



**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
AIR QUALITY PROGRAM**

**TITLE V/STATE OPERATING PERMIT**

Issue Date:	February 13, 2019	Effective Date:	October 27, 2022
Revision Date:	October 27, 2022	Expiration Date:	January 31, 2024
Revision Type:	Modification		

In accordance with the provisions of the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, as amended, and 25 Pa. Code Chapter 127, the Owner, [and Operator if noted] (hereinafter referred to as permittee) identified below is authorized by the Department of Environmental Protection (Department) to operate the air emission source(s) more fully described in this permit. This Facility is subject to all terms and conditions specified in this permit. Nothing in this permit relieves the permittee from its obligations to comply with all applicable Federal, State and Local laws and regulations.

The regulatory or statutory authority for each permit condition is set forth in brackets. All terms and conditions in this permit are federally enforceable applicable requirements unless otherwise designated as "State-Only" or "non-applicable" requirements.

**TITLE V Permit No: 62-00017**

Federal Tax Id - Plant Code: 25-1411751-1

**Owner Information**

Name: UNITED REF CO OF PA  
Mailing Address: 15 BRADLEY ST  
WARREN, PA 16365-3224

**Plant Information**

Plant: UNITED REFINING COWARREN PLT  
Location: 62 Warren County 62001 Warren City  
SIC Code: 2911 Manufacturing - Petroleum Refining

**Responsible Official**

Name: WILLIAM J. ROY  
Title: AVP, ENV. COMPL. OFFICER  
Phone: (814) 726 - 4859 Email: jroy@urc.com

**Permit Contact Person**

Name: ROBERT COOK  
Title: ENVIRONMENTAL ENGINEER  
Phone: (814) 723 - 1500 Email: rcook@urc.com

[Signature] \_\_\_\_\_  
ERIC A. GUSTAFSON, NORTHWEST REGION AIR PROGRAM MANAGER



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**SECTION A. Site Inventory List**

Source ID	Source Name	Capacity/Throughput	Fuel/Material
031	BOILER 1	60.000 MMBTU/HR	
		60.000 MCF/HR	Refinery Gas
		60.000 MCF/HR	Natural Gas
		445.000 Gal/HR	#2 Oil
		445.000 Gal/HR	REFINERY FUEL OIL
032	BOILER 2	60.000 MMBTU/HR	
		60.000 MCF/HR	Refinery Gas
		60.000 MCF/HR	Natural Gas
		445.000 Gal/HR	#2 Oil
		444.500 Gal/HR	REFINERY FUEL OIL
033	BOILER 3	80.000 MMBTU/HR	
		80.000 MCF/HR	Refinery Gas
		80.000 MCF/HR	Natural Gas
		570.000 Gal/HR	#2 Oil
		592.600 Gal/HR	REFINERY FUEL OIL
036	BOILER 5B 80MMBTU/HR	80.000 MMBTU/HR	
		80.000 MCF/HR	Natural Gas
037	VICTORY ENERGY OPERATIONS, VOYAGER, BOILER 6	182.780 MMBTU/HR	
		183.000 MCF/HR	Refinery Gas
		183.000 MCF/HR	Natural Gas
039	BOILER 7 (180 MMBTU/HR)	180.000 MMBTU/HR	
		385.000 Gal/HR	#2 Oil
		180.000 MCF/HR	Natural Gas
		180.000 MCF/HR	Refinery Gas
042	FCC HEATER (NEW UNIT)	65.600 MMBTU/HR	
		65.000 MCF/HR	REFINERY FUEL GAS
		63.700 MCF/HR	
		464.000 Gal/HR	DISTILLATE OIL
044	D.H.T. HEATER 1	9.000 MMBTU/HR	
		8.823 MCF/HR	Refinery Gas
049	EAST REFORMER HEATER	105.000 MMBTU/HR	
		105.000 MCF/HR	Natural Gas
		102.940 MCF/HR	Refinery Gas
		700.000 Gal/HR	REFINERY FUEL OIL
050	CRUDE HEATER - NORTH	125.000 MMBTU/HR	
		125.000 MCF/HR	Refinery Gas
		125.000 MCF/HR	Natural Gas
		908.000 Gal/HR	REFINERY FUEL OIL
050A	CRUDE HEATER - SOUTH	125.000 MMBTU/HR	
		125.000 MCF/HR	Refinery Gas
		125.000 MCF/HR	Natural Gas
		908.000 Gal/HR	REFINERY FUEL OIL

**SECTION A. Site Inventory List**

Source ID	Source Name	Capacity/Throughput		Fuel/Material
051	PRETREATER HEATER	46.000	MMBTU/HR	
		46.000	MCF/HR	Refinery Gas
		46.000	MCF/HR	Natural Gas
		341.000	Gal/HR	REFINERY FUEL OIL
052	WEST REFORMER HEATER	112.000	MMBTU/HR	
		829.000	Gal/HR	REFINERY FUEL OIL
		112.000	MCF/HR	Refinery Gas
		112.000	MCF/HR	Natural Gas
053	SAT GAS PLANT (DEBUT) REBOILER	20.000	MMBTU/HR	
		20.000	MCF/HR	Refinery Gas
		20.000	MCF/HR	Natural Gas
054	VACUUM PROCESS HEATER	46.000	MMBTU/HR	
		40.000	MCF/HR	Refinery Gas
		40.000	MCF/HR	Natural Gas
		347.000	Gal/HR	DISTILLATE OIL
055	D.H.T. HEATER 2	35.700	MMBTU/HR	
		35.700	MCF/HR	Refinery Gas
		35.700	MCF/HR	Natural Gas
		257.000	Gal/HR	#2 FUEL OIL
056	PREFACTIONATOR REBOILER 2	36.000	MMBTU/HR	
		36.000	MCF/HR	Refinery Gas
		36.000	MCF/HR	Natural Gas
		267.000	Gal/HR	REFINERY FUEL OIL
057	VOLCANIC HEATER (T-241)	15.000	MMBTU/HR	
		15.000	MCF/HR	Refinery Gas
		15.000	MCF/HR	Natural Gas
1000	LIQUID H2 TANKS			
1001	LITE STABILIZER			
1002	ISOMERIZATION UNIT			
1003	SOUR TIPS STRIPPER UNIT			
1004	CRUDE UNIT			
1010	SMR HYDROGEN PLANT (10 MMSCFD)(112.9 MMBTU/HR)	0.218	MMCF/HR	Natural Gas
101A	FCC UNIT	1,000.000	BBL/HR	FRESH FEED
102	BLOWDOWN SYSTEM	3,000.000	BBL/HR	FRESH FEED RATE
105	MIDDLE FCC KVG COMPRESSOR	1.700	MCF/HR	Natural Gas
		1.700	MCF/HR	Refinery Gas
106	EAST FCC KVG COMPRESSOR	1.700	MCF/HR	Natural Gas
		1.700	MCF/HR	Refinery Gas
107	SAT GAS KVG COMPRESSOR	1.700	MCF/HR	Natural Gas
		1.700	MCF/HR	Refinery Gas
108	CLAUS SULFUR PLANT 2	3.300	Tons/HR	SULFUR

**SECTION A. Site Inventory List**

Source ID	Source Name	Capacity/Throughput		Fuel/Material
108A	SULFUR PLANT 2 HOT OIL HEATER	5.600	MCF/HR	Refinery Gas
		5.600	MCF/HR	Natural Gas
109	NSPS FUG EMISSIONS (VALVES/PUMPS/ETC)	200.000	Th Gal/HR	
109A	STATE FUG EMISSIONS (VALVES/PUMPS/ETC)			
110	WASTEWATER FUGITIVE EMISSION	50,000.000	Gal/HR	PETROLEUM/SOLVENT S
111	REMEDIAL MATERIAL MANAGEMENT UNITS FUGITIVE			
112	PARTS WASHERS			
113	IC ENGINES EXEMPTED FROM PA 8-4-2008			
114	(3) 322 HP IC ENGINES AT EAST COOLING TOWER	16.000	Gal/HR	DIESEL FUEL
201	FUEL STORAGE TANK 409	20,000.000	BBL/HR	DISTILATE
202	FUEL STORAGE TANK 410	10,000.000	BBL/HR	DISTILLATE
203	FUEL STORAGE TANK 430	20,000.000	BBL/HR	REFORMER CHARGE
204	FUEL STORAGE TANK 431	17,000.000	BBL/HR	GASOLINE
205	FUEL STORAGE TANK 234	86,000.000	BBL/HR	GASOLINE
206	FUEL STORAGE TANK 236	184,000.000	BBL/HR	GASOLINE
207A	NAPHTHA STORAGE TANK 337A	87,000.000	BBL/HR	NAPHTHA
209	FUEL STORAGE TANK 432	19,769.000	BBL/HR	GASOLINE
210A	FUEL STORAGE TANK 652	29,000.000	BBL/HR	CRUDE OIL
211	LOADING RACK BOTTOM LOADING	50,000.000	Gal/HR	GASOLINE
212	STORAGE TANK 240	223,000.000	BBL/HR	GASOLINE
213	GASOLINE STORAGE TANK 244	60,000.000	BBL/HR	GASOLINE
214	STORAGE TANK 245	40,000.000	BBL/HR	GASOLINE
215	SOUR WATER/OIL TANK 434	10,000.000	BBL/HR	SOUR WATER/OIL
216	MISCELLANEOUS STORAGE TANKS	192,700.000	BBL/HR	VOC
217	MISCELLANEOUS STORAGE TANKS			
219	WASTEWATER SEPARATORS			
220	WASTEWATER SYSTEMS			
222A	STORAGE TANK 401A			
224	TANK 326			
225	LOADING RACK FUGITIVES			
226	API SEPARATOR			
231	TANK 246	75,564.000	Gal/HR	LIGHT NAPHTHA
247	TANK 247			
248	TANK 248			
250	COOLING WATER TOWERS (2 SYTEMS) (3 TOWERS)			
650	TANK 650	29,000.000	BBL/HR	CRUDE OIL
651	TANK 651	29,000.000	BBL/HR	CRUDE OIL
C01	COMBINATION UNIT FLARE			
C02	FCC UNIT FLARE			
C03A	FCC UNIT CYCLONE			

**SECTION A. Site Inventory List**

Source ID	Source Name	Capacity/Throughput	Fuel/Material
C04A	FCC UNIT CYCLONE		
C07	FCC UNIT E.S.P.		
C08	TAIL GAS TREATING UNIT		
C1010	ELEVATED PROCESS FLARE		
C105	CATALYST		
C106	CATALYST		
C107	CATALYST		
C108	SULFUR PLANT 2 INCINERATOR		
C211	VAPOR COMBUSTION UNIT		
C226A	CARBON CANISTER		
C226B	CARBON CANISTER		
FM001	REFINERY FUEL OIL - TANK 422		
FM002	REFINERY GAS- BOILERHOUSE/FCC		
FM003	NATURAL GAS		
FM007	REFINERY GAS - COMBO MIX DRUM		
FM008	REFINERY GAS - VVG		
FM009	REFINERY FUEL OIL - TANK 412		
FM010	REFINERY FUEL OIL - TANK 457		
FM011	REFINERY FUEL OIL - TANK 456		
S01	BOILERHOUSE STACK		
S039	BOILER 7 STACK		
S04	FCC HEATER STACK		
S054	VACUUM PROCESS HEATER STACK		
S057	VOLCANIC HEATER STACK		
S06	D.H.T. HEATER 1 STACK		
S1010A	SMR HYDROGEN PLANT STACK		
S1010B	PROCESS FLARE STACK		
S113	EXEMPT IC ENGINE STACKS		
S114	(3) IC ENGINES AT EAST COOLING WATER TOWER EXHAUST		
S13	EAST REFORMER HEATER STACK		
S14	CRUDE HTRS STACK		
S16	COMBINATION FLARE STACK		
S17	FCC UNIT FLARE STACK		
S18	PRETREATER HEATER STACK		
S19	WEST REFORMER HEATER STACK		
S20	SAT GAS REBOILER STACK		
S211A	VCU STACK		
S226	CARBON CANISTER STACK		
S23	MIDDLE FCC KVG COMP STACK		
S24	EAST FCC KVG COMP STACK		

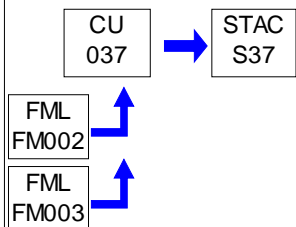
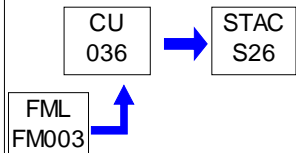
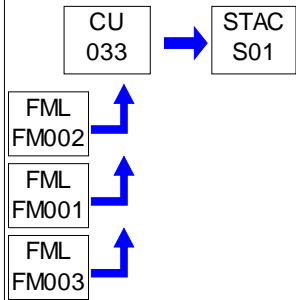
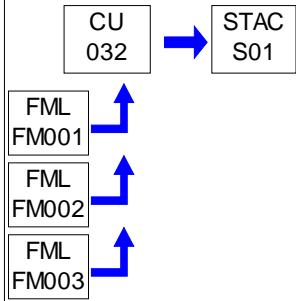
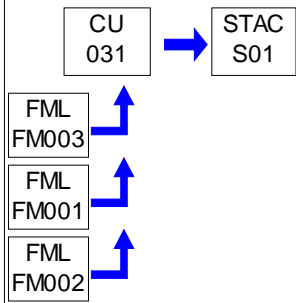
**SECTION A. Site Inventory List**

Source ID	Source Name	Capacity/Throughput	Fuel/Material
S25	SAT GAS KVG COMP STACK		
S26	BOILER 5 STACK		
S27	FCC UNIT ESP STACK		
S28	D.H.T. 2 HEATER STACK		
S29	PREFRACTION REBLR 2 STACK		
S30	SULFUR PLANT 2 STACK		
S33	SULFUR PLT 2 HEATER STACK		
S37	BOILER 6 STACK		
Z01	FUGITIVE EMISSIONS		
Z1004	FUGITIVE EMISSIONS		
Z250	COOLING WATER TOWER FUGITIVES		
Z34	LIQUID H2 TANK FUGITIVES		
Z35	LITE STABILIZER FUGITIVES		
Z36	ISOMERIZATION UNIT FUGITIVES		
Z37	SOUR TIPS STRIPPER FUGITIVES		
Z51	FUEL TANK 409 FUGITIVES		
Z52	FUEL TANK 410 FUGITIVES		
Z53	FUEL TANK 430 FUGITIVES		
Z54	FUEL TANK 431 FUGITIVES		
Z55	FUEL TANK 234 FUGITIVES		
Z56	FUEL TANK 236 FUGITIVES		
Z59	FUEL TANK 432 FUGITIVES		
Z62	FUEL TANK 240 FUGITIVES		
Z63	GAS TANK 244 FUGITIVES		
Z64	TANK 245 FUGITIVES		
Z65	TANK 434 FUGITIVES		
Z66	MISC TANKS FUGITIVES		
Z67	GROUP 2 TANK FUGITIVES		
Z69	WW SEPARATORS FUGITIVES		
Z70	WASTEWATER FUGITIVES		
Z72A	TANK 401A FUGITIVES		
Z73	TANK 326 FUGITIVES		
Z75	PARTS WASHER FUGITIVE EMISSIONS		
Z76	TANK 246 FUGITIVES		
Z77	TANK 247 FUGITIVES		
Z78	TANK 248 FUGITIVES		
Z80	TANK 650 FUGITIVES		
Z81	TANK 651 FUGITIVES		
Z83	TANK 647A (CRUDE OIL) EMISSIONS		
Z84	TANK 337A FUGITIVE EMISSIONS		



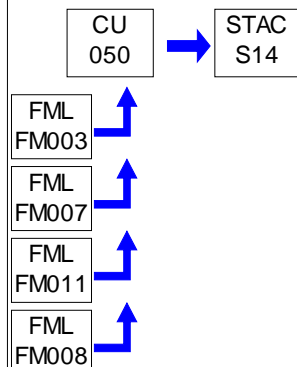
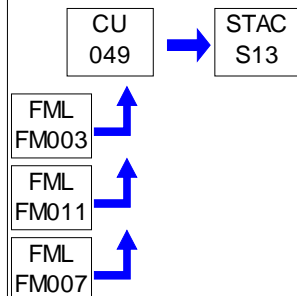
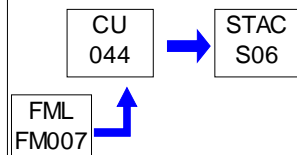
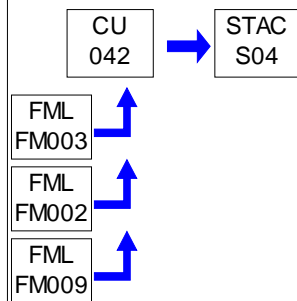
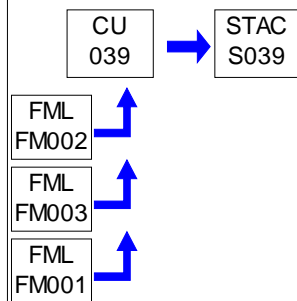


## PERMIT MAPS



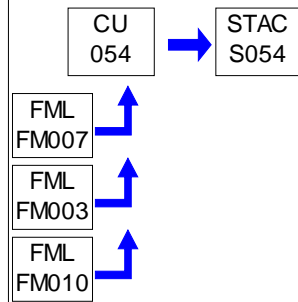
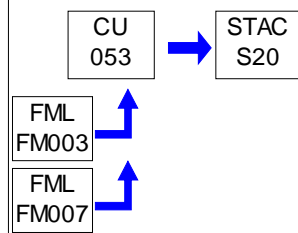
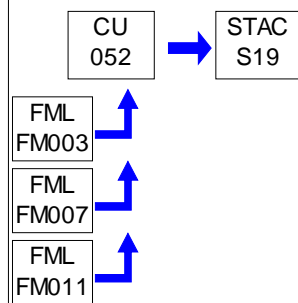
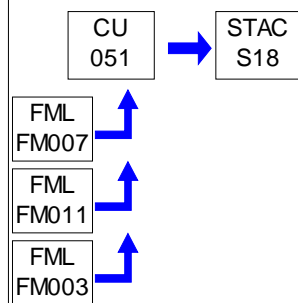
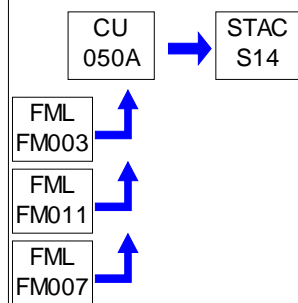


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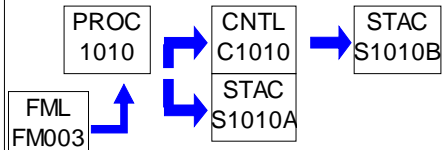
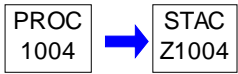
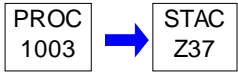
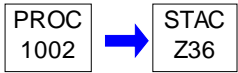
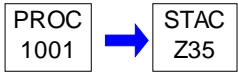
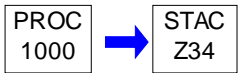
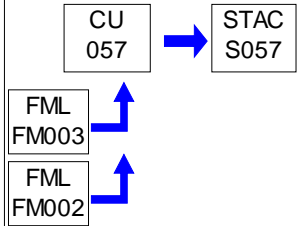
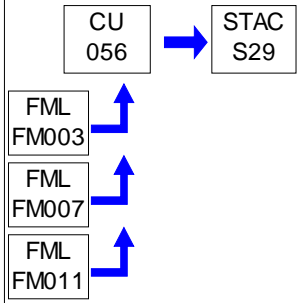
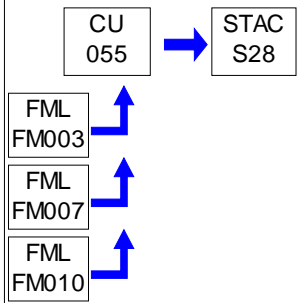


## PERMIT MAPS



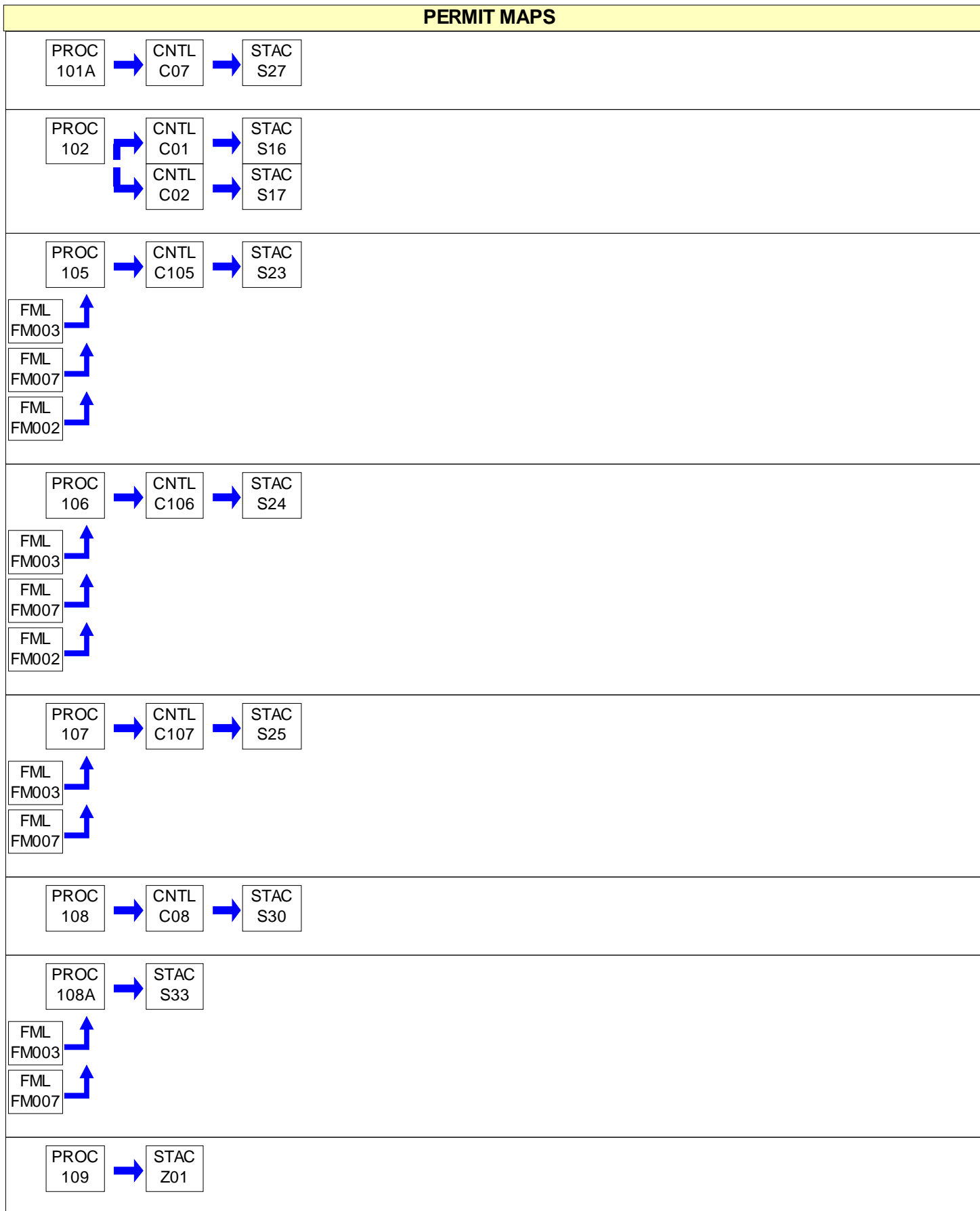


### PERMIT MAPS





## PERMIT MAPS





## PERMIT MAPS

PROC 110 → STAC Z01

PROC 112 → STAC Z75

PROC 113 → STAC S113

PROC 114 → STAC S114

PROC 201 → STAC Z51

PROC 202 → STAC Z52

PROC 203 → STAC Z53

PROC 204 → STAC Z54

PROC 205 → STAC Z55

PROC 206 → STAC Z56

PROC 207A → STAC Z84

PROC 209 → STAC Z59

PROC 210A → STAC Z83

PROC 211 → CNTL C211 → STAC S211A

PROC 212 → STAC Z62



## PERMIT MAPS

PROC 213 → STAC Z63

PROC 214 → STAC Z64

PROC 215 → STAC Z65

PROC 216 → STAC Z66

PROC 217 → STAC Z67

PROC 219 → STAC Z69

PROC 220 → STAC Z70

PROC 222A → STAC Z72A

PROC 224 → STAC Z73

PROC 225 → STAC Z01

PROC 226 → CNTL C226A → STAC S226  
PROC 226 → CNTL C226B → STAC S226

PROC 231 → STAC Z76

PROC 247 → STAC Z77

PROC 248 → STAC Z78

PROC 250 → STAC Z250



### PERMIT MAPS

PROC  
650 → STAC  
Z80

PROC  
651 → STAC  
Z81

CNTL  
C1010 → STAC  
S1010B

FML  
FM003 ↗



**SECTION B. General Title V Requirements****#001 [25 Pa. Code § 121.1]****Definitions**

Words and terms that are not otherwise defined in this permit shall have the meanings set forth in Section 3 of the Air Pollution Control Act (35 P.S. § 4003) and 25 Pa. Code § 121.1.

**#002 [25 Pa. Code § 121.7]****Prohibition of Air Pollution**

No person may permit air pollution as that term is defined in the act.

**#003 [25 Pa. Code § 127.512(c)(4)]****Property Rights**

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

**#004 [25 Pa. Code § 127.446(a) and (c)]****Permit Expiration**

This operating permit is issued for a fixed term of five (5) years and shall expire on the date specified on Page 1 of this permit. The terms and conditions of the expired permit shall automatically continue pending issuance of a new Title V permit, provided the permittee has submitted a timely and complete application and paid applicable fees required under 25 Pa. Code Chapter 127, Subchapter I and the Department is unable, through no fault of the permittee, to issue or deny a new permit before the expiration of the previous permit. An application is complete if it contains sufficient information to begin processing the application, has the applicable sections completed and has been signed by a responsible official.

**#005 [25 Pa. Code §§ 127.412, 127.413, 127.414, 127.446(e), 127.503 & 127.704(b)]****Permit Renewal**

(a) An application for the renewal of the Title V permit shall be submitted to the Department at least six (6) months, and not more than 18 months, before the expiration date of this permit. The renewal application is timely if a complete application is submitted to the Department's Regional Air Manager within the timeframe specified in this permit condition.

(b) The application for permit renewal shall include the current permit number, the appropriate permit renewal fee, a description of any permit revisions and off-permit changes that occurred during the permit term, and any applicable requirements that were promulgated and not incorporated into the permit during the permit term. The fees shall be made payable to "The Commonwealth of Pennsylvania Clean Air Fund" and submitted with the fee form to the respective regional office.

(c) The renewal application shall also include submission of proof that the local municipality and county, in which the facility is located, have been notified in accordance with 25 Pa. Code § 127.413. The application for renewal of the Title V permit shall also include submission of compliance review forms which have been used by the permittee to update information submitted in accordance with either 25 Pa. Code § 127.412(b) or § 127.412(j).

(d) The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information during the permit renewal process. The permittee shall also promptly provide additional information as necessary to address any requirements that become applicable to the source after the date a complete renewal application was submitted but prior to release of a draft permit.

**#006 [25 Pa. Code §§ 127.450(a)(4) & 127.464(a)]****Transfer of Ownership or Operational Control**

(a) In accordance with 25 Pa. Code § 127.450(a)(4), a change in ownership or operational control of the source shall be treated as an administrative amendment if:

- (1) The Department determines that no other change in the permit is necessary;
- (2) A written agreement has been submitted to the Department identifying the specific date of the transfer of permit responsibility, coverage and liability between the current and the new permittee; and,
- (3) A compliance review form has been submitted to the Department and the permit transfer has been approved by

**SECTION B. General Title V Requirements**

the Department.

(b) In accordance with 25 Pa. Code § 127.464(a), this permit may not be transferred to another person except in cases of transfer-of-ownership which are documented and approved to the satisfaction of the Department.

**#007 [25 Pa. Code § 127.513, 35 P.S. § 4008 and § 114 of the CAA]****Inspection and Entry**

(a) Upon presentation of credentials and other documents as may be required by law for inspection and entry purposes, the permittee shall allow the Department of Environmental Protection or authorized representatives of the Department to perform the following:

- (1) Enter at reasonable times upon the permittee's premises where a Title V source is located or emissions related activity is conducted, or where records are kept under the conditions of this permit;
- (2) Have access to and copy or remove, at reasonable times, records that are kept under the conditions of this permit;
- (3) Inspect at reasonable times, facilities, equipment including monitoring and air pollution control equipment, practices, or operations regulated or required under this permit;
- (4) Sample or monitor, at reasonable times, substances or parameters, for the purpose of assuring compliance with the permit or applicable requirements as authorized by the Clean Air Act, the Air Pollution Control Act, or the regulations promulgated under the Acts.

(b) Pursuant to 35 P.S. § 4008, no person shall hinder, obstruct, prevent or interfere with the Department or its personnel in the performance of any duty authorized under the Air Pollution Control Act.

(c) Nothing in this permit condition shall limit the ability of the EPA to inspect or enter the premises of the permittee in accordance with Section 114 or other applicable provisions of the Clean Air Act.

**#008 [25 Pa. Code §§ 127.25, 127.444, & 127.512(c)(1)]****Compliance Requirements**

(a) The permittee shall comply with the conditions of this permit. Noncompliance with this permit constitutes a violation of the Clean Air Act and the Air Pollution Control Act and is grounds for one (1) or more of the following:

- (1) Enforcement action
- (2) Permit termination, revocation and reissuance or modification
- (3) Denial of a permit renewal application

(b) A person may not cause or permit the operation of a source, which is subject to 25 Pa. Code Article III, unless the source(s) and air cleaning devices identified in the application for the plan approval and operating permit and the plan approval issued to the source are operated and maintained in accordance with specifications in the applications and the conditions in the plan approval and operating permit issued by the Department. A person may not cause or permit the operation of an air contamination source subject to 25 Pa. Code Chapter 127 in a manner inconsistent with good operating practices.

(c) For purposes of Sub-condition (b) of this permit condition, the specifications in applications for plan approvals and operating permits are the physical configurations and engineering design details which the Department determines are essential for the permittee's compliance with the applicable requirements in this Title V permit.

**#009 [25 Pa. Code § 127.512(c)(2)]****Need to Halt or Reduce Activity Not a Defense**

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 conditions of this permit.

**SECTION B. General Title V Requirements****#010 [25 Pa. Code §§ 127.411(d) & 127.512(c)(5)]****Duty to Provide Information**

(a) The permittee shall furnish to the Department, within a reasonable time, information that the Department 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.

(b) Upon request, the permittee shall also furnish to the Department copies of records that the permittee is required to keep by this permit, or for information claimed to be confidential, the permittee may furnish such records directly to the Administrator of EPA along with a claim of confidentiality.

**#011 [25 Pa. Code §§ 127.463, 127.512(c)(3) & 127.542]****Reopening and Revising the Title V Permit for Cause**

(a) This Title V permit may be modified, revoked, reopened and reissued or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay a permit condition.

(b) This permit may be reopened, revised and reissued prior to expiration of the permit under one or more of the following circumstances:

(1) Additional applicable requirements under the Clean Air Act or the Air Pollution Control Act become applicable to a Title V facility with a remaining permit term of three (3) or more years prior to the expiration date of this permit. The Department will revise the permit as expeditiously as practicable but not later than 18 months after promulgation of the applicable standards or regulations. No such revision is required if the effective date of the requirement is later than the expiration date of this permit, unless the original permit or its terms and conditions has been extended.

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

(3) The Department or the EPA determines that this permit contains a material mistake or inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.

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

(c) Proceedings to revise this permit shall follow the same procedures which apply to initial permit issuance and shall affect only those parts of this permit for which cause to revise exists. The revision shall be made as expeditiously as practicable.

(d) Regardless of whether a revision is made in accordance with (b)(1) above, the permittee shall meet the applicable standards or regulations promulgated under the Clean Air Act within the time frame required by standards or regulations.

**#012 [25 Pa. Code § 127.543]****Reopening a Title V Permit for Cause by EPA**

As required by the Clean Air Act and regulations adopted thereunder, this permit may be modified, reopened and reissued, revoked or terminated for cause by EPA in accordance with procedures specified in 25 Pa. Code § 127.543.

**#013 [25 Pa. Code § 127.522(a)]****Operating Permit Application Review by the EPA**

The applicant may be required by the Department to provide a copy of the permit application, including the compliance plan, directly to the Administrator of the EPA. Copies of title V permit applications to EPA, pursuant to 25 PA Code §127.522(a), shall be submitted, if required, to the following EPA e-mail box:

R3\_Air\_Apps\_and\_Notices@epa.gov

Please place the following in the subject line: TV [permit number], [Facility Name].

**SECTION B. General Title V Requirements****#014 [25 Pa. Code § 127.541]****Significant Operating Permit Modifications**

When permit modifications during the term of this permit do not qualify as minor permit modifications or administrative amendments, the permittee shall submit an application for significant Title V permit modifications in accordance with 25 Pa. Code § 127.541. Notifications to EPA, pursuant to 25 PA Code §127.522(a), if required, shall be submitted, to the following EPA e-mail box:

R3\_Air\_Apps\_and\_Notices@epa.gov

Please place the following in the subject line: TV [permit number], [Facility Name].

**#015 [25 Pa. Code §§ 121.1 & 127.462]****Minor Operating Permit Modifications**

The permittee may make minor operating permit modifications (as defined in 25 Pa. Code §121.1), on an expedited basis, in accordance with 25 Pa. Code §127.462 (relating to minor operating permit modifications). Notifications to EPA, pursuant to 25 PA Code §127.462(c), if required, shall be submitted, to the following EPA e-mail box:

R3\_Air\_Apps\_and\_Notices@epa.gov

Please place the following in the subject line: TV [permit number], [Facility Name].

**#016 [25 Pa. Code § 127.450]****Administrative Operating Permit Amendments**

(a) The permittee may request administrative operating permit amendments, as defined in 25 Pa. Code §127.450(a). Copies of request for administrative permit amendment to EPA, pursuant to 25 PA Code §127.450(c)(1), if required, shall be submitted to the following EPA e-mail box:

R3\_Air\_Apps\_and\_Notices@epa.gov

Please place the following in the subject line: TV [permit number], [Facility Name].

(b) Upon final action by the Department granting a request for an administrative operating permit amendment covered under §127.450(a)(5), the permit shield provisions in 25 Pa. Code § 127.516 (relating to permit shield) shall apply to administrative permit amendments incorporated in this Title V Permit in accordance with §127.450(c), unless precluded by the Clean Air Act or the regulations thereunder.

**#017 [25 Pa. Code § 127.512(b)]****Severability Clause**

The provisions of this permit are severable, and if any provision of this permit is determined by the Environmental Hearing Board or a court of competent jurisdiction, or US EPA to be invalid or unenforceable, such a determination will not affect the remaining provisions of this permit.

**#018 [25 Pa. Code §§ 127.704, 127.705 & 127.707]****Fee Payment**

(a) The permittee shall pay fees to the Department in accordance with the applicable fee schedules in 25 Pa. Code Chapter 127, Subchapter I (relating to plan approval and operating permit fees). The applicable fees shall be made payable to "The Commonwealth of Pennsylvania Clean Air Fund" with the permit number clearly indicated and submitted to the respective regional office.

(b) Emission Fees. The permittee shall, on or before September 1st of each year, pay applicable annual Title V emission fees for emissions occurring in the previous calendar year as specified in 25 Pa. Code § 127.705. The permittee is not required to pay an emission fee for emissions of more than 4,000 tons of each regulated pollutant emitted from the facility.

(c) As used in this permit condition, the term "regulated pollutant" is defined as a VOC, each pollutant regulated under Sections 111 and 112 of the Clean Air Act and each pollutant for which a National Ambient Air Quality Standard has been promulgated, except that carbon monoxide is excluded.

**SECTION B. General Title V Requirements**

(d) Late Payment. Late payment of emission fees will subject the permittee to the penalties prescribed in 25 Pa. Code § 127.707 and may result in the suspension or termination of the Title V permit. The permittee shall pay a penalty of fifty percent (50%) of the fee amount, plus interest on the fee amount computed in accordance with 26 U.S.C.A. § 6621(a)(2) from the date the emission fee should have been paid in accordance with the time frame specified in 25 Pa. Code § 127.705(c).

(e) The permittee shall pay an annual operating permit maintenance fee according to the following fee schedule established in 25 Pa. Code § 127.704(d) on or before December 31 of each year for the next calendar year.

(1) Eight thousand dollars (\$8,000) for calendar years 2021—2025.

(2) Ten thousand dollars (\$10,000) for calendar years 2026—2030.

(3) Twelve thousand five hundred dollars (\$12,500) for the calendar years beginning with 2031.

**#019 [25 Pa. Code §§ 127.14(b) & 127.449]****Authorization for De Minimis Emission Increases**

(a) This permit authorizes de minimis emission increases from a new or existing source in accordance with 25 Pa. Code §§ 127.14 and 127.449 without the need for a plan approval or prior issuance of a permit modification. The permittee shall provide the Department with seven (7) days prior written notice before commencing any de minimis emissions increase that would result from either: (1) a physical change of minor significance under § 127.14(c)(1); or (2) the construction, installation, modification or reactivation of an air contamination source. The written notice shall:

(1) Identify and describe the pollutants that will be emitted as a result of the de minimis emissions increase.

(2) Provide emission rates expressed in tons per year and in terms necessary to establish compliance consistent with any applicable requirement.

The Department may disapprove or condition de minimis emission increases at any time.

(b) Except as provided below in (c) and (d) of this permit condition, the permittee is authorized during the term of this permit to make de minimis emission increases (expressed in tons per year) up to the following amounts without the need for a plan approval or prior issuance of a permit modification:

(1) Four tons of carbon monoxide from a single source during the term of the permit and 20 tons of carbon monoxide at the facility during the term of the permit.

(2) One ton of NO<sub>x</sub> from a single source during the term of the permit and 5 tons of NO<sub>x</sub> at the facility during the term of the permit.

(3) One and six-tenths tons of the oxides of sulfur from a single source during the term of the permit and 8.0 tons of oxides of sulfur at the facility during the term of the permit.

(4) Six-tenths of a ton of PM<sub>10</sub> from a single source during the term of the permit and 3.0 tons of PM<sub>10</sub> at the facility during the term of the permit. This shall include emissions of a pollutant regulated under Section 112 of the Clean Air Act unless precluded by the Clean Air Act or 25 Pa. Code Article III.

(5) One ton of VOCs from a single source during the term of the permit and 5.0 tons of VOCs at the facility during the term of the permit. This shall include emissions of a pollutant regulated under Section 112 of the Clean Air Act unless precluded by the Clean Air Act or 25 Pa. Code Article III.

(c) In accordance with § 127.14, the permittee may install the following minor sources without the need for a plan approval:

(1) Air conditioning or ventilation systems not designed to remove pollutants generated or released from other sources.

(2) Combustion units rated at 2,500,000 or less Btu per hour of heat input.

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(3) Combustion units with a rated capacity of less than 10,000,000 Btu per hour heat input fueled by natural gas supplied by a public utility, liquefied petroleum gas or by commercial fuel oils which are No. 2 or lighter, viscosity less than or equal to 5.82 c St, and which meet the sulfur content requirements of 25 Pa. Code § 123.22 (relating to combustion units). For purposes of this permit, commercial fuel oil shall be virgin oil which has no reprocessed, recycled or waste material added.

(4) Space heaters which heat by direct heat transfer.

(5) Laboratory equipment used exclusively for chemical or physical analysis.

(6) Other sources and classes of sources determined to be of minor significance by the Department.

(d) This permit does not authorize de minimis emission increases if the emissions increase would cause one or more of the following:

(1) Increase the emissions of a pollutant regulated under Section 112 of the Clean Air Act except as authorized in Subparagraphs (b)(4) and (5) of this permit condition.

(2) Subject the facility to the prevention of significant deterioration requirements in 25 Pa. Code Chapter 127, Subchapter D and/or the new source review requirements in Subchapter E.

(3) Violate any applicable requirement of the Air Pollution Control Act, the Clean Air Act, or the regulations promulgated under either of the acts.

(4) Changes which are modifications under any provision of Title I of the Clean Air Act and emission increases which would exceed the allowable emissions level (expressed as a rate of emissions or in terms of total emissions) under the Title V permit.

(e) Unless precluded by the Clean Air Act or the regulations thereunder, the permit shield described in 25 Pa. Code § 127.516 (relating to permit shield) shall extend to the changes made under 25 Pa. Code § 127.449 (relating to de minimis emission increases).

(f) Emissions authorized under this permit condition shall be included in the monitoring, recordkeeping and reporting requirements of this permit.

(g) Except for de minimis emission increases allowed under this permit, 25 Pa. Code § 127.449, or sources and physical changes meeting the requirements of 25 Pa. Code § 127.14, the permittee is prohibited from making physical changes or engaging in activities that are not specifically authorized under this permit without first applying for a plan approval. In accordance with § 127.14(b), a plan approval is not required for the construction, modification, reactivation, or installation of the sources creating the de minimis emissions increase.

(h) The permittee may not meet de minimis emission threshold levels by offsetting emission increases or decreases at the same source.

**#020 [25 Pa. Code §§ 127.11a & 127.215]****Reactivation of Sources**

(a) The permittee may reactivate a source at the facility that has been out of operation or production for at least one year, but less than or equal to five (5) years, if the source is reactivated in accordance with the requirements of 25 Pa. Code §§ 127.11a and 127.215. The reactivated source will not be considered a new source.

(b) A source which has been out of operation or production for more than five (5) years but less than 10 years may be reactivated and will not be considered a new source if the permittee satisfies the conditions specified in 25 Pa. Code § 127.11a(b).

**#021 [25 Pa. Code §§ 121.9 & 127.216]****Circumvention**

(a) The owner of this Title V facility, or any other person, may not circumvent the new source review requirements of 25 Pa. Code Chapter 127, Subchapter E by causing or allowing a pattern of ownership or development, including the

**SECTION B. General Title V Requirements**

phasing, staging, delaying or engaging in incremental construction, over a geographic area of a facility which, except for the pattern of ownership or development, would otherwise require a permit or submission of a plan approval application.

(b) No person may permit the use of a device, stack height which exceeds good engineering practice stack height, dispersion technique or other technique which, without resulting in reduction of the total amount of air contaminants emitted, conceals or dilutes an emission of air contaminants which would otherwise be in violation of this permit, the Air Pollution Control Act or the regulations promulgated thereunder, except that with prior approval of the Department, the device or technique may be used for control of malodors.

**#022 [25 Pa. Code §§ 127.402(d) & 127.513(1)]****Submissions**

(a) Reports, test data, monitoring data, notifications and requests for renewal of the permit shall be submitted to the:

Regional Air Program Manager  
PA Department of Environmental Protection  
(At the address given on the permit transmittal letter, or otherwise notified)

(b) Any report or notification for the EPA Administrator or EPA Region III should be addressed to:

Enforcement & Compliance Assurance Division  
Air, RCRA and Toxics Branch (3ED21)  
Four Penn Center  
1600 John F. Kennedy Boulevard  
Philadelphia, PA 19103-2852

The Title V compliance certification shall be emailed to EPA at R3\_APD\_Permits@epa.gov.

(c) An application, form, report or compliance certification submitted pursuant to this permit condition shall contain certification by a responsible official as to truth, accuracy, and completeness as required under 25 Pa. Code § 127.402(d). Unless otherwise required by the Clean Air Act or regulations adopted thereunder, this certification and any other certification required pursuant to 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.

**#023 [25 Pa. Code §§ 127.441(c) & 127.463(e); Chapter 139; & 114(a)(3), 504(b) of the CAA]****Sampling, Testing and Monitoring Procedures**

(a) The permittee shall perform the emissions monitoring and analysis procedures or test methods for applicable requirements of this Title V permit. In addition to the sampling, testing and monitoring procedures specified in this permit, the Permittee shall comply with any additional applicable requirements promulgated under the Clean Air Act after permit issuance regardless of whether the permit is revised.

(b) The sampling, testing and monitoring required under the applicable requirements of this permit, shall be conducted in accordance with the requirements of 25 Pa. Code Chapter 139 unless alternative methodology is required by the Clean Air Act (including §§ 114(a)(3) and 504(b)) and regulations adopted thereunder.

**#024 [25 Pa. Code § 127.513]****Compliance Certification**

(a) One year after the date of issuance of the Title V permit, and each year thereafter, unless specified elsewhere in the permit, the permittee shall submit to the Department and EPA Region III a certificate of compliance with the terms and conditions in this permit, for the previous year, including the emission limitations, standards or work practices. This certification shall include:

- (1) The identification of each term or condition of the permit that is the basis of the certification.
- (2) The compliance status.
- (3) The methods used for determining the compliance status of the source, currently and over the reporting period.
- (4) Whether compliance was continuous or intermittent.

(b) The compliance certification shall be postmarked or hand-delivered no later than thirty days after each anniversary of



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the date of issuance of this Title V Operating Permit, or on the submittal date specified elsewhere in the permit, to the Department in accordance with the submission requirements specified in Section B, Condition #022 of this permit. The Title V compliance certification shall be emailed to EPA at R3\_APD\_Permits@epa.gov.

**#025 [25 Pa. Code §§ 127.511 & Chapter 135]****Recordkeeping Requirements**

(a) The permittee shall maintain and make available, upon request by the Department, records of required monitoring information that include the following:

- (1) The date, place (as defined in the permit) and time of sampling or measurements.
- (2) The dates the analyses were performed.
- (3) The company or entity that performed the analyses.
- (4) The analytical techniques or methods used.
- (5) The results of the analyses.
- (6) The operating conditions as existing at the time of sampling or measurement.

(b) The permittee shall retain records of the required monitoring data and supporting information for at least five (5) years from the date of the monitoring sample, measurement, report or application. Supporting information includes the calibration data and maintenance records and original strip-chart recordings for continuous monitoring instrumentation, and copies of reports required by the permit.

(c) The permittee shall maintain and make available to the Department upon request, records including computerized records that may be necessary to comply with the reporting, recordkeeping and emission statement requirements in 25 Pa. Code Chapter 135 (relating to reporting of sources). In accordance with 25 Pa. Code Chapter 135, § 135.5, such records may include records of production, fuel usage, maintenance of production or pollution control equipment or other information determined by the Department to be necessary for identification and quantification of potential and actual air contaminant emissions. If direct recordkeeping is not possible or practical, sufficient records shall be kept to provide the needed information by indirect means.

**#026 [25 Pa. Code §§ 127.411(d), 127.442, 127.463(e) & 127.511(c)]****Reporting Requirements**

(a) The permittee shall comply with the reporting requirements for the applicable requirements specified in this Title V permit. In addition to the reporting requirements specified herein, the permittee shall comply with any additional applicable reporting requirements promulgated under the Clean Air Act after permit issuance regardless of whether the permit is revised.

(b) Pursuant to 25 Pa. Code § 127.511(c), the permittee shall submit reports of required monitoring at least every six (6) months unless otherwise specified in this permit. Instances of deviations (as defined in 25 Pa. Code § 121.1) from permit requirements shall be clearly identified in the reports. The reporting of deviations shall include the probable cause of the deviations and corrective actions or preventative measures taken, except that sources with continuous emission monitoring systems shall report according to the protocol established and approved by the Department for the source. The required reports shall be certified by a responsible official.

(c) Every report submitted to the Department under this permit condition shall comply with the submission procedures specified in Section B, Condition #022(c) of this permit.

(d) Any records, reports or information obtained by the Department or referred to in a public hearing shall be made available to the public by the Department except for such records, reports or information for which the permittee has shown cause that the documents should be considered confidential and protected from disclosure to the public under Section 4013.2 of the Air Pollution Control Act and consistent with Sections 112(d) and 114(c) of the Clean Air Act and 25 Pa. Code § 127.411(d). The permittee may not request a claim of confidentiality for any emissions data generated for the Title V facility.



**SECTION B. General Title V Requirements****#027 [25 Pa. Code § 127.3]****Operational Flexibility**

The permittee is authorized to make changes within the Title V facility in accordance with the following provisions in 25 Pa. Code Chapter 127 which implement the operational flexibility requirements of Section 502(b)(10) of the Clean Air Act and Section 6.1(i) of the Air Pollution Control Act:

- (1) Section 127.14 (relating to exemptions)
- (2) Section 127.447 (relating to alternative operating scenarios)
- (3) Section 127.448 (relating to emissions trading at facilities with federally enforceable emissions caps)
- (4) Section 127.449 (relating to de minimis emission increases)
- (5) Section 127.450 (relating to administrative operating permit amendments)
- (6) Section 127.462 (relating to minor operating permit amendments)
- (7) Subchapter H (relating to general plan approvals and operating permits)

**#028 [25 Pa. Code §§ 127.441(d), 127.512(i) and 40 CFR Part 68]****Risk Management**

(a) If required by Section 112(r) of the Clean Air Act, the permittee shall develop and implement an accidental release program consistent with requirements of the Clean Air Act, 40 CFR Part 68 (relating to chemical accident prevention provisions) and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act (P.L. 106-40).

(b) The permittee shall prepare and implement a Risk Management Plan (RMP) which meets the requirements of Section 112(r) of the Clean Air Act, 40 CFR Part 68 and the Federal Chemical Safety Information, Site Security and Fuels Regulatory Relief Act when a regulated substance listed in 40 CFR § 68.130 is present in a process in more than the listed threshold quantity at the Title V facility. The permittee shall submit the RMP to the federal Environmental Protection Agency according to the following schedule and requirements:

- (1) The permittee shall submit the first RMP to a central point specified by EPA no later than the latest of the following:
  - (i) Three years after the date on which a regulated substance is first listed under § 68.130; or,
  - (ii) The date on which a regulated substance is first present above a threshold quantity in a process.

(2) The permittee shall submit any additional relevant information requested by the Department or EPA concerning the RMP and shall make subsequent submissions of RMPs in accordance with 40 CFR § 68.190.

(3) The permittee shall certify that the RMP is accurate and complete in accordance with the requirements of 40 CFR Part 68, including a checklist addressing the required elements of a complete RMP.

(c) As used in this permit condition, the term "process" shall be as defined in 40 CFR § 68.3. The term "process" means any activity involving a regulated substance including any use, storage, manufacturing, handling, or on-site movement of such substances or any combination of these activities. For purposes of this definition, any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release, shall be considered a single process.

(d) If the Title V facility is subject to 40 CFR Part 68, as part of the certification required under this permit, the permittee shall:

- (1) Submit a compliance schedule for satisfying the requirements of 40 CFR Part 68 by the date specified in 40 CFR § 68.10(a); or,
- (2) Certify that the Title V facility is in compliance with all requirements of 40 CFR Part 68 including the registration and submission of the RMP.

**SECTION B. General Title V Requirements**

(e) If the Title V facility is subject to 40 CFR Part 68, the permittee shall maintain records supporting the implementation of an accidental release program for five (5) years in accordance with 40 CFR § 68.200.

(f) When the Title V facility is subject to the accidental release program requirements of Section 112(r) of the Clean Air Act and 40 CFR Part 68, appropriate enforcement action will be taken by the Department if:

(1) The permittee fails to register and submit the RMP or a revised plan pursuant to 40 CFR Part 68.

(2) The permittee fails to submit a compliance schedule or include a statement in the compliance certification required under Section B, Condition #026 of this permit that the Title V facility is in compliance with the requirements of Section 112(r) of the Clean Air Act, 40 CFR Part 68, and 25 Pa. Code § 127.512(i).

**#029 [25 Pa. Code § 127.512(e)]****Approved Economic Incentives and Emission Trading Programs**

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

**#030 [25 Pa. Code §§ 127.516, 127.450(d), 127.449(f) & 127.462(g)]****Permit Shield**

(a) The permittee's compliance with the conditions of this permit shall be deemed in compliance with applicable requirements (as defined in 25 Pa. Code § 121.1) as of the date of permit issuance if either of the following applies:

(1) The applicable requirements are included and are specifically identified in this permit.

(2) The Department specifically identifies in the permit other requirements that are not applicable to the permitted facility or source.

(b) Nothing in 25 Pa. Code § 127.516 or the Title V permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act, including the authority of the Administrator of the EPA provided thereunder.

(2) The liability of the permittee for a violation of an applicable requirement prior to the time of permit issuance.

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act.

(4) The ability of the EPA to obtain information from the permittee under Section 114 of the Clean Air Act.

(c) Unless precluded by the Clean Air Act or regulations thereunder, final action by the Department incorporating a significant permit modification in this Title V Permit shall be covered by the permit shield at the time that the permit containing the significant modification is issued.

**#031 [25 Pa. Code §135.3]****Reporting**

(a) The permittee shall submit by March 1 of each year an annual emissions report for the preceding calendar year. The report shall include information for all active previously reported sources, new sources which were first operated during the preceding calendar year, and sources modified during the same period which were not previously reported. All air emissions from the facility should be estimated and reported.

(b) A source owner or operator may request an extension of time from the Department for the filing of an annual emissions report, and the Department may grant the extension for reasonable cause.

**#032 [25 Pa. Code §135.4]****Report Format**

Emissions reports shall contain sufficient information to enable the Department to complete its emission inventory. Emissions reports shall be made by the source owner or operator in a format specified by the Department.

**SECTION C. Site Level Requirements****I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.1]****Prohibition of certain fugitive emissions**

The permittee may not permit the emission into the outdoor atmosphere of fugitive air contaminant from a source other than the following:

- (1) Construction or demolition of buildings or structures.
- (2) Grading, paving and maintenance of roads and streets.
- (3) Use of roads and streets. Emissions from material in or on trucks, railroad cars and other vehicular equipment are not considered as emissions from use of roads and streets.
- (4) Clearing of land.
- (5) Stockpiling of materials.
- (6) Open burning operations.
- (7) Sources and classes of sources other than those identified above, for which the operator has obtained a determination from the Department that fugitive emissions from the source, after appropriate control, meet the following requirements:
  - (i) the emissions are of minor significance with respect to causing air pollution; and
  - (ii) the emissions are not preventing or interfering with the attainment or maintenance of any ambient air quality standard.

**# 002 [25 Pa. Code §123.2]****Fugitive particulate matter**

The permittee may not permit fugitive particulate matter to be emitted into the outdoor atmosphere from a source specified in Condition #001, above, if such emissions are visible at the point the emissions pass outside the person's property.

**# 003 [25 Pa. Code §123.31]****Limitations**

The permittee may not permit the emission into the outdoor atmosphere of any malodorous air contaminants from any source in such a manner that the malodors are detectable outside the property of the person on whose land the source is being operated.

**# 004 [25 Pa. Code §123.41]****Limitations**

The permittee may not permit the emission into the outdoor atmosphere of visible air contaminants in such a manner that the opacity of the emission is either of the following:

- (1) Equal to or greater than 20% for a period or periods aggregating more than three minutes in any 1 hour.
- (2) Equal to or greater than 60% at any time.

**# 005 [25 Pa. Code §123.42]****Exceptions**

The limitations of 25 PA Code 123.41 (relating to limitations) and Condition #004, above, shall not apply to a visible emission in any of the following instances:

- (1) when the presence of uncombined water is the only reason for failure of the emission to meet the limitations.
- (2) When the emission results from the operation of equipment used solely to train and test persons in observing the opacity of visible emissions.

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(3) When the emission results from sources specified in 25 PA Code 123.1(a)(1) -- (9) (relating to prohibition of certain fugitive emissions).

**# 006 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[62-017G]

a) The total tank VOC emissions from the following sources shall not exceed 24.57 lbs/hr and 107.6 tons/yr (based on a consecutive 12-month period): Tanks 409, 410, 234, 236, 240, 647, 648, 326, 224, 225, 431, 432, 434, 244, 245, and 430.

b) The total fugitive VOC emissions for components subject to LDAR from the following units shall not exceed 93.3 lbs/hr and 312.4 tons/yr (based on a consecutive 12-month period): Crude, Preflash, DHT1, Reformer, Light Stabilizer, Prefract II, Pretreater, Sat Gas, FCC, FCC Gas Con, FCC Gas Treating, Alky, SRU II, East Tanks, Filters #2 and #3, Gas Blending #1 and #2, Loading Areas, Rail Loading #1, West Tanks, VCU, Isom, and DHT II.

c) The total wastewater fugitive VOC emissions from the facility shall not exceed 51.46 lbs/hr and 225.4 tons/yr (based on a consecutive 12-month period).

d) The total fugitive emissions from the south cooling water tower shall not exceed the following:

- i) VOC - 0.25 lbs/hr and 1.1 tons/yr (based on a consecutive 12-month period);
- ii) TSP - 0.14 lbs/hr and 0.6 tons/yr (based on a consecutive 12-month period); and,
- iii) PM10 - 0.1 lbs/hr and 0.6 tons/yr (based on a consecutive 12-month period).

**# 007 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

The permittee shall limit the SO<sub>2</sub> emissions from the sources burning refinery fuel gas to 0.0268 lb/mmBtu and the H<sub>2</sub>S concentration in the fuel gas to 162 ppm.

[This condition pertains to Sources 031-035, 042, 049-057, and 102-107]

**II. TESTING REQUIREMENTS.****# 008 [25 Pa. Code §123.43]****Measuring techniques**

Visible emissions may be measured using either of the following:

- (1) A device approved by the Department and maintained to provide accurate opacity measurements.
- (2) Observers, trained and qualified to measure plume opacity with the naked eye or with the aid of any devices approved by the Department.

**# 009 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The Department reserves the right to require exhaust stack testing of any source(s) as necessary to verify emissions for purposes including determining the correct emission fee, malfunctions, or determining compliance with any applicable requirement.

**III. MONITORING REQUIREMENTS.****# 010 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

a) The permittee shall conduct daily monitoring of the facility property, while the facility is operating, to observe for the presence of fugitive emissions and visible emissions being emitted into the outdoor atmosphere.

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b) All detected fugitive emissions or visible emissions shall be reported to the Site Supervisor or his designated representative.

**# 011 [40 CFR Part 61 NESHAPs §40 CFR 61.354]****Subpart FF--National Emission Standard for Benzene Waste Operations****Monitoring of operations.**

(a) Except for a treatment process or waste stream complying with §61.348(d), the owner or operator shall monitor each treatment process or wastewater treatment system unit to ensure the unit is properly operated and maintained by one of the following monitoring procedures:

(1) Measure the benzene concentration of the waste stream exiting the treatment process complying with §61.348(a)(1)(i) at least once per month by collecting and analyzing one or more samples using the procedures specified in §61.355(c)(3).

(2) Install, calibrate, operate, and maintain according to manufacturer's specifications equipment to continuously monitor and record a process parameter (or parameters) for the treatment process or wastewater treatment system unit that indicates proper system operation. The owner or operator shall inspect at least once each operating day the data recorded by the monitoring equipment (e.g., temperature monitor or flow indicator) to ensure that the unit is operating properly.

(b) If an owner or operator complies with the requirements of §61.348(b), then the owner or operator shall monitor each wastewater treatment system to ensure the unit is properly operated and maintained by the appropriate monitoring procedure as follows:

(1) For the first exempt waste management unit in each waste treatment train, other than an enhanced biodegradation unit, measure the flow rate, using the procedures of §61.355(b), and the benzene concentration of each waste stream entering the unit at least once per month by collecting and analyzing one or more samples using the procedures specified in §61.355(c)(3).

(2) For each enhanced biodegradation unit that is the first exempt waste management unit in a treatment train, measure the benzene concentration of each waste stream entering the unit at least once per month by collecting and analyzing one or more samples using the procedures specified in §61.355(c)(3).

(c) An owner or operator subject to the requirements in §61.349 of this subpart shall install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor the control device operation as specified in the following paragraphs, unless alternative monitoring procedures or requirements are approved for that facility by the Administrator. The owner or operator shall inspect at least once each operating day the data recorded by the monitoring equipment (e.g., temperature monitor or flow indicator) to ensure that the control device is operating properly.

(1) For a thermal vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of  $\pm 1$  percent of the temperature being monitored in  $^{\circ}\text{C}$  or  $\pm 0.5$   $^{\circ}\text{C}$ , whichever is greater. The temperature sensor shall be installed at a representative location in the combustion chamber.

(2) For a catalytic vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature at two locations, and have an accuracy of  $\pm 1$  percent of the temperature being monitored in  $^{\circ}\text{C}$  or  $\pm 0.5$   $^{\circ}\text{C}$ , whichever is greater. One temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed inlet and a second temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed outlet.

(3) For a flare, a monitoring device in accordance with 40 CFR 60.18(f)(2) equipped with a continuous recorder.

(4) For a boiler or process heater having a design heat input capacity less than 44 MW (150 × 10<sup>6</sup> BTU/hr), a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of  $\pm 1$  percent of the temperature being monitored in  $^{\circ}\text{C}$  or  $\pm 0.5$   $^{\circ}\text{C}$ , whichever is greater. The temperature sensor shall be installed at a representative location in the combustion chamber.

(5) For a boiler or process heater having a design heat input capacity greater than or equal to 44 MW (150 × 10<sup>6</sup> BTU/hr), a

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monitoring device equipped with a continuous recorder to measure a parameter(s) that indicates good combustion operating practices are being used.

(6) For a condenser, either:

(i) A monitoring device equipped with a continuous recorder to measure either the concentration level of the organic compounds or the concentration level of benzene in the exhaust vent stream from the condenser; or

(ii) A temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature at two locations, and have an accuracy of  $\pm 1$  percent of the temperature being monitored in  $^{\circ}\text{C}$  or  $\pm 0.5$   $^{\circ}\text{C}$ , whichever is greater. One temperature sensor shall be installed at a location in the exhaust stream from the condenser, and a second temperature sensor shall be installed at a location in the coolant fluid exiting the condenser.

(7) For a carbon adsorption system that regenerates the carbon bed directly in the control device such as a fixed-bed carbon adsorber, either:

(i) A monitoring device equipped with a continuous recorder to measure either the concentration level of the organic compounds or the benzene concentration level in the exhaust vent stream from the carbon bed; or

(ii) A monitoring device equipped with a continuous recorder to measure a parameter that indicates the carbon bed is regenerated on a regular, predetermined time cycle.

(8) For a vapor recovery system other than a condenser or carbon adsorption system, a monitoring device equipped with a continuous recorder to measure either the concentration level of the organic compounds or the benzene concentration level in the exhaust vent stream from the control device.

(9) For a control device subject to the requirements of §61.349(a)(2)(iv), devices to monitor the parameters as specified in §61.349(a)(2)(iv)(C).

(d) For a carbon adsorption system that does not regenerate the carbon bed directly on site in the control device (e.g., a carbon canister), either the concentration level of the organic compounds or the concentration level of benzene in the exhaust vent stream from the carbon adsorption system shall be monitored on a regular schedule, and the existing carbon shall be replaced with fresh carbon immediately when carbon breakthrough is indicated. The device shall be monitored on a daily basis or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater. As an alternative to conducting this monitoring, an owner or operator may replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval that is determined by the maximum design flow rate and either the organic concentration or the benzene concentration in the gas stream vented to the carbon adsorption system.

(e) An alternative operation or process parameter may be monitored if it can be demonstrated that another parameter will ensure that the control device is operated in conformance with these standards and the control device's design specifications.

(f) Owners or operators using a closed-vent system that contains any bypass line that could divert a vent stream from a control device used to comply with the provisions of this subpart shall do the following:

(1) Visually inspect the bypass line valve at least once every month, checking the position of the valve and the condition of the car-seal or closure mechanism required under §61.349(a)(1)(ii) to ensure that the valve is maintained in the closed position and the vent stream is not diverted through the bypass line.

(2) Visually inspect the readings from each flow monitoring device required by §61.349(a)(1)(ii) at least once each operating day to check that vapors are being routed to the control device as required.

(g) Each owner or operator who uses a system for emission control that is maintained at a pressure less than atmospheric pressure with openings to provide dilution air shall install, calibrate, maintain, and operate according to the manufacturer's specifications a device equipped with a continuous recorder to monitor the pressure in the unit to ensure

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that it is less than atmospheric pressure.

**IV. RECORDKEEPING REQUIREMENTS.****# 012 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

The permittee, for each source, shall keep records of the emissions for each month and maintain these emissions on a 12-month rolling basis.

**# 013 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

a) The permittee shall maintain a record of the daily monitoring conducted pursuant to Condition #009, above.

b) This recordkeeping shall contain a listing or notation of any and all sources of fugitive emissions or visible emissions; the cause of the fugitive emissions or visible emissions; duration of the emission; and the corrective action taken to abate the deviation and prevent future occurrences.

**# 014 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The facility shall keep daily records of the flow rate for the sour water stripping tower.

[Additional authority for this requirement based on eRFD #4078 approved by the Department on November 27, 2013.]

**# 015 [25 Pa. Code §129.95]****Recordkeeping**

a) The owner and operator of a major NO<sub>x</sub> emitting facility or a major VOCs emitting facility shall keep records to demonstrate compliance with 25 PA Code 129.91 -- 129.94.

b) The records shall provide sufficient data and calculations to clearly demonstrate that the requirements of 25 PA Code 129.91 -- 129.94 are met.

c) Data or information required to determine compliance shall be recorded and maintained in a time frame consistent with the averaging period of the requirement.

d) The records shall be retained for at least 5 years and shall be made available to the Department on request.

e) 25 PA Code 129.95(e) is not applicable.

**# 016 [25 Pa. Code §135.5]****Recordkeeping**

The permittee shall maintain and make available upon request by the Department records including computerized records that may be necessary to comply with 25 PA Code 135.3 and 135.21 (relating to reporting; and emission statements). These may include records of production, fuel usage, maintenance of production or pollution control equipment or other information determined by the Department to be necessary for identification and quantification of potential and actual air contaminant emissions. If direct recordkeeping is not possible or practical, sufficient records shall be kept to provide the needed information by indirect means.

**# 017 [40 CFR Part 61 NESHAPs §40 CFR 61.356]****Subpart FF--National Emission Standard for Benzene Waste Operations****Recordkeeping requirements.**

(a) Each owner or operator of a facility subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section. Each record shall be maintained 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.

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(b) Each owner or operator shall maintain records that identify each waste stream at the facility subject to this subpart, and indicate whether or not the waste stream is controlled for benzene emissions in accordance with this subpart. In addition the owner or operator shall maintain the following records:

(1) 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.

(2) For each waste stream exempt from §61.342(c)(1) in accordance with §61.342(c)(3), the records shall include:

(i) All measurements, calculations, and other documentation used to determine that the continuous flow of process wastewater is less than 0.02 liters (0.005 gallons) per minute or the annual waste quantity of process wastewater is less than 10 Mg/yr (11 ton/yr) in accordance with §61.342(c)(3)(i), or

(ii) All measurements, calculations, and other documentation used to determine that the sum of the total annual benzene quantity in all exempt waste streams does not exceed 2.0 Mg/yr (2.2 ton/yr) in accordance with §61.342(c)(3)(ii).

(3) For each facility where process wastewater streams are controlled for benzene emissions in accordance with §61.342(d) of this subpart, the records shall include for each treated process wastewater stream all measurements, calculations, and other documentation used to determine the annual benzene quantity in the process wastewater stream exiting the treatment process.

(4) For each facility where waste streams are controlled for benzene emissions in accordance with §61.342(e), the records shall include for each waste stream all measurements, including the locations of the measurements, calculations, and other documentation used to determine that the total benzene quantity does not exceed 6.0 Mg/yr (6.6 ton/yr).

(5) For each facility where the annual waste quantity for process unit turnaround waste is determined in accordance with §61.355(b)(5), the records shall include all test results, measurements, calculations, and other documentation used to determine the following information: identification of each process unit at the facility 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(b)(5), 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.

(6) For each facility where wastewater streams are controlled for benzene emissions in accordance with §61.348(b)(2), the records shall include all measurements, calculations, and other documentation used to determine the annual benzene content of the waste streams and the total annual benzene quantity contained in all waste streams managed or treated in exempt waste management units.

(c) An owner or operator transferring waste off-site to another facility for treatment in accordance with §61.342(f) shall maintain documentation for each offsite waste shipment that includes the following information: Date waste is shipped offsite, quantity of waste shipped offsite, name and address of the facility receiving the waste, and a copy of the notice sent with the waste shipment.

(d) An owner or operator using control equipment in accordance with §§61.343 through 61.347 shall maintain engineering design documentation for all control equipment that is installed on the waste management unit. The documentation shall be retained for the life of the control equipment. If a control device is used, then the owner or operator shall maintain the control device records required by paragraph (f) of this section.

(e) An owner or operator using a treatment process or wastewater treatment system unit in accordance with §61.348 of this subpart shall maintain the following records. The documentation shall be retained for the life of the unit.

(1) A statement signed and dated by the owner or operator certifying that the 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



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expected to occur.

(2) If engineering calculations are used to determine treatment process or wastewater treatment system unit performance, then the owner or operator shall maintain the complete design analysis for the unit. The design analysis shall include for example the following information: Design specifications, drawings, schematics, piping and instrumentation diagrams, and other documentation necessary to demonstrate the unit performance.

(3) If performance tests are used to determine treatment process or wastewater treatment system unit performance, then the owner or operator shall maintain all test information necessary to demonstrate the unit performance.

(i) A description of the unit including the following information: type of treatment process; manufacturer name and model number; and for each waste stream entering and exiting the unit, the waste stream type (e.g., process wastewater, sludge, slurry, etc.), and the design flow rate and benzene content.

(ii) Documentation describing the test protocol and the means by which sampling variability and analytical variability were accounted for in the determination of the unit performance. The description of the test protocol shall include the following information: sampling locations, sampling method, sampling frequency, and analytical procedures used for sample analysis.

(iii) Records of unit operating conditions during each test run including all key process parameters.

(iv) All test results.

(4) If a control device is used, then the owner or operator shall maintain the control device records required by paragraph (f) of this section.

(f) An owner or operator using a closed-vent system and control device in accordance with §61.349 of this subpart shall maintain the following records. The documentation shall be retained for the life of the control device.

(1) A statement signed and dated by the owner or operator certifying that the closed-vent system and control device is designed to operate at the documented performance level when the waste management unit vented to the control device is or would be operating at the highest load or capacity expected to occur.

(2) If engineering calculations are used to determine control device performance in accordance with §61.349(c), then a design analysis for the control device that includes for example:

(i) Specifications, drawings, schematics, and piping and instrumentation diagrams prepared by the owner or operator, or the control device manufacturer or vendor that describe the control device design based on acceptable engineering texts. The design analysis shall address the following vent stream characteristics and control device operating parameters:

(A) For a thermal vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.

(B) For a catalytic vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

(C) For a boiler or process heater, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average flame zone temperatures, combustion zone residence time, and description of method and location where the vent stream is introduced into the flame zone.

(D) For a flare, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also consider the requirements specified in 40 CFR 60.18.

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(E) For a condenser, the design analysis shall consider the vent stream composition, constituent concentration, flow rate, relative humidity, and temperature. The design analysis shall also establish the design outlet organic compound concentration level or the design outlet benzene concentration level, design average temperature of the condenser exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet.

(F) For a carbon adsorption system that regenerates the carbon bed directly on-site in the control device such as a fixed-bed adsorber, the design analysis shall consider the vent stream composition, constituent concentration, flow rate, relative humidity, and temperature. The design analysis shall also establish the design exhaust vent stream organic compound concentration level or the design exhaust vent stream benzene concentration level, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total steam flow over the period of each complete carbon bed regeneration cycle, duration of the carbon bed steaming and cooling/drying cycles, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon.

(G) For a carbon adsorption system that does not regenerate the carbon bed directly on-site in the control device, such as a carbon canister, the design analysis shall consider the vent stream composition, constituent concentration, flow rate, relative humidity, and temperature. The design 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.

(H) For a control device subject to the requirements of §61.349(a)(2)(iv), the design analysis shall consider the vent stream composition, constituent concentration, and flow rate. The design analysis shall also include all of the information submitted under §61.349 (a)(2)(iv).

(ii) [Reserved]

(3) If performance tests are used to determine control device performance in accordance with §61.349(c) of this subpart:

(i) A description of how it is determined that the test is conducted when the waste management unit or treatment process is operating at the highest load or capacity level. This description shall include the estimated or design flow rate and organic content of each vent stream and definition of the acceptable operating ranges of key process and control parameters during the test program.

(ii) A description of the control device including the type of control device, control device manufacturer's name and model number, control device dimensions, capacity, and construction materials.

(iii) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

(iv) All test results.

(g) An owner or operator shall maintain a record for each visual inspection required by §§61.343 through 61.347 of this subpart that identifies a problem (such as a broken seal, gap or other problem) which could result in benzene emissions. The record shall include the date of the inspection, waste management unit and control equipment location where the problem is identified, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed.

(h) An owner or operator shall maintain a record for each test of no detectable emissions required by §§61.343 through 61.347 and §61.349 of this subpart. The record shall include the following information: date the test is performed, background level measured during test, and maximum concentration indicated by the instrument reading measured for each potential leak interface. If detectable emissions are measured at a leak interface, then the record shall also include the waste management unit, control equipment, and leak interface location where detectable emissions were measured, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed.

(i) For each treatment process and wastewater treatment system unit operated to comply with §61.348, the owner or

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operator shall maintain documentation that includes the following information regarding the unit operation:

- (1) Dates of startup and shutdown of the unit.
  - (2) If measurements of waste stream benzene concentration are performed in accordance with §61.354(a)(1) of this subpart, the owner or operator shall maintain records that include date each test is performed and all test results.
  - (3) If a process parameter is continuously monitored in accordance with §61.354(a)(2) of this subpart, the owner or operator shall maintain records that include a description of the operating parameter (or parameters ) to be monitored to ensure that the unit will be operated in conformance with these standards and the unit's design specifications, and an explanation of the criteria used for selection of that parameter (or parameters). This documentation shall be kept for the life of the unit.
  - (4) If measurements of waste stream benzene concentration are performed in accordance with §61.354(b), the owner or operator shall maintain records that include the date each test is performed and all test results.
  - (5) Periods when the unit is not operated as designed.
- (j) For each control device, the owner or operator shall maintain documentation that includes the following information regarding the control device operation:
- (1) Dates of startup and shutdown of the closed-vent system and control device.
  - (2) A description of the operating parameter (or parameters ) to be monitored to ensure that the control device will be operated in conformance with these standards and the control device's design specifications and an explanation of the criteria used for selection of that parameter (or parameters). This documentation shall be kept for the life of the control device.
  - (3) Periods when the closed-vent system and control device are not operated as designed including all periods and the duration when:
    - (i) Any valve car-seal or closure mechanism required under §61.349(a)(1)(ii) is broken or the by-pass line valve position has changed.
    - (ii) The flow monitoring devices required under §61.349(a)(1)(ii) indicate that vapors are not routed to the control device as required.
  - (4) If a thermal vapor incinerator is used, then the owner or operator shall maintain continuous records of the temperature of the gas stream in the combustion zone of the incinerator and records of all 3-hour periods of operation during which the average temperature of the gas stream in the combustion zone is more than 28 °C (50 °F) below the design combustion zone temperature.
  - (5) If a catalytic vapor incinerator is used, then the owner or operator shall maintain continuous records of the temperature of the gas stream both upstream and downstream of the catalyst bed of the incinerator, records of all 3-hour periods of operation during which the average temperature measured before the catalyst bed is more than 28 °C (50 °F) below the design gas stream temperature, and records of all 3-hour periods of operation during which the average temperature difference across the catalyst bed is less than 80 percent of the design temperature difference.
  - (6) If a boiler or process heater is used, then the owner or operator shall maintain records of each occurrence when there is a change in the location at which the vent stream is introduced into the flame zone as required by §61.349(a)(2)(i)(C). For a boiler or process heater having a design heat input capacity less than 44 MW (150 × 10<sup>6</sup> BTU/hr), the owner or operator shall maintain continuous records of the temperature of the gas stream in the combustion zone of the boiler or process heater and records of all 3-hour periods of operation during which the average temperature of the gas stream in the combustion zone is more than 28 °C (50 °F) below the design combustion zone temperature. For a boiler or process heater having a design heat input capacity greater than or equal to 44 MW (150 × 10<sup>6</sup> BTU/hr), the owner or operator shall maintain continuous records of the parameter(s) monitored in accordance with the requirements of §61.354(c)(5).

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- (7) If a flare is used, then the owner or operator shall maintain continuous records of the flare pilot flame monitoring and records of all periods during which the pilot flame is absent.
- (8) If a condenser is used, then the owner or operator shall maintain records from the monitoring device of the parameters selected to be monitored in accordance with §61.354(c)(6). If concentration of organics or concentration of benzene in the control device outlet gas stream is monitored, then the owner or operator shall record all 3-hour periods of operation during which the concentration of organics or the concentration of benzene in the exhaust stream is more than 20 percent greater than the design value. If the temperature of the condenser exhaust stream and coolant fluid is monitored, then the owner or operator shall record all 3-hour periods of operation during which the temperature of the condenser exhaust vent stream is more than 6 °C (11 °F) above the design average exhaust vent stream temperature, or the temperature of the coolant fluid exiting the condenser is more than 6 °C (11 °F) above the design average coolant fluid temperature at the condenser outlet.
- (9) If a carbon adsorber is used, then the owner or operator shall maintain records from the monitoring device of the concentration of organics or the concentration of benzene in the control device outlet gas stream. If the concentration of organics or the concentration of benzene in the control device outlet gas stream is monitored, then the owner or operator shall record all 3-hour periods of operation during which the concentration of organics or the concentration of benzene in the exhaust stream is more than 20 percent greater than the design value. If the carbon bed regeneration interval is monitored, then the owner or operator shall record each occurrence when the vent stream continues to flow through the control device beyond the predetermined carbon bed regeneration time.
- (10) If a carbon adsorber that is not regenerated directly on site in the control device is used, then the owner or operator shall maintain records of dates and times when the control device is monitored, when breakthrough is measured, and shall record the date and time then the existing carbon in the control device is replaced with fresh carbon.
- (11) If an alternative operational or process parameter is monitored for a control device, as allowed in §61.354(e) of this subpart, then the owner or operator shall maintain records of the continuously monitored parameter, including periods when the device is not operated as designed.
- (12) If a control device subject to the requirements of §61.349(a)(2)(iv) is used, then the owner or operator shall maintain records of the parameters that are monitored and each occurrence when the parameters monitored are outside the range of values specified in §61.349(a)(2)(iv)(C), or other records as specified by the Administrator.
- (k) An owner or operator who elects to install and operate the control equipment in §61.351 of this subpart shall comply with the recordkeeping requirements in 40 CFR 60.115b.
- (l) An owner or operator who elects to install and operate the control equipment in §61.352 of this subpart shall maintain records of the following:
- (1) The date, location, and corrective action for each visual inspection required by 40 CFR 60.693-2(a)(5), during which a broken seal, gap, or other problem is identified that could result in benzene emissions.
- (2) Results of the seal gap measurements required by 40 CFR 60.693-2(a).
- (m) If a system is used for emission control that is maintained at a pressure less than atmospheric pressure with openings to provide dilution air, then the owner or operator shall maintain records of the monitoring device and records of all periods during which the pressure in the unit is operated at a pressure that is equal to or greater than atmospheric pressure.
- (n) Each owner or operator using a total enclosure to comply with control requirements for tanks in §61.343 or the control requirements for containers in §61.345 must keep the records required in paragraphs (n)(1) and (2) of this section. Owners or operators may use records as required in 40 CFR 264.1089(b)(2)(iv) or 40 CFR 265.1090(b)(2)(iv) for a tank or as required in 40 CFR 264.1089(d)(1) or 40 CFR 265.1090(d)(1) for a container to meet the recordkeeping requirement in paragraph (n)(1) of this section. The owner or operator must make the records of each verification of a total enclosure available for inspection upon request.
- (1) Records of the most recent set of calculations and measurements performed to verify that the enclosure meets the

**SECTION C. Site Level Requirements**

criteria of a permanent total enclosure as specified in "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" in 40 CFR 52.741, appendix B;

(2) Records required for a closed-vent system and control device according to the requirements in paragraphs (d) (f), and (j) of this section.

**V. REPORTING REQUIREMENTS.****# 018 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

(a) The permittee shall notify the Department, at (814) 332-6940 (during business hours) or (800) 373-3398 (during non-business hours), within two (2) hours of becoming knowledgeable of any malfunction of the source(s) or associated air pollution control devices listed in Section A (including facility fugitives) of this permit, which results in or may possibly result in, the emission of air contaminants in excess of the limitations specified in this permit and/or regulations contained in 25 Pa. Code Article III that are not measured by a Department certified continuous emission monitor.

(b) Malfunction(s) which occur at this Title V facility, that pose(s) an imminent danger to public health, safety, welfare, or the environment or that create emissions which would violate permit conditions if the source were to continue to operate after the malfunction, shall be immediately reported to the Department by telephone at the above number(s).

(c) A written report shall be submitted to the Department within seven (7) working days following the notification of the incident, and shall describe, at a minimum, the following:

- (1) The malfunction(s).
- (2) The emissions [type of contaminant(s); approximate amount (if known)].
- (3) The duration.
- (4) Any corrective action taken.

(d) All emissions produced by the facility during malfunction events shall be included in the annual emission inventory for the source causing the emission, and the annual emission fee paid by the facility, and in determining compliance with all emissions limits contained in this permit, unless specifically exempted by regulation.

**# 019 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

Any exceedances of the permitted limits for the sources identified in this permit shall be reported semi-annually in the Title V required monitoring report (Section B Condition #023)

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**# 020 [25 Pa. Code §135.21]****Emission statements**

a) The permittee shall provide the Department with a statement, in a form as the Department may prescribe, for classes or categories of sources, showing the actual emissions of oxides of nitrogen and VOCs from that source for each reporting period, a description of the method used to calculate the emissions and the time period over which the calculation is based. The statement shall contain a certification by a company officer or the plant manager that the information contained in the statement is accurate.

b) Annual emission statements are due by March 1 for the preceding calendar year, and shall provide data consistent with requirements and guidance developed by the EPA. The guidance document is available from: United States Environmental Protection Agency, 401 M. Street, S.W., Washington, D.C. 20460. The Department may require more frequent submittals if the Department determines that one or more of the following applies:

- (1) A more frequent submission is required by the EPA.
- (2) Analysis of the data on a more frequent basis is necessary to implement the requirements of the act.

**SECTION C. Site Level Requirements****# 021 [25 Pa. Code §135.3]****Reporting**

a) The permittee shall submit by March 1 of each year a source report for the preceding calendar year. The report shall include information for all previously reported sources, new sources which were first operated during the preceding calendar year and sources modified during the same period which were not previously reported.

b) The permittee may request an extension of time from the Department for the filing of a source report, and the Department may grant the extension for reasonable cause.

**# 022 [25 Pa. Code §135.4]****Report format**

All source reports shall contain sufficient information to enable the Department to complete its emission inventory. Source reports shall be made by the source owner or operator in a format specified by the Department.

**# 023 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4]****Subpart A - General Provisions****Address.**

All requests, reports, applications, submittals, and other communications to the Administrator pursuant to this part shall be submitted in duplicate to the appropriate Regional Office of the U.S. Environmental Protection Agency to the attention of the Director of the Division indicated in the following list of EPA Regional Offices.

**# 024 [40 CFR Part 61 NESHAPs §40 CFR 61.357]****Subpart FF--National Emission Standard for Benzene Waste Operations****Reporting requirements.**

(a) Each owner or operator of a chemical plant, petroleum refinery, coke by-product recovery plant, and any facility managing wastes from these industries shall submit to the Administrator within 90 days after January 7, 1993, or by the initial startup for a new source with an initial startup after the effective date, a report that summarizes the regulatory status of each waste stream subject to §61.342 and is determined by the procedures specified in §61.355(c) to contain benzene. Each owner or operator subject to this subpart who has no benzene onsite in wastes, products, by-products, or intermediates shall submit an initial report that is a statement to this effect. For all other owners or operators subject to this subpart, the report shall include the following information:

(1) Total annual benzene quantity from facility waste determined in accordance with §61.355(a) of this subpart.

(2) A table identifying each waste stream and whether or not the waste stream will be controlled for benzene emissions in accordance with the requirements of this subpart.

(3) For each waste stream identified as not being controlled for benzene emissions in accordance with the requirements of this subpart the following information shall be added to the table:

(i) Whether or not the water content of the waste stream is greater than 10 percent;

(ii) Whether or not the waste stream is a process wastewater stream, product tank drawdown, or landfill leachate;

(iii) Annual waste quantity for the waste stream;

(iv) Range of benzene concentrations for the waste stream;

(v) Annual average flow-weighted benzene concentration for the waste stream; and

(vi) Annual benzene quantity for the waste stream.

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(4) The information required in paragraphs (a) (1), (2), and (3) of this section should represent the waste stream characteristics based on current configuration and operating conditions. An owner or operator only needs to list in the report those waste streams that contact materials containing benzene. The report does not need to include a description of the controls to be installed to comply with the standard or other information required in §61.10(a).

(b) If the total annual benzene quantity from facility waste is less than 1 Mg/yr (1.1 ton/yr), then the owner or operator shall submit to the Administrator a report that updates the information listed in paragraphs (a)(1) through (a)(3) of this section whenever there is a change in the process generating the waste stream that could cause the total annual benzene quantity from facility waste to increase to 1 Mg/yr (1.1 ton/yr) or more.

(c) If the total annual benzene quantity from facility waste is less than 10 Mg/yr (11 ton/yr) but is equal to or greater than 1 Mg/yr (1.1 ton/yr), then the owner or operator shall submit to the Administrator a report that updates the information listed in paragraphs (a)(1) through (a)(3) of this section. The report shall be submitted annually and whenever there is a change in the process generating the waste stream that could cause the total annual benzene quantity from facility waste to increase to 10 Mg/yr (11 ton/yr) or more. If the information in the annual report required by paragraphs (a)(1) through (a)(3) of this section is not changed in the following year, the owner or operator may submit a statement to that effect.

(d) If the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr (11 ton/yr), then the owner or operator shall submit to the Administrator the following reports:

(1) Within 90 days after January 7, 1993, unless a waiver of compliance under §61.11 of this part is granted, or by the date of initial startup for a new source with an initial startup after the effective date, a certification that the equipment necessary to comply with these standards has been installed and that the required initial inspections or tests have been carried out in accordance with this subpart. If a waiver of compliance is granted under §61.11, the certification of equipment necessary to comply with these standards shall be submitted by the date the waiver of compliance expires.

(2) Beginning on the date that the equipment necessary to comply with these standards has been certified in accordance with paragraph (d)(1) of this section, the owner or operator shall submit annually to the Administrator a report that updates the information listed in paragraphs (a)(1) through (a)(3) of this section. If the information in the annual report required by paragraphs (a)(1) through (a)(3) of this section is not changed in the following year, the owner or operator may submit a statement to that effect.

(3) If an owner or operator elects to comply with the requirements of §61.342(c)(3)(ii), then the report required by paragraph (d)(2) of this section shall include a table identifying each waste stream chosen for exemption and the total annual benzene quantity in these exempted streams.

(4) If an owner or operator elects to comply with the alternative requirements of §61.342(d) of this subpart, then he shall include in the report required by paragraph (d)(2) of this section a table presenting the following information for each process wastewater stream:

(i) Whether or not the process wastewater stream is being controlled for benzene emissions in accordance with the requirements of this subpart;

(ii) For each process wastewater stream identified as not being controlled for benzene emissions in accordance with the requirements of this subpart, the table shall report the following information for the process wastewater stream as determined at the point of waste generation: annual waste quantity, range of benzene concentrations, annual average flow-weighted benzene concentration, and annual benzene quantity;

(iii) For each process wastewater stream identified as being controlled for benzene emissions in accordance with the requirements of this subpart, the table shall report the following information for the process wastewater stream as determined at the exit to the treatment process: Annual waste quantity, range of benzene concentrations, annual average flow-weighted benzene concentration, and annual benzene quantity.

(5) If an owner or operator elects to comply with the alternative requirements of §61.342(e), then the report required by paragraph (d)(2) of this section shall include a table presenting the following information for each waste stream:

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- (i) For each waste stream identified as not being controlled for benzene emissions in accordance with the requirements of this subpart; the table shall report the following information for the waste stream as determined at the point of waste generation: annual waste quantity, range of benzene concentrations, annual average flow-weighted benzene concentration, and annual benzene quantity;
- (ii) For each waste stream identified as being controlled for benzene emissions in accordance with the requirements of this subpart; the table shall report the following information for the waste stream as determined at the applicable location described in §61.355(k)(2): Annual waste quantity, range of benzene concentrations, annual average flow-weighted benzene concentration, and annual benzene quantity.
- (6) Beginning 3 months after the date that the equipment necessary to comply with these standards has been certified in accordance with paragraph (d)(1) of this section, the owner or operator shall submit quarterly to the Administrator a certification that all of the required inspections have been carried out in accordance with the requirements of this subpart.
- (7) Beginning 3 months after the date that the equipment necessary to comply with these standards has been certified in accordance with paragraph (d)(1) of this section, the owner or operator shall submit a report quarterly to the Administrator that includes:
- (i) If a treatment process or wastewater treatment system unit is monitored in accordance with §61.354(a)(1) of this subpart, then each period of operation during which the concentration of benzene in the monitored waste stream exiting the unit is equal to or greater than 10 ppmw.
- (ii) If a treatment process or wastewater treatment system unit is monitored in accordance with §61.354(a)(2) of this subpart, then each 3-hour period of operation during which the average value of the monitored parameter is outside the range of acceptable values or during which the unit is not operating as designed.
- (iii) If a treatment process or wastewater treatment system unit is monitored in accordance with §61.354(b), then each period of operation during which the flow-weighted annual average concentration of benzene in the monitored waste stream entering the unit is equal to or greater than 10 ppmw and/or the total annual benzene quantity is equal to or greater than 1.0 mg/yr.
- (iv) For a control device monitored in accordance with §61.354(c) of this subpart, each period of operation monitored during which any of the following conditions occur, as applicable to the control device:
- (A) Each 3-hour period of operation during which the average temperature of the gas stream in the combustion zone of a thermal vapor incinerator, as measured by the temperature monitoring device, is more than 28 °C (50 °F) below the design combustion zone temperature.
- (B) Each 3-hour period of operation during which the average temperature of the gas stream immediately before the catalyst bed of a catalytic vapor incinerator, as measured by the temperature monitoring device, is more than 28 °C (50 °F) below the design gas stream temperature, and any 3-hour period during which the average temperature difference across the catalyst bed (i.e., the difference between the temperatures of the gas stream immediately before and after the catalyst bed), as measured by the temperature monitoring device, is less than 80 percent of the design temperature difference.
- (C) Each 3-hour period of operation during which the average temperature of the gas stream in the combustion zone of a boiler or process heater having a design heat input capacity less than 44 MW (150 × 10<sup>6</sup> BTU/hr), as measured by the temperature monitoring device, is more than 28 °C (50 °F) below the design combustion zone temperature.
- (D) Each 3-hour period of operation during which the average concentration of organics or the average concentration of benzene in the exhaust gases from a carbon adsorber, condenser, or other vapor recovery system is more than 20 percent greater than the design concentration level of organics or benzene in the exhaust gas.
- (E) Each 3-hour period of operation during which the temperature of the condenser exhaust vent stream is more than 6 °C (11 °F) above the design average exhaust vent stream temperature, or the temperature of the coolant fluid exiting the condenser is more than 6 °C (11 °F) above the design average coolant fluid temperature at the condenser outlet.



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- (F) Each period in which the pilot flame of a flare is absent.
- (G) Each occurrence when there is a change in the location at which the vent stream is introduced into the flame zone of a boiler or process heater as required by §61.349(a)(2)(i)(C) of this subpart.
- (H) Each occurrence when the carbon in a carbon adsorber system that is regenerated directly on site in the control device is not regenerated at the predetermined carbon bed regeneration time.
- (I) Each occurrence when the carbon in a carbon adsorber system that is not regenerated directly on site in the control device is not replaced at the predetermined interval specified in §61.354(c) of this subpart.
- (J) Each 3-hour period of operation during which the parameters monitored are outside the range of values specified in §61.349(a)(2)(iv)(C), or any other periods specified by the Administrator for a control device subject to the requirements of §61.349(a)(2)(iv).
- (v) For a cover and closed-vent system monitored in accordance with §61.354(g), the owner or operator shall submit a report quarterly to the Administrator that identifies any period in which the pressure in the waste management unit is equal to or greater than atmospheric pressure.
- (8) Beginning one year after the date that the equipment necessary to comply with these standards has been certified in accordance with paragraph (d)(1) of this section, the owner or operator shall submit annually to the Administrator a report that summarizes all inspections required by §§61.342 through 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.
- (e) An owner or operator electing to comply with the provisions of §§61.351 or 61.352 of this subpart shall notify the Administrator of the alternative standard selected in the report required under §61.07 or §61.10 of this part.
- (f) An owner or operator who elects to install and operate the control equipment in §61.351 of this subpart shall comply with the reporting requirements in 40 CFR 60.115b.
- (g) An owner or operator who elects to install and operate the control equipment in §61.352 of this subpart shall submit initial and quarterly reports that identify all seal gap measurements, as required in 40 CFR 60.693-2(a), that are outside the prescribed limits.

**# 025 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.13]****Subpart A--General Provisions****Addresses of State air pollution control agencies and EPA Regional Offices.**

This condition is applicable to source 042

All requests, reports, applications, submittals, and other communications to the Administrator pursuant to this part shall be submitted to the appropriate Regional Office of the U.S. Environmental Protection Agency indicated in the following list of EPA Regional Office.

**VI. WORK PRACTICE REQUIREMENTS.****# 026 [25 Pa. Code §123.1]****Prohibition of certain fugitive emissions**

The permittee responsible for any source specified in Condition #001, above, shall take all reasonable actions to prevent particulate matter from becoming airborne. These actions shall include, but not be limited to, the following:

- (1) Use, where possible, of water or chemicals for control of dust in the demolition of buildings or structures, construction operations, the grading of roads, or the clearing of land.
- (2) Application of asphalt, oil, water or suitable chemicals on dirt roads, material stockpiles and other surfaces which may give rise to airborne dusts.

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(3) Paving and maintenance of roadways.

(4) Prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.

**# 027 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

The facility shall meet the following requirements for the Refinery Wide LDAR Program:

**Written Refinery-Wide LDAR Program**

1. United shall develop and maintain a written program for all process units in the refinery for compliance with all applicable federal and state LDAR regulations as set forth in plan approval 62-017G. This program shall be implemented on a refinery wide basis and United shall update the program as necessary to ensure continuing compliance.
2. The program shall include:
  - (a) An overall, Refinery-wide leak rate goal that will be a target for achievement on a process-unit- by-process-unit basis;
  - (b) An identification of all equipment in light liquid and/or in gas/vapor service that has the potential to leak VOCs, HAPs, and VHAPs, within process units that are owned and maintained by the refinery;
  - (c) Procedures for identifying leaking equipment within process units that are owned and maintained by the refinery; including a chart delineating which screening values cover which process units. This should include process units that are covered by the screening values of 2500 ppm, and 1000 ppm respectively.
  - (d) Procedures for repairing and keeping track of leaking equipment;
  - (e) A process for evaluating new and replacement equipment to promote consideration and installation of equipment that will minimize leaks and/or eliminate chronic leakers;
  - (f) A definition of "LDAR Personnel" and process for accountability, and identify for the refinery the person or position that will be the "LDAR coordinator." This person shall have the authority and responsibility to implement improvements to the LDAR program; and (g) Procedures (e.g., a Management of Change program) to ensure that components subject to LDAR requirements added to the refinery during maintenance and construction are integrated into the LDAR program.

**Training**

United shall develop and begin implementing the following training programs at each refinery:

- (a.) For new LDAR personnel, United shall provide and require LDAR training prior to the employee beginning work in the LDAR group;
- (b.) For all LDAR personnel, United shall provide and require completion of annual LDAR training; and
- (c.) For all other refinery operations personnel, United shall provide and require annual review courses for LDAR monitoring.

**LDAR Audits.**

1. United Refining shall conduct one external (Third Party) Audit of the refinery-wide compliance with the LDAR regulation, to include at a minimum, each of the audit requirements set forth in Paragraph 3 during the term of the permit. Within 60 days of completion of the audit, United Refinery shall report to PADEP any areas of non-compliance identified as a result of its refinery-wide audit and if required submit in writing a proposed compliance schedule for correcting the non-compliance.
2. Within 90 days of completing the audit, United Refinery shall certify to PADEP that the audit and any related corrective actions have been completed and that the refinery is complying with the LDAR regulations as cited in this plan approval. PADEP will review United Refinery's certification and will respond with written concurrence.
3. Audit Program. United Refinery's LDAR audit program shall, at a minimum, focus on comparative monitoring, records review, tagging, data management, and observation of the LDAR technicians' calibration and monitoring techniques. During the audits, leak rates shall be calculated for each process unit where comparative monitoring was performed. These leak rates shall be based on the total number of valves in the process unit, rather than the total number of valves monitored during the audit.

**SECTION C. Site Level Requirements****# 028 [25 Pa. Code §129.55]****Petroleum refineries--specific sources**

a) Wastewater separators. No person may permit the use of a compartment of a single or multiple compartment volatile organic compound wastewater separator which compartment receives effluent water containing 200 gallons a day or more of any volatile organic compound from equipment processing, refining, treating, storing, or handling volatile organic compounds unless the compartment is equipped with one of the following vapor loss control devices--properly installed, in good working order, and in operation--as follows:

(1) A container having all openings sealed and totally enclosing the liquid contents. Gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.

(2) A container equipped with a floating roof--consisting of a pontoon-type roof, double-deck-type roof, or internal floating cover--which will rest on the surface of the contents and be equipped with closure seal or seals to close the space between the roof edge and container wall. Gauging and sampling devices shall be gas tight except when gauging or sampling is taking place.

b) Pumps and compressors. All pumps and compressors handling volatile organic compounds with a vapor pressure of greater than 1.5 psi (10.3 kilopascals) at actual conditions shall have mechanical seals. For the purpose of determining vapor pressure, a temperature no greater than 100F (37.8 C) shall be used.

c) Vacuum-producing systems. Vacuum producing systems shall conform with the following.

(1) The owner or operator of any vacuum-producing system at a petroleum refinery may not permit the emission of any volatile organic compounds from the condensers, hot wells, or accumulators of the system.

(2) The emission limit under paragraph (1) of this subsection shall be achieved by one of the following:

(i) piping the vapors to a firebox or incinerator.

(ii) compressing the vapors and adding them to the refinery fuel gas.

(iii) any method approved by the Department which recovers no less than 90% by weight of uncontrolled volatile organic compounds that would otherwise be emitted to the atmosphere.

d) Process unit turnarounds. Purging of volatile organic compounds during depressurization of reactors, fractionating columns, pipes, or vessels during unit shut-down, repair, inspection, or startup shall be performed in such a manner as to direct the volatile organic vapors to a fuel gas system, flare, or vapor recovery system until the internal pressure in such equipment reaches 19.7 psia (136 kilopascals).

**VII. ADDITIONAL REQUIREMENTS.****# 029 [25 Pa. Code §121.7]****Prohibition of air pollution.**

No person may permit air pollution as that term is defined in the act.

**# 030 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017G]

The prefrac I unit was shut down in 1994 and shall no longer be operated.

**# 031 [25 Pa. Code §127.25]****Compliance requirement.**

A person may not cause or permit the operation of a source subject to 127.11 (relating to plan approval requirements), unless the source and air cleaning devices identified in the application for the plan approval and the plan approval issued to the source, are operated and maintained in accordance with specifications in the application and conditions in the plan

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approval issued by the Department. A person may not cause or permit the operation of an air contamination source subject to this chapter in a manner inconsistent with good operating practices.

**# 032 [25 Pa. Code §127.512]****Operating permit terms and conditions.**

The permittee can modify the mixture of pollutants regulated under section 112 which are VOCs or PM10 so long as the emission limitations of the permit are not violated. The permittee shall keep a log which identifies the mixture of pollutants regulated under section 112 and report the changes in the mixture of pollutants regulated under section 112 with the next report required to be provided to the Department.

**# 033 [25 Pa. Code §129.14]****Open burning operations**

The permittee may not permit the open burning of material in a manner that:

- (1) The emissions are visible, at any time, at the point such emissions pass outside the property of the person on whose land the open burning is being conducted.
- (2) Malodorous air contaminants from the open burning are detectable outside the property of the person on whose land the open burning is being conducted.
- (3) The emissions interfere with the reasonable enjoyment of life or property.
- (4) The emissions cause damage to vegetation or property.
- (5) The emissions are or may be deleterious to human or animal health.

Exceptions: The requirements above do not apply where the open burning operations result from:

- (1) A fire set to prevent or abate a fire hazard, when approved by the Department and set by or under the supervision of a public officer.
- (2) A fire set for the purpose of instructing personnel in fire fighting, when approved by the Department.
- (3) A fire set for the prevention and control of disease or pests, when approved by the Department.
- (4) A fire set in conjunction with the production of agricultural commodities in their unmanufactured state on the premises of the farm operation.
- (5) A fire set for the purpose of burning domestic refuse, when the fire is on the premises of a structure occupied solely as a dwelling by two families or less and when the refuse results from the normal occupancy of such structure.
- (6) A fire set solely for recreational or ceremonial purposes.
- (7) A fire set solely for cooking food.

**# 034 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.1]****Subpart A - General Provisions****Applicability.**

This condition is applicable to Sources 034, 042, 049, 050, 052, 053, 054, 055, 056, 057, 101A, 102, 105, 106, 107, 108, 108A, 109, 201, 202, 211, 212, 213, 214, 215, 219, 220, & 224.

a) Except as provided in subparts B and C, the provisions of this part apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

b) Any new or revised standard of performance promulgated pursuant to section 111(b) of the Act shall apply to the owner

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or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of such new or revised standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

c) In addition to complying with the provisions of this part, the owner or operator of an affected facility may be required to obtain an operating permit issued to stationary sources by an authorized State air pollution control agency or by the Administrator of the U.S. Environmental Protection Agency (EPA) pursuant to title V of the Clean Air Act (Act) as amended November 15, 1990 (42 U.S.C. 7661). For more information about obtaining an operating permit see part 70 of this chapter.

**# 035 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]****Subpart J - Standards of Performance for Petroleum Refineries****Applicability, designation of affected facility, and reconstruction.**

(a) The provisions of this subpart are applicable to the following affected facilities in petroleum refineries: fluid catalytic cracking unit catalyst regenerators, fuel gas combustion devices, and all Claus sulfur recovery plants except Claus plants with a design capacity for sulfur feed of 20 long tons per day (LTD) or less. The Claus sulfur recovery plant need not be physically located within the boundaries of a petroleum refinery to be an affected facility, provided it processes gases produced within a petroleum refinery.

(b) Any fluid catalytic cracking unit catalyst regenerator or fuel gas combustion device under paragraph (a) of this section other than a flare which commences construction, reconstruction or modification after June 11, 1973, and on or before May 14, 2007, or any fuel gas combustion device under paragraph (a) of this section that is also a flare which commences construction, reconstruction or modification after June 11, 1973, and on or before June 24, 2008, or any Claus sulfur recovery plant under paragraph (a) of this section which commences construction, reconstruction or modification after October 4, 1976, and on or before May 14, 2007, is subject to the requirements of this subpart except as provided under paragraphs (c) through (e) of this section.

(c) Any fluid catalytic cracking unit catalyst regenerator under paragraph (b) of this section which commences construction, reconstruction, or modification on or before January 17, 1984, is exempted from §60.104(b).

(d) Any fluid catalytic cracking unit in which a contact material reacts with petroleum derivatives to improve feedstock quality and in which the contact material is regenerated by burning off coke and/or other deposits and that commences construction, reconstruction, or modification on or before January 17, 1984, is exempt from this subpart.

(e) Owners or operators may choose to comply with the applicable provisions of subpart Ja of this part to satisfy the requirements of this subpart for an affected facility.

(f) For purposes of this subpart, under §60.15, the "fixed capital cost of the new components" includes the fixed capital cost of all depreciable components which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following January 17, 1984. For purposes of this paragraph, "commenced" means that an owner or operator has undertaken a continuous program of component replacement or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of component replacement.

[43 FR 10868, Mar. 15, 1978, as amended at 44 FR 61543, Oct. 25, 1979; 54 FR 34026, Aug. 17, 1989; 73 FR 35865, June 24, 2008; 77 FR 56463, Sep. 12, 2012]

**# 036 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100a]****SUBPART Ja - Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007****Applicability, designation of affected facility, and reconstruction. Source: 73 FR 35867, June 24, 2008, unless otherwise noted.**

(a) The provisions of this subpart apply to the following affected facilities in petroleum refineries: fluid catalytic cracking units (FCCU), fluid coking units (FCU), delayed coking units, fuel gas combustion devices (including process heaters), flares and sulfur recovery plants. The sulfur recovery plant need not be physically located within the boundaries of a petroleum refinery to be an affected facility, provided it processes gases produced within a petroleum refinery.

**SECTION C. Site Level Requirements**

(b) Except for flares and delayed coking units, the provisions of this subpart apply only to affected facilities under paragraph (a) of this section which either commence construction, modification or reconstruction after May 14, 2007, or elect to comply with the provisions of this subpart in lieu of complying with the provisions in subpart J of this part. For flares, the provisions of this subpart apply only to flares which commence construction, modification or reconstruction after June 24, 2008. For the purposes of this subpart, a modification to a flare commences when a project that includes any of the activities in paragraphs (c)(1) or (2) of this section is commenced. For delayed coking units, the provisions of this subpart apply to delayed coking units that commence construction, reconstruction or modification on the earliest of the following dates:

(1) - (3) Not applicable

(c) For all affected facilities other than flares, the provisions in §60.14 regarding modification apply. As provided in §60.14(f), the special provisions set forth under this subpart shall supersede the provisions in §60.14 with respect to flares. For the purposes of this subpart, a modification to a flare occurs as provided in paragraphs (c)(1) or (2) of this section.

(1) Any new piping from a refinery process unit, including ancillary equipment, or a fuel gas system is physically connected to the flare (e.g., for direct emergency relief or some form of continuous or intermittent venting). However, the connections described in paragraphs (c)(1)(i) through (vii) of this section are not considered modifications of a flare.

(i) Connections made to install monitoring systems to the flare.

(ii) Connections made to install a flare gas recovery system or connections made to upgrade or enhance components of a flare gas recovery system (e.g., addition of compressors or recycle lines).

(iii) Connections made to replace or upgrade existing pressure relief or safety valves, provided the new pressure relief or safety valve has a set point opening pressure no lower and an internal diameter no greater than the existing equipment being replaced or upgraded.

(iv) Connections made for flare gas sulfur removal.

(v) Connections made to install back-up (redundant) equipment associated with the flare (such as a back-up compressor) that does not increase the capacity of the flare.

(vi) Replacing piping or moving an existing connection from a refinery process unit to a new location in the same flare, provided the new pipe diameter is less than or equal to the diameter of the pipe/connection being replaced/moved.

(vii) Connections that interconnect two or more flares.

(2) A flare is physically altered to increase the flow capacity of the flare.

(d) For purposes of this subpart, under §60.15, the "fixed capital cost of the new components" includes the fixed capital cost of all depreciable components which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following the relevant applicability date specified in paragraph (b) of this section.

[73 FR 35867, June 24, 2008, as amended at 77 FR 56464, Sep. 12, 2012; 80 FR 75230, Dec. 1, 2015]

**# 037 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.102]  
Subpart J - Standards of Performance for Petroleum Refineries  
Standard for particulate matter.**

This condition is applicable to Source 101A.

Each owner or operator of any fluid catalytic cracking unit catalyst regenerator that is subject to the requirements of this subpart shall comply with the emission limitations set forth in this section on and after the date on which the initial performance test, required by §60.8, is completed, but not later than 60 days after achieving the maximum production rate at which the fluid catalytic cracking unit catalyst regenerator will be operated, or 180 days after initial startup, whichever comes first.

**SECTION C. Site Level Requirements**

(a) No owner or operator subject to the provisions of this subpart shall discharge or cause the discharge into the atmosphere from any fluid catalytic cracking unit catalyst regenerator:

(1) Particulate matter in excess of 1.0 kg/Mg (2.0 lb/ton) of coke burn-off in the catalyst regenerator.

(2) Gases exhibiting greater than 30 percent opacity, except for one six-minute average opacity reading in any one hour period. [This condition is streamlined from the permit in favor of the more stringent State requirement found in 25 Pa Code Section 123.41]

(b) Where the gases discharged by the fluid catalytic cracking unit catalyst regenerator pass through an incinerator or waste heat boiler in which auxiliary or supplemental liquid or solid fossil fuel is burned, particulate matter in excess of that permitted by paragraph (a)(1) of this section may be emitted to the atmosphere, except that the incremental rate of particulate matter emissions shall not exceed 43 grams per Gigajoule (g/GJ) (0.10 lb/million British thermal units (Btu)) of heat input attributable to such liquid or solid fossil fuel.

**# 038 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.103]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Standard for carbon monoxide.**

This condition is applicable to Source 101A.

Each owner or operator of any fluid catalytic cracking unit catalyst regenerator that is subject to the requirements of this subpart shall comply with the emission limitations set forth in this section on and after the date on which the initial performance test, required by 40 CFR 60.8, is completed, but not later than 60 days after achieving the maximum production rate at which the fluid catalytic cracking unit catalyst regenerator will be operated, or 180 days after initial startup, whichever comes first.

a) No owner or operator subject to the provisions of this subpart shall discharge or cause the discharge into the atmosphere from any fluid catalytic cracking unit catalyst regenerator any gases that contain carbon monoxide (CO) in excess of 500 ppm by volume (dry basis).

**# 039 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.103a]**

**SUBPART Ja - Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007**

**Work practice standards.**

(a) Except as provided in paragraph (g) of this section, each owner or operator that operates a flare that is subject to this subpart shall develop and implement a written flare management plan no later than the date specified in paragraph (b) of this section. The flare management plan must include the information described in paragraphs (a)(1) through (7) of this section.

(1) A listing of all refinery process units, ancillary equipment, and fuel gas systems connected to the flare for each affected flare.

(2) An assessment of whether discharges to affected flares from these process units, ancillary equipment and fuel gas systems can be minimized. The flare minimization assessment must (at a minimum) consider the items in paragraphs (a)(2)(i) through (iv) of this section. The assessment must provide clear rationale in terms of costs (capital and annual operating), natural gas offset credits (if applicable), technical feasibility, secondary environmental impacts and safety considerations for the selected minimization alternative(s) or a statement, with justifications, that flow reduction could not be achieved. Based upon the assessment, each owner or operator of an affected flare shall identify the minimization alternatives that it has implemented by the due date of the flare management plan and shall include a schedule for the prompt implementation of any selected measures that cannot reasonably be completed as of that date.

(i) Elimination of process gas discharge to the flare through process operating changes or gas recovery at the source.

(ii) Reduction of the volume of process gas to the flare through process operating changes.

**SECTION C. Site Level Requirements**

(iii) Installation of a flare gas recovery system or, for facilities that are fuel gas rich, a flare gas recovery system and a co-generation unit or combined heat and power unit.

(iv) Minimization of sweep gas flow rates and, for flares with water seals, purge gas flow rates.

(3) A description of each affected flare containing the information in paragraphs (a)(3)(i) through (vii) of this section.

(i) A general description of the flare, including the information in paragraphs (a)(3)(i)(A) through (G) of this section.

(A) Whether it is a ground flare or elevated (including height).

(B) The type of assist system (e.g., air, steam, pressure, non-assisted).

(C) Whether it is simple or complex flare tip (e.g., staged, sequential).

(D) Whether the flare is part of a cascaded flare system (and if so, whether the flare is primary or secondary).

(E) Whether the flare serves as a backup to another flare.

(F) Whether the flare is an emergency flare or a non-emergency flare.

(G) Whether the flare is equipped with a flare gas recovery system.

(ii) Description and simple process flow diagram showing the interconnection of the following components of the flare: flare tip (date installed, manufacturer, nominal and effective tip diameter, tip drawing); knockout or surge drum(s) or pot(s) (including dimensions and design capacities); flare header(s) and subheader(s); assist system; and ignition system.

(iii) Flare design parameters, including the maximum vent gas flow rate; minimum sweep gas flow rate; minimum purge gas flow rate (if any); maximum supplemental gas flow rate; maximum pilot gas flow rate; and, if the flare is steam-assisted, minimum total steam rate.

(iv) Description and simple process flow diagram showing all gas lines (including flare, purge (if applicable), sweep, supplemental and pilot gas) that are associated with the flare. For purge, sweep, supplemental and pilot gas, identify the type of gas used. Designate which lines are exempt from sulfur, H<sub>2</sub>S or flow monitoring and why (e.g., natural gas, inherently low sulfur, pilot gas). Designate which lines are monitored and identify on the process flow diagram the location and type of each monitor.

(v) For each flow rate, H<sub>2</sub>S, sulfur content, pressure or water seal monitor identified in paragraph (a)(3)(iv) of this section, provide a detailed description of the manufacturer's specifications, including, but not limited to, make, model, type, range, precision, accuracy, calibration, maintenance and quality assurance procedures.

(vi) For emergency flares, secondary flares and flares equipped with a flare gas recovery system designed, sized and operated to capture all flows except those resulting from startup, shutdown or malfunction:

(A) Description of the water seal, including the operating range for the liquid level.

(B) Designation of the monitoring option elected (flow and sulfur monitoring or pressure and water seal liquid level monitoring).

(vii) For flares equipped with a flare gas recovery system:

(A) A description of the flare gas recovery system, including number of compressors and capacity of each compressor.

(B) A description of the monitoring parameters used to quantify the amount of flare gas recovered.



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(C) For systems with staged compressors, the maximum time period required to begin gas recovery with the secondary compressor(s), the monitoring parameters and procedures used to minimize the duration of releases during compressor staging and a justification for why the maximum time period cannot be further reduced.

(4) An evaluation of the baseline flow to the flare. The baseline flow to the flare must be determined after implementing the minimization assessment in paragraph (a)(2) of this section. Baseline flows do not include pilot gas flow or purge gas flow (i.e., gas introduced after the flare's water seal) provided these gas flows remain reasonably constant (i.e., separate flow monitors for these streams are not required). Separate baseline flow rates may be established for different operating conditions provided that the management plan includes:

(i) A primary baseline flow rate that will be used as the default baseline for all conditions except those specifically delineated in the plan;

(ii) A description of each special condition for which an alternate baseline is established, including the rationale for each alternate baseline, the daily flow for each alternate baseline and the expected duration of the special conditions for each alternate baseline; and

(iii) Procedures to minimize discharges to the affected flare during each special condition described in paragraph (a)(4)(ii) of this section, unless procedures are already developed for these cases under paragraph (a)(5) through (7) of this section, as applicable.

(5) Procedures to minimize or eliminate discharges to the flare during the planned startup and shutdown of the refinery process units and ancillary equipment that are connected to the affected flare, together with a schedule for the prompt implementation of any procedures that cannot reasonably be implemented as of the date of the submission of the flare management plan.

(6) Procedures to reduce flaring in cases of fuel gas imbalance (i.e., excess fuel gas for the refinery's energy needs), together with a schedule for the prompt implementation of any procedures that cannot reasonably be implemented as of the date of the submission of the flare management plan.

(7) For flares equipped with flare gas recovery systems, procedures to minimize the frequency and duration of outages of the flare gas recovery system and procedures to minimize the volume of gas flared during such outages, together with a schedule for the prompt implementation of any procedures that cannot reasonably be implemented as of the date of the submission of the flare management plan.

(b) Except as provided in paragraph (g) of this section, each owner or operator required to develop and implement a written flare management plan as described in paragraph (a) of this section must submit the plan to the Administrator as described in paragraphs (b)(1) through (3) of this section.

(1) The owner or operator of a newly constructed or reconstructed flare must develop and implement the flare management plan by no later than the date that the flare becomes an affected facility subject to this subpart, except for the selected minimization alternatives in paragraph (a)(2) and/or the procedures in paragraphs (a)(5) through (a)(7) of this section that cannot reasonably be implemented by that date, which the owner or operator must implement in accordance with the schedule in the flare management plan. The owner or operator of a modified flare must develop and implement the flare management plan by no later than November 11, 2015 or upon startup of the modified flare, whichever is later.

(2) The owner or operator must comply with the plan as submitted by the date specified in paragraph (b)(1) of this section. The plan should be updated periodically to account for changes in the operation of the flare, such as new connections to the flare or the installation of a flare gas recovery system, but the plan need be re-submitted to the Administrator only if the owner or operator adds an alternative baseline flow rate, revises an existing baseline as described in paragraph (a)(4) of this section, installs a flare gas recovery system or is required to change flare designations and monitoring methods as described in §60.107a(g). The owner or operator must comply with the updated plan as submitted.

(3) All versions of the plan submitted to the Administrator shall also be submitted to the following address: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, U.S. EPA Mailroom (E143-01), Attention: Refinery Sector Lead, 109 T.W. Alexander Drive, Research Triangle Park, NC 27711.

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Electronic copies in lieu of hard copies may also be submitted to [refinerynpsps@epa.gov](mailto:refinerynpsps@epa.gov).

(c) Except as provided in paragraphs (f) and (g) of this section, each owner or operator that operates a fuel gas combustion device, flare or sulfur recovery plant subject to this subpart shall conduct a root cause analysis and a corrective action analysis for each of the conditions specified in paragraphs (c)(1) through (3) of this section.

(1) For a flare:

(i) Any time the SO<sub>2</sub> emissions exceed 227 kilograms (kg) (500 lb) in any 24-hour period; or

(ii) Any discharge to the flare in excess of 14,160 standard cubic meters (m<sup>3</sup>) (500,000 standard cubic feet (scf)) above the baseline, determined in paragraph (a)(4) of this section, in any 24-hour period; or

(iii) If the monitoring alternative in §60.107a(g) is elected, any period when the flare gas line pressure exceeds the water seal liquid depth, except for periods attributable to compressor staging that do not exceed the staging time specified in paragraph (a)(3)(vii)(C) of this section.

(2) For a fuel gas combustion device, each exceedance of an applicable short-term emissions limit in §60.102a(g)(1) if the SO<sub>2</sub> discharge to the atmosphere is 227 kg (500 lb) greater than the amount that would have been emitted if the emissions limits had been met during one or more consecutive periods of excess emissions or any 24-hour period, whichever is shorter.

(3) For a sulfur recovery plant, each time the SO<sub>2</sub> emissions are more than 227 kg (500 lb) greater than the amount that would have been emitted if the SO<sub>2</sub> or reduced sulfur concentration was equal to the applicable emissions limit in §60.102a(f)(1) or (2) during one or more consecutive periods of excess emissions or any 24-hour period, whichever is shorter.

(d) Except as provided in paragraphs (f) and (g) of this section, a root cause analysis and corrective action analysis must be completed as soon as possible, but no later than 45 days after a discharge meeting one of the conditions specified in paragraphs (c)(1) through (3) of this section. Special circumstances affecting the number of root cause analyses and/or corrective action analyses are provided in paragraphs (d)(1) through (5) of this section.

(1) If a single continuous discharge meets any of the conditions specified in paragraphs (c)(1) through (3) of this section for 2 or more consecutive 24-hour periods, a single root cause analysis and corrective action analysis may be conducted.

(2) If a single discharge from a flare triggers a root cause analysis based on more than one of the conditions specified in paragraphs (c)(1)(i) through (iii) of this section, a single root cause analysis and corrective action analysis may be conducted.

(3) If the discharge from a flare is the result of a planned startup or shutdown of a refinery process unit or ancillary equipment connected to the affected flare and the procedures in paragraph (a)(5) of this section were followed, a root cause analysis and corrective action analysis is not required; however, the discharge must be recorded as described in §60.108a(c)(6) and reported as described in §60.108a(d)(5).

(4) If both the primary and secondary flare in a cascaded flare system meet any of the conditions specified in paragraphs (c)(1)(i) through (iii) of this section in the same 24-hour period, a single root cause analysis and corrective action analysis may be conducted.

(5) Except as provided in paragraph (d)(4) of this section, if discharges occur that meet any of the conditions specified in paragraphs (c)(1) through (3) of this section for more than one affected facility in the same 24-hour period, initial root cause analyses shall be conducted for each affected facility. If the initial root cause analyses indicate that the discharges have the same root cause(s), the initial root cause analyses can be recorded as a single root cause analysis and a single corrective action analysis may be conducted.

(e) Except as provided in paragraphs (f) and (g) of this section, each owner or operator of a fuel gas combustion device, flare or sulfur recovery plant subject to this subpart shall implement the corrective action(s) identified in the corrective action

**SECTION C. Site Level Requirements**

analysis conducted pursuant to paragraph (d) of this section in accordance with the applicable requirements in paragraphs (e)(1) through (3) of this section.

(1) All corrective action(s) must be implemented within 45 days of the discharge for which the root cause and corrective action analyses were required or as soon thereafter as practicable. If an owner or operator concludes that corrective action should not be conducted, the owner or operator shall record and explain the basis for that conclusion no later than 45 days following the discharge as specified in §60.108a(c)(6)(ix).

(2) For corrective actions that cannot be fully implemented within 45 days following the discharge for which the root cause and corrective action analyses were required, the owner or operator shall develop an implementation schedule to complete the corrective action(s) as soon as practicable.

(3) No later than 45 days following the discharge for which a root cause and corrective action analyses were required, the owner or operator shall record the corrective action(s) completed to date, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates as specified in §60.108a(c)(6)(x).

(f) Modified flares shall comply with the requirements of paragraphs (c) through (e) of this section by November 11, 2015 or at startup of the modified flare, whichever is later. Modified flares that were not affected facilities subject to subpart J of this part prior to becoming affected facilities under §60.100a shall comply with the requirements of paragraph (h) of this section and the requirements of §60.107a(a)(2) by November 11, 2015 or at startup of the modified flare, whichever is later. Modified flares that were affected facilities subject to subpart J of this part prior to becoming affected facilities under §60.100a shall comply with the requirements of paragraph (h) of this section and the requirements of §60.107a(a)(2) by November 13, 2012 or at startup of the modified flare, whichever is later, except that modified flares that have accepted applicability of subpart J under a federal consent decree shall comply with the subpart J requirements as specified in the consent decree, but shall comply with the requirements of paragraph (h) of this section and the requirements of §60.107a(a)(2) by no later than November 11, 2015.

(g) Not applicable.

(h) Each owner or operator shall not burn in any affected flare any fuel gas that contains H<sub>2</sub>S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis. The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this limit.

(i) Not applicable.

(j) Alternative means of emission limitation. (1) Each owner or operator subject to the provisions of this section may apply to the Administrator for a determination of equivalence for any means of emission limitation that achieves a reduction in emissions of a specified pollutant at least equivalent to the reduction in emissions of that pollutant achieved by the controls required in this section.

(2) Determination of equivalence to the design, equipment, work practice or operational requirements of this section will be evaluated by the following guidelines:

(i) Each owner or operator applying for a determination of equivalence shall be responsible for collecting and verifying test data to demonstrate the equivalence of the alternative means of emission limitation.

(ii) For each affected facility for which a determination of equivalence is requested, the emission reduction achieved by the design, equipment, work practice or operational requirements shall be demonstrated.

(iii) For each affected facility for which a determination of equivalence is requested, the emission reduction achieved by the alternative means of emission limitation shall be demonstrated.

(iv) Each owner or operator applying for a determination of equivalence to a work practice standard shall commit in writing to work practice(s) that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practice.

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(v) The Administrator will compare the demonstrated emission reduction for the alternative means of emission limitation to the demonstrated emission reduction for the design, equipment, work practice or operational requirements and, if applicable, will consider the commitment in paragraph (j)(2)(iv) of this section.

(vi) The Administrator may condition the approval of the alternative means of emission limitation on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as the design, equipment, work practice or operational requirements.

(3) An owner or operator may offer a unique approach to demonstrate the equivalence of any equivalent means of emission limitation.

(4) Approval of the application for equivalence to the design, equipment, work practice or operational requirements of this section will be evaluated by the following guidelines:

(i) After a request for determination of equivalence is received, the Administrator will publish a notice in the Federal Register and provide the opportunity for public hearing if the Administrator judges that the request may be approved.

(ii) After notice and opportunity for public hearing, the Administrator will determine the equivalence of a means of emission limitation and will publish the determination in the Federal Register.

(iii) Any equivalent means of emission limitations approved under this section shall constitute a required work practice, equipment, design or operational standard within the meaning of section 111(h)(1) of the CAA.

(5) Manufacturers of equipment used to control emissions may apply to the Administrator for determination of equivalence for any alternative means of emission limitation that achieves a reduction in emissions achieved by the equipment, design and operational requirements of this section. The Administrator will make an equivalence determination according to the provisions of paragraphs (j)(2) through (4) of this section.

**# 040 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104]  
Subpart J - Standards of Performance for Petroleum Refineries  
Standards for sulfur oxides.**

This condition is applicable to Sources 034, 042, 049, 050, 052, 053, 054, 055, 056, 057, 101, 105, 106, 107, 108, & 108A.

Each owner or operator that is subject to the requirements of this subpart shall comply with the emission limitations set forth in this section on and after the date on which the initial performance test, required by §60.8, is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after initial startup, whichever comes first.

(a) No owner or operator subject to the provisions of this subpart shall:

(1) Burn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H<sub>2</sub>S) in excess of 230 mg/dscm (0.10 gr/dscf). The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this paragraph.

(2) Discharge or cause the discharge of any gases into the atmosphere from any Claus sulfur recovery plant containing in excess of:

(i) For an oxidation control system or a reduction control system followed by incineration, 250 ppm by volume (dry basis) of sulfur dioxide (SO<sub>2</sub>) at zero percent excess air.

(ii) For a reduction control system not followed by incineration, 300 ppm by volume of reduced sulfur compounds and 10 ppm by volume of hydrogen sulfide (H<sub>2</sub>S), each calculated as ppm SO<sub>2</sub> by volume (dry basis) at zero percent excess air.

(b) Not Applicable.

(c) Compliance with paragraph (b)(1), (b)(2), or (b)(3) of this section is determined daily on a 7-day rolling average basis

**SECTION C. Site Level Requirements**

using the appropriate procedures outlined in §60.106.

(d) A minimum of 22 valid days of data shall be obtained every 30 rolling successive calendar days when complying with paragraph (b)(1) of this section.

**# 041 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104a]  
SUBPART Ja - Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or  
Modification Commenced After May 14, 2007**

**Performance tests.**

(a) The owner or operator shall conduct a performance test for each FCCU, FCU, sulfur recovery plant and fuel gas combustion device to demonstrate initial compliance with each applicable emissions limit in §60.102a and conduct a performance test for each flare to demonstrate initial compliance with the H<sub>2</sub>S concentration requirement in §60.103a(h) according to the requirements of §60.8. The notification requirements of §60.8(d) apply to the initial performance test and to subsequent performance tests required by paragraph (b) of this section (or as required by the Administrator), but does not apply to performance tests conducted for the purpose of obtaining supplemental data because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments.

(b) Not applicable.

(c) In conducting the performance tests required by this subpart (or as requested by the Administrator), the owner or operator shall use the test methods in 40 CFR part 60, Appendices A-1 through A-8 or other methods as specified in this section, except as provided in §60.8(b).

(d) - (i) Not applicable.

(j) The owner or operator shall determine compliance with the applicable H<sub>2</sub>S emissions limit in §60.102a(g)(1) for a fuel gas combustion device or the concentration requirement in §60.103a(h) for a flare according to the following test methods and procedures:

(1)—(3) [Reserved]

(4) EPA Method 11, 15 or 15A of appendix A-5 to part 60 or EPA Method 16 of appendix A-6 to part 60 for determining the H<sub>2</sub>S concentration for affected facilities using an H<sub>2</sub>S monitor as specified in §60.107a(a)(2). The method ANSI/ASME PTC 19.10-1981 (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 15A of appendix A-5 to part 60. The owner or operator may demonstrate compliance based on the mixture used in the fuel gas combustion device or flare or for each individual fuel gas stream used in the fuel gas combustion device or flare.

(i) For Method 11 of appendix A-5 to part 60, the sampling time and sample volume must be at least 10 minutes and 0.010 dscm (0.35 dscf). Two samples of equal sampling times must be taken at about 1-hour intervals. The arithmetic average of these two samples constitutes a run. For most fuel gases, sampling times exceeding 20 minutes may result in depletion of the collection solution, although fuel gases containing low concentrations of H<sub>2</sub>S may necessitate sampling for longer periods of time.

(ii) For Method 15 of appendix A-5 to part 60, at least three injects over a 1-hour period constitutes a run.

(iii) For Method 15A of appendix A-5 to part 60, a 1-hour sample constitutes a run. The method ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 15A of appendix A-5 to part 60.

(iv) If monitoring is conducted at a single point in a common source of fuel gas as allowed under §60.107a(a)(2)(iv), only one performance test is required. That is, performance tests are not required when a new affected fuel gas combustion device or flare is added to a common source of fuel gas that previously demonstrated compliance.

[73 FR 35867, June 24, 2008, as amended at 77 FR 56470, Sep. 12, 2012; 80 FR 75231, Dec. 1, 2015]

**SECTION C. Site Level Requirements****# 042 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]****Subpart J - Standards of Performance for Petroleum Refineries****Monitoring of emissions and operations.**

This condition is applicable to Sources 034, 042, 049, 050, 052, 053, 054, 055, 056, 057, 101A, 105, 106, 107, 108, 108A.

(a) Continuous monitoring systems shall be installed, calibrated, maintained, and operated by the owner or operator subject to the provisions of this subpart as follows:

- (1) For fluid catalytic cracking unit catalyst regenerators subject to §60.102(a)(2), an instrument for continuously monitoring and recording the opacity of emissions into the atmosphere. The instrument shall be spanned at 60, 70, or 80 percent opacity.
- (2) For fluid catalytic cracking unit catalyst regenerators subject to §60.103(a), an instrument for continuously monitoring and recording the concentration by volume (dry basis) of CO emissions into the atmosphere, except as provided in paragraph (a)(2) (ii) of this section.
  - (i) The span value for this instrument is 1,000 ppm CO.
  - (ii) A CO continuous monitoring system need not be installed if the owner or operator demonstrates that the average CO emissions are less than 50 ppm (dry basis) and also files a written request for exemption to the Administrator and receives such an exemption. The demonstration shall consist of continuously monitoring CO emissions for 30 days using an instrument that shall meet the requirements of Performance Specification 4 of appendix B of this part. 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. For instruments that are identical to Method 10 and employ the sample conditioning system of Method 10A, the alternative relative accuracy test procedure in §10.1 of Performance Specification 2 may be used in place of the relative accuracy test.
- (3) For fuel gas combustion devices subject to §60.104(a)(1), either an instrument for continuously monitoring and recording the concentration by volume (dry basis, zero percent excess air) of SO<sub>2</sub> emissions into the atmosphere or monitoring as provided in paragraph (a)(4) of this section). The monitor shall include an oxygen monitor for correcting the data for excess.
  - (i) The span values for this monitor are 50 ppm SO<sub>2</sub> and 25 percent oxygen (O<sub>2</sub>).
  - (ii) The SO<sub>2</sub> monitoring level equivalent to the H<sub>2</sub>S standard under §60.104(a)(1) shall be 20 ppm (dry basis, zero percent excess air).
  - (iii) The performance evaluations for this SO<sub>2</sub> monitor under §60.13(c) shall use Performance Specification 2. Methods 6 or 6C and 3 or 3A shall be used for conducting the relative accuracy evaluations. Method 6 samples shall be taken at a flow rate of approximately 2 liters/min for at least 30 minutes. The relative accuracy limit shall be 20 percent or 4 ppm, whichever is greater, and the calibration drift limit shall be 5 percent of the established span value.
  - (iv) Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location (i.e., after one of the combustion devices), if monitoring at this location accurately represents the SO<sub>2</sub> emissions into the atmosphere from each of the combustion devices.
- (4) Instead of the SO<sub>2</sub> monitor in paragraph (a)(3) of this section for fuel gas combustion devices subject to §60.104(a)(1), an instrument for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in fuel gases before being burned in any fuel gas combustion device.
  - (i) The span value for this instrument is 425 mg/dscm H<sub>2</sub>S.
  - (ii) Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of H<sub>2</sub>S in the fuel gas being burned.

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- (iii) The performance evaluations for this H<sub>2</sub>S monitor under §60.13(c) shall use Performance Specification 7. Method 11, 15, 15A, or 16 shall be used for conducting the relative accuracy evaluations.
- (iv) The owner or operator of a fuel gas combustion device is not required to comply with paragraph (a)(3) or (4) of this section for fuel gas streams that are exempt under §60.104(a)(1) and fuel gas streams combusted in a fuel gas combustion device that are inherently low in sulfur content. Fuel gas streams meeting one of the requirements in paragraphs (a)(4)(iv)(A) through (D) of this section will be considered inherently low in sulfur content. If the composition of a fuel gas stream changes such that it is no longer exempt under §60.104(a)(1) or it no longer meets one of the requirements in paragraphs (a)(4)(iv)(A) through (D) of this section, the owner or operator must begin continuous monitoring under paragraph (a)(3) or (4) of this section within 15 days of the change.
- (A) Pilot gas for heaters and flares.
- (B) Fuel gas streams that meet a commercial-grade product specification for sulfur content of 30 ppmv or less. In the case of a liquefied petroleum gas (LPG) product specification in the pressurized liquid state, the gas phase sulfur content should be evaluated assuming complete vaporization of the LPG and sulfur containing-compounds at the product specification concentration.
- (C) Fuel gas streams produced in process units that are intolerant to sulfur contamination, such as fuel gas streams produced in the hydrogen plant, the catalytic reforming unit, the isomerization unit, and HF alkylation process units.
- (D) Other fuel gas streams that an owner or operator demonstrates are low-sulfur according to the procedures in paragraph (b) of this section.
- (5) For Claus sulfur recovery plants with oxidation control systems or reduction control systems followed by incineration subject to §60.104(a)(2)(i), an instrument for continuously monitoring and recording the concentration (dry basis, zero percent excess air) of SO<sub>2</sub> emissions into the atmosphere. The monitor shall include an oxygen monitor for correcting the data for excess air.
- (i) The span values for this monitor are 500 ppm SO<sub>2</sub> and 25 percent O<sub>2</sub>.
- (ii) The performance evaluations for this SO<sub>2</sub> monitor under §60.13(c) shall use Performance Specification 2. Methods 6 or 6C and 3 or 3A shall be used for conducting the relative accuracy evaluations.
- (6) For Claus sulfur recovery plants with reduction control systems not followed by incineration subject to §60.104(a)(2)(ii), an instrument for continuously monitoring and recording the concentration of reduced sulfur and O<sub>2</sub> emissions into the atmosphere. The reduced sulfur emissions shall be calculated as SO<sub>2</sub> (dry basis, zero percent excess air).
- (i) The span values for this monitor are 450 ppm reduced sulfur and 25 percent O<sub>2</sub>.
- (ii) The performance evaluations for this reduced sulfur (and O<sub>2</sub>) monitor under §60.13(c) shall use Performance Specification 5 of appendix B of this part (and Performance Specification 3 of appendix B of this part for the O<sub>2</sub> analyzer). Methods 15 or 15A and Method 3 shall be used for conducting the relative accuracy evaluations. If Method 3 yields O<sub>2</sub> concentrations below 0.25 percent during the performance specification test, the O<sub>2</sub> concentration may be assumed to be zero and the reduced sulfur CEMS need not include an O<sub>2</sub> monitor.
- (7) In place of the reduced sulfur monitor under paragraph (a)(6) of this section, an instrument using an air or O<sub>2</sub> dilution and oxidation system to convert the reduced sulfur to SO<sub>2</sub> for continuously monitoring and recording the concentration (dry basis, zero percent excess air) of the resultant SO<sub>2</sub>. The monitor shall include an oxygen monitor for correcting the data for excess oxygen.
- (i) The span values for this monitor are 375 ppm SO<sub>2</sub> and 25 percent O<sub>2</sub>.
- (ii) For reporting purposes, the SO<sub>2</sub> exceedance level for this monitor is 250 ppm (dry basis, zero percent excess air).
- (iii) The performance evaluations for this SO<sub>2</sub> (and O<sub>2</sub>) monitor under §60.13(c) shall use Performance Specification 5.

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Methods 15 or 15A and Method 3 shall be used for conducting the relative accuracy evaluations.

(8) An instrument for continuously monitoring and recording concentrations of SO<sub>2</sub> in the gases at both the inlet and outlet of the SO<sub>2</sub> control device from any fluid catalytic cracking unit catalyst regenerator for which the owner or operator seeks to comply specifically with the 90 percent reduction option under §60.104(b)(1).

(i) The span value of the inlet monitor shall be set at 125 percent of the maximum estimated hourly potential SO<sub>2</sub> emission concentration entering the control device, and the span value of the outlet monitor shall be set at 50 percent of the maximum estimated hourly potential SO<sub>2</sub> emission concentration entering the control device.

(ii) The performance evaluations for these SO<sub>2</sub> monitors under §60.13(c) shall use Performance Specification 2. Methods 6 or 6C and 3 or 3A shall be used for conducting the relative accuracy evaluations.

(9) An instrument for continuously monitoring and recording concentrations of SO<sub>2</sub> in the gases discharged into the atmosphere from any fluid catalytic cracking unit catalyst regenerator for which the owner or operator seeks to comply specifically with the 50 ppmv emission limit under §60.104 (b)(1).

(i) The span value of the monitor shall be set at 50 percent of the maximum hourly potential SO<sub>2</sub> emission concentration of the control device.

(ii) The performance evaluations for this SO<sub>2</sub> monitor under §60.13 (c) shall use Performance Specification 2. Methods 6 or 6C and 3 or 3A shall be used for conducting the relative accuracy evaluations.

(10) An instrument for continuously monitoring and recording concentrations of oxygen (O<sub>2</sub>) in the gases at both the inlet and outlet of the sulfur dioxide control device (or the outlet only if specifically complying with the 50 ppmv standard) from any fluid catalytic cracking unit catalyst regenerator for which the owner or operator has elected to comply with §60.104(b)(1). The span of this continuous monitoring system shall be set at 10 percent.

(11) The continuous monitoring systems under paragraphs (a)(8), (a)(9), and (a)(10) of this section are operated and data recorded during all periods of operation of the affected facility including periods of startup, shutdown, or malfunction, except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments.

(12) The owner or operator shall use the following procedures to evaluate the continuous monitoring systems under paragraphs (a)(8), (a)(9), and (a)(10) of this section.

(i) Method 3 or 3A and Method 6 or 6C for the relative accuracy evaluations under the §60.13(e) performance evaluation.

(ii) appendix F, Procedure 1, including quarterly accuracy determinations and daily calibration drift tests.

(13) When seeking to comply with §60.104(b)(1), when emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using one of the following methods to provide emission data for a minimum of 18 hours per day in at least 22 out of 30 rolling successive calendar days.

(i) The test methods as described in §60.106(k);

(ii) A spare continuous monitoring system; or

(iii) Other monitoring systems as approved by the Administrator.

(b) An owner or operator may demonstrate that a fuel gas stream combusted in a fuel gas combustion device subject to §60.104(a)(1) that is not specifically exempted in §60.105(a)(4)(iv) is inherently low in sulfur. A fuel gas stream that is determined to be low-sulfur is exempt from the monitoring requirements in paragraphs (a)(3) and (4) of this section until there are changes in operating conditions or stream composition.

(1) The owner or operator shall submit to the Administrator a written application for an exemption from monitoring. The



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application must contain the following information:

(i) A description of the fuel gas stream/system to be considered, including submission of a portion of the appropriate piping diagrams indicating the boundaries of the fuel gas stream/system, and the affected fuel gas combustion device(s) to be considered;

(ii) A statement that there are no crossover or entry points for sour gas (high H<sub>2</sub>S content) to be introduced into the fuel gas stream/system (this should be shown in the piping diagrams);

(iii) An explanation of the conditions that ensure low amounts of sulfur in the fuel gas stream (i.e., control equipment or product specifications) at all times;

(iv) The supporting test results from sampling the requested fuel gas stream/system demonstrating that the sulfur content is less than 5 ppmv. Sampling data must include, at minimum, 2 weeks of daily monitoring (14 grab samples) for frequently operated fuel gas streams/systems; for infrequently operated fuel gas streams/systems, seven grab samples must be collected unless other additional information would support reduced sampling. The owner or operator shall use detector tubes ("length-of-stain tube" type measurement) following the "Gas Processors Association Standard 2377-86 (incorporated by reference—see §60.17), using tubes with a maximum span between 10 and 40 ppmv inclusive when  $1 < \text{or} = N < \text{or} = 10$ , where N = number of pump strokes, to test the applicant fuel gas stream for H<sub>2</sub>S; and

(v) A description of how the 2 weeks (or seven samples for infrequently operated fuel gas streams/systems) of monitoring results compares to the typical range of H<sub>2</sub>S concentration (fuel quality) expected for the fuel gas stream/system going to the affected fuel gas combustion device (e.g., the 2 weeks of daily detector tube results for a frequently operated loading rack included the entire range of products loaded out, and, therefore, should be representative of typical operating conditions affecting H<sub>2</sub>S content in the fuel gas stream going to the loading rack flare).

(2) The effective date of the exemption is the date of submission of the information required in paragraph (b)(1) of this section).

(3) No further action is required unless refinery operating conditions change in such a way that affects the exempt fuel gas stream/system (e.g., the stream composition changes). If such a change occurs, the owner or operator will follow the procedures in paragraph (b)(3)(i), (b)(3)(ii), or (b)(3)(iii) of this section.

(i) If the operation change results in a sulfur content that is still within the range of concentrations included in the original application, the owner or operator shall conduct an H<sub>2</sub>S test on a grab sample and record the results as proof that the concentration is still within the range.

(ii) If the operation change results in a sulfur content that is outside the range of concentrations included in the original application, the owner or operator may submit new information following the procedures of paragraph (b)(1) of this section within 60 days (or within 30 days after the seventh grab sample is tested for infrequently operated process units).

(iii) If the operation change results in a sulfur content that is outside the range of concentrations included in the original application and the owner or operator chooses not to submit new information to support an exemption, the owner or operator must begin H<sub>2</sub>S monitoring using daily stain sampling to demonstrate compliance using length-of stain tubes with a maximum span between 200 and 400 ppmv inclusive when  $1 < \text{or} = N < \text{or} = 5$ , where N = number of pump strokes. The owner or operator must begin monitoring according to the requirements in paragraph (a)(1) or (2) of this section as soon as practicable but in no case later than 180 days after the operation change. During daily stain tube sampling, a daily sample exceeding 162 ppmv is an exceedance of the 3-hour H<sub>2</sub>S concentration limit.

(c) The average coke burn-off rate (Mg (tons) per hour) and hours of operation shall be recorded daily for any fluid catalytic cracking unit catalyst regenerator subject to §60.102, §60.103, or §60.104(b)(2).

(d) For any fluid catalytic cracking unit catalyst regenerator under §60.102 that uses an incinerator-waste heat boiler to combust the exhaust gases from the catalyst regenerator, the owner or operator shall record daily the rate of combustion of liquid or solid fossil-fuels and the hours of operation during which liquid or solid fossil-fuels are combusted in the incinerator-waste heat boiler.

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(e) For the purpose of reports under §60.7(c), periods of excess emissions that shall be determined and reported are defined as follows:

Note: All averages, except for opacity, shall be determined as the arithmetic average of the applicable 1-hour averages, e.g., the rolling 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages.

(1) Opacity. All 1-hour periods that contain two or more 6-minute periods during which the average opacity as measured by the continuous monitoring system under §60.105(a)(1) exceeds 30 percent. [This requirement is streamlined from the permit in favor of the more stringent State requirement found in 25 Pa. Code Section 123.41.]

(2) Carbon monoxide. All 1-hour periods during which the average CO concentration as measured by the CO continuous monitoring system under §60.105(a)(2) exceeds 500 ppm.

(3) Sulfur dioxide from fuel gas combustion. (i) All rolling 3-hour periods during which the average concentration of SO<sub>2</sub> as measured by the SO<sub>2</sub> continuous monitoring system under §60.105(a)(3) exceeds 20 ppm (dry basis, zero percent excess air); or

(ii) All rolling 3-hour periods during which the average concentration of H<sub>2</sub>S as measured by the H<sub>2</sub>S continuous monitoring system under §60.105(a)(4) exceeds 230 mg/dscm (0.10 gr/dscf).

(4) Sulfur dioxide from Claus sulfur recovery plants. (i) All 12-hour periods during which the average concentration of SO<sub>2</sub> as measured by the SO<sub>2</sub> continuous monitoring system under §60.105(a)(5) exceeds 250 ppm (dry basis, zero percent excess air); or

(ii) All 12-hour periods during which the average concentration of reduced sulfur (as SO<sub>2</sub>) as measured by the reduced sulfur continuous monitoring system under §60.105(a)(6) exceeds 300 ppm; or

(iii) All 12-hour periods during which the average concentration of SO<sub>2</sub> as measured by the SO<sub>2</sub> continuous monitoring system under §60.105(a)(7) exceeds 250 ppm (dry basis, zero percent excess air).

**# 043 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]****Subpart J - Standards of Performance for Petroleum Refineries****Test methods and procedures.**

This condition is applicable to Sources 034, 042, 049, 050, 052, 053, 054, 055, 056, 057, 101A, 105, 106, 107, 108, 108A.

a) In conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in 40 CFR Part 60 Appendix A or other methods and procedures as specified in this section, except as provided in 40 CFR 60.8(b).

b) The owner or operator shall determine compliance with the particulate matter (PM) standards in 40 CFR 60.102(a) as specified in 40 CFR 60.106(b).

c) If auxiliary liquid or solid fossil-fuels are burned in an incinerator-waste heat boiler, the owner or operator shall determine the emission rate of PM permitted in 40 CFR 60.102(b) as specified in 40 CFR 60.106(c).

d) The owner or operator shall determine compliance with the CO standard in 40 CFR 60.103(a) by using the integrated sampling technique of Method 10 to determine the CO concentration (dry basis). The sampling time for each run shall be 60 minutes.

e) The owner or operator shall determine compliance with the H<sub>2</sub>S standard in 40 CFR 60.104(a)(1) as specified in 40 CFR 60.106(e).

f) The owner or operator shall determine compliance with the SO<sub>2</sub> and the H<sub>2</sub>S and reduced sulfur standards in 40 CFR 60.104(a)(2) as specified in 40 CFR 60.106(f).

g) Each performance test conducted for the purpose of determining compliance under 40 CFR 60.104(b) shall consist of

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all testing performed over a 7-day period using the applicable test methods and procedures specified in this section. To determine compliance, the arithmetic mean of the results of all the tests shall be compared with the applicable standard.

h) For the purpose of determining compliance with 40 CFR 60.104(b)(1), the calculation procedures specified in 40 CFR 106(h) shall be used.

i) For the purpose of determining compliance with 40 CFR 60.104(b)(2), the reference methods and calculation procedures specified in 40 CFR 60.106(i) shall be used except as provided in 40 CFR 60.106(i)(12).

j) For the purpose of determining compliance with 40 CFR 60.104(b)(3), the analytical methods and calculation procedures specified in 40 CFR 60.106(j) shall be used.

k) The test methods used to supplement continuous monitoring system data to meet the minimum data requirements in 40 CFR 60.104(d) will be used as described in 40 CFR 60.106(k) or as otherwise approved by the Administrator.

**# 044 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]****Subpart J - Standards of Performance for Petroleum Refineries****Reporting and recordkeeping requirements.**

This condition is applicable to Sources 034, 042, 049, 050, 052, 053, 054, 055, 056, 057, 101A, 105, 106, 107, 108, 108A.

(a) Each owner or operator subject to §60.104(b) shall notify the Administrator of the specific provisions of §60.104(b) with which the owner or operator seeks to comply. Notification shall be submitted with the notification of initial startup required by §60.7(a)(3). If an owner or operator elects at a later date to comply with an alternative provision of §60.104(b), then the Administrator shall be notified by the owner or operator in the report described in paragraph (c) of this section.

(b) Each owner or operator subject to §60.104(b) shall record and maintain the following information:

(1) If subject to §60.104(b)(1),

(i) All data and calibrations from continuous monitoring systems located at the inlet and outlet to the control device, including the results of the daily drift tests and quarterly accuracy assessments required under appendix F, Procedure 1;

(ii) Measurements obtained by supplemental sampling (refer to §60.105(a)(13) and §60.106(k)) for meeting minimum data requirements; and

(iii) The written procedures for the quality control program required by appendix F, Procedure 1.

(2) If subject to §60.104(b)(2), measurements obtained in the daily Method 8 testing, or those obtained by alternative measurement methods, if §60.106(i)(12) applies.

(3) If subject to §60.104(b)(3), data obtained from the daily feed sulfur tests.

(4) Each 7-day rolling average compliance determination.

(c) Each owner or operator subject to §60.104(b) shall submit a report except as provided by paragraph (d) of this section. The following information shall be contained in the report:

(1) Any 7-day period during which:

(i) The average percent reduction and average concentration of sulfur dioxide on a dry, O<sub>2</sub>-free basis in the gases discharged to the atmosphere from any fluid cracking unit catalyst regenerator for which the owner or operator seeks to comply with §60.104(b)(1) is below 90 percent and above 50 ppmv, as measured by the continuous monitoring system prescribed under §60.105(a)(8), or above 50 ppmv, as measured by the outlet continuous monitoring system prescribed under §60.105(a)(9). The average percent reduction and average sulfur dioxide concentration shall be determined using the procedures specified under §60.106(h);

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- (ii) The average emission rate of sulfur dioxide in the gases discharged to the atmosphere from any fluid catalytic cracking unit catalyst regenerator for which the owner or operator seeks to comply with §60.104(b)(2) exceeds 9.8 kg SO<sub>x</sub> per 1,000 kg coke burn-off, as measured by the daily testing prescribed under §60.106(i). The average emission rate shall be determined using the procedures specified under §60.106(i); and
- (iii) The average sulfur content of the fresh feed for which the owner or operator seeks to comply with §60.104(b)(3) exceeds 0.30 percent by weight. The fresh feed sulfur content, a 7-day rolling average, shall be determined using the procedures specified under §60.106(j).
- (2) Any 30-day period in which the minimum data requirements specified in §60.104(d) are not obtained.
- (3) For each 7-day period during which an exceedance has occurred as defined in paragraphs (c)(1)(i) through (c)(1)(iii) and (c)(2) of this section:
- (i) The date that the exceedance occurred;
  - (ii) An explanation of the exceedance;
  - (iii) Whether the exceedance was concurrent with a startup, shutdown, or malfunction of the fluid catalytic cracking unit or control system; and
  - (iv) A description of the corrective action taken, if any.
- (4) If subject to §60.104(b)(1),
- (i) The dates for which and brief explanations as to why fewer than 18 valid hours of data were obtained for the inlet continuous monitoring system;
  - (ii) The dates for which and brief explanations as to why fewer than 18 valid hours of data were obtained for the outlet continuous monitoring system;
  - (iii) Identification of times when hourly averages have been obtained based on manual sampling methods;
  - (iv) Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system; and
  - (v) Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specifications 2 or 3.
  - (vi) Results of daily drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1.
- (5) If subject to §60.104(b)(2), for each day in which a Method 8 sample result required by §60.106(i) was not obtained, the date for which and brief explanation as to why a Method 8 sample result was not obtained, for approval by the Administrator.
- (6) If subject to §60.104(b)(3), for each 8-hour period in which a feed sulfur measurement required by §60.106(j) was not obtained, the date for which and brief explanation as to why a feed sulfur measurement was not obtained, for approval by the Administrator.
- (d) For any periods for which sulfur dioxide or oxides emissions data are not available, the owner or operator of the affected facility shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability.
- (e) For each fuel gas stream combusted in a fuel gas combustion device subject to §60.104(a)(1), if an owner or operator determines that one of the exemptions listed in §60.105(a)(4)(iv) applies to that fuel gas stream, the owner or operator shall maintain records of the specific exemption chosen for each fuel gas stream. If the owner or operator applies for the

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exemption described in §60.105(a)(4)(iv)(D), the owner or operator must keep a copy of the application as well as the letter from the Administrator granting approval of the application.

(f) The owner or operator of an affected facility shall submit the reports required under this subpart to the Administrator semiannually for each six-month period. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period.

(g) The owner or operator of the affected facility shall submit a signed statement certifying the accuracy and completeness of the information contained in the report.

**# 045 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107a]  
SUBPART Ja - Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or  
Modification Commenced After May 14, 2007  
Monitoring of emissions and operations for fuel gas combustion devices and flares.**

(a) Fuel gas combustion devices subject to SO<sub>2</sub> or H<sub>2</sub>S limit and flares subject to H<sub>2</sub>S concentration requirements. The owner or operator of a fuel gas combustion device that is subject to §60.102a(g)(1) and elects to comply with the SO<sub>2</sub> emission limits in §60.102a(g)(1)(i) shall comply with the requirements in paragraph (a)(1) of this section. The owner or operator of a fuel gas combustion device that is subject to §60.102a(g)(1) and elects to comply with the H<sub>2</sub>S concentration limits in §60.102a(g)(1)(ii) or a flare that is subject to the H<sub>2</sub>S concentration requirement in §60.103a(h) shall comply with paragraph (a)(2) of this section.

(1) Not applicable

(2) The owner or operator of a fuel gas combustion device that elects to comply with the H<sub>2</sub>S concentration limits in §60.102a(g)(1)(ii) or a flare that is subject to the H<sub>2</sub>S concentration requirement in §60.103a(h) shall install, operate, calibrate and maintain an instrument for continuously monitoring and recording the concentration by volume (dry basis) of H<sub>2</sub>S in the fuel gases before being burned in any fuel gas combustion device or flare.

(i) The owner or operator shall install, operate and maintain each H<sub>2</sub>S monitor according to Performance Specification 7 of appendix B to part 60. The span value for this instrument is 300 ppmv H<sub>2</sub>S.

(ii) The owner or operator shall conduct performance evaluations for each H<sub>2</sub>S monitor according to the requirements of §60.13(c) and Performance Specification 7 of appendix B to part 60. The owner or operator shall use Method 11, 15, or 15A of appendix A-5 to part 60 or Method 16 of appendix A-6 to part 60 for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 15A of appendix A-5 to part 60.

(iii) The owner or operator shall comply with the applicable quality assurance procedures in appendix F to part 60 for each H<sub>2</sub>S monitor.

(iv) Fuel gas combustion devices or flares having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of H<sub>2</sub>S in the fuel gas being burned in the respective fuel gas combustion devices or flares.

(v) The owner or operator of a flare subject to §60.103a(c) through (e) may use the instrument required in paragraph (e)(1) of this section to demonstrate compliance with the H<sub>2</sub>S concentration requirement in §60.103a(h) if the owner or operator complies with the requirements of paragraph (e)(1)(i) through (iv) and if the instrument has a span (or dual span, if necessary) capable of accurately measuring concentrations between 20 and 300 ppmv. If the instrument required in paragraph (e)(1) of this section is used to demonstrate compliance with the H<sub>2</sub>S concentration requirement, the concentration directly measured by the instrument must meet the numeric concentration in §60.103a(h).

(vi) The owner or operator of modified flare that meets all three criteria in paragraphs (a)(2)(vi)(A) through (C) of this section shall comply with the requirements of paragraphs (a)(2)(i) through (v) of this section no later than November 11, 2015. The owner or operator shall comply with the approved alternative monitoring plan or plans pursuant to §60.13(i) until the flare is in compliance with requirements of paragraphs (a)(2)(i) through (v) of this section.

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(A) The flare was an affected facility subject to subpart J of this part prior to becoming an affected facility under §60.100a.

(B) The owner or operator had an approved alternative monitoring plan or plans pursuant to §60.13(i) for all fuel gases combusted in the flare.

(C) The flare did not have in place on or before September 12, 2012 an instrument for continuously monitoring and recording the concentration by volume (dry basis) of H<sub>2</sub>S in the fuel gases that is capable of complying with the requirements of paragraphs (a)(2)(i) through (v) of this section.

(3) The owner or operator of a fuel gas combustion device or flare is not required to comply with paragraph (a)(1) or (2) of this section for fuel gas streams that are exempt under §§60.102a(g)(1)(iii) or 60.103a(h) or, for fuel gas streams combusted in a process heater, other fuel gas combustion device or flare that are inherently low in sulfur content. Fuel gas streams meeting one of the requirements in paragraphs (a)(3)(i) through (iv) of this section will be considered inherently low in sulfur content.

(i) Pilot gas for heaters and flares.

(ii) Fuel gas streams that meet a commercial-grade product specification for sulfur content of 30 ppmv or less. In the case of a liquefied petroleum gas (LPG) product specification in the pressurized liquid state, the gas phase sulfur content should be evaluated assuming complete vaporization of the LPG and sulfur containing-compounds at the product specification concentration.

(iii) Fuel gas streams produced in process units that are intolerant to sulfur contamination, such as fuel gas streams produced in the hydrogen plant, catalytic reforming unit, isomerization unit, and HF alkylation process units.

(iv) Other fuel gas streams that an owner or operator demonstrates are low-sulfur according to the procedures in paragraph (b) of this section.

(4) If the composition of an exempt fuel gas stream changes, the owner or operator must follow the procedures in paragraph (b)(3) of this section.

(b) Exemption from H<sub>2</sub>S monitoring requirements for low-sulfur fuel gas streams. The owner or operator of a fuel gas combustion device or flare may apply for an exemption from the H<sub>2</sub>S monitoring requirements in paragraph (a)(2) of this section for a fuel gas stream that is inherently low in sulfur content. A fuel gas stream that is demonstrated to be low-sulfur is exempt from the monitoring requirements of paragraphs (a)(1) and (2) of this section until there are changes in operating conditions or stream composition.

(1) The owner or operator shall submit to the Administrator a written application for an exemption from monitoring. The application must contain the following information:

(i) A description of the fuel gas stream/system to be considered, including submission of a portion of the appropriate piping diagrams indicating the boundaries of the fuel gas stream/system and the affected fuel gas combustion device(s) or flare(s) to be considered;

(ii) A statement that there are no crossover or entry points for sour gas (high H<sub>2</sub>S content) to be introduced into the fuel gas stream/system (this should be shown in the piping diagrams);

(iii) An explanation of the conditions that ensure low amounts of sulfur in the fuel gas stream (i.e., control equipment or product specifications) at all times;

(iv) The supporting test results from sampling the requested fuel gas stream/system demonstrating that the sulfur content is less than 5 ppmv H<sub>2</sub>S. Sampling data must include, at minimum, 2 weeks of daily monitoring (14 grab samples) for frequently operated fuel gas streams/systems; for infrequently operated fuel gas streams/systems, seven grab samples must be collected unless other additional information would support reduced sampling. The owner or operator shall use detector tubes ("length-of-stain tube" type measurement) following the "Gas Processors Association Standard

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2377-86 (incorporated by reference—see §60.17), using tubes with a maximum span between 10 and 40 ppmv inclusive when 1 is less than or equal to N is less than or equal to 10, where N = number of pump strokes, to test the applicant fuel gas stream for H<sub>2</sub>S; and

(v) A description of how the 2 weeks (or seven samples for infrequently operated fuel gas streams/systems) of monitoring results compares to the typical range of H<sub>2</sub>S concentration (fuel quality) expected for the fuel gas stream/system going to the affected fuel gas combustion device or flare (e.g., the 2 weeks of daily detector tube results for a frequently operated loading rack included the entire range of products loaded out and, therefore, should be representative of typical operating conditions affecting H<sub>2</sub>S content in the fuel gas stream going to the loading rack flare).

(2) The effective date of the exemption is the date of submission of the information required in paragraph (b)(1) of this section.

(3) No further action is required unless refinery operating conditions change in such a way that affects the exempt fuel gas stream/system (e.g., the stream composition changes). If such a change occurs, the owner or operator shall follow the procedures in paragraph (b)(3)(i), (b)(3)(ii), or (b)(3)(iii) of this section.

(i) If the operation change results in a sulfur content that is still within the range of concentrations included in the original application, the owner or operator shall conduct an H<sub>2</sub>S test on a grab sample and record the results as proof that the concentration is still within the range.

(ii) If the operation change results in a sulfur content that is outside the range of concentrations included in the original application, the owner or operator may submit new information following the procedures of paragraph (b)(1) of this section within 60 days (or within 30 days after the seventh grab sample is tested for infrequently operated process units).

(iii) If the operation change results in a sulfur content that is outside the range of concentrations included in the original application and the owner or operator chooses not to submit new information to support an exemption, the owner or operator must begin H<sub>2</sub>S monitoring using daily stain sampling to demonstrate compliance using length-of-stain tubes with a maximum span between 200 and 400 ppmv inclusive when 1 is less than or equal to N is less than or equal to 5, where N = number of pump strokes. The owner or operator must begin monitoring according to the requirements in paragraphs (a)(1) or (a)(2) of this section as soon as practicable, but in no case later than 180 days after the operation change. During daily stain tube sampling, a daily sample exceeding 162 ppmv is an exceedance of the 3-hour H<sub>2</sub>S concentration limit. The owner or operator of a fuel gas combustion device must also determine a rolling 365-day average using the stain sampling results; an average H<sub>2</sub>S concentration of 5 ppmv must be used for days within the rolling 365-day period prior to the operation change.

(c) - (d) Not applicable

(e) Sulfur monitoring for assessing root cause analysis threshold for affected flares. Except as described in paragraphs (e)(4) and (h) of this section, the owner or operator of an affected flare subject to §60.103a(c) through (e) shall determine the total reduced sulfur concentration for each gas line directed to the affected flare in accordance with either paragraph (e)(1), (e)(2) or (e)(3) of this section. Different options may be elected for different gas lines. If a monitoring system is in place that is capable of complying with the requirements related to either paragraph (e)(1), (e)(2) or (e)(3) of this section, the owner or operator of a modified flare must comply with the requirements related to either paragraph (e)(1), (e)(2) or (e)(3) of this section upon startup of the modified flare. If a monitoring system is not in place that is capable of complying with the requirements related to either paragraph (e)(1), (e)(2) or (e)(3) of this section, the owner or operator of a modified flare must comply with the requirements related to either paragraph (e)(1), (e)(2) or (e)(3) of this section no later than November 11, 2015 or upon startup of the modified flare, whichever is later.

(1) Total reduced sulfur monitoring requirements. The owner or operator shall install, operate, calibrate and maintain an instrument or instruments for continuously monitoring and recording the concentration of total reduced sulfur in gas discharged to the flare.

(i) The owner or operator shall install, operate and maintain each total reduced sulfur monitor according to Performance Specification 5 of appendix B to part 60. The span value should be determined based on the maximum sulfur content of gas that can be discharged to the flare (e.g., roughly 1.1 to 1.3 times the maximum anticipated sulfur

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concentration), but may be no less than 5,000 ppmv. A single dual range monitor may be used to comply with the requirements of this paragraph and paragraph (a)(2) of this section provided the applicable span specifications are met.

(ii) The owner or operator shall conduct performance evaluations of each total reduced sulfur monitor according to the requirements in §60.13(c) and Performance Specification 5 of appendix B to this part. The owner or operator of each total reduced sulfur monitor shall use EPA Method 15A of appendix A-5 to this part for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10-1981 (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 15A of appendix A-5 to this part. The alternative relative accuracy procedures described in section 16.0 of Performance Specification 2 of appendix B to this part (cylinder gas audits) may be used for conducting the relative accuracy evaluations, except that it is not necessary to include as much of the sampling probe or sampling line as practical.

(iii) The owner or operator shall comply with the applicable quality assurance procedures in appendix F to part 60 for each total reduced sulfur monitor.

(2) H<sub>2</sub>S monitoring requirements. The owner or operator shall install, operate, calibrate, and maintain an instrument or instruments for continuously monitoring and recording the concentration of H<sub>2</sub>S in gas discharged to the flare according to the requirements in paragraphs (e)(2)(i) through (iii) of this section and shall collect and analyze samples of the gas and calculate total sulfur concentrations as specified in paragraphs (e)(2)(iv) through (ix) of this section.

(i) The owner or operator shall install, operate and maintain each H<sub>2</sub>S monitor according to Performance Specification 7 of appendix B to part 60. The span value should be determined based on the maximum sulfur content of gas that can be discharged to the flare (e.g., roughly 1.1 to 1.3 times the maximum anticipated sulfur concentration), but may be no less than 5,000 ppmv. A single dual range H<sub>2</sub>S monitor may be used to comply with the requirements of this paragraph and paragraph (a)(2) of this section provided the applicable span specifications are met.

(ii) The owner or operator shall conduct performance evaluations of each H<sub>2</sub>S monitor according to the requirements in §60.13(c) and Performance Specification 7 of appendix B to this part. The owner or operator shall use EPA Method 11, 15 or 15A of appendix A-5 to this part for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10-1981 (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 15A of appendix A-5 to this part. The alternative relative accuracy procedures described in section 16.0 of Performance Specification 2 of appendix B to this part (cylinder gas audits) may be used for conducting the relative accuracy evaluations, except that it is not necessary to include as much of the sampling probe or sampling line as practical.

(iii) The owner or operator shall comply with the applicable quality assurance procedures in appendix F to part 60 for each H<sub>2</sub>S monitor.

(iv) In the first 10 operating days after the date the flare must begin to comply with §60.103a(c)(1), the owner or operator shall collect representative daily samples of the gas discharged to the flare. The samples may be grab samples or integrated samples. The owner or operator shall take subsequent representative daily samples at least once per week or as required in paragraph (e)(2)(ix) of this section.

(v) The owner or operator shall analyze each daily sample for total sulfur using either EPA Method 15A of appendix A-5 to part 60, EPA Method 16A of appendix A-6 to part 60, ASTM Method D4468-85 (Reapproved 2006) (incorporated by reference—see §60.17) or ASTM Method D5504-08 (incorporated by reference—see §60.17).

(vi) The owner or operator shall develop a 10-day average total sulfur-to-H<sub>2</sub>S ratio and 95-percent confidence interval as follows:

(A) Calculate the ratio of the total sulfur concentration to the H<sub>2</sub>S concentration for each day during which samples are collected.

(B) Determine the 10-day average total sulfur-to-H<sub>2</sub>S ratio as the arithmetic average of the daily ratios calculated in paragraph (e)(2)(vi)(A) of this section.

(C) Determine the acceptable range for subsequent weekly samples based on the 95-percent confidence interval



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for the distribution of daily ratios based on the 10 individual daily ratios using Equation 14 of this section.

[Equation 14]  $AR = \text{Ratio Avg} \pm 2.262 \times SDev$

Where:

AR = Acceptable range of subsequent ratio determinations, unitless.

RatioAvg = 10-day average total sulfur-to-H<sub>2</sub>S concentration ratio, unitless.

2.262 = t-distribution statistic for 95-percent 2-sided confidence interval for 10 samples (9 degrees of freedom).

SDev = Standard deviation of the 10 daily average total sulfur-to-H<sub>2</sub>S concentration ratios used to develop the 10-day average total sulfur-to-H<sub>2</sub>S concentration ratio, unitless.

(vi) For each day during the period when data are being collected to develop a 10-day average, the owner or operator shall estimate the total sulfur concentration using the measured total sulfur concentration measured for that day.

(vii) For all days other than those during which data are being collected to develop a 10-day average, the owner or operator shall multiply the most recent 10-day average total sulfur-to-H<sub>2</sub>S ratio by the daily average H<sub>2</sub>S concentrations obtained using the monitor as required by paragraph (e)(2)(i) through (iii) of this section to estimate total sulfur concentrations.

(ix) If the total sulfur-to-H<sub>2</sub>S ratio for a subsequent weekly sample is outside the acceptable range for the most recent distribution of daily ratios, the owner or operator shall develop a new 10-day average ratio and acceptable range based on data for the outlying weekly sample plus data collected over the following 9 operating days.

(3) Not applicable.

(4) Exemptions from sulfur monitoring requirements. Flares identified in paragraphs (e)(4)(i) through (iv) of this section are exempt from the requirements in paragraphs (e)(1) through (3) of this section. For each such flare, except as provided in paragraph (e)(4)(iv), engineering calculations shall be used to calculate the SO<sub>2</sub> emissions in the event of a discharge that may trigger a root cause analysis under §60.103a(c)(1).

(i) Flares that can only receive:

(A) Fuel gas streams that are inherently low in sulfur content as described in paragraph (a)(3)(i) through (iv) of this section; and/or

(B) Fuel gas streams that are inherently low in sulfur content for which the owner or operator has applied for an exemption from the H<sub>2</sub>S monitoring requirements as described in paragraph (b) of this section.

(ii) Emergency flares, provided that for each such flare, the owner or operator complies with the monitoring alternative in paragraph (g) of this section.

(iii) Flares equipped with flare gas recovery systems designed, sized and operated to capture all flows except those resulting from startup, shutdown or malfunction, provided that for each such flare, the owner or operator complies with the monitoring alternative in paragraph (g) of this section.

(iv) Secondary flares that receive gas diverted from the primary flare. In the event of a discharge from the secondary flare, the sulfur content measured by the sulfur monitor on the primary flare should be used to calculate SO<sub>2</sub> emissions, regardless of whether or not the monitoring alternative in paragraph (g) of this section is selected for the secondary flare.

(f) Flow monitoring for flares. Except as provided in paragraphs (f)(2) and (h) of this section, the owner or operator of an affected flare subject to §60.103a(c) through (e) shall install, operate, calibrate and maintain, in accordance with the specifications in paragraph (f)(1) of this section, a CPMS to measure and record the flow rate of gas discharged to the flare. If a flow monitor is not already in place, the owner or operator of a modified flare shall comply with the requirements of this

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paragraph by no later than November 11, 2015 or upon startup of the modified flare, whichever is later.

(1) The owner or operator shall install, calibrate, operate and maintain each flow monitor according to the manufacturer's procedures and specifications and the following requirements.

(i) Locate the monitor in a position that provides a representative measurement of the total gas flow rate.

(ii) Use a flow sensor meeting an accuracy requirement of  $\pm 20$  percent of the flow rate at velocities ranging from 0.1 to 1 feet per second and an accuracy of  $\pm 5$  percent of the flow rate for velocities greater than 1 feet per second.

(iii) Use a flow monitor that is maintainable online, is able to continuously correct for temperature and pressure and is able to record flow in standard conditions (as defined in §60.2) over one-minute averages.

(iv) At least quarterly, perform a visual inspection of all components of the monitor for physical and operational integrity and all electrical connections for oxidation and galvanic corrosion if the flow monitor is not equipped with a redundant flow sensor.

(v) Recalibrate the flow monitor in accordance with the manufacturer's procedures and specifications biennially (every two years) or at the frequency specified by the manufacturer.

(2) Emergency flares, secondary flares and flares equipped with flare gas recovery systems designed, sized and operated to capture all flows except those resulting from startup, shutdown or malfunction are not required to install continuous flow monitors; provided, however, that for any such flare, the owner or operator shall comply with the monitoring alternative in paragraph (g) of this section.

(g) Alternative monitoring for certain flares equipped with water seals. The owner or operator of an affected flare subject to §60.103a(c) through (e) that can be classified as either an emergency flare, a secondary flare or a flare equipped with a flare gas recovery system designed, sized and operated to capture all flows except those resulting from startup, shutdown or malfunction may, as an alternative to the sulfur and flow monitoring requirements of paragraphs (e) and (f) of this section, install, operate, calibrate and maintain, in accordance with the requirements in paragraphs (g)(1) through (7) of this section, a CPMS to measure and record the pressure in the flare gas header between the knock-out pot and water seal and to measure and record the water seal liquid level. If the required monitoring systems are not already in place, the owner or operator of a modified flare shall comply with the requirements of this paragraph by no later than November 11, 2015 or upon startup of the modified flare, whichever is later.

(1) Locate the pressure sensor(s) in a position that provides a representative measurement of the pressure and locate the liquid seal level monitor in a position that provides a representative measurement of the water column height.

(2) Minimize or eliminate pulsating pressure, vibration and internal and external corrosion.

(3) Use a pressure sensor and level monitor with a minimum tolerance of 1.27 centimeters of water.

(4) Using a manometer, check pressure sensor calibration quarterly.

(5) Conduct calibration checks any time the pressure sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.

(6) In a cascaded flare system that employs multiple secondary flares, pressure and liquid level monitoring is required only on the first secondary flare in the system (i.e., the secondary flare with the lowest pressure release set point).

(7) This alternative monitoring option may be elected only for flares with four or fewer pressure exceedances required to be reported under §60.108a(d)(5) ("reportable pressure exceedances") in any 365 consecutive calendar days. Following the fifth reportable pressure exceedance in a 365-day period, the owner or operator must comply with the sulfur and flow monitoring requirements of paragraphs (e) and (f) of this section as soon as practical, but no later than 180 days after the fifth reportable pressure exceedance in a 365-day period.

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(h) Not applicable.

(i) Excess emissions. For the purpose of reports required by §60.7(c), periods of excess emissions for fuel gas combustion devices subject to the emissions limitations in §60.102a(g) and flares subject to the concentration requirement in §60.103a(h) are defined as specified in paragraphs (i)(1) through (5) of this section. Determine a rolling 3-hour or a rolling daily average as the arithmetic average of the applicable 1-hour averages (e.g., a rolling 3-hour average is the arithmetic average of three contiguous 1-hour averages). Determine a rolling 30-day or a rolling 365-day average as the arithmetic average of the applicable daily averages (e.g., a rolling 30-day average is the arithmetic average of 30 contiguous daily averages).

(1) SO<sub>2</sub> or H<sub>2</sub>S limits for fuel gas combustion devices. (i) If the owner or operator of a fuel gas combustion device elects to comply with the SO<sub>2</sub> emission limits in §60.102a(g)(1)(i), each rolling 3-hour period during which the average concentration of SO<sub>2</sub> as measured by the SO<sub>2</sub> continuous monitoring system required under paragraph (a)(1) of this section exceeds 20 ppmv, and each rolling 365-day period during which the average concentration of SO<sub>2</sub> as measured by the SO<sub>2</sub> continuous monitoring system required under paragraph (a)(1) of this section exceeds 8 ppmv.

(ii) If the owner or operator of a fuel gas combustion device elects to comply with the H<sub>2</sub>S concentration limits in §60.102a(g)(1)(ii), each rolling 3-hour period during which the average concentration of H<sub>2</sub>S as measured by the H<sub>2</sub>S continuous monitoring system required under paragraph (a)(2) of this section exceeds 162 ppmv and each rolling 365-day period during which the average concentration as measured by the H<sub>2</sub>S continuous monitoring system under paragraph (a)(2) of this section exceeds 60 ppmv.

(iii) If the owner or operator of a fuel gas combustion device becomes subject to the requirements of daily stain tube sampling in paragraph (b)(3)(iii) of this section, each day during which the daily concentration of H<sub>2</sub>S exceeds 162 ppmv and each rolling 365-day period during which the average concentration of H<sub>2</sub>S exceeds 60 ppmv.

(2) H<sub>2</sub>S concentration limits for flares. (i) Each rolling 3-hour period during which the average concentration of H<sub>2</sub>S as measured by the H<sub>2</sub>S continuous monitoring system required under paragraph (a)(2) of this section exceeds 162 ppmv.

(ii) If the owner or operator of a flare becomes subject to the requirements of daily stain tube sampling in paragraph (b)(3)(iii) of this section, each day during which the daily concentration of H<sub>2</sub>S exceeds 162 ppmv.

(3) - (4) Not applicable

(5) Daily O<sub>2</sub> limits for fuel gas combustion devices. Each day during which the concentration of O<sub>2</sub> as measured by the O<sub>2</sub> continuous monitoring system required under paragraph (c)(6) or (d)(8) of this section exceeds the O<sub>2</sub> operating limit or operating curve determined during the most recent biennial performance test.

[73 FR 35867, June 24, 2008, as amended at 77 FR 56473, Sep. 12, 2012; 80 FR 75235, Dec. 1, 2015]

**# 046 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.108]**  
**Subpart J - Standards of Performance for Petroleum Refineries**  
**Performance test and compliance provisions.**

This condition is applicable to Source 101A.

(a) Section 60.8(d) shall apply to the initial performance test specified under paragraph (c) of this section, but not to the daily performance tests required thereafter as specified in §60.108(d). Section 60.8(f) does not apply when determining compliance with the standards specified under §60.104(b). Performance tests conducted for the purpose of determining compliance under §60.104(b) shall be conducted according to the applicable procedures specified under §60.106.

(b) Owners or operators who seek to comply with §60.104(b)(3) shall meet that standard at all times, including periods of startup, shutdown, and malfunctions.

(c) The initial performance test shall consist of the initial 7-day average calculated for compliance with §60.104(b)(1), (b)(2), or (b)(3).

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(d) After conducting the initial performance test prescribed under §60.8, the owner or operator of a fluid catalytic cracking unit catalyst regenerator subject to §60.104(b) shall conduct a performance test for each successive 24-hour period thereafter. The daily performance tests shall be conducted according to the appropriate procedures specified under §60.106. In the event that a sample collected under §60.106(i) or (j) is accidentally lost or conditions occur in which one of the samples must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operators' control, compliance may be determined using available data for the 7-day period.

(e) Each owner or operator subject to §60.104(b) who has demonstrated compliance with one of the provisions of §60.104(b) but a later date seeks to comply with another of the provisions of §60.104(b) shall begin conducting daily performance tests as specified under paragraph (d) of this section immediately upon electing to become subject to one of the other provisions of §60.104(b). The owner or operator shall furnish the Administrator with a written notification of the change in the semiannual report required by §60.107(f).

**# 047 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.108a]  
SUBPART Ja - Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007  
Recordkeeping and reporting requirements.**

(a) - (b) Not applicable

(c) The owner or operator shall maintain the following records:

(1) A copy of the flare management plan.

(2) - (4) Not applicable.

(5) For each fuel gas stream to which one of the exemptions listed in §60.107a(a)(3) applies, records of the specific exemption determined to apply for each fuel stream. If the owner or operator applies for the exemption described in §60.107a(a)(3)(iv), the owner or operator must keep a copy of the application as well as the letter from the Administrator granting approval of the application.

(6) Records of discharges greater than 500 lb SO<sub>2</sub> in any 24-hour period from any affected flare, discharges greater than 500 lb SO<sub>2</sub> in excess of the allowable limits from a fuel gas combustion device or sulfur recovery plant and discharges to an affected flare in excess of 500,000 scf above baseline in any 24-hour period as required by §60.103a(c). If the monitoring alternative provided in §60.107a(g) is selected, the owner or operator shall record any instance when the flare gas line pressure exceeds the water seal liquid depth, except for periods attributable to compressor staging that do not exceed the staging time specified in §60.103a(a)(3)(vii)(C). The following information shall be recorded no later than 45 days following the end of a discharge exceeding the thresholds:

(i) A description of the discharge.

(ii) The date and time the discharge was first identified and the duration of the discharge.

(iii) The measured or calculated cumulative quantity of gas discharged over the discharge duration. If the discharge duration exceeds 24 hours, record the discharge quantity for each 24-hour period. For a flare, record the measured or calculated cumulative quantity of gas discharged to the flare over the discharge duration. If the discharge duration exceeds 24 hours, record the quantity of gas discharged to the flare for each 24-hour period. Engineering calculations are allowed for fuel gas combustion devices, but are not allowed for flares, except for those complying with the alternative monitoring requirements in §60.107a(g).

(iv) For each discharge greater than 500 lb SO<sub>2</sub> in any 24-hour period from a flare, the measured total sulfur concentration or both the measured H<sub>2</sub>S concentration and the estimated total sulfur concentration in the fuel gas at a representative location in the flare inlet.

(v) For each discharge greater than 500 lb SO<sub>2</sub> in excess of the applicable short-term emissions limit in §60.102a(g)(1) from a fuel gas combustion device, either the measured concentration of H<sub>2</sub>S in the fuel gas or the

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measured concentration of SO<sub>2</sub> in the stream discharged to the atmosphere. Process knowledge can be used to make these estimates for fuel gas combustion devices, but cannot be used to make these estimates for flares, except as provided in §60.107a(e)(4).

(vi) For each discharge greater than 500 lb SO<sub>2</sub> in excess of the allowable limits from a sulfur recovery plant, either the measured concentration of reduced sulfur or SO<sub>2</sub> discharged to the atmosphere.

(vii) For each discharge greater than 500 lb SO<sub>2</sub> in any 24-hour period from any affected flare or discharge greater than 500 lb SO<sub>2</sub> in excess of the allowable limits from a fuel gas combustion device or sulfur recovery plant, the cumulative quantity of H<sub>2</sub>S and SO<sub>2</sub> released into the atmosphere. For releases controlled by flares, assume 99-percent conversion of reduced sulfur or total sulfur to SO<sub>2</sub>. For fuel gas combustion devices, assume 99-percent conversion of H<sub>2</sub>S to SO<sub>2</sub>.

(viii) The steps that the owner or operator took to limit the emissions during the discharge.

(ix) The root cause analysis and corrective action analysis conducted as required in §60.103a(d), including an identification of the affected facility, the date and duration of the discharge, a statement noting whether the discharge resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under §60.103a(e).

(x) For any corrective action analysis for which corrective actions are required in §60.103a(e), a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(xi) For each discharge from any affected flare that is the result of a planned startup or shutdown of a refinery process unit or ancillary equipment connected to the affected flare, a statement that a root cause analysis and corrective action analysis are not necessary because the owner or operator followed the flare management plan.

(7) If the owner or operator elects to comply with §60.107a(e)(2) for a flare, records of the H<sub>2</sub>S and total sulfur analyses of each grab or integrated sample, the calculated daily total sulfur-to-H<sub>2</sub>S ratios, the calculated 10-day average total sulfur-to-H<sub>2</sub>S ratios and the 95-percent confidence intervals for each 10-day average total sulfur-to-H<sub>2</sub>S ratio.

(d) Each owner or operator subject to this subpart shall submit an excess emissions report for all periods of excess emissions according to the requirements of §60.7(c) except that the report shall contain the information specified in paragraphs (d)(1) through (7) of this section.

(1) The date that the exceedance occurred;

(2) An explanation of the exceedance;

(3) Whether the exceedance was concurrent with a startup, shutdown, or malfunction of an affected facility or control system; and

(4) A description of the action taken, if any.

(5) The information described in paragraph (c)(6) of this section for all discharges listed in paragraph (c)(6) of this section. For a flare complying with the monitoring alternative under §60.107a(g), following the fifth discharge required to be recorded under paragraph (c)(6) of this section and reported under this paragraph, the owner or operator shall include notification that monitoring systems will be installed according to §60.107a(e) and (f) within 180 days following the fifth discharge.

(6) For any periods for which monitoring data are not available, any changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability.

(7) A written statement, signed by a responsible official, certifying the accuracy and completeness of the information

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contained in the report.

[73 FR 35867, June 24, 2008, as amended at 77 FR 56479, Sep. 12, 2012]

**# 048 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.11]****Subpart A - General Provisions****Compliance with standards and maintenance requirements.**

This condition is applicable to Sources 034, 042, 049, 050, 052, 053, 054, 055, 056, 057, 101A, 102, 105, 106, 107, 108, 108A, 109, 201, 202, 211, 212, 213, 214, 215, 219, 220, & 224.

- a) Compliance with standards in this part, other than opacity standards, shall be determined in accordance with performance tests established by 40 CFR 60.8, unless otherwise specified in the applicable standard.
- b) Compliance with opacity standards in this part shall be determined by conducting observations in accordance with Reference Method 9 in Appendix A of this part, any alternative method that is approved by the Administrator, or as provided in paragraph (e)(5) of this section. For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test or other set of observations (meaning those fugitive-type emission sources subject only to an opacity standard).
- c) 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.
- d) 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 practice for minimizing emissions. Determination of whether acceptable operating 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, opacity observations, review of operating and maintenance procedures, and inspection of the source.
- e)(1) For the purpose of demonstration initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in 40 CFR 60.8, unless one of the following conditions apply. If no performance test under 40 CFR 60.8 is required, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial startup of the facility. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the initial performance test required under 40 CFR 60.8, the source owner or operator shall reschedule the opacity observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. In these cases, the 30-day prior notification to the Administrator required in 40 CFR 60.7(a)(6) shall be waived. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existing during the initial performance test conducted under 40 CFR 60.8. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being made concurrently with the initial performance test in accordance with procedures contained in Reference Method 9 of Appendix B of this part. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity standards. The owner or operator of an affected facility shall make available, upon request by the Administrator, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. Except as provided in paragraph (e)(5) of this section, the results of continuous monitoring by transmissometer which indicate that the opacity at the time visual observations were made was not in excess of the standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the source shall meet the burden of proving that the instrument used meets (at the time of the alleged violation) Performance Specification 1 in Appendix B of this part, has been properly maintained and (at the time of the alleged violation) that the resulting data have not been altered in any way.
- (2) Except as provided in paragraph (e)(3) of this section, the owner or operator of an affected facility to which an opacity standard in this part applies shall conduct opacity observations in accordance with paragraph (b) of this section, shall record the opacity of emissions, and shall report to the Administrator the opacity results along with the results of the initial performance test required under 40 CFR 60.8. The inability of an owner or operator to secure a visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test.



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(3) The owner or operator of an affected facility to which an opacity standard in this part applies may request the Administrator to determine and to record the opacity of emissions from the affected facility during the initial performance test and at such times as may be required. The owner or operator of the affected facility shall report the opacity results. Any request to the Administrator to determine and to record the opacity of emissions from an affected facility shall be included in the notification required in 40 CFR 60.7(a)(6). If, for some reason, the Administrator cannot determine and record the opacity of emissions from the affected facility during the performance test, then the provisions of paragraph (e)(1) of this section shall apply.

(4) An owner or operator of an affected facility using a continuous opacity monitor (transmissometer) shall record the monitoring data produced during the initial performance test required by 40 CFR 60.8 and shall furnish the Administrator a written report of the monitoring results along with Method 9 and 40 CFR 60.8 performance test results.

(5) An owner or operator of an affected facility subject to an opacity standard may submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under 60.8 in lieu of Method 9 observation data. If an owner or operator elects to submit COMS data for compliance with the opacity standard, he shall notify the Administrator of that decision, in writing, at least 30 days before any performance test required under 40 CFR 60.8 is conducted. Once the owner or operator of an affected facility has notified the administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent tests required under 40 CFR 60.8 until the owner or operator notifies the Administrator, in writing, to the contrary. For the purpose of determining compliance with the opacity standard during a performance test required under 40 CFR 60.8 using COMS data, the minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the mass emission performance test. Results of the COMS opacity determinations shall be submitted along with the results of the performance test required under 40 CFR 60.8. The owner or operator of an affected facility using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in 40 CFR 60.13(c) of this part, that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. If COMS data results are submitted for compliance with the opacity standard for a period of time during which Method 9 data indicates noncompliance, the Method 9 data will be used to determine opacity compliance.

(6) Upon receipt from an owner or operator of the written reports of the results of the performance tests required by 40 CFR 60.8, the opacity observation results and observer certification required by 40 CFR 60.11(e)(1) of this section, and the COMS results, if applicable, the Administrator will make a finding concerning compliance with opacity and other applicable standards. If COMS data results are used to comply with an opacity standard, only those results are required to be submitted along with the performance test results required by 40 CFR 60.8. If the Administrator finds that an affected facility is in compliance with all applicable standards for which performance tests are conducted in accordance with 40 CFR 60.8 of this part but during the time such performance tests are being conducted fails to meet any applicable opacity standard, he shall notify the owner or operator and advise him that he may petition the Administrator within 10 days of receipt of notification to make appropriate adjustment to the opacity standard for the affected facility.

(7) The Administrator will grant such a petition upon a demonstration by the owner or operator that the affected facility and associated air pollution control equipment was operated and maintained in a manner to minimize the opacity of emission during the performance tests; that the performance tests were performed under the conditions established by the Administrator; and that the affected facility and associated air pollution control equipment were incapable of being adjusted or operated to meet the applicable opacity standard.

(8) The Administrator will establish an opacity standard for the affected facility meeting the above requirements at a level at which the source was able, as indicated by the performance and opacity tests, to meet the opacity standard at all times during which the source is meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity standard in the FEDERAL REGISTER.

f) Special provisions set forth under an applicable subpart of this part shall supersede any conflicting provisions in paragraphs (a) through (e) of this section.

g) 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

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appropriate performance or compliance test or procedure had been performed.

**# 049 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.12]****Subpart A - General Provisions****Circumvention.**

This condition is applicable to Sources 034, 042, 049, 050, 052, 053, 054, 055, 056, 057, 101A, 102, 105, 106, 107, 108, 108A, 109, 201, 202, 211, 212, 213, 214, 215, 219, 220, & 224.

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 with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

**# 050 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.13]****Subpart A - General Provisions****Monitoring requirements.**

This condition is applicable to Sources 034, 042, 049, 050, 052, 053, 054, 055, 056, 057, 101A, 102, 105, 106, 107, 108, 108A, 109, 201, 202, 211, 212, 213, 214, 215, 219, 220, & 224.

a) For the purposes of this section, all continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section upon promulgation of performance specifications for continuous monitoring systems under appendix B to this part and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, appendix F to this part, unless otherwise specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.

b) All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests under 40 CFR 60.8. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.

c) If the owner or operator of an affected facility elects to submit continuous opacity monitoring system (COMS) data for compliance with the opacity standard as provided under 40 CFR 60.11(e)(5), he shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, appendix B, of this part before the performance test required under 40 CFR 60.8 is conducted. Otherwise, the owner or operator of an affected facility shall conduct a performance evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under 40 CFR 60.8 or within 30 days thereafter in accordance with the applicable performance specification in appendix B of this part. The owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as may be required by the Administrator under section 114 of the Act.

(1) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under 40 CFR 60.8 and as described in 40 CFR 60.11(e)(5) shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS performance evaluation described in paragraph (c) of this section at least 10 days before the performance test required under 40 CFR 60.8 is conducted.

(2) Except as provided in paragraph (c)(1) of this section, the owner or operator of an affected facility shall furnish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.

d)(1) Owners and operators of all continuous emission monitoring systems installed in accordance with the provisions of this part shall check the zero (or low-level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span shall, as a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications in appendix B. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified. For continuous monitoring systems measuring opacity of emissions, the optical surfaces exposed to the effluent gases shall be cleaned prior to performing



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the zero and span drift adjustments except that for systems using automatic zero adjustments. The optical surfaces shall be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity.

(2) Unless otherwise approved by the Administrator, the following procedures shall be followed for continuous monitoring systems measuring opacity of emissions. Minimum procedures shall include a method for producing a simulated zero opacity condition and an upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of the analyzer internal optical surfaces and all electronic circuitry including the lamp and photodetector assembly.

e) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of this section, all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(1) All continuous monitoring systems referenced by paragraph (c) of this section for measuring opacity of emissions 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.

(2) All continuous monitoring systems referenced by paragraph (c) of this section for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

f) All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of appendix B of this part shall be used.

g) When the effluents from a single affected facility or two or more affected facilities subject to the same emission standards are combined before being released to the atmosphere, the owner or operator may install applicable continuous monitoring systems on each effluent or on the combined effluent. When the affected facilities are not subject to the same emission standards, separate continuous monitoring systems shall be installed on each effluent. When the effluent from one affected facility is released to the atmosphere through more than one point, the owner or operator shall install an applicable continuous monitoring system on each separate effluent unless the installation of fewer systems is approved by the Administrator. When more than one continuous monitoring system is used to measure the emissions from one affected facility (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required from each continuous monitoring system.

h) Owners or operators of all continuous monitoring systems for measurement of opacity shall reduce all data to 6-minute averages and for continuous monitoring systems other than opacity to 1-hour averages for time periods as defined in 40 CFR 60.2. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period. For continuous monitoring systems other than opacity, 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorder during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. For owners or operators complying with the requirements in 40 CFR 60.7(f)(1) or (2), data averages must include any data recorded during periods of monitor breakdown or malfunction. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O<sub>2</sub> or ng/J of pollutant). All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in subparts. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in the applicable subparts to specify the emission limit (e.g., rounded to the nearest 1 percent opacity).

i) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring procedures or requirements of this part including, but not limited to those specified in 40 CFR 60.13(i).

j) An alternative to the relative accuracy test specified in Performance Specification 2 of appendix B may be requested as specified in 40 CFR 60.13(j).

**SECTION C. Site Level Requirements****# 051 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-1]  
Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry  
Standards: General.**

This condition is applicable to Sources 042, 049, 050, 055, 056, 102, 108, 109, & 211.

(a) Each owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of §§60.482-1 through 60.482-10 or §60.480(e) for all equipment within 180 days of initial startup.

(b) Compliance with §§60.482-1 to 60.482-10 will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in §60.485.

(c)(1) An owner or operator may request a determination of equivalence of a means of emission limitation to the requirements of §§60.482-2, 60.482-3, 60.482-5, 60.482-6, 60.482-7, 60.482-8, and 60.482-10 as provided in §60.484.

(2) If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of §§60.482-2, 60.482-3, 60.482-5, 60.482-6, 60.482-7, 60.482-8, or 60.482-10, an owner or operator shall comply with the requirements of that determination.

(d) Equipment that is in vacuum service is excluded from the requirements of §§60.482-2 to 60.482-10 if it is identified as required in §60.486(e)(5).

(e) Equipment that an owner or operator designates as being in VOC service less than 300 hours (hr)/yr is excluded from the requirements of §§60.482-2 through 60.482-10 if it is identified as required in §60.486(e)(6) and it meets any of the conditions specified in paragraphs (e)(1) through (3) of this section.

(1) The equipment is in VOC service only during startup and shutdown, excluding startup and shutdown between batches of the same campaign for a batch process.

(2) The equipment is in VOC service only during process malfunctions or other emergencies.

(3) The equipment is backup equipment that is in VOC service only when the primary equipment is out of service.

(f)(1) If a dedicated batch process unit operates less than 365 days during a year, an owner or operator may monitor to detect leaks from pumps and valves at the frequency specified in the table found in 40 CFR Section 60.482-1(f)(1) instead of monitoring as specified in §§60.482-2, 60.482-7, and 60.483-2:

(2) Pumps and valves that are shared among two or more batch process units that are subject to this subpart may be monitored at the frequencies specified in paragraph (f)(1) of this section, provided the operating time of all such process units is considered.

(3) The monitoring frequencies specified in paragraph (f)(1) of this section are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. An owner or operator may monitor at any time during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. Reasonable intervals are defined in paragraphs (f)(3)(i) through (iv) of this section.

(i) When monitoring is conducted quarterly, monitoring events must be separated by at least 30 calendar days.

(ii) When monitoring is conducted semiannually ( i.e. , once every 2 quarters), monitoring events must be separated by at least 60 calendar days.

(iii) When monitoring is conducted in 3 quarters per year, monitoring events must be separated by at least 90 calendar days.

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(iv) When monitoring is conducted annually, monitoring events must be separated by at least 120 calendar days.

(g) If the storage vessel is shared with multiple process units, the process unit with the greatest annual amount of stored materials (predominant use) is the process unit the storage vessel is assigned to. If the storage vessel is shared equally among process units, and one of the process units has equipment subject to subpart VVa of this part, the storage vessel is assigned to that process unit. If the storage vessel is shared equally among process units, none of which have equipment subject to subpart VVa of this part, the storage vessel is assigned to any process unit subject to this subpart. If the predominant use of the storage vessel varies from year to year, then the owner or operator must estimate the predominant use initially and reassess every 3 years. The owner or operator must keep records of the information and supporting calculations that show how predominant use is determined. All equipment on the storage vessel must be monitored when in VOC service.

**# 052 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-10]  
Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry**

**Standards: Closed vent systems and control devices.**

This condition is applicable to Sources 042, 049, 050, 055, 056, 102, 108, 109, & 211.

a) Owners or operators of closed vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section.

b) Vapor recovery systems (for example, condensers and adsorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater.

c) Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816C.

d) Flares used to comply with this subpart shall comply with the requirements of 40 CFR 60.18.

e) Owners or operators of control devices used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.

f) Except as provided in paragraphs (i) through (k) of this section, each closed vent systems shall be inspected according to the procedures and schedule specified in paragraphs (f)(1) and (f)(2) of this section.

(1) If the vapor collection system or closed vent system is constructed of hard-piping, the owner or operator shall comply with the requirements specified in paragraphs (f)(1)(i) and (f)(1)(ii) of this section:

(i) Conduct an initial inspection according to the procedures in 40 CFR 60.485(b); and

(ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(2) If the vapor collection system or closed vent system is constructed of ductwork, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in 40 CFR 60.485(b); and

(ii) Conduct annual inspections according to the procedures in 40 CFR 60.485(b).

g) Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practical except as provided in paragraph (h) of this section.

(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(2) Repair shall be completed no later than 15 calendar days after the leak is detected.

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h) 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 determined 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.

i) If a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(1)(2) of this section.

j) Any parts of the closed vent system that are designated, as described in paragraph (l)(1) of this section, as unsafe to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (j)(1) and (j)(2) of this section.

(1) The owner or operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraphs (f)(1)(i) or (f)(2) of this section; and

(2) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

k) Any parts of the closed vent system that are designated, as described in paragraph (l)(2) of this section, as difficult to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (k)(1) through (k)(3) of this section:

(1) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) The process unit within which the closed vent system is located becomes an affected facility through 40 CFR 60.14 or 40 CFR 60.15, or the owner or operator designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and

(3) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years. A closed vent system is exempt from inspection if it is operated under a vacuum.

l) The owner or operator shall record the information specified in paragraphs (l)(1) through (l)(5) of this section:

(1) Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

(2) Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

(3) For each inspection during which a leak is detected, a record of the information specified in 40 CFR 60.486(c).

(4) For each inspection conducted in accordance with 40 CFR 60.485(b) 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.

(5) For each visual inspection conducted in accordance with paragraph (f)(1)(ii) of this section 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.

m) Closed vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

**# 053 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-1a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006**

**SECTION C. Site Level Requirements****Standards: General.**

(a) Each owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of §§60.482-1a through 60.482-10a or §60.480a(e) for all equipment within 180 days of initial startup.

(b) Compliance with §§60.482-1a to 60.482-10a will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in §60.485a.

(c) (1) An owner or operator may request a determination of equivalence of a means of emission limitation to the requirements of §§60.482-2a, 60.482-3a, 60.482-5a, 60.482-6a, 60.482-7a, 60.482-8a, and 60.482-10a as provided in §60.484a.

(2) If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of §§60.482-2a, 60.482-3a, 60.482-5a, 60.482-6a, 60.482-7a, 60.482-8a, or 60.482-10a, an owner or operator shall comply with the requirements of that determination.

(d) Equipment that is in vacuum service is excluded from the requirements of §§60.482-2a through 60.482-10a if it is identified as required in §60.486a(e)(5).

(e) Equipment that an owner or operator designates as being in VOC service less than 300 hr/yr is excluded from the requirements of §§60.482-2a through 60.482-11a if it is identified as required in §60.486a(e)(6) and it meets any of the conditions specified in paragraphs (e)(1) through (3) of this section.

(1) The equipment is in VOC service only during startup and shutdown, excluding startup and shutdown between batches of the same campaign for a batch process.

(2) The equipment is in VOC service only during process malfunctions or other emergencies.

(3) The equipment is backup equipment that is in VOC service only when the primary equipment is out of service.

(f) Not applicable

(g) If the storage vessel is shared with multiple process units, the process unit with the greatest annual amount of stored materials (predominant use) is the process unit the storage vessel is assigned to. If the storage vessel is shared equally among process units, and one of the process units has equipment subject to this subpart, the storage vessel is assigned to that process unit. If the storage vessel is shared equally among process units, none of which have equipment subject to this subpart of this part, the storage vessel is assigned to any process unit subject to subpart VV of this part. If the predominant use of the storage vessel varies from year to year, then the owner or operator must estimate the predominant use initially and reassess every 3 years. The owner or operator must keep records of the information and supporting calculations that show how predominant use is determined. All equipment on the storage vessel must be monitored when in VOC service.

[Effective Date Note: At 73 FR 31376, June 2, 2008, in §60.482-1a, paragraph (g) was stayed until further notice.]

**# 054 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-2]  
Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry  
Standards: Pumps in light liquid service.**

This condition is applicable to Sources 042, 049, 050, 055, 056, 102, 108, 109, & 211.

(a)(1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in §60.485(b), except as provided in §60.482-1(c) and (f) and paragraphs (d), (e), and (f) of this section. 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 and except as provided in §60.482-1(c) and (f) and paragraphs (d), (e), and (f) of this section.

(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids

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dripping from the pump seal, except as provided in §60.482-1(f).

(b)(1) If an instrument reading of 2,500 ppm or greater is measured, a leak is detected.

[revised from 10,000 ppm to 2,500 ppm by Plan Approval 62-017G]

(2) If there are indications of liquids dripping from the pump seal, the owner or operator shall follow the procedure specified in either paragraph (b)(2)(i) or (ii) of this section. This requirement does not apply to a pump that was monitored after a previous weekly inspection if the instrument reading for that monitoring event was less than 2,500 ppm and the pump was not repaired since that monitoring event.

[revised from 10,000 ppm to 2,500 ppm by Plan Approval 62-017G]

(i) Monitor the pump within 5 days as specified in §60.485(b). If an instrument reading of 2,500 ppm or greater is measured, a leak is detected. The leak shall be repaired using the procedures in paragraph (c) of this section.

[revised from 10,000 ppm to 2,500 ppm by Plan Approval 62-017G]

(ii) Designate the visual indications of liquids dripping as a leak, and repair the leak within 15 days of detection by eliminating the visual indications of liquids dripping.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482-9.

(2) 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, where practicable.

(i) Tightening the packing gland nuts;

(ii) Ensuring that the seal flush is operating at design pressure and temperature.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a) of this section, provided the requirements specified in paragraphs (d)(1) through (6) of this section are met.

(1) Each dual mechanical seal system is:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

(ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482-10; or

(iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(2) The barrier fluid system is in heavy liquid service or is not in VOC service.

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4)(i) Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

(ii) If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the owner or operator shall follow the procedure specified in either paragraph (d)(4)(ii)(A) or (B) of this section.

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(A) Monitor the pump within 5 days as specified in §60.485(b) to determine if there is a leak of VOC in the barrier fluid. If an instrument reading of 2,500 ppm or greater is measured, a leak is detected.

[revised from 10,000 ppm to 2,500 ppm by Plan Approval 62-017G]

(B) Designate the visual indications of liquids dripping as a leak.

(5)(i) Each sensor as described in paragraph (d)(3) of this section is checked daily or is equipped with an audible alarm.

(ii) The owner or operator determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(iii) If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion established in paragraph (d)(5)(ii) of this section, a leak is detected.

(6)(i) When a leak is detected pursuant to paragraph (d)(4)(ii)(A) of this section, it shall be repaired as specified in paragraph (c) of this section.

(ii) A leak detected pursuant to paragraph (d)(5)(iii) of this section shall be repaired within 15 days of detection by eliminating the conditions that activated the sensor.

(iii) A designated leak pursuant to paragraph (d)(4)(ii)(B) of this section shall be repaired within 15 days of detection by eliminating visual indications of liquids dripping.

(e) Any pump that is designated, as described in §60.486(e)(1) and (2), 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 as measured by the methods specified in §60.485(c), and

(3) Is tested for compliance with paragraph (e)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(f) If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of §60.482-10, it is exempt from paragraphs (a) through (e) of this section.

(g) Any pump that is designated, as described in §60.486(f)(1), 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) of this section; and

(2) The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (c) of this section if a leak is detected.

(h) Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (a)(2) and (d)(4) of this section, and the daily requirements of paragraph (d)(5) of this section, provided that each pump is visually inspected as often as practicable and at least monthly.

**SECTION C. Site Level Requirements**

- # 055 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-2a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Standards: Pumps in light liquid service.**
- (a) (1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in §60.485a(b), except as provided in §60.482-1a(c) and (f) and paragraphs (d), (e), and (f) of this section. 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 and except as provided in §60.482-1a(c) and paragraphs (d), (e), and (f) of this section.
- (2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal, except as provided in §60.482-1a(f).
- (b) (1) The instrument reading that defines a leak is specified in paragraphs (b)(1)(i) and (ii) of this section.
- (i) 5,000 parts per million (ppm) or greater for pumps handling polymerizing monomers;
- (ii) 2,000 ppm or greater for all other pumps.
- (2) If there are indications of liquids dripping from the pump seal, the owner or operator shall follow the procedure specified in either paragraph (b)(2)(i) or (ii) of this section. This requirement does not apply to a pump that was monitored after a previous weekly inspection and the instrument reading was less than the concentration specified in paragraph (b)(1)(i) or (ii) of this section, whichever is applicable.
- (i) Monitor the pump within 5 days as specified in §60.485a(b). A leak is detected if the instrument reading measured during monitoring indicates a leak as specified in paragraph (b)(1)(i) or (ii) of this section, whichever is applicable. The leak shall be repaired using the procedures in paragraph (c) of this section.
- (ii) Designate the visual indications of liquids dripping as a leak, and repair the leak using either the procedures in paragraph (c) of this section or by eliminating the visual indications of liquids dripping.
- (c) (1) 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.
- (2) 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, where practicable.
- (i) Tightening the packing gland nuts;
- (ii) Ensuring that the seal flush is operating at design pressure and temperature.
- (d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a) of this section, provided the requirements specified in paragraphs (d)(1) through (6) of this section are met.
- (1) Each dual mechanical seal system is:
- (i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or
- (ii) Equipped 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
- (iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.



**SECTION C. Site Level Requirements**

- (2) The barrier fluid system is in heavy liquid service or is not in VOC service.
- (3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.
- (4) (i) Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.
- (ii) If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the owner or operator shall follow the procedure specified in either paragraph (d)(4)(ii)(A) or (B) of this section prior to the next required inspection.
- (A) Monitor the pump within 5 days as specified in §60.485a(b) to determine if there is a leak of VOC in the barrier fluid. If an instrument reading of 2,000 ppm or greater is measured, a leak is detected.
- (B) Designate the visual indications of liquids dripping as a leak.
- (5) (i) Each sensor as described in paragraph (d)(3) is checked daily or is equipped with an audible alarm.
- (ii) The owner or operator determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.
- (iii) If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion established in paragraph (d)(5)(ii) of this section, a leak is detected.
- (6) (i) When a leak is detected pursuant to paragraph (d)(4)(ii)(A) of this section, it shall be repaired as specified in paragraph (c) of this section.
- (ii) A leak detected pursuant to paragraph (d)(5)(iii) of this section shall be repaired within 15 days of detection by eliminating the conditions that activated the sensor.
- (iii) A designated leak pursuant to paragraph (d)(4)(ii)(B) of this section shall be repaired within 15 days of detection by eliminating visual indications of liquids dripping.
- (e) Any pump that is designated, as described in §60.486a(e)(1) and (2), 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 as measured by the methods specified in §60.485a(c); and
- (3) Is tested for compliance with paragraph (e)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.
- (f) If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of §60.482-10a, it is exempt from paragraphs (a) through (e) of this section.
- (g) Any pump that is designated, as described in §60.486a(f)(1), 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) of this section; and

**SECTION C. Site Level Requirements**

(2) The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (c) of this section if a leak is detected.

(h) Not applicable

**# 056 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-3]  
Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry  
Compressors.**

This condition is applicable to Sources 049, 050, 055, 056, 102, 108, 109, & 211.

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in §60.482-1(c) and paragraphs (h), (i), and (j) of this section.

(b) Each compressor seal system as required in paragraph (a) shall be:

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482-10; or

(3) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(c) The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

(d) Each barrier fluid system as described in paragraph (a) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e)(1) Each sensor as required in paragraph (d) shall be checked daily or shall be equipped with an audible alarm.

(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under paragraph (e)(2), a leak is detected.

(g)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482-9.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(h) A compressor is exempt from the requirements of paragraphs (a) and (b) of this section, if it is equipped with a closed vent system to capture and transport leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of §60.482-10, except as provided in paragraph (i) of this section.

(i) Any compressor that is designated, as described in §60.486(e) (1) and (2), 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)-(h) if the compressor:

(1) Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the methods specified in §60.485(c); and

(2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times requested by the Administrator.

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(j) Any existing reciprocating compressor in a process unit which becomes an affected facility under provisions of §60.14 or §60.15 is exempt from paragraphs (a) through (e) and (h) of this section, provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of paragraphs (a) through (e) and (h) of this section.

**# 057 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-4]  
Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry**

**Standards: Pressure relief devices in gas/vapor service.**

This condition is applicable to Sources 042, 049, 050, 055, 056, 102, 108, 109, & 211.

a) 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, as determined by the methods specified in 40 CFR 60.485(c).

b)(1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in 40 CFR 60.482-9.

(2) 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, by the methods specified in 40 CFR 60.485(c).

c) Any pressure relief device that is equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in 40 CFR 60.482-10 is exempted from the requirements of paragraphs (a) and (b).

**# 058 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-4a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Standards: Pressure relief devices in gas/vapor service.**

(a) 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, as determined by the methods specified in §60.485a(c).

(b) (1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in §60.482-9a.

(2) 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, by the methods specified in §60.485a(c).

(c) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in §60.482-10a is exempted from the requirements of paragraphs (a) and (b) of this section.

(d) (1) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (a) and (b) of this section, provided the owner or operator complies with the requirements in paragraph (d)(2) of this section.

(2) After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §60.482-9a.

**# 059 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-5]  
Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry**

**SECTION C. Site Level Requirements****Standards: Sampling connection systems.**

This condition is applicable to Sources 042, 049, 050, 055, 056, 102, 108, 109, & 211.

(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in §60.482-1(c) and paragraph (c) of this section.

(b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall comply with the requirements specified in paragraphs (b)(1) through (4) of this section.

(1) Gases displaced during filling of the sample container are not required to be collected or captured.

(2) Containers that are part of a closed-purge system must be covered or closed when not being filled or emptied.

(3) 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.

(4) Each closed-purge, closed-loop, or closed-vent system shall be designed and operated to meet requirements in either paragraph (b)(4)(i), (ii), (iii), or (iv) of this section.

(i) Return the purged process fluid directly to the process line.

(ii) Collect and recycle the purged process fluid to a process.

(iii) Capture and transport all the purged process fluid to a control device that complies with the requirements of §60.482-10.

(iv) Collect, store, and transport the purged process fluid to any of the following systems or facilities:

(A) A waste management unit as defined in §63.111, if the waste management unit is subject to and operated in compliance with the provisions of 40 CFR part 63, subpart G, applicable to Group 1 wastewater streams;

(B) A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266;

(C) A facility permitted, licensed, or registered by a state to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261;

(D) A waste management unit subject to and operated in compliance with the treatment requirements of §61.348(a), provided all waste management units that collect, store, or transport the purged process fluid to the treatment unit are subject to and operated in compliance with the management requirements of §§61.343 through 61.347; or

(E) A device used to burn off-specification used oil for energy recovery in accordance with 40 CFR part 279, subpart G, provided the purged process fluid is not hazardous waste as defined in 40 CFR part 261.

(c) In situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

**# 060 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-5a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Standards: Sampling connection systems.**

(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in §60.482-1a(c) and paragraph (c) of this section.

(b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall comply with the requirements specified in paragraphs (b)(1) through (4) of this section.

**SECTION C. Site Level Requirements**

- (1) Gases displaced during filling of the sample container are not required to be collected or captured.
- (2) Containers that are part of a closed-purge system must be covered or closed when not being filled or emptied.
- (3) 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.
- (4) Each closed-purge, closed-loop, or closed-vent system shall be designed and operated to meet requirements in either paragraph (b)(4)(i), (ii), (iii), or (iv) of this section.
  - (i) Return the purged process fluid directly to the process line.
  - (ii) Collect and recycle the purged process fluid to a process.
  - (iii) Capture and transport all the purged process fluid to a control device that complies with the requirements of §60.482-10a.
  - (iv) Collect, store, and transport the purged process fluid to any of the following systems or facilities:
    - (A) A waste management unit as defined in 40 CFR 63.111, if the waste management unit is subject to and operated in compliance with the provisions of 40 CFR part 63, subpart G, applicable to Group 1 wastewater streams;
    - (B) A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266;
    - (C) A facility permitted, licensed, or registered by a state to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261;
    - (D) A waste management unit subject to and operated in compliance with the treatment requirements of 40 CFR 61.348(a), provided all waste management units that collect, store, or transport the purged process fluid to the treatment unit are subject to and operated in compliance with the management requirements of 40 CFR 61.343 through 40 CFR 61.347; or
    - (E) A device used to burn off-specification used oil for energy recovery in accordance with 40 CFR part 279, subpart G, provided the purged process fluid is not hazardous waste as defined in 40 CFR part 261.
- (c) In-situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

**# 061 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-6]  
Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry  
Standards: Open-ended valves or lines.**

This condition is applicable to Sources 042, 049, 050, 055, 056, 102, 108, 109, & 211.

- (a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482-1(c) and paragraphs (d) and (e) of this section.
- (2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.
- (b) 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.
- (c) 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 comply with paragraph (a) at all other times.

**SECTION C. Site Level Requirements**

(d) 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 from the requirements of paragraphs (a), (b) and (c) of this section.

(e) 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 as specified in paragraphs (a) through (c) of this section are exempt from the requirements of paragraphs (a) through (c) of this section.

**# 062 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-6a]****Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Standards: Open-ended valves or lines.**

(a) (1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482-1a(c) and paragraphs (d) and (e) of this section.

(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.

(b) 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.

(c) 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 comply with paragraph (a) of this section at all other times.

(d) 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 from the requirements of paragraphs (a), (b), and (c) of this section.

(e) 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 as specified in paragraphs (a) through (c) of this section are exempt from the requirements of paragraphs (a) through (c) of this section.

**# 063 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-7]****Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry  
Standards: Valves in gas/vapor service and in light liquid service.**

This condition is applicable to Sources 042, 049, 050, 055, 056, 102, 108, 109, & 211.

(a)(1) Each valve shall be monitored monthly to detect leaks by the methods specified in §60.485(b) and shall comply with paragraphs (b) through (e) of this section, except as provided in paragraphs (f), (g), and (h) of this section, §60.482-1(c) and (f), and §§60.483-1 and 60.483-2.

(2) 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 according to paragraphs (a)(2)(i) or (ii), 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.

(i) Monitor the valve as in paragraph (a)(1) of this section. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation.

(ii) If the valves on the process unit are monitored in accordance with §60.483-1 or §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.

(b) If an instrument reading of 2,500 ppm or greater is measured, a leak is detected.

**SECTION C. Site Level Requirements**

[revised from 10,000 ppm to 2,500 ppm by Plan Approval 62-017G]

(c)(1)(i) 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.

(ii) As an alternative to monitoring all of the valves in the first month of a quarter, an owner or operator may elect to subdivide the process unit into 2 or 3 subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months. The owner or operator must keep records of the valves assigned to each subgroup.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

(d)(1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in §60.482-9.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

(1) Tightening of bonnet bolts;

(2) Replacement of bonnet bolts;

(3) Tightening of packing gland nuts;

(4) Injection of lubricant into lubricated packing.

(f) Any valve that is designated, as described in §60.486(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph (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 as determined by the method specified in §60.485(c), and

(3) Is tested for compliance with paragraph (f)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(g) Any valve that is designated, as described in §60.486(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (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.

(h) Any valve that is designated, as described in §60.486(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (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.

(2) The process unit within which the valve is located either becomes an affected facility through §60.14 or §60.15 or the owner or operator designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and

**SECTION C. Site Level Requirements**

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

**# 064 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-7a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Standards: Valves in gas/vapor service and in light liquid service.**

(a) (1) Each valve shall be monitored monthly to detect leaks by the methods specified in §60.485a(b) and shall comply with paragraphs (b) through (e) of this section, except as provided in paragraphs (f), (g), and (h) of this section, §60.482-1a(c) and (f), and §§60.483-1a and 60.483-2a.

(2) 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 according to paragraphs (a)(2)(i) or (ii), except for a valve that replaces a leaking valve and except as provided in paragraphs (f), (g), and (h) of this section, §60.482-1a(c), and §§60.483-1a and 60.483-2a.

(i) Monitor the valve as in paragraph (a)(1) of this section. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation.

(ii) If the existing valves in the process unit are monitored in accordance with §60.483-1a or §60.483-2a, count the new valve as leaking when calculating the percentage of valves leaking as described in §60.483-2a(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.

(b) If an instrument reading of 500 ppm or greater is measured, a leak is detected.

(c) (1) (i) 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.

(ii) As an alternative to monitoring all of the valves in the first month of a quarter, an owner or operator may elect to subdivide the process unit into two or three subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months. The owner or operator must keep records of the valves assigned to each subgroup.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

(d) (1) 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.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

(1) Tightening of bonnet bolts;

(2) Replacement of bonnet bolts;

(3) Tightening of packing gland nuts;

(4) Injection of lubricant into lubricated packing.

(f) Any valve that is designated, as described in §60.486a(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph (a) of this section if the valve:

(1) Has no external actuating mechanism in contact with the process fluid,



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- (2) Is operated with emissions less than 500 ppm above background as determined by the method specified in §60.485a(c), and
- (3) Is tested for compliance with paragraph (f)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.
- (g) Any valve that is designated, as described in §60.486a(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) of this section 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) of this section, 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.
- (h) Any valve that is designated, as described in §60.486a(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) of this section 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.
  - (2) The process unit within which the valve is located either:
    - (i) Becomes an affected facility through §60.14 or §60.15 and was constructed on or before January 5, 1981; or
    - (ii) Has less than 3.0 percent of its total number of valves designated as difficult-to-monitor by the owner or operator.
  - (3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

**# 065 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-8]  
Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry  
Standards: Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and  
connectors.**

This condition is applicable to Sources 042, 049, 050, 055, 056, 102, 108, 109, & 211.

(a) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors, the owner or operator shall follow either one of the following procedures:

- (1) The owner or operator shall monitor the equipment within 5 days by the method specified in §60.485(b) and shall comply with the requirements of paragraphs (b) through (d) of this section.
- (2) The owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak within 5 calendar days of detection.

(b) If an instrument reading of 2,500 ppm or greater is measured, a leak is detected.

[revised from 10,000 ppm to 2,500 ppm by Plan Approval 62-017G]

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482-9.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

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(d) First attempts at repair include, but are not limited to, the best practices described under §§60.482-2(c)(2) and 60.482-7(e).

**# 066 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-8a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Standards: Pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service.**

(a) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service, the owner or operator shall follow either one of the following procedures:

(1) The owner or operator shall monitor the equipment within 5 days by the method specified in §60.485a(b) and shall comply with the requirements of paragraphs (b) through (d) of this section.

(2) The owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak within 5 calendar days of detection.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c) (1) 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.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) 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).

**# 067 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-9]  
Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry  
Standards: Delay of repair.**

This condition is applicable to Sources 042, 049, 050, 055, 056, 102, 108, 109, & 211.

(a) 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 of this equipment 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.

(b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

(c) Delay of repair for valves will be allowed if:

(1) The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §60.482-10.

(d) Delay of repair for pumps 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.

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(e) Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies 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.

**# 068 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-9a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Standards: Delay of repair.**

(a) 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 of this equipment 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.

(b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

(c) Delay of repair for valves and connectors will be allowed if:

(1) The owner or operator demonstrates that emissions of 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.

(d) Delay of repair for pumps 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.

(e) Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies 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, 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.

**# 069 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.483-1]  
Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry  
Alternative standards for valves - allowable percentage of valves leaking.**

This condition is applicable to Sources 042, 049, 050, 055, 056, 102, 108, 109, & 211.

(a) An owner or operator may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent.

(b) The following requirements shall be met if an owner or operator wishes to comply with an allowable percentage of valves leaking:

(1) An owner or operator must notify the Administrator that the owner or operator has elected to comply with the allowable

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percentage of valves leaking before implementing this alternative standard, as specified in §60.487(d).

(2) A performance test as specified in paragraph (c) of this section shall be conducted initially upon designation, annually, and at other times requested by the Administrator.

(3) If a valve leak is detected, it shall be repaired in accordance with §60.482-7(d) and (e).

(c) Performance tests shall be conducted in the following manner:

(1) All valves in gas/vapor and light liquid service within the affected facility shall be monitored within 1 week by the methods specified in §60.485(b).

(2) If an instrument reading of 2,500 ppm or greater is measured, a leak is detected.

[revised from 10,000 ppm to 2,500 ppm by Plan Approval 62-017G]

(3) The leak percentage shall be determined by dividing the number of valves for which leaks are detected by the number of valves in gas/vapor and light liquid service within the affected facility.

(d) Owners and operators who elect to comply with this alternative standard shall not have an affected facility with a leak percentage greater than 2.0 percent, determined as described in §60.485(h).

**# 070 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.483-2]  
Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry  
Alternative standards for valves-skip period leak detection and repair.**

This condition is applicable to Sources 042, 049, 050, 055, 056, 102, 108, 109, & 211.

(a)(1) An owner or operator may elect to comply with one of the alternative work practices specified in paragraphs (b)(2) and (3) of this section.

(2) An owner or operator must notify the Administrator before implementing one of the alternative work practices, as specified in §60.487(d).

(b)(1) An owner or operator shall comply initially with the requirements for valves in gas/vapor service and valves in light liquid service, as described in §60.482-7.

(2) After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 1 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(3) After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 3 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(4) If the percent of valves leaking is greater than 2.0, the owner or operator shall comply with the requirements as described in §60.482-7 but can again elect to use this section.

(5) The percent of valves leaking shall be determined as described in §60.485(h).

(6) An owner or operator must keep a record of the percent of valves found leaking during each leak detection period.

(7) A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for a process unit following one of the alternative standards in this section must be monitored in accordance with §60.482-7(a)(2)(i) or (ii) before the provisions of this section can be applied to that valve.

**# 071 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.484]  
Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry**

**SECTION C. Site Level Requirements****Equivalence of means of emission limitation.**

This condition is applicable to Sources 042, 049, 050, 055, 056, 102, 108, 109, & 211.

- (a) Each owner or operator subject to the provisions of this subpart may apply to the Administrator for determination of equivalence for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart.
- (b) Determination of equivalence to the equipment, design, and operational requirements of this subpart will be evaluated by the following guidelines:
- (1) Each owner or operator applying for an equivalence determination shall be responsible for collecting and verifying test data to demonstrate equivalence of means of emission limitation.
- (2) The Administrator will compare test data for demonstrating equivalence of the means of emission limitation to test data for the equipment, design, and operational requirements.
- (3) The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the equipment, design, and operational requirements.
- (c) Determination of equivalence to the required work practices in this subpart will be evaluated by the following guidelines:
- (1) Each owner or operator applying for a determination of equivalence shall be responsible for collecting and verifying test data to demonstrate equivalence of an equivalent means of emission limitation.
- (2) For each affected facility for which a determination of equivalence is requested, the emission reduction achieved by the required work practice shall be demonstrated.
- (3) For each affected facility, for which a determination of equivalence is requested, the emission reduction achieved by the equivalent means of emission limitation shall be demonstrated.
- (4) Each owner or operator applying for a determination of equivalence shall commit in writing to work practice(s) that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practice.
- (5) The Administrator will compare the demonstrated emission reduction for the equivalent means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in paragraph (c)(4).
- (6) The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the required work practice.
- (d) An owner or operator may offer a unique approach to demonstrate the equivalence of any equivalent means of emission limitation.
- (e)(1) After a request for determination of equivalence is received, the Administrator will publish a notice in the Federal Register and provide the opportunity for public hearing if the Administrator judges that the request may be approved.
- (2) After notice and opportunity for public hearing, the Administrator will determine the equivalence of a means of emission limitation and will publish the determination in the Federal Register.
- (3) Any equivalent means of emission limitations approved under this section shall constitute a required work practice, equipment, design, or operational standard within the meaning of section 111(h)(1) of the Clean Air Act.
- (f)(1) Manufacturers of equipment used to control equipment leaks of VOC may apply to the Administrator for determination of equivalence for any equivalent means of emission limitation that achieves a reduction in emissions of VOC achieved by the equipment, design, and operational requirements of this subpart.

**SECTION C. Site Level Requirements**

(2) The Administrator will make an equivalence determination according to the provisions of paragraphs (b), (c), (d), and (e) of this section.

**# 072 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.484a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Equivalence of means of emission limitation.**

- (a) Each owner or operator subject to the provisions of this subpart may apply to the Administrator for determination of equivalence for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart.
- (b) Determination of equivalence to the equipment, design, and operational requirements of this subpart will be evaluated by the following guidelines:
- (1) Each owner or operator applying for an equivalence determination shall be responsible for collecting and verifying test data to demonstrate equivalence of means of emission limitation.
- (2) The Administrator will compare test data for demonstrating equivalence of the means of emission limitation to test data for the equipment, design, and operational requirements.
- (3) The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the equipment, design, and operational requirements.
- (c) Determination of equivalence to the required work practices in this subpart will be evaluated by the following guidelines:
- (1) Each owner or operator applying for a determination of equivalence shall be responsible for collecting and verifying test data to demonstrate equivalence of an equivalent means of emission limitation.
- (2) For each affected facility for which a determination of equivalence is requested, the emission reduction achieved by the required work practice shall be demonstrated.
- (3) For each affected facility, for which a determination of equivalence is requested, the emission reduction achieved by the equivalent means of emission limitation shall be demonstrated.
- (4) Each owner or operator applying for a determination of equivalence shall commit in writing to work practice(s) that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practice.
- (5) The Administrator will compare the demonstrated emission reduction for the equivalent means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in paragraph (c)(4) of this section.
- (6) The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the required work practice.
- (d) An owner or operator may offer a unique approach to demonstrate the equivalence of any equivalent means of emission limitation.
- (e) (1) After a request for determination of equivalence is received, the Administrator will publish a notice in the Federal Register and provide the opportunity for public hearing if the Administrator judges that the request may be approved.
- (2) After notice and opportunity for public hearing, the Administrator will determine the equivalence of a means of emission limitation and will publish the determination in the Federal Register.

**SECTION C. Site Level Requirements**

(3) Any equivalent means of emission limitations approved under this section shall constitute a required work practice, equipment, design, or operational standard within the meaning of section 111(h)(1) of the CAA.

(f) (1) Manufacturers of equipment used to control equipment leaks of VOC may apply to the Administrator for determination of equivalence for any equivalent means of emission limitation that achieves a reduction in emissions of VOC achieved by the equipment, design, and operational requirements of this subpart.

(2) The Administrator will make an equivalence determination according to the provisions of paragraphs (b), (c), (d), and (e) of this section.

**# 073 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.485]  
Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry  
Test methods and procedures.**

This condition is applicable to Sources 042, 049, 050, 055, 056, 102, 108, 109, & 211.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

(b) The owner or operator shall determine compliance with the standards in §§60.482-1 through 60.482-10, 60.483, and 60.484 as follows:

(1) Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21. The following calibration gases shall be used:

(i) Zero air (less than 10 ppm of hydrocarbon in air); and

(ii) A mixture of methane or n-hexane and air at a concentration of about, but less than, 2,500 ppm methane or n-hexane.

[revised from 10,000 ppm to 2,500 ppm by Plan Approval 62-017G]

(c) The owner or operator shall determine compliance with the no detectable emission standards in §§60.482-2(e), 60.482-3(i), 60.482-4, 60.482-7(f), and 60.482-10(e) as follows:

(1) The requirements of paragraph (b) shall apply.

(2) Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(d) The owner or operator shall test each piece of equipment unless he demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used:

(1) Procedures that conform to the general methods in ASTM E260-73, 91, or 96, E168-67, 77, or 92, E169-63, 77, or 93 (incorporated by reference - see §60.17) shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment.

(2) Organic compounds that are considered by the Administrator to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid.

(3) Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the Administrator disagrees with the judgment, paragraphs (d) (1) and (2) of this section shall be used to resolve the disagreement.

**SECTION C. Site Level Requirements**

(e) The owner or operator shall demonstrate that a piece of equipment is in light liquid service by showing that all the following conditions apply:

(1) The vapor pressure of one or more of the organic components is greater than 0.3 kPa at 20 °C (1.2 in. H<sub>2</sub>O at 68 °F). Standard reference texts or ASTM D2879-83, 96, or 97 (incorporated by reference - see §60.17) shall be used to determine the vapor pressures.

(2) The total concentration of the pure organic components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. H<sub>2</sub>O at 68 °F) is equal to or greater than 20 percent by weight.

(3) The fluid is a liquid at operating conditions.

(f) Samples used in conjunction with paragraphs (d), (e), and (g) of this section shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.

(g) The owner or operator shall determine compliance with the standards of flares as follows:

(1) Method 22 shall be used to determine visible emissions.

(2) A thermocouple or any other equivalent device shall be used to monitor the presence of a pilot flame in the flare.

(3) The maximum permitted velocity for air assisted flares shall be computed using the equation found in 40 CFR Section 60.485(g)(3).

(4) The net heating value (HT) of the gas being combusted in a flare shall be computed using the equation found in 40 CFR Section 60.485(g)(4).

(5) Method 18 or ASTM D6420-99 (2004) (where the target compound(s) are those listed in Section 1.1 of ASTM D6420-99, and the target concentration is between 150 parts per billion by volume and 100 parts per million by volume) and ASTM D2504-67, 77 or 88 (Reapproved 1993) (incorporated by reference - see §60.17) shall be used to determine the concentration of sample component "i".

(6) ASTM D2382-76 or 88 or D4809-95 (incorporated by reference - see §60.17) shall be used to determine the net heat of combustion of component "i" if published values are not available or cannot be calculated.

(7) Method 2, 2A, 2C, or 2D, as appropriate, shall be used to determine the actual exit velocity of a flare. If needed, the unobstructed (free) cross-sectional area of the flare tip shall be used.

(h) The owner or operator shall determine compliance with §60.483-1 or §60.483-2 as follows:

(1) The percent of valves leaking shall be determined using the following equation:

$$\%VL = (VL/VT) * 100$$

Where:

%VL= Percent leaking valves

VL= Number of valves found leaking

VT= The sum of the total number of valves monitored

(2) 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.



**SECTION C. Site Level Requirements**

- (3) The number of valves leaking shall include valves for which repair has been delayed.
- (4) 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.
- (5) 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.
- (6) The total number of valves monitored does not include a valve monitored to verify repair.

**# 074 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.485a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Test methods and procedures.**

- (a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).
- (b) The owner or operator shall determine compliance with the standards in §§60.482-1a through 60.482-11a, 60.483a, and 60.484a as follows:
  - (1) Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 of appendix A-7 of this part. The following calibration gases shall be used:
    - (i) Zero air (less than 10 ppm of hydrocarbon in air); and
    - (ii) A mixture of methane or n-hexane and air at a concentration no more than 2,000 ppm greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 ppm above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 ppm. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.
  - (2) A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day. Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A-7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in §60.486a(e)(7). Calculate the average algebraic difference between the three meter readings and the most recent calibration value. Divide this algebraic difference by the initial calibration value and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10 percent from the initial calibration value, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at the owner/operator's discretion, all equipment since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored.
- (c) The owner or operator shall determine compliance with the no-detectable- emission standards in §§60.482-2a(e), 60.482-3a(i), 60.482-4a, 60.482-7a(f), and 60.482-10a(e) as follows:
  - (1) The requirements of paragraph (b) shall apply.
  - (2) Method 21 of appendix A-7 of this part 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.

**SECTION C. Site Level Requirements**

- (d) The owner or operator shall test each piece of equipment unless he demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used:
- (1) Procedures that conform to the general methods in ASTM E260-73, 91, or 96, E168-67, 77, or 92, E169-63, 77, or 93 (incorporated by reference-see §60.17) shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment.
  - (2) Organic compounds that are considered by the Administrator to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid.
  - (3) Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the Administrator disagrees with the judgment, paragraphs (d)(1) and (2) of this section shall be used to resolve the disagreement.
- (e) The owner or operator shall demonstrate that a piece of equipment is in light liquid service by showing that all the following conditions apply:
- (1) The vapor pressure of one or more of the organic components is greater than 0.3 kPa at 20°C (1.2 in. H<sub>2</sub>O at 68°F). Standard reference texts or ASTM D2879-83, 96, or 97 (incorporated by reference-see §60.17) shall be used to determine the vapor pressures.
  - (2) The total concentration of the pure organic components having a vapor pressure greater than 0.3 kPa at 20°C (1.2 in. H<sub>2</sub>O at 68 °F) is equal to or greater than 20 percent by weight.
  - (3) The fluid is a liquid at operating conditions.
- (f) Samples used in conjunction with paragraphs (d), (e), and (g) of this section shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.
- (g) Not applicable
- (h) The owner or operator shall determine compliance with §60.483-1a or §60.483-2a as follows:
- (1) The percent of valves leaking shall be determined using the following equation:  
$$\%VL = (VL / VT) * 100$$

Where:

%VL = Percent leaking valves.

VL = Number of valves found leaking.

VT = The sum of the total number of valves monitored.
  - (2) 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.
  - (3) The number of valves leaking shall include valves for which repair has been delayed.
  - (4) 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.

**SECTION C. Site Level Requirements**

(5) If the process unit has been subdivided in accordance with §60.482-7a(c)(1)(ii), the sum of valves found leaking during a monitoring period includes all subgroups.

(6) The total number of valves monitored does not include a valve monitored to verify repair.

**# 075 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.486]  
Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry  
Recordkeeping requirements.**

This condition is applicable to Sources 042, 049, 050, 055, 056, 102, 108, 109, & 211.

(a)(1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.

(2) An owner or operator of more than one affected facility subject to the provisions of this subpart may comply with the recordkeeping requirements for these facilities in one recordkeeping system if the system identifies each record by each facility.

(b) When each leak is detected as specified in §§60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in §60.482-7(c) and no leak has been detected during those 2 months.

(3) The identification on equipment except on a valve, may be removed after it has been repaired.

(c) When each leak is detected as specified in §§60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:

(1) The instrument and operator identification numbers and the equipment identification number.

(2) The 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 2,500" if the maximum instrument reading measured by the methods specified in §60.485(a) after each repair attempt is equal to or greater than 2,500 ppm.

[revised from 10,000 ppm to 2,500 ppm by Plan Approval 62-017G]

(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.

(d) The following information pertaining to the design requirements for closed vent systems and control devices described in §60.482-10 shall be recorded and kept in a readily accessible location:

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- (1) Detailed schematics, design specifications, and piping and instrumentation diagrams.
  - (2) The dates and descriptions of any changes in the design specifications.
  - (3) A description of the parameter or parameters monitored, as required in §60.482-10(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.
  - (4) Periods when the closed vent systems and control devices required in §§60.482-2, 60.482-3, 60.482-4, and 60.482-5 are not operated as designed, including periods when a flare pilot light does not have a flame.
  - (5) Dates of startups and shutdowns of the closed vent systems and control devices required in §§60.482-2, 60.482-3, 60.482-4, and 60.482-5.
- (e) The following information pertaining to all equipment subject to the requirements in §§60.482-1 to 60.482-10 shall be recorded in a log that is kept in a readily accessible location:
- (1) A list of identification numbers for equipment subject to the requirements of this subpart.
  - (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. Alternatively, the owner or operator may establish a mechanism with their permitting authority that satisfies this requirement.
  - (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.
  - (f) The following information pertaining to all valves subject to the requirements of §60.482-7(g) and (h) and to all pumps subject to the requirements of §60.482-2(g) shall be recorded in a log that is kept in a readily accessible location:
    - (1) A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump.
    - (2) A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.
  - (g) The following information shall be recorded for valves complying with §60.483-2:
    - (1) A schedule of monitoring.
    - (2) The percent of valves found leaking during each monitoring period.
  - (h) The following information shall be recorded in a log that is kept in a readily accessible location:

**SECTION C. Site Level Requirements**

- (1) Design criterion required in §§60.482-2(d)(5) and 60.482-3(e)(2) and explanation of the design criterion; and
  - (2) Any changes to this criterion and the reasons for the changes.
- (i) The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in §60.480(d):
- (1) An analysis demonstrating the design capacity of the affected facility,
  - (2) A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and
  - (3) An analysis demonstrating that equipment is not in VOC service.
- (j) 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.
- (k) The provisions of §60.7 (b) and (d) do not apply to affected facilities subject to this subpart.

**# 076 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.486a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Recordkeeping requirements.**

- (a) (1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.
- (2) An owner or operator of more than one affected facility subject to the provisions of this subpart may comply with the recordkeeping requirements for these facilities in one recordkeeping system if the system identifies each record by each facility.
- (3) The owner or operator shall record the information specified in paragraphs (a)(3)(i) through (v) of this section for each monitoring event required by §§60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a.
- (i) Monitoring instrument identification.
  - (ii) Operator identification.
  - (iii) Equipment identification.
  - (iv) Date of monitoring.
  - (v) Instrument reading.
- (b) When each leak is detected as specified in §§60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a, the following requirements apply:
- (1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.
  - (2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in §60.482-7a(c) and no leak has been detected during those 2 months.
  - (3) The identification on a connector may be removed after it has been monitored as specified in §60.482-11a(b)(3)(iv) and no leak has been detected during that monitoring.
  - (4) The identification on equipment, except on a valve or connector, may be removed after it has been repaired.

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(c) When each leak is detected as specified in §§60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:

- (1) The instrument and operator identification numbers and the equipment identification number, except when indications of liquids dripping from a pump are designated as a leak.
- (2) The 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) Maximum instrument reading measured by Method 21 of appendix A-7 of this part at the time the leak is successfully repaired or determined to be nonrepairable, except when a pump is repaired by eliminating indications of liquids dripping.
- (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.

(d) Not applicable

(e) The following information pertaining to all equipment subject to the requirements in §§60.482-1a to 60.482-11a shall be recorded in a log that is kept in a readily accessible location:

- (1) A list of identification numbers for equipment subject to the requirements of this subpart.
- (2) (i) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §§60.482-2a(e), 60.482-3a(i), and 60.482-7a(f).  
(ii) The designation of equipment as subject to the requirements of §60.482-2a(e), §60.482-3a(i), or §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.
- (3) A list of equipment identification numbers for pressure relief devices required to comply with §60.482-4a.
- (4) (i) The dates of each compliance test as required in §§60.482-2a(e), 60.482-3a(i), 60.482-4a, and 60.482-7a(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 §60.482-1a(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.
- (7) The date and results of the weekly visual inspection for indications of liquids dripping from pumps in light liquid service.

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- (8) Records of the information specified in paragraphs (e)(8)(i) through (vi) of this section for monitoring instrument calibrations conducted according to sections 8.1.2 and 10 of Method 21 of appendix A-7 of this part and §60.485a(b).
- (i) Date of calibration and initials of operator performing the calibration.
  - (ii) Calibration gas cylinder identification, certification date, and certified concentration.
  - (iii) Instrument scale(s) used.
  - (iv) A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value in accordance with section 10.1 of Method 21 of appendix A-7 of this part.
  - (v) Results of each calibration drift assessment required by §60.485a(b)(2) (i.e., instrument reading for calibration at end of monitoring day and the calculated percent difference from the initial calibration value).
  - (vi) If an owner or operator makes their own calibration gas, a description of the procedure used.
- (9) The connector monitoring schedule for each process unit as specified in §60.482-11a(b)(3)(v).
- (10) Records of each release from a pressure relief device subject to §60.482-4a.
- (f) The following information pertaining to all valves subject to the requirements of §60.482-7a(g) and (h), all pumps subject to the requirements of §60.482-2a(g), and all connectors subject to the requirements of §60.482-11a(e) shall be recorded in a log that is kept in a readily accessible location:
- (1) A list of identification numbers for valves, pumps, and connectors that are designated as unsafe-to-monitor, an explanation for each valve, pump, or connector stating why the valve, pump, or connector is unsafe-to-monitor, and the plan for monitoring each valve, pump, or connector.
  - (2) A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.
- (g) The following information shall be recorded for valves complying with §60.483-2a:
- (1) A schedule of monitoring.
  - (2) The percent of valves found leaking during each monitoring period.
- (h) The following information shall be recorded in a log that is kept in a readily accessible location:
- (1) Design criterion required in §§60.482-2a(d)(5) and 60.482-3a(e)(2) and explanation of the design criterion; and
  - (2) Any changes to this criterion and the reasons for the changes.
- (i) The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in §60.480a(d):
- (1) An analysis demonstrating the design capacity of the affected facility,
  - (2) A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and
  - (3) An analysis demonstrating that equipment is not in VOC service.
- (j) Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that

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is kept in a readily accessible location.

(k) The provisions of §60.7(b) and (d) do not apply to affected facilities subject to this subpart.

**# 077 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.487]  
Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry  
Reporting requirements.**

This condition is applicable to Sources 042, 049, 050, 055, 056, 102, 108, 109, & 211.

(a) Each owner or operator subject to the provisions of this subpart shall submit semiannual reports to the Administrator beginning six months after the initial startup date.

(b) The initial semiannual report to the Administrator shall include the following information:

(1) Process unit identification.

(2) Number of valves subject to the requirements of §60.482-7, excluding those valves designated for no detectable emissions under the provisions of §60.482-7(f).

(3) Number of pumps subject to the requirements of §60.482-2, excluding those pumps designated for no detectable emissions under the provisions of §60.482-2(e) and those pumps complying with §60.482-2(f).

(4) Number of compressors subject to the requirements of §60.482-3, excluding those compressors designated for no detectable emissions under the provisions of §60.482-3(i) and those compressors complying with §60.482-3(h).

(c) All semiannual reports to the Administrator shall include the following information, summarized from the information in §60.486:

(1) Process unit identification.

(2) For each month during the semiannual reporting period,

(i) Number of valves for which leaks were detected as described in §60.482-7(b) or §60.483-2,

(ii) Number of valves for which leaks were not repaired as required in §60.482-7(d)(1),

(iii) Number of pumps for which leaks were detected as described in §60.482-2(b), (d)(4)(ii)(A) or (B), or (d)(5)(iii),

(iv) Number of pumps for which leaks were not repaired as required in §60.482-2(c)(1) and (d)(6),

(v) Number of compressors for which leaks were detected as described in §60.482-3(f),

(vi) Number of compressors for which leaks were not repaired as required in §60.482-3(g)(1), and

(vii) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

(3) Dates of process unit shutdowns which occurred within the semiannual reporting period.

(4) Revisions to items reported according to paragraph (b) if changes have occurred since the initial report or subsequent revisions to the initial report.

(d) An owner or operator electing to comply with the provisions of §§60.483-1 or 60.483-2 shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions.



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(e) An owner or operator shall report the results of all performance tests in accordance with §60.8 of the General Provisions. The provisions of §60.8(d) do not apply to affected facilities subject to the provisions of this subpart except that an owner or operator must notify the Administrator of the schedule for the initial performance tests at least 30 days before the initial performance tests.

(f) The requirements of paragraphs (a) through (c) of this section remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with the requirements of paragraphs (a) through (c) of this section, provided that they comply with the requirements established by the State.

**# 078 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.487a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Reporting requirements.**

(a) Each owner or operator subject to the provisions of this subpart shall submit semiannual reports to the Administrator beginning 6 months after the initial startup date.

(b) The initial semiannual report to the Administrator shall include the following information:

(1) Process unit identification.

(2) Number of valves subject to the requirements of §60.482-7a, excluding those valves designated for no detectable emissions under the provisions of §60.482-7a(f).

(3) Number of pumps subject to the requirements of §60.482-2a, excluding those pumps designated for no detectable emissions under the provisions of §60.482-2a(e) and those pumps complying with §60.482-2a(f).

(4) Number of compressors subject to the requirements of §60.482-3a, excluding those compressors designated for no detectable emissions under the provisions of §60.482-3a(i) and those compressors complying with §60.482-3a(h).

(5) Number of connectors subject to the requirements of §60.482-11a.

(c) All semiannual reports to the Administrator shall include the following information, summarized from the information in §60.486a:

(1) Process unit identification.

(2) For each month during the semiannual reporting period,

(i) Number of valves for which leaks were detected as described in §60.482-7a(b) or §60.483-2a,

(ii) Number of valves for which leaks were not repaired as required in §60.482-7a(d)(1),

(iii) Number of pumps for which leaks were detected as described in §60.482-2a(b), (d)(4)(ii)(A) or (B), or (d)(5)(iii),

(iv) Number of pumps for which leaks were not repaired as required in §60.482-2a(c)(1) and (d)(6),

(v) Number of compressors for which leaks were detected as described in §60.482-3a(f),

(vi) Number of compressors for which leaks were not repaired as required in §60.482-3a(g)(1),

(vii) Number of connectors for which leaks were detected as described in §60.482-11a(b)

(viii) Number of connectors for which leaks were not repaired as required in §60.482-11a(d), and

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(ix)-(x) [Reserved]

(xi) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

(3) Dates of process unit shutdowns which occurred within the semiannual reporting period.

(4) Revisions to items reported according to paragraph (b) of this section if changes have occurred since the initial report or subsequent revisions to the initial report.

(d) An owner or operator electing to comply with the provisions of §§60.483-1a or 60.483-2a shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions.

(e) An owner or operator shall report the results of all performance tests in accordance with §60.8 of the General Provisions. The provisions of §60.8(d) do not apply to affected facilities subject to the provisions of this subpart except that an owner or operator must notify the Administrator of the schedule for the initial performance tests at least 30 days before the initial performance tests.

(f) The requirements of paragraphs (a) through (c) of this section remain in force until and unless EPA, in delegating enforcement authority to a state under section 111(c) of the CAA, approves reporting requirements or an alternative means of compliance surveillance adopted by such state. In that event, affected sources within the state will be relieved of the obligation to comply with the requirements of paragraphs (a) through (c) of this section, provided that they comply with the requirements established by the state.

**# 079 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.5]**

**Subpart A - General Provisions**

**Determination of construction or modification.**

This condition is applicable to Sources 034, 042, 049, 050, 052, 053, 054, 055, 056, 057, 101A, 102, 105, 106, 107, 108, 108A, 109, 201, 202, 211, 212, 213, 214, 215, 219, 220, & 224.

a) When requested to do so by an owner or operator, the Administrator will make a determination of whether action taken or intended to be taken by such owner or operator constitutes construction (including reconstruction) or modification or the commencement thereof within the meaning of this part.

b) The Administrator will respond to any request for a determination under paragraph (a) of this section within 30 days of receipt of such request.

**# 080 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.590]**

**Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries**

**Applicability and designation of affected facility.**

(a)(1) The provisions of this subpart apply to affected facilities in petroleum refineries.

(2) A compressor is an affected facility.

(3) The group of all the equipment (defined in §60.591) within a process unit is an affected facility.

(b) Any affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after January 4, 1983, and on or before November 7, 2006, is subject to the requirements of this subpart.

(c) Addition or replacement of equipment (defined in §60.591) for the purpose of process improvement which is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.

(d) Facilities subject to subpart VV, subpart VVa, or subpart KKK of this part are excluded from this subpart.

(e) Stay of standards. Owners or operators are not required to comply with the definition of "process unit" in §60.590 of this subpart until the EPA takes final action to require compliance and publishes a document in the Federal Register. While the

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definition of "process unit" is stayed, owners or operators should use the following definition:

Process unit means components assembled to produce intermediate or final products from petroleum, unfinished petroleum derivatives, or other intermediates; a process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.

**# 081 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.590a]  
Subpart GGGa - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Applicability and designation of affected facility.**

(a)(1) The provisions of this subpart apply to affected facilities in petroleum refineries.

(2) A compressor is an affected facility.

(3) The group of all the equipment (defined in §60.591a) within a process unit is an affected facility.

(b) Any affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after November 7, 2006, is subject to the requirements of this subpart.

(c) Addition or replacement of equipment (defined in §60.591a) for the purpose of process improvement which is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.

(d) Facilities subject to subpart VV, subpart VVa, subpart GGG, or subpart KKK of this part are excluded from this subpart.

(e) Stay of standards. Owners or operators are not required to comply with the definition of "process unit" in §60.590 of this subpart until the EPA takes final action to require compliance and publishes a document in the Federal Register. While the definition of "process unit" is stayed, owners or operators should use the following definition:

Process unit means components assembled to produce intermediate or final products from petroleum, unfinished petroleum derivatives, or other intermediates; a process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.

**# 082 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.591a]  
Subpart GGGa - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Definitions.**

[Please see eCFR 40 CFR Section 63.591a for the definitions used in subpart GGGa]

**# 083 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.592]  
Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries  
Standards.**

This condition is applicable to Sources 042, 049, 050, 054, 055, 056, 102, 108, 109, & 211.

(a) Each owner or operator subject to the provisions of this subpart shall comply with the requirements of §§60.482-1 to 60.482-10 as soon as practicable, but no later than 180 days after initial startup.

(b) For a given process unit, an owner or operator may elect to comply with the requirements of paragraphs (b)(1), (2), or (3) of this section as an alternative to the requirements in §60.482-7.

(1) Comply with §60.483-1.

(2) Comply with §60.483-2.

(3) Comply with the Phase III provisions in 40 CFR 63.168, except an owner or operator may elect to follow the provisions in §60.482-7(f) instead of 40 CFR 63.168 for any valve that is designated as being leakless.

(c) An owner or operator may apply to the Administrator for a determination of equivalency for any means of emission

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limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart. In doing so, the owner or operator shall comply with requirements of §60.484.

(d) Each owner or operator subject to the provisions of this subpart shall comply with the provisions of §60.485 except as provided in §60.593.

(e) Each owner or operator subject to the provisions of this subpart shall comply with the provisions of §§60.486 and 60.487.

**# 084 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.592a]  
Subpart GGGa - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 Standards.**

(a) Each owner or operator subject to the provisions of this subpart shall comply with the requirements of §§60.482-1a to 60.482-10a as soon as practicable, but no later than 180 days after initial startup.

(b) For a given process unit, an owner or operator may elect to comply with the requirements of paragraphs (b)(1), (2), or (3) of this section as an alternative to the requirements in §60.482-7a.

(1) Comply with §60.483-1a.

(2) Comply with §60.483-2a.

(3) Comply with the Phase III provisions in §63.168, except an owner or operator may elect to follow the provisions in §60.482-7a(f) instead of §63.168 for any valve that is designated as being leakless.

(c) An owner or operator may apply to the Administrator for a determination of equivalency for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart. In doing so, the owner or operator shall comply with requirements of §60.484a.

(d) Each owner or operator subject to the provisions of this subpart shall comply with the provisions of §60.485a except as provided in §60.593a.

(e) Each owner or operator subject to the provisions of this subpart shall comply with the provisions of §§60.486a and 60.487a.

**# 085 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.593]  
Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries Exceptions.**

This condition is applicable to Sources 042, 049, 050, 054, 055, 056, 102, 108, 109, & 211.

(a) Each owner or operator subject to the provisions of this subpart may comply with the following exceptions to the provisions of subpart VV.

(b)(1) Compressors in hydrogen service are exempt from the requirements of §60.592 if an owner or operator demonstrates that a compressor is in hydrogen service.

(2) Each compressor is presumed not to be in hydrogen service unless an owner or operator demonstrates that the piece of equipment is in hydrogen service. For a piece of equipment to be considered in hydrogen service, it must be determined that the percent hydrogen content can be reasonably expected always to exceed 50 percent by volume. For purposes of determining the percent hydrogen content in the process fluid that is contained in or contacts a compressor, procedures that conform to the general method described in ASTM E260-73, 91, or 96, E168-67, 77, or 92, or E169-63, 77, or 93 (incorporated by reference as specified in §60.17) shall be used.

(3)(i) An owner or operator may use engineering judgment rather than procedures in paragraph (b)(2) of this section to demonstrate that the percent content exceeds 50 percent by volume, provided the engineering judgment demonstrates that

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the content clearly exceeds 50 percent by volume. When an owner or operator and the Administrator do not agree on whether a piece of equipment is in hydrogen service, however, the procedures in paragraph (b)(2) shall be used to resolve the disagreement.

(ii) If an owner or operator determines that a piece of equipment is in hydrogen service, the determination can be revised only after following the procedures in paragraph (b)(2).

(c) Any existing reciprocating compressor that becomes an affected facility under provisions of §60.14 or §60.15 is exempt from §60.482-3(a), (b), (c), (d), (e), and (h) provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of §60.482-3(a), (b), (c), (d), (e), and (h).

(d) An owner or operator may use the following provision in addition to §60.485(e): Equipment is in light liquid service if the percent evaporated is greater than 10 percent at 150 °C as determined by ASTM Method D86-78, 82, 90, 95, or 96 (incorporated by reference as specified in §60.17).

(e) Pumps in light liquid service and valves in gas/vapor and light liquid service within a process unit that is located in the Alaskan North Slope are exempt from the requirements of §60.482-2 and §60.482-7.

(f) Open-ended valves or lines containing asphalt as defined in §60.591 are exempt from the requirements of §60.482-6(a) through (c).

**# 086 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.593a]****Subpart GGGa - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Exceptions.**

(a) Each owner or operator subject to the provisions of this subpart may comply with the following exceptions to the provisions of subpart VVa of this part.

(b)(1) Compressors in hydrogen service are exempt from the requirements of §60.592a if an owner or operator demonstrates that a compressor is in hydrogen service.

(2) Each compressor is presumed not to be in hydrogen service unless an owner or operator demonstrates that the piece of equipment is in hydrogen service. For a piece of equipment to be considered in hydrogen service, it must be determined that the percent hydrogen content can be reasonably expected always to exceed 50 percent by volume. For purposes of determining the percent hydrogen content in the process fluid that is contained in or contacts a compressor, procedures that conform to the general method described in ASTM E260-73, 91, or 96, E168-67, 77, or 92, or E169-63, 77, or 93 (incorporated by reference as specified in §60.17) shall be used.

(3)(i) An owner or operator may use engineering judgment rather than procedures in paragraph (b)(2) of this section to demonstrate that the percent content exceeds 50 percent by volume, provided the engineering judgment demonstrates that the content clearly exceeds 50 percent by volume. When an owner or operator and the Administrator do not agree on whether a piece of equipment is in hydrogen service, however, the procedures in paragraph (b)(2) of this section shall be used to resolve the disagreement.

(ii) If an owner or operator determines that a piece of equipment is in hydrogen service, the determination can be revised only after following the procedures in paragraph (b)(2).

(c) Any existing reciprocating compressor that becomes an affected facility under provisions of §60.14 or §60.15 is exempt from §60.482-3a(a), (b), (c), (d), (e), and (h) provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of §60.482-3a(a), (b), (c), (d), (e), and (h).

(d) An owner or operator may use the following provision in addition to §60.485a(e): Equipment is in light liquid service if the percent evaporated is greater than 10 percent at 150 °C as determined by ASTM Method D86-78, 82, 90, 93, 95, or 96 (incorporated by reference as specified in §60.17).

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(e) Pumps in light liquid service and valves in gas/vapor and light liquid service within a process unit that is located in the Alaskan North Slope are exempt from the requirements of §§60.482-2a and 60.482-7a.

(f) Open-ended valves or lines containing asphalt as defined in §60.591a are exempt from the requirements of §60.482-6a(a) through (c).

(g) Connectors in gas/vapor or light liquid service are exempt from the requirements in §60.482-11a, provided the owner or operator complies with §60.482-8a for all connectors, not just those in heavy liquid service.

**# 087 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.6]****Subpart A - General Provisions****Review of plans.**

This condition is applicable to Sources 034, 042, 049, 050, 052, 053, 054, 055, 056, 057, 101A, 102, 105, 106, 107, 108, 108A, 109, 201, 202, 211, 212, 213, 214, 215, 219, 220, & 224.

a) When requested to do so by an owner or operator, the Administrator will review plans for construction or modification for the purpose of providing technical advice to the owner or operator.

b)(1) A separate request shall be submitted for each construction or modification project.

(2) Each request shall identify the location of such project, and be accompanied by technical information describing the proposed nature, size, design, and method of operation of each affected facility involved in such project, including information on any equipment to be used for measurement or control of emissions.

c) Neither a request for plans review nor advice furnished by the Administrator in response to such request shall (1) relieve an owner or operator of legal responsibility for compliance with any provision of this part or of any applicable State or local requirement, or (2) prevent the Administrator from implementing or enforcing any provision of this part or taking any other action authorized by the Act.

**# 088 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.7]****Subpart A - General Provisions****Notification and record keeping.**

This condition is applicable to Sources 034, 042, 049, 050, 052, 053, 054, 055, 056, 057, 101A, 102, 105, 106, 107, 108, 108A, 109, 201, 202, 211, 212, 213, 214, 215, 219, 220, & 224.

a) Any owner or operator subject to the provisions of this part shall furnish the Administrator written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, as follows:

(1) A notification of the date construction (or reconstruction as defined under 40 CFR 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.

(2) [Reserved]

(3) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.

(4) A 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. The Administrator may request additional relevant information subsequent to this notice.

(5) A 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.

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(6) A notification of the anticipated date for conducting the opacity observations required by 40 CFR 60.11(e)(1) of this part. The notification shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.

(7) A 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 40 CFR 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.

b) Any owner or operator subject to the provisions of this part shall 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.

c) Each owner or operator required to install a continuous monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or summary report form (see paragraph (d) of this section) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:

(1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

d) The summary report form shall contain the information and be in the format shown in Figure 1 (Summary Report Gaseous and Opacity Excess Emission and Monitoring System Performance) in 40 CFR 60.7 unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

(1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.

(2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.

e)(1) Notwithstanding the frequency of reporting requirements specified in paragraph (c) of this section, an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in

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compliance with the applicable standard;

(ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the applicable standard; and

(iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in paragraph (e)(2) of this section.

(2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in paragraphs (e)(1) and (e)(2) of this section.

f) Any owner or operator subject to the provisions of this part shall 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 suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records, except as specified in 40 CFR 60.7(f).

g) If notification substantially similar to that in paragraph (a) of this section is required by any other State or local agency, sending the Administrator a copy of that notification will satisfy the requirements of paragraph (a) of this section.

h) Individual subparts of this part may include specific provisions which clarify or make inapplicable the provisions set forth in this section.

**# 089 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.8]**

**Subpart A - General Provisions**

**Performance tests.**

This condition is applicable to Sources 034, 042, 049, 050, 052, 053, 054, 055, 056, 057, 101A, 102, 105, 106, 107, 108, 108A, 109, 201, 202, 211, 212, 213, 214, 215, 219, 220, & 224.

(a) Except as specified in paragraphs (a)(1),(a)(2), (a)(3), and (a)(4) of this section, within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, or at such other times specified by this part, and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).

(1) If a force majeure is about to occur, occurs, or has occurred for which the affected owner or operator intends to assert a claim of force majeure, the owner or operator shall notify the Administrator, in writing as soon as practicable following the date the owner or operator first knew, or through due diligence should have known that the event may cause or caused a



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delay in testing beyond the regulatory deadline, but the notification must occur before the performance test deadline unless the initial force majeure or a subsequent force majeure event delays the notice, and in such cases, the notification shall occur as soon as practicable.

(2) The owner or operator shall provide to the Administrator a written description of the force majeure event and a rationale for attributing the delay in testing beyond the regulatory deadline to the force majeure; describe the measures taken or to be taken to minimize the delay; and identify a date by which the owner or operator proposes to conduct the performance test. The performance test shall be conducted as soon as practicable after the force majeure occurs.

(3) The decision as to whether or not to grant an extension to the performance test deadline is solely within the discretion of the Administrator. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an extension as soon as practicable.

(4) Until an extension of the performance test deadline has been approved by the Administrator under paragraphs (a)(1), (2), and (3) of this section, the owner or operator of the affected facility remains strictly subject to the requirements of this part.

(b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance, (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. 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 applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

d) The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the Administrator (or delegated State or local agency) as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator (or delegated State or local agency) by mutual agreement.

e) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(1) Sampling ports adequate for test methods applicable to such facility. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.

(2) Safe sampling platform(s).

(3) Safe access to sampling platform(s).

(4) Utilities for sampling and testing equipment.

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(f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method.

(1) Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

(2) Contents of report (electronic or paper submitted copy). Unless otherwise specified in a relevant standard or test method, or as otherwise approved by the Administrator in writing, the report for a performance test shall include the elements identified in paragraphs (f)(2)(i) through (vi) of this section.

(i) General identification information for the facility including a mailing address, the physical address, the owner or operator or responsible official (where applicable) and his/her email address, and the appropriate Federal Registry System (FRS) number for the facility.

(ii) Purpose of the test including the applicable regulation(s) requiring the test, the pollutant(s) and other parameters being measured, the applicable emission standard and any process parameter component, and a brief process description.

(iii) Description of the emission unit tested including fuel burned, control devices, and vent characteristics; the appropriate source classification code (SCC); the permitted maximum process rate (where applicable); and the sampling location.

(iv) Description of sampling and analysis procedures used and any modifications to standard procedures, quality assurance procedures and results, record of process operating conditions that demonstrate the applicable test conditions are met, and values for any operating parameters for which limits were being set during the test.

(v) Where a test method requires you record or report, the following shall be included: Record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, chain-of-custody documentation, and example calculations for reported results.

(vi) Identification of the company conducting the performance test including the primary office address, telephone number, and the contact for this test program including his/her email address.

(g) The performance testing shall include a test method performance audit (PA) during the performance test. The PAs consist of blind audit samples supplied by an accredited audit sample provider and analyzed during the performance test in order to provide a measure of test data bias. Gaseous audit samples are designed to audit the performance of the sampling system as well as the analytical system and must be collected by the sampling system during the compliance test just as the compliance samples are collected. If a liquid or solid audit sample is designed to audit the sampling system, it must also be collected by the sampling system during the compliance test. If multiple sampling systems or sampling trains are used during the compliance test for any of the test methods, the tester is only required to use one of the sampling systems per method to collect the audit sample. The audit sample must be analyzed by the same analyst using the same analytical reagents and analytical system and at the same time as the compliance samples. Retests are required when there is a failure to produce acceptable results for an audit sample. However, if the audit results do not affect the compliance or noncompliance status of the affected facility, the compliance authority may waive the reanalysis requirement, further audits, or retests and accept the results of the compliance test. Acceptance of the test results shall constitute a waiver of the reanalysis requirement, further audits, or retests. The compliance authority may also use the audit sample failure and the compliance test results as evidence to determine the compliance or noncompliance status of the affected facility. A blind audit sample is a sample whose value is known only to the sample provider and is not revealed to the tested facility until after they report the measured value of the audit sample. For pollutants that exist in the gas phase at ambient temperature, the audit sample shall consist of an appropriate concentration of the pollutant in air or nitrogen that can be introduced into the sampling system of the test method at or near the same entry point as a sample from the emission source. If no gas phase audit samples are available, an acceptable alternative is a sample of the pollutant in the



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same matrix that would be produced when the sample is recovered from the sampling system as required by the test method. For samples that exist only in a liquid or solid form at ambient temperature, the audit sample shall consist of an appropriate concentration of the pollutant in the same matrix that would be produced when the sample is recovered from the sampling system as required by the test method. An accredited audit sample provider (AASP) is an organization that has been accredited to prepare audit samples by an independent, third party accrediting body.

(1) The source owner, operator, or representative of the tested facility shall obtain an audit sample, if commercially available, from an AASP for each test method used for regulatory compliance purposes. No audit samples are required for the following test methods: Methods 3A and 3C of appendix A-3 of part 60, Methods 6C, 7E, 9, and 10 of appendix A-4 of part 60, Methods 18 and 19 of appendix A-6 of part 60, Methods 20, 22, and 25A of appendix A-7 of part 60, Methods 30A and 30B of appendix A-8 of part 60, and Methods 303, 318, 320, and 321 of appendix A of part 63 of this chapter. If multiple sources at a single facility are tested during a compliance test event, only one audit sample is required for each method used during a compliance test. The compliance authority responsible for the compliance test may waive the requirement to include an audit sample if they believe that an audit sample is not necessary. "Commercially available" means that two or more independent AASPs have blind audit samples available for purchase. If the source owner, operator, or representative cannot find an audit sample for a specific method, the owner, operator, or representative shall consult the EPA Web site at the following URL, [www.epa.gov/ttn/emc](http://www.epa.gov/ttn/emc), to confirm whether there is a source that can supply an audit sample for that method. If the EPA Web site does not list an available audit sample at least 60 days prior to the beginning of the compliance test, the source owner, operator, or representative shall not be required to include an audit sample as part of the quality assurance program for the compliance test. When ordering an audit sample, the source owner, operator, or representative shall give the sample provider an estimate for the concentration of each pollutant that is emitted by the source or the estimated concentration of each pollutant based on the permitted level and the name, address, and phone number of the compliance authority. The source owner, operator, or representative shall report the results for the audit sample along with a summary of the emission test results for the audited pollutant to the compliance authority and shall report the results of the audit sample to the AASP. The source owner, operator, or representative shall make both reports at the same time and in the same manner or shall report to the compliance authority first and then report to the AASP. If the method being audited is a method that allows the samples to be analyzed in the field and the tester plans to analyze the samples in the field, the tester may analyze the audit samples prior to collecting the emission samples provided a representative of the compliance authority is present at the testing site. The tester may request and the compliance authority may grant a waiver to the requirement that a representative of the compliance authority must be present at the testing site during the field analysis of an audit sample. The source owner, operator, or representative may report the results of the audit sample to the compliance authority and report the results of the audit sample to the AASP prior to collecting any emission samples. The test protocol and final test report shall document whether an audit sample was ordered and utilized and the pass/fail results as applicable.

(2) An AASP shall have and shall prepare, analyze, and report the true value of audit samples in accordance with a written technical criteria document that describes how audit samples will be prepared and distributed in a manner that will ensure the integrity of the audit sample program. An acceptable technical criteria document shall contain standard operating procedures for all of the following operations:

(i) Preparing the sample;

(ii) Confirming the true concentration of the sample;

(iii) Defining the acceptance limits for the results from a well qualified tester. This procedure must use well established statistical methods to analyze historical results from well qualified testers. The acceptance limits shall be set so that there is 95 percent confidence that 90 percent of well qualified labs will produce future results that are within the acceptance limit range.

(iv) Providing the opportunity for the compliance authority to comment on the selected concentration level for an audit sample;

(v) Distributing the sample to the user in a manner that guarantees that the true value of the sample is unknown to the user;

(vi) Recording the measured concentration reported by the user and determining if the measured value is within



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acceptable limits;

(vi) The AASP shall report the results from each audit sample in a timely manner to the compliance authority and then to the source owner, operator, or representative. The AASP shall make both reports at the same time and in the same manner or shall report to the compliance authority first and then report to the source owner, operator, or representative. The results shall include the name of the facility tested, the date on which the compliance test was conducted, the name of the company performing the sample collection, the name of the company that analyzed the compliance samples including the audit sample, the measured result for the audit sample, and whether the testing company passed or failed the audit. The AASP shall report the true value of the audit sample to the compliance authority. The AASP may report the true value to the source owner, operator, or representative if the AASP's operating plan ensures that no laboratory will receive the same audit sample twice.

(vii) Evaluating the acceptance limits of samples at least once every two years to determine in cooperation with the voluntary consensus standard body if they should be changed;

(ix) Maintaining a database, accessible to the compliance authorities, of results from the audit that shall include the name of the facility tested, the date on which the compliance test was conducted, the name of the company performing the sample collection, the name of the company that analyzed the compliance samples including the audit sample, the measured result for the audit sample, the true value of the audit sample, the acceptance range for the measured value, and whether the testing company passed or failed the audit.

(3) The accrediting body shall have a written technical criteria document that describes how it will ensure that the AASP is operating in accordance with the AASP technical criteria document that describes how audit samples are to be prepared and distributed. This document shall contain standard operating procedures for all of the following operations:

(i) Checking audit samples to confirm their true value as reported by the AASP;

(ii) Performing technical systems audits of the AASP's facilities and operating procedures at least once every two years;

(iii) Providing standards for use by the voluntary consensus standard body to approve the accrediting body that will accredit the audit sample providers.

(4) The technical criteria documents for the accredited sample providers and the accrediting body shall be developed through a public process guided by a voluntary consensus standards body (VCSB). The VCSB shall operate in accordance with the procedures and requirements in the Office of Management and Budget Circular A-119. A copy of Circular A-119 is available upon request by writing the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW., Washington, DC 20503, by calling (202) 395-6880 or downloading online at [http://standards.gov/standards\\_gov/a119.cfm](http://standards.gov/standards_gov/a119.cfm). The VCSB shall approve all accrediting bodies. The Administrator will review all technical criteria documents. If the technical criteria documents do not meet the minimum technical requirements in paragraphs (g)(2) through (4) of this section, the technical criteria documents are not acceptable and the proposed audit sample program is not capable of producing audit samples of sufficient quality to be used in a compliance test. All acceptable technical criteria documents shall be posted on the EPA Web site at the following URL, <http://www.epa.gov/ttn/emc>.

(h) Unless otherwise specified in the applicable subpart, each test location must be verified to be free of cyclonic flow and evaluated for the existence of emission gas stratification and the required number of sampling traverse points. If other procedures are not specified in the applicable subpart to the regulations, use the appropriate procedures in Method 1 to check for cyclonic flow and Method 7E to evaluate emission gas stratification and selection of sampling points.

(i) Whenever the use of multiple calibration gases is required by a test method, performance specification, or quality assurance procedure in a part 60 standard or appendix, Method 205 of 40 CFR part 51, appendix M of this chapter, "Verification of Gas Dilution Systems for Field Instrument Calibrations," may be used.

**SECTION C. Site Level Requirements****# 090 [40 CFR Part 61 NESHAPs §40 CFR 61.342]****Subpart FF--National Emission Standard for Benzene Waste Operations****Standards: General.**

- (a) An owner or operator of a facility at which the total annual benzene quantity from facility waste is less than 10 megagrams per year (Mg/yr) (11 ton/yr) shall be exempt from the requirements of paragraphs (b) and (c) of this section. The total annual benzene quantity from facility waste is the sum of 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. Other specific requirements for calculating the total annual benzene waste quantity are as follows:
- (1) Wastes that are exempted from control under §§61.342(c)(2) and 61.342(c)(3) are included in the calculation of the total annual benzene quantity if they have an annual average water content greater than 10 percent, or if they are mixed with water or other wastes at any time and the mixture has an annual average water content greater than 10 percent.
  - (2) The benzene in a material subject to this subpart that is sold is included in the calculation of the total annual benzene quantity if the material has an annual average water content greater than 10 percent.
  - (3) Benzene in wastes generated by remediation activities conducted at the facility, such as the excavation of contaminated soil, pumping and treatment of groundwater, and the recovery of product from soil or groundwater, are not included in the calculation of total annual benzene quantity for that facility. If the facility's total annual benzene quantity is 10 Mg/yr (11 ton/yr) or more, wastes generated by remediation activities are subject to the requirements of paragraphs (c) through (h) of this section. If the facility is managing remediation waste generated offsite, the benzene in this waste shall be included in the calculation of total annual benzene quantity in facility waste, if the waste streams have an annual average water content greater than 10 percent, or if they are mixed with water or other wastes at any time and the mixture has an annual average water content greater than 10 percent.
  - (4) The total annual benzene quantity is determined based upon the quantity of benzene in the waste before any waste treatment occurs to remove the benzene except as specified in §61.355(c)(1)(i) (A) through (C).
- (b) Each owner or operator of a facility at which the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr (11 ton/yr) as determined in paragraph (a) of this section shall be in compliance with the requirements of paragraphs (c) through (h) of this section no later than 90 days following the effective date, unless a waiver of compliance has been obtained under §61.11, or by the initial startup for a new source with an initial startup after the effective date.
- (1) The owner or operator of an existing source unable to comply with the rule within the required time may request a waiver of compliance under §61.10.
  - (2) As part of the waiver application, the owner or operator shall submit to the Administrator a plan under §61.10(b)(3) that is an enforceable commitment to obtain environmental benefits to mitigate the benzene emissions that result from extending the compliance date. The plan shall include the following information:
    - (i) A description of the method of compliance, including the control approach, schedule for installing controls, and quantity of the benzene emissions that result from extending the compliance date;
    - (ii) If the control approach involves a compliance strategy designed to obtain integrated compliance with multiple regulatory requirements, a description of the other regulations involved and their effective dates; and
    - (iii) A description of the actions to be taken at the facility to obtain mitigating environmental benefits, including how the benefits will be obtained, the schedule for these actions, and an estimate of the quantifiable benefits that directly result from these actions.
- (c) Each owner or operator of a facility at which the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr (11 ton/yr) as determined in paragraph (a) of this section shall manage and treat the facility waste as follows:

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(1) For each waste stream that contains benzene, including (but not limited to) organic waste streams that contain less than 10 percent water and aqueous waste streams, even if the wastes are not discharged to an individual drain system, the owner or operator shall:

(i) Remove or destroy the benzene contained in the waste using a treatment process or wastewater treatment system that complies with the standards specified in §61.348 of this subpart.

(ii) Comply with the standards specified in §§61.343 through 61.347 of this subpart for each waste management unit that receives or manages the waste stream prior to and during treatment of the waste stream in accordance with paragraph (c)(1)(i) of this section.

(iii) Each waste management unit used to manage or treat waste streams that will be recycled to a process shall comply with the standards specified in §§61.343 through 61.347. Once the waste stream is recycled to a process, including to a tank used for the storage of production process feed, product, or product intermediates, unless this tank is used primarily for the storage of wastes, the material is no longer subject to paragraph (c) of this section.

(2) A waste stream is exempt from paragraph (c)(1) of this section provided that the owner or operator demonstrates initially and, thereafter, 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).

(3) A waste stream is exempt from paragraph (c)(1) of this section provided that the owner or operator demonstrates initially and, thereafter, at least once per year that the conditions specified in either paragraph (c)(3)(i) or (c)(3)(ii) of this section are met.

(i) The waste stream is process wastewater that has a flow rate less than 0.02 liters per minute (0.005 gallons per minute) or an annual wastewater quantity of less than 10 Mg/yr (11 ton/yr); or

(ii) 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.

(d) As an alternative to the requirements specified in paragraphs (c) and (e) of this section, an owner or operator of a facility at which the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr (11 ton/yr) as determined in paragraph (a) of this section may elect to manage and treat the facility waste as follows:

(1) The owner or operator shall manage and treat facility waste other than process wastewater in accordance with the requirements of paragraph (c)(1) of this section.

(2) The owner or operator shall manage and treat process wastewater in accordance with the following requirements:

(i) Process wastewater shall be treated to achieve a total annual benzene quantity from facility process wastewater less than 1 Mg/yr (1.1 ton/yr). Total annual benzene from facility process wastewater shall be determined by adding together the annual benzene quantity at the point of waste generation for each untreated process wastewater stream plus the annual benzene quantity exiting the treatment process for each process wastewater stream treated in accordance with the requirements of paragraph (c)(1)(i) of this section.

(ii) Each treated process wastewater stream identified in paragraph (d)(2)(i) of this section shall be managed and treated in accordance with paragraph (c)(1) of this section.

(iii) Each untreated process wastewater stream identified in paragraph (d)(2)(i) of this section is exempt from the

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requirements of paragraph (c)(1) of this section.

(e) As an alternative to the requirements specified in paragraphs (c) and (d) of this section, an owner or operator of a facility at which the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr (11 ton/yr) as determined in paragraph (a) of this section may elect to manage and treat the facility waste as follows:

(1) The owner or operator shall manage and treat facility waste with a flow-weighted annual average water content of less than 10 percent in accordance with the requirements of paragraph (c)(1) of this section; and

(2) The owner or operator shall manage and treat facility waste (including remediation and process unit turnaround waste) with a flow-weighted annual average water content of 10 percent or greater, on a volume basis as total water, and each waste stream that is mixed with water or wastes at any time such that the resulting mixture has an annual water content greater than 10 percent, in accordance with the following:

(i) The benzene quantity for the wastes described in paragraph (e)(2) of this section must be equal to or less than 6.0 Mg/yr (6.6 ton/yr), as determined in §61.355(k). Wastes as described in paragraph (e)(2) of this section that are transferred offsite shall be included in the determination of benzene quantity as provided in §61.355(k). The provisions of paragraph (f) of this section shall not apply to any owner or operator who elects to comply with the provisions of paragraph (e) of this section.

(ii) The determination of benzene quantity for each waste stream defined in paragraph (e)(2) of this section shall be made in accordance with §61.355(k).

(f) Rather than treating the waste onsite, an owner or operator may elect to comply with paragraph (c)(1)(i) of this section by transferring the waste offsite to another facility where the waste is treated in accordance with the requirements of paragraph (c)(1)(i) of this section. The owner or operator transferring the waste shall:

(1) Comply with the standards specified in §§61.343 through 61.347 of this subpart for each waste management unit that receives or manages the waste prior to shipment of the waste offsite.

(2) Include with each offsite waste shipment a notice stating that the waste contains benzene which is required to be managed and treated in accordance with the provisions of this subpart.

(g) Compliance with this subpart will be determined by review of facility records and results from tests and inspections using methods and procedures specified in §61.355 of this subpart.

(h) Permission to use an alternative means of compliance to meet the requirements of §§61.342 through 61.352 of this subpart may be granted by the Administrator as provided in §61.353 of this subpart.

**# 091 [40 CFR Part 61 NESHAPs §40 CFR 61.343]**

**Subpart FF--National Emission Standard for Benzene Waste Operations**

**Standards: Tanks.**

(a) Except as provided in paragraph (b) of this section and in §61.351, the owner or operator must meet the standards in paragraph (a)(1) or (2) of this section for each tank in which the waste stream is placed in accordance with §61.342 (c)(1)(ii). The standards in this section apply to the treatment and storage of the waste stream in a tank, including dewatering.

(1) The owner or operator shall install, operate, and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the tank to a control device.

(i) The fixed-roof shall meet the following requirements:

(A) The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in §61.355(h) of this subpart.

(B) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all

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times that waste is in the tank except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair.

(C) If the cover and closed-vent system operate such that the tank is maintained at a pressure less than atmospheric pressure, then paragraph (a)(1)(i)(B) of this section does not apply to any opening that meets all of the following conditions:

(1) The purpose of the opening is to provide dilution air to reduce the explosion hazard;

(2) The opening is designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in §61.355(h); and

(3) The pressure is monitored continuously to ensure that the pressure in the tank remains below atmospheric pressure.

(ii) The closed-vent system and control device shall be designed and operated in accordance with the requirements of §61.349 of this subpart.

(2) The owner or operator must install, operate, and maintain an enclosure and closed-vent system that routes all organic vapors vented from the tank, located inside the enclosure, to a control device in accordance with the requirements specified in paragraph (e) of this section.

(b) For a tank that meets all the conditions specified in paragraph (b)(1) of this section, the owner or operator may elect to comply with paragraph (b)(2) of this section as an alternative to the requirements specified in paragraph (a)(1) of this section.

(1) The waste managed in the tank complying with paragraph (b)(2) of this section shall meet all of the following conditions:

(i) Each waste stream managed in the tank must have a flow-weighted annual average water content less than or equal to 10 percent water, on a volume basis as total water.

(ii) The waste managed in the tank either:

(A) Has a maximum organic vapor pressure less than 5.2 kilopascals (kPa) (0.75 pounds per square inch (psi));

(B) Has a maximum organic vapor pressure less than 27.6 kPa (4.0 psi) and is managed in a tank having design capacity less than 151 m<sup>3</sup> (40,000 gal); or

(C) Has a maximum organic vapor pressure less than 76.6 kPa (11.1 psi) and is managed in a tank having a design capacity less than 75 m<sup>3</sup> (20,000 gal).

(2) The owner or operator shall install, operate, and maintain a fixed roof as specified in paragraph (a)(1)(i).

(3) For each tank complying with paragraph (b) of this section, one or more devices which vent directly to the atmosphere may be used on the tank provided each device remains in a closed, sealed position during normal operations except when the device needs to open to prevent physical damage or permanent deformation of the tank or cover resulting from filling or emptying the tank, diurnal temperature changes, atmospheric pressure changes or malfunction of the unit in accordance with good engineering and safety practices for handling flammable, explosive, or other hazardous materials.

(c) Each fixed-roof, seal, access door, and all other openings shall be checked by visual inspection initially and quarterly thereafter to ensure that no cracks or gaps occur and that access doors and other openings are closed and gasketed properly.

(d) Except as provided in §61.350 of this subpart, when a broken seal or gasket or other problem is identified, or when detectable emissions are measured, first efforts at repair shall be made as soon as practicable, but not later than 45 calendar days after identification.



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(e) Each owner or operator who controls air pollutant emissions by using an enclosure vented through a closed-vent system to a control device must meet the requirements specified in paragraphs (e)(1) through (4) of this section.

(1) The tank must be located inside a total enclosure. The enclosure must be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" in 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator must perform the verification procedure for the enclosure as specified in section 5.0 of Procedure T initially when the enclosure is first installed and, thereafter, annually. A facility that has conducted an initial compliance demonstration and that performs annual compliance demonstrations in accordance with the requirements for Tank Level 2 control requirements 40 CFR 264.1084(i) or 40 CFR 265(i) is not required to make repeat demonstrations of initial and continuous compliance for the purposes of this subpart.

(2) The enclosure must be vented through a closed-vent system to a control device that is designed and operated in accordance with the standards for control devices specified in §61.349.

(3) Safety devices, as defined in this subpart, may be installed and operated as necessary on any enclosure, closed-vent system, or control device used to comply with the requirements of paragraphs (e)(1) and (2) of this section.

(4) The closed-vent system must be designed and operated in accordance with the requirements of §61.349.

**# 092 [40 CFR Part 61 NESHAPs §40 CFR 61.344]****Subpart FF--National Emission Standard for Benzene Waste Operations****Standards: Surface impoundments.**

(a) The owner or operator shall meet the following standards for each surface impoundment in which waste is placed in accordance with §61.342(c)(1)(ii) of this subpart:

(1) The owner or operator shall install, operate, and maintain on each surface impoundment a cover (e.g., air-supported structure or rigid cover) and closed-vent system that routes all organic vapors vented from the surface impoundment to a control device.

(i) The cover shall meet the following requirements:

(A) The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, initially and thereafter at least once per year by the methods specified in §61.355(h) of this subpart.

(B) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that waste is in the surface impoundment except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair.

(C) If the cover and closed-vent system operate such that the enclosure of the surface impoundment is maintained at a pressure less than atmospheric pressure, then paragraph (a)(1)(i)(B) of this section does not apply to any opening that meets all of the following conditions:

( 1 ) The purpose of the opening is to provide dilution air to reduce the explosion hazard;

( 2 ) The opening is designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in §61.355(h) of this subpart; and

( 3 ) The pressure is monitored continuously to ensure that the pressure in the enclosure of the surface impoundment remains below atmospheric pressure.

(D) The cover shall be used at all times that waste is placed in the surface impoundment except during removal of

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treatment residuals in accordance with 40 CFR 268.4 or closure of the surface impoundment in accordance with 40 CFR 264.228. (Note: the treatment residuals generated by these activities may be subject to the requirements of this part.)

(ii) The closed-vent system and control device shall be designed and operated in accordance with §61.349 of this subpart.

(b) Each cover seal, access hatch, and all other openings shall be checked by visual inspection initially and quarterly thereafter to ensure that no cracks or gaps occur and that access hatches and other openings are closed and gasketed properly.

(c) Except as provided in §61.350 of this subpart, when a broken seal or gasket or other problem is identified, or when detectable emissions are measured, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after identification.

**# 093 [40 CFR Part 61 NESHAPs §40 CFR 61.345]****Subpart FF--National Emission Standard for Benzene Waste Operations****Standards: Containers.**

(a) The owner or operator shall meet the following standards for each container in which waste is placed in accordance with §61.342(c)(1)(ii) of this subpart:

(1) The owner or operator shall install, operate, and maintain a cover on each container used to handle, transfer, or store waste in accordance with the following requirements:

(i) The cover and all openings (e.g., bungs, hatches, and sampling ports) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, initially and thereafter at least once per year by the methods specified in §61.355(h) of this subpart.

(ii) Except as provided in paragraph (a)(4) of this section, each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that waste is in the container except when it is necessary to use the opening for waste loading, removal, inspection, or sampling.

(2) When a waste is transferred into a container by pumping, the owner or operator shall perform the transfer using a submerged fill pipe. The submerged fill pipe outlet shall extend to within two fill pipe diameters of the bottom of the container while the container is being loaded. During loading of the waste, the cover shall remain in place and all openings shall be maintained in a closed, sealed position except for those openings required for the submerged fill pipe, those openings required for venting of the container to prevent physical damage or permanent deformation of the container or cover, and any openings complying with paragraph (a)(4) of this section.

(3) Treatment of a waste in a container, including aeration, thermal or other treatment, must be performed by the owner or operator in a manner such that while the waste is being treated the container meets the standards specified in paragraphs (a)(3)(i) through (iii) of this section, except for covers and closed-vent systems that meet the requirements in paragraph (a)(4) of this section.

(i) The owner or operator must either:

(A) Vent the container inside a total enclosure which is exhausted through a closed-vent system to a control device in accordance with the requirements of paragraphs (a)(3)(ii)(A) and (B) of this section; or

(B) Vent the covered or closed container directly through a closed-vent system to a control device in accordance with the requirements of paragraphs (a)(3)(ii)(B) and (C) of this section.

(ii) The owner or operator must meet the following requirements, as applicable to the type of air emission control equipment selected by the owner or operator:

(A) The total enclosure must be designed and operated in accordance with the criteria for a permanent total enclosure as specified in section 5 of the "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" in 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of

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containers through the enclosure by conveyor or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator must perform the verification procedure for the enclosure as specified in section 5.0 of "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually. A facility that has conducted an initial compliance demonstration and that performs annual compliance demonstrations in accordance with the Container Level 3 control requirements in 40 CFR 264.1086(e)(2)(i) or 40 CFR 265.1086(e)(2)(i) is not required to make repeat demonstrations of initial and continuous compliance for the purposes of this subpart.

(B) The closed-vent system and control device must be designed and operated in accordance with the requirements of §61.349.

(C) For a container cover, the cover and all openings (e.g., doors, hatches) must be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, initially and thereafter at least once per year by the methods specified in §61.355(h).

(iii) Safety devices, as defined in this subpart, may be installed and operated as necessary on any container, enclosure, closed-vent system, or control device used to comply with the requirements of paragraph (a)(3)(i) of this section.

(4) If the cover and closed-vent system operate such that the container is maintained at a pressure less than atmospheric pressure, the owner or operator may operate the system with an opening that is not sealed and kept closed at all times if the following conditions are met:

(i) The purpose of the opening is to provide dilution air to reduce the explosion hazard;

(ii) The opening is designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by methods specified in §61.355(h); and

(iii) The pressure is monitored continuously to ensure that the pressure in the container remains below atmospheric pressure.

(b) Each cover and all openings shall be visually inspected initially and quarterly thereafter to ensure that they are closed and gasketed properly.

(c) Except as provided in §61.350 of this subpart, when 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.

**# 094 [40 CFR Part 61 NESHAPs 40 CFR 61.346]****Subpart FF--National Emission Standard for Benzene Waste Operations****Standards: Individual drain systems.**

(a) Except as provided in paragraph (b) of this section, the owner or operator shall meet the following standards for each individual drain system in which waste is placed in accordance with §61.342(c)(1)(ii) of this subpart:

(1) The owner or operator shall install, operate, and maintain on each drain system opening a cover and closed-vent system that routes all organic vapors vented from the drain system to a control device.

(i) The cover shall meet the following requirements:

(A) The cover and all openings (e.g., access hatches, sampling ports) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, initially and thereafter at least once per year by the methods specified in §61.355(h) of this subpart.

(B) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that waste is in the drain system except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair.

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(C) If the cover and closed-vent system operate such that the individual drain system is maintained at a pressure less than atmospheric pressure, then paragraph (a)(1)(i)(B) of this section does not apply to any opening that meets all of the following conditions:

(1) The purpose of the opening is to provide dilution air to reduce the explosion hazard;

(2) The opening is designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in §61.355(h); and

(3) The pressure is monitored continuously to ensure that the pressure in the individual drain system remains below atmospheric pressure.

(ii) The closed-vent system and control device shall be designed and operated in accordance with §61.349 of this subpart.

(2) Each cover seal, access hatch, and all other openings shall be checked by visual inspection initially and quarterly thereafter to ensure that no cracks or gaps occur and that access hatches and other openings are closed and gasketed properly.

(3) Except as provided in §61.350 of this subpart, when a broken seal or gasket or other problem is identified, or when detectable emissions are measured, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after identification.

(b) As an alternative to complying with paragraph (a) of this section, an owner or operator may elect to comply with the following requirements:

(1) Each drain shall be equipped with water seal controls or a tightly sealed cap or plug.

(2) Each junction box shall be equipped with a cover and may have a vent pipe. The vent pipe shall be at least 90 cm (3 ft) in length and shall not exceed 10.2 cm (4 in) in diameter.

(i) Junction box covers shall have a tight seal around the edge and shall be kept in place at all times, except during inspection and maintenance.

(ii) One of the following methods shall be used to control emissions from the junction box vent pipe to the atmosphere:

(A) Equip the junction box with a system to prevent the flow of organic vapors from the junction box vent pipe to the atmosphere during normal operation. An example of such a system includes use of water seal controls on the junction box. A flow indicator shall be installed, operated, and maintained on each junction box vent pipe to ensure that organic vapors are not vented from the junction box to the atmosphere during normal operation.

(B) Connect the junction box vent pipe to a closed-vent system and control device in accordance with §61.349 of this subpart.

(3) Each sewer line 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.

(4) Equipment installed in accordance with paragraphs (b)(1), (b)(2), or (b)(3) of this section shall be inspected as follows:

(i) Each drain using water seal controls shall be checked by visual or physical inspection initially and thereafter quarterly for indications of low water levels or other conditions that would reduce the effectiveness of water seal controls.

(ii) Each drain using a tightly sealed cap or plug shall be visually inspected initially and thereafter quarterly to ensure caps or plugs are in place and properly installed.

(iii) Each junction box shall be visually inspected initially and thereafter quarterly to ensure that the cover is in place and to

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ensure that the cover has a tight seal around the edge.

(iv) The unburied portion of each sewer line shall be visually inspected initially and thereafter quarterly for indication of cracks, gaps, or other problems that could result in benzene emissions.

(5) Except as provided in §61.350 of this subpart, when a broken seal, gap, crack 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.

**# 095 [40 CFR Part 61 NESHAPs §40 CFR 61.347]****Subpart FF--National Emission Standard for Benzene Waste Operations****Standards: Oil-water separators.**

(a) Except as provided in §61.352 of this subpart, the owner or operator shall meet the following standards for each oil-water separator in which waste is placed in accordance with §61.342(c)(1)(ii) of this subpart:

(1) The owner or operator shall 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.

(i) The fixed-roof shall meet the following requirements:

(A) The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in §61.355(h) of this subpart.

(B) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that waste is in the oil-water separator except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair.

(C) If the cover and closed-vent system operate such that the oil-water separator is maintained at a pressure less than atmospheric pressure, then paragraph (a)(1)(i)(B) of this section does not apply to any opening that meets all of the following conditions:

( 1 ) The purpose of the opening is to provide dilution air to reduce the explosion hazard;

( 2 ) The opening is designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in §61.355(h); and

( 3 ) The pressure is monitored continuously to ensure that the pressure in the oil-water separator remains below atmospheric pressure.

(ii) The closed-vent system and control device shall be designed and operated in accordance with the requirements of §61.349 of this subpart.

(b) Each cover seal, access hatch, and all other openings shall be checked by visual inspection initially and quarterly thereafter to ensure that no cracks or gaps occur between the cover and oil-water separator wall and that access hatches and other openings are closed and gasketed properly.

(c) Except as provided in §61.350 of this subpart, when a broken seal or gasket or other problem is identified, or when detectable emissions are measured, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after identification.

**# 096 [40 CFR Part 61 NESHAPs §40 CFR 61.348]****Subpart FF--National Emission Standard for Benzene Waste Operations****Standards: Treatment processes.**

(a) Except as provided in paragraph (a)(5) of this section, the owner or operator shall treat the waste stream in accordance with the following requirements:

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- (1) The owner or operator shall design, install, operate, and maintain a treatment process that either:
- (i) Removes benzene from the waste stream to a level less than 10 parts per million by weight (ppmw) on a flow-weighted annual average basis,
  - (ii) Removes benzene from the waste stream by 99 percent or more on a mass basis, or
  - (iii) Destroys benzene in the waste stream by incinerating the waste in a combustion unit that achieves a destruction efficiency of 99 percent or greater for benzene.
- (2) Each treatment process complying with paragraphs (a)(1)(i) or (a)(1)(ii) of this section shall be designed and operated in accordance with the appropriate waste management unit standards specified in §§61.343 through 61.347 of this subpart. For example, if a treatment process is a tank, then the owner or operator shall comply with §61.343 of this subpart.
- (3) For the purpose of complying with the requirements specified in paragraph (a)(1)(i) of this section, the intentional or unintentional reduction in the benzene concentration of a waste stream by dilution of the waste stream with other wastes or materials is not allowed.
- (4) An owner or operator may aggregate or mix together individual waste streams to create a combined waste stream for the purpose of facilitating treatment of waste to comply with the requirements of paragraph (a)(1) of this section except as provided in paragraph (a)(5) of this section.
- (5) If an owner or operator aggregates or mixes any combination of process wastewater, product tank drawdown, or landfill leachate subject to §61.342(c)(1) of this subpart together with other waste streams to create a combined waste stream for the purpose of facilitating management or treatment of waste in a wastewater treatment system, then the wastewater treatment system shall be operated in accordance with paragraph (b) of this section. These provisions apply to above-ground wastewater treatment systems as well as those that are at or below ground level.
- (b) Except for facilities complying with §61.342(e), the owner or operator that aggregates or mixes individual waste streams as defined in paragraph (a)(5) of this section for management and treatment in a wastewater treatment system shall comply with the following requirements:
- (1) The owner or operator shall design and operate each waste management unit that comprises the wastewater treatment system in accordance with the appropriate standards specified in §§61.343 through 61.347 of this subpart.
- (2) The provisions of paragraph (b)(1) of this section do not apply to any waste management unit that the owner or operator demonstrates to meet the following conditions initially and, thereafter, at least once per year:
- (i) The benzene content of each waste stream entering the waste management unit is less than 10 ppmw on a flow-weighted annual average basis as determined by the procedures specified in §61.355(c) of this subpart; and
  - (ii) The total annual benzene quantity contained in all waste streams managed or treated in exempt waste management units comprising the facility wastewater treatment systems is less than 1 Mg/yr (1.1 ton/yr). For this determination, total annual benzene quantity shall be calculated as follows:
    - (A) The total annual benzene quantity shall be calculated as the sum of the individual benzene quantities determined at each location where a waste stream first enters an exempt waste management unit. The benzene quantity discharged from an exempt waste management unit shall not be included in this calculation.
    - (B) The annual benzene quantity in a waste stream managed or treated in an enhanced biodegradation unit shall not be included in the calculation of the total annual benzene quantity, if the enhanced biodegradation unit is the first exempt unit in which the waste is managed or treated. A unit shall be considered enhanced biodegradation if it is a suspended-growth process that generates biomass, uses recycled biomass, and periodically removes biomass from the process. An enhanced biodegradation unit typically operates at a food-to-microorganism ratio in the range of 0.05 to 1.0 kg of biological oxygen demand per kg of biomass per day, a mixed liquor suspended solids ratio in the range of 1 to 8 grams per liter (0.008 to 0.7 pounds per liter), and a residence time in the range of 3 to 36 hours.

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(c) The owner and operator shall demonstrate that each treatment process or wastewater treatment system unit, except as provided in paragraph (d) of this section, achieves the appropriate conditions specified in paragraphs (a) or (b) of this section in accordance with the following requirements:

- (1) Engineering calculations in accordance with requirements specified in §61.356(e) of this subpart; or
  - (2) Performance tests conducted using the test methods and procedures that meet the requirements specified in §61.355 of this subpart.
- (d) A treatment process or waste stream is in compliance with the requirements of this subpart and exempt from the requirements of paragraph (c) of this section provided that the owner or operator documents that the treatment process or waste stream is in compliance with other regulatory requirements as follows:
- (1) The treatment process is a hazardous waste incinerator for which the owner or operator has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 264, subpart O;
  - (2) The treatment process is an industrial furnace or boiler burning hazardous waste for energy recovery for which the owner or operator has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 266, subpart D;
  - (3) The waste stream is treated by a means or to a level that meets benzene-specific treatment standards in accordance with the Land Disposal Restrictions under 40 CFR part 268, and the treatment process is designed and operated with a closed-vent system and control device meeting the requirements of §61.349 of this subpart;
  - (4) The waste stream is treated by a means or to a level that meets benzene-specific effluent limitations or performance standards in accordance with the Effluent Guidelines and Standards under 40 CFR parts 401-464, and the treatment process is designed and operated with a closed-vent system and control device meeting the requirements of §61.349 of this subpart; or
  - (5) The waste stream is discharged to an underground injection well for which the owner or operator has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 122.
- (e) Except as specified in paragraph (e)(3) of this section, if the treatment process or wastewater treatment system unit has any openings (e.g., access doors, hatches, etc.), all such openings shall be sealed (e.g., gasketed, latched, etc.) and kept closed at all times when waste is being treated, except during inspection and maintenance.
- (1) Each seal, access door, and all other openings shall be checked by visual inspections initially and quarterly thereafter to ensure that no cracks or gaps occur and that openings are closed and gasketed properly.
  - (2) Except as provided in §61.350 of this subpart, when 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.
  - (3) If the cover and closed-vent system operate such that the treatment process and wastewater treatment system unit are maintained at a pressure less than atmospheric pressure, the owner or operator may operate the system with an opening that is not sealed and kept closed at all times if the following conditions are met:
    - (i) The purpose of the opening is to provide dilution air to reduce the explosion hazard;
    - (ii) The opening is designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in §61.355(h); and
    - (iii) The pressure is monitored continuously to ensure that the pressure in the treatment process and wastewater treatment system unit remain below atmospheric pressure.
- (f) Except for treatment processes complying with paragraph (d) of this section, the Administrator may request at any time

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an owner or operator demonstrate that a treatment process or wastewater treatment system unit meets the applicable requirements specified in paragraphs (a) or (b) of this section by conducting a performance test using the test methods and procedures as required in §61.355 of this subpart.

(g) The owner or operator of a treatment process or wastewater treatment system unit that is used to comply with the provisions of this section shall monitor the unit in accordance with the applicable requirements in §61.354 of this subpart.

**# 097 [40 CFR Part 61 NESHAPs §40 CFR 61.349]****Subpart FF--National Emission Standard for Benzene Waste Operations****Standards: Closed-vent systems and control devices.**

(a) For each closed-vent system and control device used to comply with standards in accordance with §§61.343 through 61.348 of this subpart, the owner or operator shall properly design, install, operate, and maintain the closed-vent system and control device in accordance with the following requirements:

(1) The closed-vent system shall:

(i) Be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in §61.355(h) of this subpart.

(ii) Vent systems that contain any bypass line that could divert the vent stream away from a control device used to comply with the provisions of this subpart shall install, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow away from the control device at least once every 15 minutes, except as provided in paragraph (a)(1)(ii)(B) of this section.

(A) The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere.

(B) Where the bypass line valve is secured in the closed position with a car-seal or a lock-and-key type configuration, a flow indicator is not required.

(iii) All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.

(iv) For each closed-vent system complying with paragraph (a) of this section, one or more devices which vent directly to the atmosphere may be used on the closed-vent system provided each device remains in a closed, sealed position during normal operations except when the device needs to open to prevent physical damage or permanent deformation of the closed-vent system resulting from malfunction of the unit in accordance with good engineering and safety practices for handling flammable, explosive, or other hazardous materials.

(2) The control device shall be designed and operated in accordance with the following conditions:

(i) An enclosed combustion device (e.g., a vapor incinerator, boiler, or process heater) shall meet one of the following conditions:

(A) Reduce the organic emissions vented to it by 95 weight percent or greater;

(B) Achieve a total organic compound concentration of 20 ppmv (as the sum of the concentrations for individual compounds using Method 18) on a dry basis corrected to 3 percent oxygen; or

(C) Provide a minimum residence time of 0.5 seconds at a minimum temperature of 760 °C (1,400 °F). If a boiler or process heater issued as the control device, then the vent stream shall be introduced into the flame zone of the boiler or process heater.

(ii) A vapor recovery system (e.g., a carbon adsorption system or a condenser) shall recover or control the organic emissions vented to it with an efficiency of 95 weight percent or greater, or shall recover or control the benzene emissions vented to it with an efficiency of 98 weight percent or greater.



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(iii) A flare shall comply with the requirements of 40 CFR 60.18.

(iv) A control device other than those described in paragraphs (a)(2) (i) through (iii) of this section may be used provided that the following conditions are met:

(A) The device shall recover or control the organic emissions vented to it with an efficiency of 95 weight percent or greater, or shall recover or control the benzene emissions vented to it with an efficiency of 98 weight percent or greater.

(B) The owner or operator shall develop test data and design information that documents the control device will achieve an emission control efficiency of either 95 percent or greater for organic compounds or 98 percent or greater for benzene.

(C) The owner or operator shall identify:

( 1 ) The critical operating parameters that affect the emission control performance of the device;

( 2 ) The range of values of these operating parameters that ensure the emission control efficiency specified in paragraph (a)(2)(iv)(A) of this section is maintained during operation of the device; and

( 3 ) How these operating parameters will be monitored to ensure the proper operation and maintenance of the device.

(D) The owner or operator shall submit the information and data specified in paragraphs (a)(2)(iv) (B) and (C) of this section to the Administrator prior to operation of the alternative control device.

(E) The Administrator will determine, based on the information submitted under paragraph (a)(2)(iv)(D) of this section, if the control device subject to paragraph (a)(2)(iv) of this section meets the requirements of §61.349. The control device subject to paragraph (a)(2)(iv) of this section may be operated prior to receiving approval from the Administrator. However, if the Administrator determines that the control device does not meet the requirements of §61.349, the facility may be subject to enforcement action beginning from the time the control device began operation.

(b) Each closed-vent system and control device used to comply with this subpart shall be operated at all times when waste is placed in the waste management unit vented to the control device except when maintenance or repair of the waste management unit cannot be completed without a shutdown of the control device.

(c) An owner and operator shall demonstrate that each control device, except for a flare, achieves the appropriate conditions specified in paragraph (a)(2) of this section by using one of the following methods:

(1) Engineering calculations in accordance with requirements specified in §61.356(f) of this subpart; or

(2) Performance tests conducted using the test methods and procedures that meet the requirements specified in §61.355 of this subpart.

(d) An owner or operator shall demonstrate compliance of each flare in accordance with paragraph (a)(2)(iii) of this section.

(e) The Administrator may request at any time an owner or operator demonstrate that a control device meets the applicable conditions specified in paragraph (a)(2) of this section by conducting a performance test using the test methods and procedures as required in §61.355, and for control devices subject to paragraph (a)(2)(iv) of this section, the Administrator may specify alternative test methods and procedures, as appropriate.

(f) Each closed-vent system and control device shall be visually inspected initially and quarterly thereafter. The visual inspection shall include inspection of ductwork and piping and connections to covers and control devices for evidence of visible defects such as holes in ductwork or piping and loose connections.

(g) Except as provided in §61.350 of this subpart, if visible defects are observed during an inspection, or if other problems are identified, or if detectable emissions are measured, a first effort to repair the closed-vent system and control device shall be made as soon as practicable but no later than 5 calendar days after detection. Repair shall be completed no later than 15 calendar days after the emissions are detected or the visible defect is observed.

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(h) The owner or operator of a control device that is used to comply with the provisions of this section shall monitor the control device in accordance with §61.354(c) of this subpart.

**# 098 [40 CFR Part 61 NESHAPs §40 CFR 61.350]****Subpart FF--National Emission Standard for Benzene Waste Operations  
Standards: Delay of repair.**

(a) Delay of repair of facilities or units that are subject to the provisions of this subpart will be allowed if the repair is technically impossible without a complete or partial facility or unit shutdown.

(b) Repair of such equipment shall occur before the end of the next facility or unit shutdown.

**# 099 [40 CFR Part 61 NESHAPs §40 CFR 61.351]****Subpart FF--National Emission Standard for Benzene Waste Operations  
Alternative standards for tanks.**

(a) As an alternative to the standards for tanks specified in §61.343 of this subpart, an owner or operator may elect to comply with one of the following:

(1) A fixed roof and internal floating roof meeting the requirements in 40 CFR 60.112b(a)(1);

(2) An external floating roof meeting the requirements of 40 CFR 60.112b (a)(2); or

(3) An alternative means of emission limitation as described in 40 CFR 60.114b.

(b) If an owner or operator elects to comply with the provisions of this section, then the owner or operator is exempt from the provisions of §61.343 of this subpart applicable to the same facilities.

**# 100 [40 CFR Part 61 NESHAPs §40 CFR 61.352]****Subpart FF--National Emission Standard for Benzene Waste Operations  
Alternative standards for oil-water separators.**

(a) As an alternative to the standards for oil-water separators specified in §61.347 of this subpart, an owner or operator may elect to comply with one of the following:

(1) A floating roof meeting the requirements in 40 CFR 60.693-2(a); or

(2) An alternative means of emission limitation as described in 40 CFR 60.694.

(b) For portions of the oil-water separator where it is infeasible to construct and operate a floating roof, such as over the weir mechanism, a fixed roof vented to a vapor control device that meets the requirements in §§61.347 and 61.349 of this subpart shall be installed and operated.

(c) Except as provided in paragraph (b) of this section, if an owner or operator elects to comply with the provisions of this section, then the owner or operator is exempt from the provisions in §61.347 of this subpart applicable to the same facilities.

**# 101 [40 CFR Part 61 NESHAPs §40 CFR 61.353]****Subpart FF--National Emission Standard for Benzene Waste Operations  
Alternative means of emission limitation.**

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in benzene emissions at least equivalent to the reduction in benzene emissions from the source achieved by the applicable design, equipment, work practice, or operational requirements in §§61.342 through 61.349, the Administrator will publish in the Federal Register a notice permitting the use of the alternative means for purposes of compliance with that requirement. The notice may condition the permission on requirements related to the operation and maintenance of the alternative means.

(b) Any notice under paragraph (a) of this section shall be published only after public notice and an opportunity for a hearing.

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(c) Any person seeking permission under this section shall collect, verify, and submit to the Administrator information showing that the alternative means achieves equivalent emission reductions.

**# 102 [40 CFR Part 61 NESHAPs §40 CFR 61.355]****Subpart FF--National Emission Standard for Benzene Waste Operations****Test methods, procedures, and compliance provisions.**

(a) An owner or operator shall determine the total annual benzene quantity from facility waste by the following procedure:

(1) For each waste stream subject to this subpart having a flow-weighted annual average water content greater than 10 percent water, on a volume basis as total water, or is mixed with water or other wastes at any time and the resulting mixture has an annual average water content greater than 10 percent as specified in §61.342(a), the owner or operator shall:

(i) Determine the annual waste quantity for each waste stream using the procedures specified in paragraph (b) of this section.

(ii) Determine the flow-weighted annual average benzene concentration for each waste stream using the procedures specified in paragraph (c) of this section.

(iii) Calculate the annual benzene quantity for each waste stream by multiplying the annual waste quantity of the waste stream times the flow-weighted annual average benzene concentration.

(2) Total annual benzene quantity from facility waste is calculated by adding together the annual benzene quantity for each waste stream generated during the year and the annual benzene quantity for each process unit turnaround waste annualized according to paragraph (b)(4) of this section.

(3) If the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr (11 ton/yr), then the owner or operator shall comply with the requirements of §61.342 (c), (d), or (e).

(4) If the total annual benzene quantity from facility waste is less than 10 Mg/yr (11 ton/yr) but is equal to or greater than 1 Mg/yr (1.1 ton/yr), then the owner or operator shall:

(i) Comply with the recordkeeping requirements of §61.356 and reporting requirements of §61.357 of this subpart; and

(ii) Repeat the determination of total annual benzene quantity from facility waste at least once per year and whenever there is a change in the process generating the waste that could cause the total annual benzene quantity from facility waste to increase to 10 Mg/yr (11 ton/yr) or more.

(5) If the total annual benzene quantity from facility waste is less than 1 Mg/yr (1.1 ton/yr), then the owner or operator shall:

(i) Comply with the recordkeeping requirements of §61.356 and reporting requirements of §61.357 of this subpart; and

(ii) Repeat the determination of total annual benzene quantity from facility waste whenever there is a change in the process generating the waste that could cause the total annual benzene quantity from facility waste to increase to 1 Mg/yr (1.1 ton/yr) or more.

(6) The benzene quantity in a waste stream that is generated less than one time per year, except as provided for process unit turnaround waste in paragraph (b)(4) of this section, shall be included in the determination of total annual benzene quantity from facility waste for the year in which the waste is generated unless the waste stream is otherwise excluded from the determination of total annual benzene quantity from facility waste in accordance with paragraphs (a) through (c) of this section. The benzene quantity in this waste stream shall not be annualized or averaged over the time interval between the activities that resulted in generation of the waste, for purposes of determining the total annual benzene quantity from facility waste.

(b) For purposes of the calculation required by paragraph (a) of this section, an owner or operator shall determine the annual waste quantity at the point of waste generation, unless otherwise provided in paragraphs (b) (1), (2), (3), and (4) of

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this section, by one of the methods given in paragraphs (b) (5) through (7) of this section.

(1) The determination of annual waste quantity for sour water streams that are processed in sour water strippers shall be made at the point that the water exits the sour water stripper.

(2) The determination of annual waste quantity for wastes at coke by-product plants subject to and complying with the control requirements of §61.132, 61.133, 61.134, or 61.139 of subpart L of this part shall be made at the location that the waste stream exits the process unit component or waste management unit controlled by that subpart or at the exit of the ammonia still, provided that the following conditions are met:

(i) The transfer of wastes between units complying with the control requirements of subpart L of this part, process units, and the ammonia still is made through hard piping or other enclosed system.

(ii) The ammonia still meets the definition of a sour water stripper in §61.341.

(3) The determination of annual waste quantity for wastes that are received at hazardous waste treatment, storage, or disposal facilities from offsite shall be made at the point where the waste enters the hazardous waste treatment, storage, or disposal facility.

(4) The determination of annual waste quantity for each process unit turnaround waste generated only at 2 year or greater intervals, may be made by dividing the total quantity of waste generated during the most recent process unit turnaround by the time period (in the nearest tenth of a year) between the turnaround resulting in generation of the waste and the most recent preceding process turnaround for the unit. The resulting annual waste quantity shall be included in the calculation of the annual benzene quantity as provided in paragraph (a)(1)(iii) of this section for the year in which the turnaround occurs and for each subsequent year until the unit undergoes the next process turnaround. For estimates of total annual benzene quantity as specified in the 90-day report, required under §61.357(a)(1), the owner or operator shall estimate the waste quantity generated during the most recent turnaround, and the time period between turnarounds in accordance with good engineering practices. If the owner or operator chooses not to annualize process unit turnaround waste, as specified in this paragraph, then the process unit turnaround waste quantity shall be included in the calculation of the annual benzene quantity for the year in which the turnaround occurs.

(5) Select the highest annual quantity of waste managed from historical records representing the most recent 5 years of operation or, if the facility has been in service for less than 5 years but at least 1 year, from historical records representing the total operating life of the facility;

(6) Use the maximum design capacity of the waste management unit; or

(7) Use measurements that are representative of maximum waste generation rates.

(c) For the purposes of the calculation required by §§61.355(a) of this subpart, an owner or operator shall determine the flow-weighted annual average benzene concentration in a manner that meets the requirements given in paragraph (c)(1) of this section using either of the methods given in paragraphs (c)(2) and (c)(3) of this section.

(1) The determination of flow-weighted annual average benzene concentration shall meet all of the following criteria:

(i) The determination shall be made at the point of waste generation except for the specific cases given in paragraphs (c)(1)(i)(A) through (D) of this section.

(A) The determination for sour water streams that are processed in sour water strippers shall be made at the point that the water exits the sour water stripper.

(B) The determination for wastes at coke by-product plants subject to and complying with the control requirements of §61.132, 61.133, 61.134, or 61.139 of subpart L of this part shall be made at the location that the waste stream exits the process unit component or waste management unit controlled by that subpart or at the exit of the ammonia still, provided that the following conditions are met:

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- (1) The transfer of wastes between units complying with the control requirements of subpart L of this part, process units, and the ammonia still is made through hard piping or other enclosed system.
- (2) The ammonia still meets the definition of a sour water stripper in §61.341.
- (C) The determination for wastes that are received from offsite shall be made at the point where the waste enters the hazardous waste treatment, storage, or disposal facility.
- (D) The determination of flow-weighted annual average benzene concentration for process unit turnaround waste shall be made using either of the methods given in paragraph (c)(2) or (c)(3) of this section. The resulting flow-weighted annual average benzene concentration shall be included in the calculation of annual benzene quantity as provided in paragraph (a)(1)(iii) of this section for the year in which the turnaround occurs and for each subsequent year until the unit undergoes the next process unit turnaround.
- (ii) Volatilization of the benzene by exposure to air shall not be used in the determination to reduce the benzene concentration.
- (iii) Mixing or diluting the waste stream with other wastes or other materials shall not be used in the determination to reduce the benzene concentration.
- (iv) The determination shall be made prior to any treatment of the waste that removes benzene, except as specified in paragraphs (c)(1)(i)(A) through (D) of this section.
- (v) For wastes with multiple phases, the determination shall provide the weighted-average benzene concentration based on the benzene concentration in each phase of the waste and the relative proportion of the phases.
- (2) Knowledge of the waste. The owner or operator shall provide sufficient information to document the flow-weighted annual average benzene concentration of each waste stream. Examples of information that could constitute knowledge include material balances, records of chemicals purchases, or previous test results provided the results are still relevant to the current waste stream conditions. If test data are used, then the owner or operator shall provide documentation describing the testing protocol and the means by which sampling variability and analytical variability were accounted for in the determination of the flow-weighted annual average benzene concentration for the waste stream. When an owner or operator and the Administrator do not agree on determinations of the flow-weighted annual average benzene concentration based on knowledge of the waste, the procedures under paragraph (c)(3) of this section shall be used to resolve the disagreement.
- (3) Measurements of the benzene concentration in the waste stream in accordance with the following procedures:
- (i) Collect a minimum of three representative samples from each waste stream. Where feasible, samples shall be taken from an enclosed pipe prior to the waste being exposed to the atmosphere.
- (ii) For waste in enclosed pipes, the following procedures shall be used:
- (A) Samples shall be collected prior to the waste being exposed to the atmosphere in order to minimize the loss of benzene prior to sampling.
- (B) A static mixer shall be installed in the process line or in a by-pass line unless the owner or operator demonstrates that installation of a static mixer in the line is not necessary to accurately determine the benzene concentration of the waste stream.
- (C) The sampling tap shall be located within two pipe diameters of the static mixer outlet.
- (D) Prior to the initiation of sampling, sample lines and cooling coil shall be purged with at least four volumes of waste.
- (E) After purging, the sample flow shall be directed to a sample container and the tip of the sampling tube shall be kept below the surface of the waste during sampling to minimize contact with the atmosphere.

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(F) Samples shall be collected at a flow rate such that the cooling coil is able to maintain a waste temperature less than 10 °C (50 °F).

(G) After filling, the sample container shall be capped immediately (within 5 seconds) to leave a minimum headspace in the container.

(H) The sample containers shall immediately be cooled and maintained at a temperature below 10 °C (50 °F) for transfer to the laboratory.

(iii) When sampling from an enclosed pipe is not feasible, a minimum of three representative samples shall be collected in a manner to minimize exposure of the sample to the atmosphere and loss of benzene prior to sampling.

(iv) Each waste sample shall be analyzed using one of the following test methods for determining the benzene concentration in a waste stream:

(A) Method 8020, Aromatic Volatile Organics, in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846 (incorporation by reference as specified in §61.18 of this part);

(B) Method 8021, Volatile Organic Compounds in Water by Purge and Trap Capillary Column Gas Chromatography with Photoionization and Electrolytic Conductivity Detectors in Series in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846 (incorporation by reference as specified in §61.18 of this part);

(C) Method 8240, Gas Chromatography/Mass Spectrometry for Volatile Organics in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846 (incorporation by reference as specified in §61.18 of this part);

(D) Method 8260, Gas Chromatography/Mass Spectrometry for Volatile Organics: Capillary Column Technique in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846 (incorporation by reference as specified in §61.18 of this part);

(E) Method 602, Purgeable Aromatics, as described in 40 CFR part 136, appendix A, Test Procedures for Analysis of Organic Pollutants, for wastewaters for which this is an approved EPA methods; or

(F) Method 624, Purgeables, as described in 40 CFR part 136, appendix A, Test Procedures for Analysis of Organic Pollutants, for wastewaters for which this is an approved EPA method.

(v) The flow-weighted annual average benzene concentration shall be calculated by averaging the results of the sample analyses as follows [Calculation can be found in 40 CFR Section 61.355(c)(3)(v)]:

(d) An owner or operator using performance tests to demonstrate compliance of a treatment process with §61.348 (a)(1)(i) shall measure the flow-weighted annual average benzene concentration of the waste stream exiting the treatment process by collecting and analyzing a minimum of three representative samples of the waste stream using the procedures in paragraph (c)(3) of this section. The test shall be conducted under conditions that exist when the treatment process is operating at the highest inlet waste stream flow rate and benzene content expected to occur. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a test. The owner or operator shall record all process information as is necessary to document the operating conditions during the test.

(e) An owner or operator using performance tests to demonstrate compliance of a treatment process with §61.348(a)(1)(ii) of this subpart shall determine the percent reduction of benzene in the waste stream on a mass basis by the following procedure:

(1) The test shall be conducted under conditions that exist when the treatment process is operating at the highest inlet waste stream flow rate and benzene content expected to occur. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a test. The owner or operator shall record all process information as is necessary to document the operating conditions during the test.

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- (2) All testing equipment shall be prepared and installed as specified in the appropriate test methods.
- (3) The mass flow rate of benzene entering the treatment process ( $E_b$ ) shall be determined by computing the product of the flow rate of the waste stream entering the treatment process, as determined by the inlet flow meter, and the benzene concentration of the waste stream, as determined using the sampling and analytical procedures specified in paragraph (c)(2) or (c)(3) of this section. Three grab samples of the waste shall be taken at equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs conducted over a 3-hour period. The mass flow rate of benzene entering the treatment process is calculated as follows [Calculation can be found in 40 CFR Section 61.355(e)(3)]
- (4) The mass flow rate of benzene exiting the treatment process ( $E_a$ ) shall be determined by computing the product of the flow rate of the waste stream exiting the treatment process, as determined by the outlet flow meter or the inlet flow meter, and the benzene concentration of the waste stream, as determined using the sampling and analytical procedures specified in paragraph (c)(2) or (c)(3) of this section. Three grab samples of the waste shall be taken at equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs conducted over the same 3-hour period at which the mass flow rate of benzene entering the treatment process is determined. The mass flow rate of benzene exiting the treatment process is calculated as follows [Calculation can be found in 40 CFR Section 61.355(e)(4)]:
- (f) An owner or operator using performance tests to demonstrate compliance of a treatment process with §61.348(a)(1)(iii) of this subpart shall determine the benzene destruction efficiency for the combustion unit by the following procedure:
- (1) The test shall be conducted under conditions that exist when the combustion unit is operating at the highest inlet waste stream flow rate and benzene content expected to occur. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a test. The owner or operator shall record all process information necessary to document the operating conditions during the test.
- (2) All testing equipment shall be prepared and installed as specified in the appropriate test methods.
- (3) The mass flow rate of benzene entering the combustion unit shall be determined by computing the product of the flow rate of the waste stream entering the combustion unit, as determined by the inlet flow meter, and the benzene concentration of the waste stream, as determined using the sampling procedures in paragraph (c)(2) or (c)(3) of this section. Three grab samples of the waste shall be taken at equally spaced time intervals over a 1-hour period. Each 1-hour period constitutes a run, and the performance test shall consist of a minimum of 3 runs conducted over a 3-hour period. The mass flow rate of benzene into the combustion unit is calculated as follows [Calculation can be found in 40 CFR Section 61.355(f)(3)]:
- (4) The mass flow rate of benzene exiting the combustion unit exhaust stack shall be determined as follows:
- (i) The time period for the test shall not be less than 3 hours during which at least 3 stack gas samples are collected and be the same time period at which the mass flow rate of benzene entering the treatment process is determined. Each sample shall be collected over a 1-hour period (e.g., in a tedlar bag) to represent a time-integrated composite sample and each 1-hour period shall correspond to the periods when the waste feed is sampled.
- (ii) A run shall consist of a 1-hour period during the test. For each run:
- (A) The reading from each measurement shall be recorded;
- (B) The volume exhausted shall be determined using Method 2, 2A, 2C, or 2D from appendix A of 40 CFR part 60, as appropriate.
- (C) The average benzene concentration in the exhaust downstream of the combustion unit shall be determined using Method 18 from appendix A of 40 CFR part 60.
- (iii) The mass of benzene emitted during each run shall be calculated as follows [Calculation can be found in 40 CFR Section 61.355(f)(4)(iii)]:

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(iv) The benzene mass emission rate in the exhaust shall be calculated as follows [Calculation can be found in 40 CFR Section 61.355(f)(4)(iv)]:

(5) The benzene destruction efficiency for the combustion unit shall be calculated as follows [Calculation can be found in 40 CFR Section 61.355(f)(5)]:

(g) An owner or operator using performance tests to demonstrate compliance of a wastewater treatment system unit with §61.348(b) shall measure the flow-weighted annual average benzene concentration of the wastewater stream where the waste stream enters an exempt waste management unit by collecting and analyzing a minimum of three representative samples of the waste stream using the procedures in paragraph (c)(3) of this section. The test shall be conducted under conditions that exist when the wastewater treatment system is operating at the highest inlet wastewater stream flow rate and benzene content expected to occur. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a test. The owner or operator shall record all process information as is necessary to document the operating conditions during the test.

(h) An owner or operator shall test equipment for compliance with no detectable emissions as required in §§61.343 through 61.347, and §61.349 of this subpart in accordance with the following requirements:

(1) Monitoring shall comply with Method 21 from appendix A of 40 CFR part 60.

(2) The detection instrument shall meet the performance criteria of Method 21.

(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21.

(4) Calibration gases shall be:

(i) Zero air (less than 10 ppm of hydrocarbon in air); and

(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.

(5) The background level shall be determined as set forth in Method 21.

(6) The instrument probe shall be traversed around all potential leak interfaces as close as possible to the interface as described in Method 21.

(7) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared to 500 ppm for determining compliance.

(i) An owner or operator using a performance test to demonstrate compliance of a control device with either the organic reduction efficiency requirement or the benzene reduction efficiency requirement specified under §61.349(a)(2) shall use the following procedures:

(1) The test shall be conducted under conditions that exist when the waste management unit vented to the control device is operating at the highest load or capacity level expected to occur. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a test. The owner or operator shall record all process information necessary to document the operating conditions during the test.

(2) Sampling sites shall be selected using Method 1 or 1A from appendix A of 40 CFR part 60, as appropriate.

(3) The mass flow rate of either the organics or benzene entering and exiting the control device shall be determined as follows:

(i) The time period for the test shall not be less than 3 hours during which at least 3 stack gas samples are collected. Samples of the vent stream entering and exiting the control device shall be collected during the same time period. Each sample shall be collected over a 1-hour period (e.g., in a tedlar bag) to represent a time-integrated composite sample.



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- (ii) A run shall consist of a 1-hour period during the test. For each run:
- (A) The reading from each measurement shall be recorded;
  - (B) The volume exhausted shall be determined using Method 2, 2A, 2C, or 2D from appendix A of 40 CFR part 60, as appropriate;
  - (C) The organic concentration or the benzene concentration, as appropriate, in the vent stream entering and exiting the control shall be determined using Method 18 from appendix A of 40 CFR part 60.
- (iii) The mass of organics or benzene entering and exiting the control device during each run shall be calculated as follows [Calculation can be found in 40 CFR Section 61.355(i)(3)(iii)]:
- (iv) The mass flow rate of organics or benzene entering and exiting the control device shall be calculated as follows [Calculation can be found in 40 CFR Section 61.355(i)(3)(iv)]:
- (4) The organic reduction efficiency or the benzene reduction efficiency for the control device shall be calculated as follows [Calculation can be found in 40 CFR Section 61.355(i)(4)]:
- (j) An owner or operator shall determine the benzene quantity for the purposes of the calculation required by §61.342(c)(3)(ii)(B) according to the provisions of paragraph (a) of this section, except that the procedures in paragraph (a) of this section shall also apply to wastes with a water content of 10 percent or less.
- (k) An owner or operator shall determine the benzene quantity for the purposes of the calculation required by §61.342(e)(2) by the following procedure:
- (1) For each waste stream that is not controlled for air emissions in accordance with §61.343, 61.344, 61.345, 61.346, 61.347, or 61.348(a), as applicable to the waste management unit that manages the waste, the benzene quantity shall be determined as specified in paragraph (a) of this section, except that paragraph (b)(4) of this section shall not apply, i.e., the waste quantity for process unit turnaround waste is not annualized but shall be included in the determination of benzene quantity for the year in which the waste is generated for the purposes of the calculation required by §61.342(e)(2).
  - (2) For each waste stream that is controlled for air emissions in accordance with §61.343, 61.344, 61.345, 61.346, 61.347, or 61.348(a), as applicable to the waste management unit that manages the waste, the determination of annual waste quantity and flow-weighted annual average benzene concentration shall be made at the first applicable location as described in paragraphs (k)(2)(i), (k)(2)(ii), and (k)(2)(iii) of this section and prior to any reduction of benzene concentration through volatilization of the benzene, using the methods given in (k)(2)(iv) and (k)(2)(v) of this section.
- (i) Where the waste stream enters the first waste management unit not complying with §§61.343, 61.344, 61.345, 61.346, 61.347, and 61.348(a) that are applicable to the waste management unit,
- (ii) For each waste stream that is managed or treated only in compliance with §§61.343 through 61.348(a) up to the point of final direct discharge from the facility, the determination of benzene quantity shall be prior to any reduction of benzene concentration through volatilization of the benzene, or
  - (iii) For wastes managed in units controlled for air emissions in accordance with §§61.343, 61.344, 61.345, 61.346, 61.347, and 61.348(a), and then transferred offsite, facilities shall use the first applicable offsite location as described in paragraphs (k)(2)(i) and (k)(2)(ii) of this section if they have documentation from the offsite facility of the benzene quantity at this location. Facilities without this documentation for offsite wastes shall use the benzene quantity determined at the point where the transferred waste leaves the facility.
- (iv) Annual waste quantity shall be determined using the procedures in paragraphs (b)(5), (6), or (7) of this section, and
- (v) The flow-weighted annual average benzene concentration shall be determined using the procedures in paragraphs (c)(2) or (3) of this section.

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(3) The benzene quantity in a waste stream that is generated less than one time per year, including process unit turnaround waste, shall be included in the determination of benzene quantity as determined in paragraph (k)(6) of this section for the year in which the waste is generated. The benzene quantity in this waste stream shall not be annualized or averaged over the time interval between the activities that resulted in generation of the waste for purposes of determining benzene quantity as determined in paragraph (k)(6) of this section.

(4) The benzene in waste entering an enhanced biodegradation unit, as defined in §61.348(b)(2)(ii)(B), shall not be included in the determination of benzene quantity, determined in paragraph (k)(6) of this section, if the following conditions are met:

(i) The benzene concentration for each waste stream entering the enhanced biodegradation unit is less than 10 ppmw on a flow-weighted annual average basis, and

(ii) All prior waste management units managing the waste comply with §§61.343, 61.344, 61.345, 61.346, 61.347 and 61.348(a).

(5) The benzene quantity for each waste stream in paragraph (k)(2) of this section shall be determined by multiplying the annual waste quantity of each waste stream times its flow-weighted annual average benzene concentration.

(6) The total benzene quantity for the purposes of the calculation required by §61.342(e)(2) shall be determined by adding together the benzene quantities determined in paragraphs (k)(1) and (k)(5) of this section for each applicable waste stream.

(7) If the benzene quantity determined in paragraph (6) of this section exceeds 6.0 Mg/yr (6.6 ton/yr) only because of multiple counting of the benzene quantity for a waste stream, the owner or operator may use the following procedures for the purposes of the calculation required by §61.342(e)(2):

(i) Determine which waste management units are involved in the multiple counting of benzene;

(ii) Determine the quantity of benzene that is emitted, recovered, or removed from the affected units identified in paragraph (k)(7)(i) of this section, or destroyed in the units if applicable, using either direct measurements or the best available estimation techniques developed or approved by the Administrator.

(iii) Adjust the benzene quantity to eliminate the multiple counting of benzene based on the results from paragraph (k)(7)(ii) of this section and determine the total benzene quantity for the purposes of the calculation required by §61.342(e)(2).

(iv) Submit in the annual report required under §61.357(a) a description of the methods used and the resulting calculations for the alternative procedure under paragraph (k)(7) of this section, the benzene quantity determination from paragraph (k)(6) of this section, and the adjusted benzene quantity determination from paragraph (k)(7)(iii) of this section.

**# 103 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1]****Subpart A--General Provisions****Applicability.**

This condition is applicable to Sources 101A, 105, 106, 107, 108, 109, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 216, 217, 219, 220, 221, 222, & 224.

(a) General.

(1) Terms used throughout this part are defined in §63.2 or in the Clean Air Act (Act) as amended in 1990, except that individual subparts of this part may include specific definitions in addition to or that supersede definitions in §63.2.

(2) This part contains national emission standards for hazardous air pollutants (NESHAP) established pursuant to section 112 of the Act as amended November 15, 1990. These standards regulate specific categories of stationary sources that emit (or have the potential to emit) one or more hazardous air pollutants listed in this part pursuant to section 112(b) of the Act. This section explains the applicability of such standards to sources affected by them. The standards in this part are independent of NESHAP contained in 40 CFR part 61. The NESHAP in part 61 promulgated by signature of the

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Administrator before November 15, 1990 (i.e., the date of enactment of the Clean Air Act Amendments of 1990) remain in effect until they are amended, if appropriate, and added to this part.

(3) No emission standard or other requirement established under this part shall be interpreted, construed, or applied to diminish or replace the requirements of a more stringent emission limitation or other applicable requirement established by the Administrator pursuant to other authority of the Act (section 111, part C or D or any other authority of this Act), or a standard issued under State authority. The Administrator may specify in a specific standard under this part that facilities subject to other provisions under the Act need only comply with the provisions of that standard.

(4) Not applicable

(5) [Reserved]

(6) Not applicable

(7)-(9) [Reserved]

(10) For the purposes of this part, time periods specified in days shall be measured in calendar days, even if the word "calendar" is absent, unless otherwise specified in an applicable requirement.

(11) For the purposes of this part, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, test plan, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery agreed to by the permitting authority, is acceptable.

(12) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in §63.9(i).

(b) Initial applicability determination for this part. (1) The provisions of this part apply to the owner or operator of any stationary source that:

(i) Emits or has the potential to emit any hazardous air pollutant listed in or pursuant to section 112(b) of the Act; and

(ii) Is subject to any standard, limitation, prohibition, or other federally enforceable requirement established pursuant to this part.

(2) [Reserved]

(3) An owner or operator of a stationary source who is in the relevant source category and who determines that the source is not subject to a relevant standard or other requirement established under this part must keep a record as specified in §63.10(b)(3).

(c) Applicability of this part after a relevant standard has been set under this part. (1) If a relevant standard has been established under this part, the owner or operator of an affected source must comply with the provisions of that standard and of this subpart as provided in paragraph (a)(4) of this section.

(2) Not applicable

(3)-(4) [Reserved]

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(5) If an area source that otherwise would be subject to an emission standard or other requirement established under this part if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that the source is a major source that is subject to the emission standard or other requirement, such source also shall be subject to the notification requirements of this subpart.

(d) [Reserved]

(e) Not applicable

**# 104 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.10]**

**Subpart A--General Provisions**

**Recordkeeping and reporting requirements.**

This condition is applicable to Sources 101A, 105, 106, 107, 108, 109, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 216, 217, 219, 220, 221, 222, & 224.

a) Applicability and general information. {See 40 CFR 63.10(a)}

b) General recordkeeping requirements.

(1) Not applicable

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

(i) - (ii) Not applicable;

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

(iv) - (v) Not applicable

(vi) Not applicable

(vii) Not applicable

(viii) Not applicable

(ix) Not applicable

(x) All CMS calibration checks;

(xi) Not applicable

(xii) Not applicable

(xiii) Not applicable

(xiv) Not applicable

(3) Not applicable

c) Not applicable

d) General reporting requirements.

(1) Not applicable

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(2) Not applicable

(3) Not applicable

(4) Progress reports. The owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under 40 CFR 63.6(i) shall submit such reports to the Administrator (or the State with an approved permit program) by the dates specified in the written extension of compliance.

(5) Not applicable

e) Not applicable

f) Waiver of recordkeeping or reporting requirements. {See 40 CFR 63.10(f)}

**# 105 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1063]****Subpart WW - National Emission Standards for Storage Vessels (Tanks)-Control Level 2****Floating roof requirements.**

(a) - (b) Not applicable.

(c) Inspection frequency requirements—(1) Internal floating roofs. Internal floating roofs shall be inspected as specified in paragraph (d)(1) of this section before the initial filling of the storage vessel. Subsequent inspections shall be performed as specified in paragraph (c)(1)(i) or (c)(1)(ii) of this section.

(i) Internal floating roofs shall be inspected as specified in paragraphs (c)(1)(i)(A) and (c)(1)(i)(B) of this section.

(A) At least once per year the IFR shall be inspected as specified in paragraph (d)(2) of this section.

(B) Each time the storage vessel is completely emptied and degassed, or every 10 years, whichever occurs first, the IFR shall be inspected as specified in paragraph (d)(1) of this section.

(ii) Instead of the inspection frequency specified in paragraph (c)(1)(i) of this section, internal floating roofs with two rim seals may be inspected as specified in paragraph (d)(1) of this section each time the storage vessel is completely emptied and degassed, or every 5 years, whichever occurs first.

(2) External floating roofs. External floating roofs shall be inspected as specified in paragraphs (c)(2)(i) through (c)(2)(iv) of this section.

(i) Within 90 days after the initial filling of the storage vessel, the primary and secondary rim seals shall be inspected as specified in paragraph (d)(3) of this section.

(ii) The secondary seal shall be inspected at least once every year, and the primary seal shall be inspected at least every 5 years, as specified in paragraph (d)(3) of this section.

(iii) Each time the storage vessel is completely emptied and degassed, or every 10 years, whichever occurs first, the EFR shall be inspected as specified in paragraph (d)(1) of this section.

(iv) If the owner or operator determines that it is unsafe to perform the floating roof inspections specified in paragraphs (c)(2)(i) and (c)(2)(ii) of this section, the owner or operator shall comply with the requirements of paragraph (c)(2)(iv)(A) or (c)(2)(iv)(B) of this section.

(A) The inspections shall be performed no later than 30 days after the determination that the floating roof is unsafe.

(B) The storage vessel shall be removed from liquid service no later than 45 days after determining the floating roof is unsafe. If the vessel cannot be emptied within 45 days, the owner or operator may utilize up to two extensions of up to 30 additional days each. If the vessel cannot be emptied within 45 days, the owner or operator may utilize up to two extensions of up to 30 additional days each. Documentation of a decision to use an extension shall include an explanation of why it

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was unsafe to perform the inspection, documentation that alternative storage capacity is unavailable, and a schedule of actions that will ensure that the vessel will be emptied as soon as practical.

(d) Inspection procedure requirements. Floating roof inspections shall be conducted as specified in paragraphs (d)(1) through (d)(3) of this section, as applicable. If a floating roof fails an inspection, the owner or operator shall comply with the repair requirements of paragraph (e) of this section.

(1) Floating roof (IFR and EFR) inspections shall be conducted by visually inspecting the floating roof deck, deck fittings, and rim seals from within the storage vessel. The inspection may be performed entirely from the top side of the floating roof, as long as there is visual access to all deck components specified in paragraph (a) of this section. Any of the conditions described in paragraphs (d)(1)(i) through (d)(1)(v) of this section constitutes inspection failure.

(i) Stored liquid on the floating roof.

(ii) Holes or tears in the primary or secondary seal (if one is present).

(iii) Floating roof deck, deck fittings, or rim seals that are not functioning as designed (as specified in paragraph (a) of this section).

(iv) Failure to comply with the operational requirements of paragraph (b) of this section.

(v) Gaps of more than 0.32 centimeters ( 1/8 inch) between any deck fitting gasket, seal, or wiper (required by paragraph (a) of this section) and any surface that it is intended to seal.

(2) Tank-top inspections of IFR's shall be conducted by visually inspecting the floating roof deck, deck fittings, and rim seal through openings in the fixed roof. Any of the conditions described in paragraphs (d)(1)(i) through (d)(1)(iv) of this section constitutes inspection failure. Identification of holes or tears in the rim seal is required only for the seal that is visible from the top of the storage vessel.

(3) Seal gap inspections for EFR's shall determine the presence and size of gaps between the rim seals and the wall of the storage vessel by the procedures specified in paragraph (d)(3)(i) of this section. Any exceedance of the gap requirements specified in paragraphs (d)(3)(ii) and (d)(3)(iii) of this section constitutes inspection failure.

(i) Rim seals shall be measured for gaps at one or more levels while the EFR is floating, as specified in paragraphs (d)(3)(i)(A) through (d)(3)(i)(F) of this section.

(A) The inspector shall hold a 0.32 centimeter ( 1/8 inch) diameter probe vertically against the inside of the storage vessel wall, just above the rim seal, and attempt to slide the probe down between the seal and the vessel wall. Each location where the probe passes freely (without forcing or binding against the seal) between the seal and the vessel wall constitutes a gap.

(B) The length of each gap shall be determined by inserting the probe into the gap (vertically) and sliding the probe along the vessel wall in each direction as far as it will travel freely without binding between the seal and the vessel wall. The circumferential length along which the probe can move freely is the gap length.

(C) The maximum width of each gap shall be determined by inserting probes of various diameters between the seal and the vessel wall. The smallest probe diameter should be 0.32 centimeter, and larger probes should have diameters in increments of 0.32 centimeter. The diameter of the largest probe that can be inserted freely anywhere along the length of the gap is the maximum gap width.

(D) The average width of each gap shall be determined by averaging the minimum gap width (0.32 centimeter) and the maximum gap width.

(E) The area of a gap is the product of the gap length and average gap width.

(F) The ratio of accumulated area of rim seal gaps to storage vessel diameter shall be determined by adding the area of

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each gap, and dividing the sum by the nominal diameter of the storage vessel. This ratio shall be determined separately for primary and secondary rim seals.

(ii) The ratio of seal gap area to vessel diameter for the primary seal shall not exceed 212 square centimeters per meter of vessel diameter (10 square inches per foot of vessel diameter), and the maximum gap width shall not exceed 3.81 centimeters (1.5 inches).

(iii) The ratio of seal gap area to vessel diameter for the secondary seal shall not exceed 21.2 square centimeters per meter (1 square inch per foot), and the maximum gap width shall not exceed 1.27 centimeters (0.5 inches), except when the secondary seal must be pulled back or removed to inspect the primary seal.

(e) Repair requirements. Conditions causing inspection failures under paragraph (d) of this section shall be repaired as specified in paragraph (e)(1) or (e)(2) of this section.

(1) If the inspection is performed while the storage vessel is not storing liquid, repairs shall be completed before the refilling of the storage vessel with liquid.

(2) If the inspection is performed while the storage vessel is storing liquid, repairs shall be completed or the vessel removed from service within 45 days. If a repair cannot be completed and the vessel cannot be emptied within 45 days, the owner or operator may use up to 2 extensions of up to 30 additional days each. Documentation of a decision to use an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be completely emptied as soon as practical.

**# 106 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1065]  
Subpart WW - National Emission Standards for Storage Vessels (Tanks)-Control Level 2  
Recordkeeping requirements.**

The owner or operator shall keep the records required in paragraph (a) of this section for as long as liquid is stored. Records required in paragraphs (b), (c) and (d) of this section shall be kept for at least 5 years. Records shall be kept in such a manner that they can be readily accessed within 24 hours. Records may be kept in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

(a) Vessel dimensions and capacity. A record shall be kept of the dimensions of the storage vessel, an analysis of the capacity of the storage vessel, and an identification of the liquid stored.

(b) Inspection results. Records of floating roof inspection results shall be kept as specified in paragraphs (b)(1) and (b)(2) of this section.

(1) If the floating roof passes inspection, a record shall be kept that includes the information specified in paragraphs (b)(1)(i) and (b)(1)(ii) of this section. If the floating roof fails inspection, a record shall be kept that includes the information specified in paragraphs (b)(1)(i) through (b)(1)(v) of this section.

(i) Identification of the storage vessel that was inspected.

(ii) The date of the inspection.

(iii) A description of all inspection failures.

(iv) A description of all repairs and the dates they were made.

(v) The date the storage vessel was removed from service, if applicable.

(2) A record shall be kept of EFR seal gap measurements, including the raw data obtained and any calculations performed.

(c) Floating roof landings. The owner or operator shall keep a record of the date when a floating roof is set on its legs or other support devices. The owner or operator shall also keep a record of the date when the roof was refloated, and the

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record shall indicate whether the process of refloating was continuous.

(d) An owner or operator who elects to use an extension in accordance with §63.1063(e)(2) or §63.1063(c)(2)(iv)(B) shall keep the documentation required by those paragraphs.

**# 107 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.11]****Subpart A--General Provisions****Control device requirements.**

This condition is applicable to Sources 101A, 105, 106, 107, 108, 109, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 216, 217, 219, 220, 221, 222, & 224.

a) Applicability. This section contains requirements for control devices used to comply with provisions in relevant standards. These requirements apply only to affected sources covered by relevant standards referring directly or indirectly to this section.

b) Flares.

(1) Owners or operators using flares to comply with the provisions of this part shall monitor these control devices to assure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators using flares shall monitor these control devices.

(2) Flares shall be steam-assisted, air-assisted, or non-assisted.

(3) Flares shall be operated at all times when emissions may be vented to them.

(4) Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. Test Method 22 in Appendix A of part 60 of this chapter shall be used to determine the compliance of flares with the visible emission provisions of this part. The observation period is 2 hours and shall be used according to Method 22.

(5) 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.

(6) An owner or operator has the choice of adhering to the heat content specifications in paragraph (b)(6)(ii) of this section, and the maximum tip velocity specifications in paragraph (b)(7) or (b)(8) of this section, or adhering to the requirements in paragraph (b)(6)(i) of this section.

(i)(A) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume) or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity  $V_{max}$ , as determined by the equation found in 40 CFR 63.11(b)(6)(i)(A).

(B) The actual exit velocity of a flare shall be determined by the method specified in paragraph (b)(7)(i) of this section.

(ii) Flares shall be used only with the net heating value of the gas being combusted at 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted at 7.45 MJ/scm (200 Btu/scf) or greater if the flare is non-assisted. The net heating value of the gas being combusted in a flare shall be calculated using the equation found in 40 CFR 63.11(b)(6)(ii).

(7)(i) 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 (b)(7)(ii) and (b)(7)(iii) of this section. The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), as determined by Test Methods 2, 2A, 2C, or 2D in Appendix A to 40 CFR part 60 of this chapter, as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

(ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in paragraph (b)(7)(i) of this section, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400



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ft/sec), are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in paragraph (b)(7)(i) of this section, less than the velocity  $V_{max}$ , as determined by the method specified in this paragraph, but less than 122 m/sec (400 ft/sec) are allowed. The maximum permitted velocity,  $V_{max}$ , for flares complying with this paragraph shall be determined by the equation found in 40 CFR 63.11(b)(7)(iii).

(8) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity  $V_{max}$ . The maximum permitted velocity,  $V_{max}$ , for air-assisted flares shall be determined by the equation found in 40 CFR 63.11(b)(8).

**# 108 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.12]****Subpart A--General Provisions****State authority and delegations.**

This condition is applicable to Sources 101A, 105, 106, 107, 108, 109, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 216, 217, 219, 220, 221, 222, & 224.

a) The provisions of this part shall not be construed in any manner to preclude any State or political subdivision thereof from--

(1) Adopting and enforcing any standard, limitation, prohibition, or other regulation applicable to an affected source subject to the requirements of this part, provided that such standard, limitation, prohibition, or regulation is not less stringent than any requirement applicable to such source established under this part;

(2) Requiring the owner or operator of an affected source to obtain permits, licenses, or approvals prior to initiating construction, reconstruction, modification, or operation of such source; or

(3) Requiring emission reductions in excess of those specified in subpart D of this part as a condition for granting the extension of compliance authorized by section 112(i)(5) of the Act.

b)(1) section 112(l) of the Act directs the Administrator to delegate to each State, when appropriate, the authority to implement and enforce standards and other requirements pursuant to section 112 for stationary sources located in that State. Because of the unique nature of radioactive material, delegation of authority to implement and enforce standards that control radionuclides may require separate approval.

(2) Subpart E of this part establishes procedures consistent with section 112(l) for the approval of State rules or programs to implement and enforce applicable Federal rules promulgated under the authority of section 112. Subpart E also establishes procedures for the review and withdrawal of section 112 implementation and enforcement authorities granted through a section 112(l) approval.

c) All information required to be submitted to the EPA under this part also shall be submitted to the appropriate State agency of any State to which authority has been delegated under section 112(l) of the Act, provided that each specific delegation may exempt sources from a certain Federal or State reporting requirement. The Administrator may permit all or some of the information to be submitted to the appropriate State agency only, instead of to the EPA and the State agency.

**# 109 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.15]****Subpart A--General Provisions****Availability of information and confidentiality.**

This condition is applicable to Sources 101A, 105, 106, 107, 108, 109, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 216, 217, 219, 220, 221, 222, & 224.

a) Availability of information. {See 40 CFR 63.15(a)}

b) Confidentiality. {See 40 CFR 63.15(b)}

**# 110 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.4]****Subpart A--General Provisions****Prohibited activities and circumvention.**

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This condition is applicable to Sources 101A, 105, 106, 107, 108, 109, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 216, 217, 219, 220, 221, 222, & 224.

a) Prohibited activities.

(1) No owner or operator subject to the provisions of this part shall operate any affected source in violation of the requirements of this part except as specified in 40 CFR 63.4(a)(1).

(2) 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.

(3) -(5) [Reserved]

b) Circumvention. 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--

(1) 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;

(2) The use of gaseous diluents to achieve compliance with a relevant standard for visible emissions; and

c) Fragmentation. 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.

**# 111 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.5]**

**Subpart A--General Provisions**

**Construction and reconstruction.**

This condition is applicable to Sources 101A, 105, 106, 107, 108, 109, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 216, 217, 219, 220, 221, 222, & 224.

a) Applicability. {See 40 CFR 63.5(a)}

b) Requirements for existing, newly constructed, and reconstructed sources. {See 40 CFR 63.5(b)}

c) [Reserved]

d) Application for approval of construction or reconstruction. {See 40 CFR 63.5(d)}

e) Approval of construction or reconstruction. {See 40 CFR 63.5(e)}

f) Approval of construction or reconstruction based on prior State preconstruction review. {See 40 CFR 63.5(f)}

**# 112 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6]**

**Subpart A--General Provisions**

**Compliance with standards and maintenance requirements.**

This condition is applicable to Sources 101A, 105, 106, 107, 108, 109, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 216, 217, 219, 220, 221, 222, & 224.

(a) Applicability. {See 40 CFR 63.6(a)}

(b) Compliance dates for new and reconstructed sources.

(1) Not applicable

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(2) Not applicable

(3) The owner or operator of an affected source for which construction or reconstruction is commenced after the proposal date of a relevant standard established under this part pursuant to sections 112(d), 112(f), or 112(h) of the Act but before the effective date (that is, promulgation) of such standard shall comply with the relevant emission standard not later than the date 3 years after the effective date if:

(i) The promulgated standard (that is, the relevant standard) is more stringent than the proposed standard; and

(ii) The owner or operator complies with the standard as proposed during the 3-year period immediately after the effective date.

(4) Not applicable

(5) Not applicable

(6) [Reserved]

(7) Not applicable

(c) Compliance dates for existing sources.

(1) Not applicable

(2) Not applicable

(3)-(4) [Reserved]

(5) After the effective date of an emission standard promulgated under this part, the owner or operator of an unaffected existing area source that increases its emissions of (or its potential to emit) hazardous air pollutants such that the source becomes a major source that is subject to the emission standard shall comply by the date specified in the standard for existing area sources that become major sources. If no such compliance date is specified in the standard, the source shall have a period of time to comply with the relevant emission standard that is equivalent to the compliance period specified in that standard for other existing sources. This compliance period shall apply to existing area sources that become affected major sources regardless of whether the existing area source previously was affected by that standard. Notwithstanding the previous two sentences, however, if the existing area source becomes a major source by the addition of a new affected source or by reconstructing, the portion of the existing facility that is a new affected source or a reconstructed source shall comply with all requirements of that standard that affect new sources, including the compliance date for new sources.

d) [Reserved]

(e) Operation and maintenance requirements.

(1)

(i) -(ii) Not applicable.

(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.

(2) [Reserved]

(3) Not applicable.

(ii) [Reserved]

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(iii) - (ix) Not applicable

(f) Compliance with nonopacity emission standards--

(1) Not applicable.

(2) Methods for determining compliance.

(i) The Administrator will determine compliance with nonopacity emission standards in this part based on the results of performance tests conducted according to the procedures in 40 CFR 63.7, unless otherwise specified in an applicable subpart of this part.

(ii) The Administrator will determine compliance with nonopacity emission standards in this part by evaluation of an owner or operator's conformance with operation and maintenance requirements, including the evaluation of monitoring data, as specified in 40 CFR 63.6(e) and applicable subparts of this part.

(iii) If an affected source conducts performance testing at startup to obtain an operating permit in the State in which the source is located, the results of such testing may be used to demonstrate compliance with a relevant standard if--

(A) The performance test was conducted within a reasonable amount of time before an initial performance test is required to be conducted under the relevant standard;

(B) The performance test was conducted under representative operating conditions for the source;

(C) The performance test was conducted and the resulting data were reduced using EPA-approved test methods and procedures, as specified in 40 CFR 63.7(e) of this subpart; and

(D) Not applicable

(iv) The Administrator will determine compliance with design, equipment, work practice, or operational emission standards in this part by review of records, inspection of the source, and other procedures specified in applicable subparts of this part.

(v) The Administrator will determine compliance with design, equipment, work practice, or operational emission standards in this part by evaluation of an owner or operator's conformance with operation and maintenance requirements, as specified in paragraph (e) of this section and applicable subparts of this part.

(3) Finding of compliance. The Administrator will make a finding concerning an affected source's compliance with a nonopacity emission standard, as specified in paragraphs (f)(1) and (f)(2) of this section, upon obtaining all the compliance information required by the relevant standard (including the written reports of performance test results, monitoring results, and other information, if applicable) and any information available to the Administrator needed to determine whether proper operation and maintenance practices are being used.

(g) Use of an alternative nonopacity emission standard. {See 40 CFR 63.6(g)}

(h) Compliance with opacity and visible emission standards--

(1) Not applicable.

(2) Methods for determining compliance.

(i) Not applicable.

(ii) [Reserved]

(iii) If an affected source undergoes opacity or visible emission testing at startup to obtain an operating permit in the

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State in which the source is located, the results of such testing may be used to demonstrate compliance with a relevant standard if--

(A) The opacity or visible emission test was conducted within a reasonable amount of time before a performance test is required to be conducted under the relevant standard;

(B) The opacity or visible emission test was conducted under representative operating conditions for the source;

(C) The opacity or visible emission test was conducted and the resulting data were reduced using EPA-approved test methods and procedures, as specified in 40 CFR 63.7(e) of this subpart; and

(D) The opacity or visible emission test was appropriately quality-assured, as specified in 40 CFR 63.7(c) of this section.

(3) [Reserved]

(4) Not applicable

(5) Not applicable

(6) Availability of records. The owner or operator of an affected source shall make available, upon request by the Administrator, such records that the Administrator deems necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification.

(7) Not applicable

(8) Not applicable

(9) Not applicable

(i) Extension of compliance with emission standards. {See 40 CFR 63.6(i)}

(j) Exemption from compliance with emission standards. {See 40 CFR 63.6(j)}

**# 113 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.640]**

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Applicability and designation of affected source.**

(a) This subpart applies to petroleum refining process units and to related emissions points that are specified in paragraphs (c)(1) through (9) of this section that are located at a plant site and that meet the criteria in paragraphs (a)(1) and (2) of this section:

(1) Are located at a plant site that is a major source as defined in section 112(a) of the Clean Air Act; and

(2) Emit or have equipment containing or contacting one or more of the hazardous air pollutants listed in table 1 of this subpart.

(b)(1) If the predominant use of the flexible operation unit, as described in paragraphs (b)(1)(i) and (ii) of this section, is as a petroleum refining process unit, as defined in §63.641, then the flexible operation unit shall be subject to the provisions of this subpart.

(i) Except as provided in paragraph (b)(1)(ii) of this section, the predominant use of the flexible operation unit shall be the use representing the greatest annual operating time.

(ii) If the flexible operation unit is used as a petroleum refining process unit and for another purpose equally based on operating time, then the predominant use of the flexible operation unit shall be the use that produces the greatest annual production on a mass basis.

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(2) The determination of applicability of this subpart to petroleum refining process units that are designed and operated as flexible operation units shall be reported as specified in §63.655(h)(6)(i).

(c) For the purposes of this subpart, the affected source shall comprise all emissions points, in combination, listed in paragraphs (c)(1) through (9) of this section that are located at a single refinery plant site.

(1) All miscellaneous process vents from petroleum refining process units meeting the criteria in paragraph (a) of this section;

(2) All storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section;

(3) All wastewater streams and treatment operations associated with petroleum refining process units meeting the criteria in paragraph (a) of this section;

(4) All equipment leaks from petroleum refining process units meeting the criteria in paragraph (a) of this section;

(5) All gasoline loading racks classified under Standard Industrial Classification code 2911 meeting the criteria in paragraph (a) of this section;

(6) Not applicable;

(7) All storage vessels and equipment leaks associated with a bulk gasoline terminal or pipeline breakout station classified under Standard Industrial Classification code 2911 located within a contiguous area and under common control with a refinery meeting the criteria in paragraph (a) of this section; and

(8) All heat exchange systems, as defined in this subpart.

(9) Not applicable.

(d) The affected source subject to this subpart does not include the emission points listed in paragraphs (d)(1) through (d)(5) of this section.

(1) Stormwater from segregated stormwater sewers;

(2) Spills;

(3) Any pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, or instrumentation system that is intended to operate in organic hazardous air pollutant service, as defined in §63.641 of this subpart, for less than 300 hours during the calendar year;

(4) Catalytic cracking unit and catalytic reformer catalyst regeneration vents, and sulfur plant vents; and

(5) Emission points routed to a fuel gas system, as defined in §63.641, provided that on and after January 30, 2019, any flares receiving gas from that fuel gas system are subject to §63.670. No other testing, monitoring, recordkeeping, or reporting is required for refinery fuel gas systems or emission points routed to refinery fuel gas systems.

(e) The owner or operator of a storage vessel constructed on or before August 18, 1994, shall follow the procedures specified in paragraphs (e)(1) and (e)(2) of this section to determine whether a storage vessel is part of a source to which this subpart applies. The owner or operator of a storage vessel constructed after August 18, 1994, shall follow the procedures specified in paragraphs (e)(1), (e)(2)(i), and (e)(2)(ii) of this section to determine whether a storage vessel is part of a source to which this subpart applies.

(1) Where a storage vessel is used exclusively by a process unit, the storage vessel shall be considered part of that process unit.

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- (i) If the process unit is a petroleum refining process unit subject to this subpart, then the storage vessel is part of the affected source to which this subpart applies.
- (ii) If the process unit is not subject to this subpart, then the storage vessel is not part of the affected source to which this subpart applies.
- (2) If a storage vessel is not dedicated to a single process unit, then the applicability of this subpart shall be determined according to the provisions in paragraphs (e)(2)(i) through (e)(2)(iii) of this section.
- (i) If a storage vessel is shared among process units and one of the process units has the predominant use, as determined by paragraphs (e)(2)(i)(A) and (e)(2)(i)(B) of this section, then the storage vessel is part of that process unit.
- (A) If the greatest input on a volume basis into the storage vessel is from a process unit that is located on the same plant site, then that process unit has the predominant use.
- (B) If the greatest input on a volume basis into the storage vessel is provided from a process unit that is not located on the same plant site, then the predominant use shall be the process unit that receives the greatest amount of material on a volume basis from the storage vessel at the same plant site.
- (ii) If a storage vessel is shared among process units so that there is no single predominant use, and at least one of those process units is a petroleum refining process unit subject to this subpart, the storage vessel shall be considered to be part of the petroleum refining process unit that is subject to this subpart. If more than one petroleum refining process unit is subject to this subpart, the owner or operator may assign the storage vessel to any of the petroleum refining process units subject to this subpart.
- (iii) If the predominant use of a storage vessel varies from year to year, then the applicability of this subpart shall be determined based on the utilization of that storage vessel during the year preceding August 18, 1995. This determination shall be reported as specified in §63.655(h)(6)(ii).
- (f) The owner or operator of a distillation unit constructed on or before August 18, 1994, shall follow the procedures specified in paragraphs (f)(1) through (f)(4) of this section to determine whether a miscellaneous process vent from a distillation unit is part of a source to which this subpart applies. The owner or operator of a distillation unit constructed after August 18, 1994, shall follow the procedures specified in paragraphs (f)(1) through (f)(5) of this section to determine whether a miscellaneous process vent from a distillation unit is part of a source to which this subpart applies.
- (1) If the greatest input to the distillation unit is from a process unit located on the same plant site, then the distillation unit shall be assigned to that process unit.
- (2) If the greatest input to the distillation unit is provided from a process unit that is not located on the same plant site, then the distillation unit shall be assigned to the process unit located at the same plant site that receives the greatest amount of material from the distillation unit.
- (3) If a distillation unit is shared among process units so that there is no single predominant use, as described in paragraphs (f)(1) and (f)(2) of this section, and at least one of those process units is a petroleum refining process unit subject to this subpart, the distillation unit shall be assigned to the petroleum refining process unit that is subject to this subpart. If more than one petroleum refining process unit is subject to this subpart, the owner or operator may assign the distillation unit to any of the petroleum refining process units subject to this rule.
- (4) If the process unit to which the distillation unit is assigned is a petroleum refining process unit subject to this subpart and the vent stream contains greater than 20 parts per million by volume total organic hazardous air pollutants, then the vent from the distillation unit is considered a miscellaneous process vent (as defined in §63.641 of this subpart) and is part of the source to which this subpart applies.
- (5) If the predominant use of a distillation unit varies from year to year, then the applicability of this subpart shall be determined based on the utilization of that distillation unit during the year preceding August 18, 1995. This determination shall be reported as specified in §63.655(h)(6)(iii).

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(g) The provisions of this subpart do not apply to the processes specified in paragraphs (g)(1) through (g)(7) of this section.

(1) Research and development facilities, regardless of whether the facilities are located at the same plant site as a petroleum refining process unit that is subject to the provisions of this subpart;

(2) Equipment that does not contain any of the hazardous air pollutants listed in table 1 of this subpart that is located within a petroleum refining process unit that is subject to this subpart;

(3) Units processing natural gas liquids;

(4) Units that are used specifically for recycling discarded oil;

(5) Shale oil extraction units;

(6) Ethylene processes; and

(7) Process units and emission points subject to subparts F, G, H, and I of this part.

(h) Sources subject to this subpart are required to achieve compliance on or before the dates specified in table 11 of this subpart, except as provided in paragraphs (h)(1) through (3) of this section.

(1) Not applicable.

(2) Existing Group 1 floating roof storage vessels meeting the applicability criteria in item 1 of the definition of Group 1 storage vessel shall be in compliance with §63.646 at the first degassing and cleaning activity after August 18, 1998, or August 18, 2005, whichever is first.

(3) An owner or operator may elect to comply with the provisions of §63.648(c) through (i) as an alternative to the provisions of §63.648(a) and (b). In such cases, the owner or operator shall comply no later than the dates specified in paragraphs (h)(3)(i) through (iii) of this section.

(i) Phase I (see table 2 of this subpart), beginning on August 18, 1998;

(ii) Phase II (see table 2 of this subpart), beginning no later than August 18, 1999; and

(iii) Phase III (see table 2 of this subpart), beginning no later than February 18, 2001.

(i) If an additional petroleum refining process unit is added to a plant site that is a major source as defined in section 112(a) of the Clean Air Act, the addition shall be subject to the requirements for a new source if it meets the criteria specified in paragraphs (i)(1) through (i)(3) of this section:

(1) It is an addition that meets the definition of construction in §63.2 of subpart A of this part;

(2) Such construction commenced after July 14, 1994; and

(3) The addition has the potential to emit 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants.

(j) If any change is made to a petroleum refining process unit subject to this subpart, the change shall be subject to the requirements for a new source if it meets the criteria specified in paragraphs (j)(1) and (j)(2) of this section:

(1) It is a change that meets the definition of reconstruction in §63.2 of subpart A of this part; and

(2) Such reconstruction commenced after July 14, 1994.

(k) If an additional petroleum refining process unit is added to a plant site or a change is made to a petroleum refining



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process unit and the addition or change is determined to be subject to the new source requirements according to paragraphs (i) or (j) of this section it must comply with the requirements specified in paragraphs (k)(1) and (k)(2) of this section:

(1) The reconstructed source, addition, or change shall be in compliance with the new source requirements in item (1), (2), or (3) of table 11 of this subpart, as applicable, upon initial startup of the reconstructed source or by August 18, 1995, whichever is later; and

(2) The owner or operator of the reconstructed source, addition, or change shall comply with the reporting and recordkeeping requirements that are applicable to new sources. The applicable reports include, but are not limited to:

(i) The application for approval of construction or reconstruction shall be submitted as soon as practical before the construction or reconstruction is planned to commence (but it need not be sooner than November 16, 1995);

(ii) The Notification of Compliance Status report as required by §63.655(f) for a new source, addition, or change;

(iii) Periodic Reports and other reports as required by §63.655(g) and (h);

(iv) Reports and notifications required by §60.487 of subpart VV of part 60 or §63.182 of subpart H of this part. The requirements for subpart H are summarized in table 3 of this subpart;

(v) Reports required by 40 CFR 61.357 of subpart FF;

(vi) Reports and notifications required by §63.428(b), (c), (g)(1), (h)(1) through (h)(3), and (k) of subpart R. These requirements are summarized in table 4 of this subpart; and

(vii) Reports and notifications required by §§63.565 and 63.567 of subpart Y of this part. These requirements are summarized in table 5 of this subpart.

(l) If an additional petroleum refining process unit is added to a plant site or if a miscellaneous process vent, storage vessel, gasoline loading rack, marine tank vessel loading operation, heat exchange system, or decoking operation that meets the criteria in paragraphs (c)(1) through (9) of this section is added to an existing petroleum refinery or if another deliberate operational process change creating an additional Group 1 emissions point(s) (as defined in §63.641) is made to an existing petroleum refining process unit, and if the addition or process change is not subject to the new source requirements as determined according to paragraph (i) or (j) of this section, the requirements in paragraphs (l)(1) through (4) of this section shall apply. Examples of process changes include, but are not limited to, changes in production capacity, or feed or raw material where the change requires construction or physical alteration of the existing equipment or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. For purposes of this paragraph (l) and paragraph (m) of this section, process changes do not include: Process upsets, unintentional temporary process changes, and changes that are within the equipment configuration and operating conditions documented in the Notification of Compliance Status report required by §63.655(f).

(1) 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.

(2) The added emission point(s) and any emission point(s) within the added or changed petroleum refining process unit shall be in compliance with the applicable requirements in item (4) of table 11 of this subpart by the dates specified in paragraph (l)(2)(i) or (ii) of this section.

(i) If a petroleum refining 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 of any added petroleum refining process unit or emission point(s) or by the applicable compliance date in item (4) of table 11 of this subpart, whichever is later.

(ii) 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 (as defined in §63.641), the owner or operator shall be in compliance

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upon initial startup or by August 18, 1998, whichever is later, unless the owner or operator demonstrates to the Administrator that achieving compliance will take longer than making the change. If this demonstration is made to the Administrator's satisfaction, the owner or operator shall follow the procedures in paragraphs (m)(1) through (m)(3) of this section to establish a compliance date.

(3) The owner or operator of a petroleum refining process unit or of a storage vessel, miscellaneous process vent, wastewater stream, gasoline loading rack, marine tank vessel loading operation, heat exchange system, or decoking operation meeting the criteria in paragraphs (c)(1) through (9) of this section that is added to a plant site and is subject to the requirements for existing sources shall comply with the reporting and recordkeeping requirements that are applicable to existing sources including, but not limited to, the reports listed in paragraphs (l)(3)(i) through (vii) of this section. A process change to an existing petroleum refining process unit shall be subject to the reporting requirements for existing sources including, but not limited to, the reports listed in paragraphs (l)(3)(i) through (vii) of this section. The applicable reports include, but are not limited to:

(i) The Notification of Compliance Status report as required by §63.655(f) for the emission points that were added or changed;

(ii) Periodic Reports and other reports as required by §63.655(g) and (h);

(iii) Reports and notifications required by sections of subpart A of this part that are applicable to this subpart, as identified in table 6 of this subpart.

(iv) Reports and notifications required by §63.182, or 40 CFR 60.487. The requirements of subpart H of this part are summarized in table 3 of this subpart;

(v) Reports required by §61.357 of subpart FF;

(vi) Reports and notifications required by §63.428(b), (c), (g)(1), (h)(1) through (h)(3), and (k) of subpart R. These requirements are summarized in table 4 of this subpart; and

(vii) Reports and notifications required by §§63.565 and 63.567 of subpart Y. These requirements are summarized in table 5 of this subpart.

(4) If pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, or instrumentation systems are added to an existing source, they are subject to the equipment leak standards for existing sources in §63.648. A notification of compliance status report shall not be required for such added equipment.

(m) If a change that does not meet the criteria in paragraph (l) of this section is made to a petroleum refining process unit subject to this subpart, and the change causes a Group 2 emission point to become a Group 1 emission point (as defined in §63.641), then the owner or operator shall comply with the applicable requirements of this subpart for existing sources, as specified in item (4) of table 11 of this subpart, for the Group 1 emission point as expeditiously as practicable, but in no event later than 3 years after the emission point becomes Group 1.

(1) The owner or operator shall submit to the Administrator for approval a compliance schedule, along with a justification for the schedule.

(2) The compliance schedule shall be submitted within 180 days after the change is made, unless the compliance schedule has been previously submitted to the permitting authority. If it is not possible to determine until after the change is implemented whether the emission point has become Group 1, the compliance schedule shall be submitted within 180 days of the date when the effect of the change is known to the source. The compliance schedule may be submitted in the next Periodic Report if the change is made after the date the Notification of Compliance Status report is due.

(3) The Administrator shall approve or deny the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification. Approval is automatic if not received from the Administrator within 120 calendar days of receipt.

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(n) Overlap of this subpart with other regulations for storage vessels. As applicable, paragraphs (n)(1), (3), (4), (6), and (7) of this section apply for Group 2 storage vessels and paragraphs (n)(2) and (5) of this section apply for Group 1 storage vessels.

(1) After the compliance dates specified in paragraph (h) of this section, a Group 2 storage vessel that is subject to the provisions of 40 CFR part 60, subpart Kb, is required to comply only with the requirements of 40 CFR part 60, subpart Kb, except as provided in paragraph (n)(8) of this section. After the compliance dates specified in paragraph (h) of this section, a Group 2 storage vessel that is subject to the provisions of 40 CFR part 61, subpart Y, is required to comply only with the requirements of 40 CFR part 61, subpart Y, except as provided in paragraph (n)(10) of this section.

(2) After the compliance dates specified in paragraph (h) of this section, a Group 1 storage vessel that is also subject to 40 CFR part 60, subpart Kb, is required to comply only with either 40 CFR part 60, subpart Kb, except as provided in paragraph (n)(8) of this section or this subpart. After the compliance dates specified in paragraph (h) of this section, a Group 1 storage vessel that is also subject to 40 CFR part 61, subpart Y, is required to comply only with either 40 CFR part 61, subpart Y, except as provided in paragraph (n)(10) of this section or this subpart.

(3) After the compliance dates specified in paragraph (h) of this section, a Group 2 storage vessel that is part of a new source and is subject to 40 CFR 60.110b, but is not required to apply controls by 40 CFR 60.110b or 60.112b, is required to comply only with this subpart.

(4) After the compliance dates specified in paragraph (h) of this section, a Group 2 storage vessel that is part of a new source and is subject to 40 CFR 61.270, but is not required to apply controls by 40 CFR 61.271, is required to comply only with this subpart.

(5) After the compliance dates specified in paragraph (h) of this section, a Group 1 storage vessel that is also subject to the provisions of 40 CFR part 60, subpart K or Ka, is required to only comply with the provisions of this subpart.

(6) After compliance dates specified in paragraph (h) of this section, a Group 2 storage vessel that is subject to the control requirements of 40 CFR part 60, subparts K or Ka is required to comply only with the provisions of 40 CFR part 60, subparts K or Ka except as provided for in paragraph (n)(9) of this section.

(7) After the compliance dates specified in paragraph (h) of this section, a Group 2 storage vessel that is subject to 40 CFR part 60, subparts K or Ka, but not to the control requirements of 40 CFR part 60, subparts K or Ka, is required to comply only with this subpart.

(8) Storage vessels described by paragraph (n)(1) of this section are to comply with 40 CFR part 60, subpart Kb, except as provided in paragraphs (n)(8)(i) through (vi) of this section. Storage vessels described by paragraph (n)(2) electing to comply with part 60, subpart Kb of this chapter shall comply with subpart Kb except as provided in paragraphs (n)(8)(i) through (viii) of this section.

(i) Storage vessels that are to comply with §60.112b(a)(2) of subpart Kb are exempt from the secondary seal requirements of §60.112b(a)(2)(i)(B) during the gap measurements for the primary seal required by §60.113b(b) of subpart Kb.

(ii) If the owner or operator determines that it is unsafe to perform the seal gap measurements required in §60.113b(b) of this chapter or to inspect the vessel to determine compliance with §60.113b(a) of this chapter because the roof appears to be structurally unsound and poses an imminent danger to inspecting personnel, the owner or operator shall comply with the requirements in either §63.120(b)(7)(i) or (ii) of subpart G (only up to the compliance date specified in paragraph (h) of this section for compliance with §63.660, as applicable) or either §63.1063(c)(2)(iv)(A) or (B) of subpart WW.

(iii) If a failure is detected during the inspections required by §60.113b(a)(2) or during the seal gap measurements required by §60.113b(b)(1), and the vessel cannot be repaired within 45 days and the vessel cannot be emptied within 45 days, the owner or operator may utilize up to two extensions of up to 30 additional calendar days each. The owner or operator is not required to provide a request for the extension to the Administrator.

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(iv) If an extension is utilized in accordance with paragraph (n)(8)(iii) of this section, the owner or operator shall, in the next periodic report, identify the vessel, provide the information listed in §60.113b(a)(2) or §60.113b(b)(4)(iii), and describe the nature and date of the repair made or provide the date the storage vessel was emptied.

(v) Owners and operators of storage vessels complying with subpart Kb of part 60 may submit the inspection reports required by §§60.115b(a)(3), (a)(4), and (b)(4) of subpart Kb as part of the periodic reports required by this subpart, rather than within the 30-day period specified in §§60.115b(a)(3), (a)(4), and (b)(4) of subpart Kb.

(vi) The reports of rim seal inspections specified in §60.115b(b)(2) are not required if none of the measured gaps or calculated gap areas exceed the limitations specified in §60.113b(b)(4). Documentation of the inspections shall be recorded as specified in §60.115b(b)(3).

(vii) To be in compliance with §60.112b(a)(1)(iv) or (a)(2)(ii) of this chapter, guidepoles in floating roof storage vessels must be equipped with covers and/or controls (e.g., pole float system, pole sleeve system, internal sleeve system or flexible enclosure system) as appropriate to comply with the "no visible gap" requirement.

(viii) If a flare is used as a control device for a storage vessel, on and after January 30, 2019, the owner or operator must meet the requirements of §63.670 instead of the requirements referenced from part 60, subpart Kb of this chapter for that flare.

(9) Storage vessels described by paragraph (n)(6) of this section that are to comply with 40 CFR part 60, subpart Ka, are to comply with only subpart Ka except as provided for in paragraphs (n)(9)(i) through (n)(9)(iv) of this section.

(i) If the owner or operator determines that it is unsafe to perform the seal gap measurements required in §60.113a(a)(1) of this chapter because the floating roof appears to be structurally unsound and poses an imminent danger to inspecting personnel, the owner or operator shall comply with the requirements in either §63.120(b)(7)(i) or (ii) of subpart G (only up to the compliance date specified in paragraph (h) of this section for compliance with §63.660, as applicable) or either §63.1063(c)(2)(iv)(A) or (B) of subpart WW.

(ii) If a failure is detected during the seal gap measurements required by §60.113a(a)(1) of subpart Ka, and the vessel cannot be repaired within 45 days and the vessel cannot be emptied within 45 days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each.

(iii) If an extension is utilized in accordance with paragraph (n)(9)(ii) of this section, the owner or operator shall, in the next periodic report, identify the vessel, describe the nature and date of the repair made or provide the date the storage vessel was emptied. The owner or operator shall also provide documentation of the decision to utilize an extension including a description of the failure, documentation that alternate storage capacity is unavailable, and a schedule of actions that will ensure that the control equipment will be repaired or the vessel emptied as soon as possible.

(iv) Owners and operators of storage vessels complying with subpart Ka of part 60 may submit the inspection reports required by §60.113a(a)(1)(i)(E) of subpart Ka as part of the periodic reports required by this subpart, rather than within the 60-day period specified in §60.113a(a)(1)(i)(E) of subpart Ka.

(10) Storage vessels described by paragraph (n)(1) of this section are to comply with 40 CFR part 61, subpart Y, except as provided in paragraphs (n)(10)(i) through (vi) of this section. Storage vessels described by paragraph (n)(2) electing to comply with 40 CFR part 61, subpart Y, shall comply with subpart Y except as provided for in paragraphs (n)(10)(i) through (vii) of this section.

(i) Storage vessels that are to comply with §61.271(b) of this chapter are exempt from the secondary seal requirements of §61.271(b)(2)(ii) of this chapter during the gap measurements for the primary seal required by §61.272(b) of this chapter.

(ii) If the owner or operator determines that it is unsafe to perform the seal gap measurements required in §61.272(b) of this chapter or to inspect the vessel to determine compliance with §61.272(a) of this chapter because the roof appears to be structurally unsound and poses an imminent danger to inspecting personnel, the owner or operator shall comply with the requirements in either §63.120(b)(7)(i) or (ii) of subpart G (only up to the compliance date specified in paragraph (h) of

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this section for compliance with §63.660, as applicable) or either §63.1063(c)(2)(iv)(A) or (B) of subpart WW.

(iii) If a failure is detected during the inspections required by §61.272(a)(2) of this chapter or during the seal gap measurements required by §61.272(b)(1) of this chapter, and the vessel cannot be repaired within 45 days and the vessel cannot be emptied within 45 days, the owner or operator may utilize up to two extensions of up to 30 additional calendar days each. The owner or operator is not required to provide a request for the extension to the Administrator.

(iv) If an extension is utilized in accordance with paragraph (n)(10)(iii) of this section, the owner or operator shall, in the next periodic report, identify the vessel, provide the information listed in §61.272(a)(2) or (b)(4)(iii) of this chapter, and describe the nature and date of the repair made or provide the date the storage vessel was emptied.

(v) Owners and operators of storage vessels complying with 40 CFR part 61, subpart Y, may submit the inspection reports required by §61.275(a), (b)(1), and (d) of this chapter as part of the periodic reports required by this subpart, rather than within the 60-day period specified in §61.275(a), (b)(1), and (d) of this chapter.

(vi) The reports of rim seal inspections specified in §61.275(d) of this chapter are not required if none of the measured gaps or calculated gap areas exceed the limitations specified in §61.272(b)(4) of this chapter. Documentation of the inspections shall be recorded as specified in §61.276(a) of this chapter.

(vii) To be in compliance with §61.271(a)(6) or (b)(3) of this chapter, guidepoles in floating roof storage vessels must be equipped with covers and/or controls (e.g., pole float system, pole sleeve system, internal sleeve system or flexible enclosure system) as appropriate to comply with the "no visible gap" requirement.

(viii) If a flare is used as a control device for a storage vessel, on and after January 30, 2019, the owner or operator must meet the requirements of §63.670 instead of the requirements referenced from part 61, subpart Y of this chapter for that flare.

(o) Overlap of this subpart CC with other regulations for wastewater.

(1) After the compliance dates specified in paragraph (h) of this section a Group 1 wastewater stream managed in a piece of equipment that is also subject to the provisions of 40 CFR part 60, subpart QQQ is required to comply only with this subpart.

(2) After the compliance dates specified in paragraph (h) of this section a Group 1 or Group 2 wastewater stream that is conveyed, stored, or treated in a wastewater stream management unit that also receives streams subject to the provisions of §§63.133 through 63.147 of subpart G wastewater provisions of this part shall comply as specified in paragraph (o)(2)(i) or (o)(2)(ii) of this section. Compliance with the provisions of paragraph (o)(2) of this section shall constitute compliance with the requirements of this subpart for that wastewater stream.

(i) Comply with paragraphs (o)(2)(i)(A) through (D) of this section.

(A) The provisions in §§63.133 through 63.140 of subpart G for all equipment used in the storage and conveyance of the Group 1 or Group 2 wastewater stream.

(B) The provisions in both 40 CFR part 61, subpart FF and in §§63.138 and 63.139 of subpart G for the treatment and control of the Group 1 or Group 2 wastewater stream.

(C) The provisions in §§63.143 through 63.148 of subpart G for monitoring and inspections of equipment and for recordkeeping and reporting requirements. The owner or operator is not required to comply with the monitoring, recordkeeping, and reporting requirements associated with the treatment and control requirements in 40 CFR part 61, subpart FF, §§61.355 through 61.357.

(D) If a flare is used as a control device, on and after January 30, 2019, the flare shall meet the requirements of §63.670. Prior to January 30, 2019, the flare shall meet the applicable requirements of 40 CFR part 61, subpart FF, and subpart G of this part, or the requirements of §63.670.

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(ii) Comply with paragraphs (o)(2)(ii)(A) through (C) of this section.

(A) Comply with the provisions of §§63.133 through 63.148 and §§63.151 and 63.152 of subpart G.

(B) For any Group 2 wastewater stream or organic stream whose benzene emissions are subject to control through the use of one or more treatment processes or waste management units under the provisions of 40 CFR part 61, subpart FF on or after December 31, 1992, comply with the requirements of §63.133 through §63.147 of subpart G for Group 1 wastewater streams.

(C) If a flare is used as a control device, on and after January 30, 2019, the flare shall meet the requirements of §63.670. Prior to January 30, 2019, the flare shall meet the applicable requirements of 40 CFR part 61, subpart FF, and subpart G of this part, or the requirements of §63.670.

(p) Overlap of subpart CC with other regulations for equipment leaks.

(1) After the compliance dates specified in paragraph (h) of this section, equipment leaks that are also subject to the provisions of 40 CFR parts 60 and 61 standards promulgated before September 4, 2007, are required to comply only with the provisions specified in this subpart.

(2) Equipment leaks that are also subject to the provisions of 40 CFR part 60, subpart GGGa, are required to comply only with the provisions specified in 40 CFR part 60, subpart GGGa.

(q) For overlap of subpart CC with local or State regulations, the permitting authority for the affected source may allow consolidation of the monitoring, recordkeeping, and reporting requirements under this subpart with the monitoring, recordkeeping, and reporting requirements under other applicable requirements in 40 CFR parts 60, 61, or 63, and in any 40 CFR part 52 approved State implementation plan provided the implementation plan allows for approval of alternative monitoring, reporting, or recordkeeping requirements and provided that the permit contains an equivalent degree of compliance and control.

(r) Overlap of subpart CC with other regulations for gasoline loading racks. After the compliance dates specified in paragraph (h) of this section, a Group 1 gasoline loading rack that is part of a source subject to subpart CC and also is subject to the provisions of 40 CFR part 60, subpart XX is required to comply only with this subpart.

(s) Overlap of this subpart with other regulation for flares. On January 30, 2019, flares that are subject to the provisions of 40 CFR 60.18 or 63.11 and subject to this subpart are required to comply only with the provisions specified in this subpart. Prior to January 30, 2019, flares that are subject to the provisions of 40 CFR 60.18 or 63.11 and elect to comply with the requirements in §§63.670 and 63.671 are required to comply only with the provisions specified in this subpart.

[60 FR 43260, Aug. 18, 1995; 61 FR 7051, Feb. 23, 1996, as amended at 61 FR 29878, June 12, 1996; 63 FR 44140, Aug. 18, 1998; 66 FR 28841, May 25, 2001; 74 FR 55683, Oct. 28, 2009; 78 FR 37145, June 20, 2013; 80 FR 75237, Dec. 1, 2015]

**# 114 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.641]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Definitions.**

[Please see eCFR 40 CFR Section 63.641 for the definitions used in subpart CC]

**# 115 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.642]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
General standards.**

This condition is applicable to Sources 042, 101A, 105, 106, 107, 108, 109, 211, 219, & 220.

(a) Each owner or operator of a source subject to this subpart is required to apply for a part 70 or part 71 operating permit from the appropriate permitting authority. If the EPA has approved a State operating permit program under part 70, the permit shall be obtained from the State authority. If the State operating permit program has not been approved, the source shall apply to the EPA Regional Office pursuant to part 71.

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(b) The emission standards set forth in this subpart shall apply at all times.

(c) Table 6 of this subpart specifies the provisions of subpart A of this part that apply and those that do not apply to owners and operators of sources subject to this subpart.

(d) Initial performance tests and initial compliance determinations shall be required only as specified in this subpart.

(1) Performance tests and compliance determinations shall be conducted according to the schedule and procedures specified in this subpart.

(2) The owner or operator shall notify the Administrator of the intention to conduct a performance test at least 30 days before the performance test is scheduled.

(3) Performance tests shall be conducted according to the provisions of §63.7(e) except that performance tests shall be conducted at maximum representative operating capacity for the process. During the performance test, an owner or operator shall operate the control device at either maximum or minimum representative operating conditions for monitored control device parameters, whichever results in lower emission reduction. An owner or operator shall not conduct a performance test during startup, shutdown, periods when the control device is bypassed or periods when the process, monitoring equipment or control device is not operating properly. The owner/operator may not conduct performance tests during periods of malfunction. The owner or operator must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that the test was conducted at maximum representative operating capacity. 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.

(4) Data shall be reduced in accordance with the EPA-approved methods specified in the applicable section or, if other test methods are used, the data and methods shall be validated according to the protocol in Method 301 of appendix A of this part.

(e) All applicable records shall be maintained as specified in §63.655(i).

(f) All reports required under this subpart shall be sent to the Administrator at the addresses listed in §63.13 of subpart A of this part. If acceptable to both the Administrator and the owner or operator of a source, reports may be submitted on electronic media.

(g) The owner or operator of an existing source subject to the requirements of this subpart shall control emissions of organic HAP's to the level represented by the following equation:

$$EA = 0.02S EPV1 + S EPV2 + 0.05S ES1 + S ES2 + S EGLR1C + S EGLR2 + (R) S EMV1 + S EMV2 + S EWW1C + S EWW2$$

where:

S = Summation sum of all values in range of series.

EA = Emission rate, megagrams per year, allowed for the source.

0.02S EPV1 = Sum of the residual emissions, megagrams per year, from all Group 1 miscellaneous process vents, as defined in §63.641.

S EPV2 = Sum of the emissions, megagrams per year, from all Group 2 process vents, as defined in §63.641.

0.05S ES1 = Sum of the residual emissions, megagrams per year, from all Group 1 storage vessels, as defined in §63.641.

S ES2 = Sum of the emissions, megagrams per year, from all Group 2 storage vessels, as defined in §63.641.

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S EGLR1C = Sum of the residual emissions, megagrams per year, from all Group 1 gasoline loading racks, as defined in §63.641.

S EGLR2 = Sum of the emissions, megagrams per year, from all Group 2 gasoline loading racks, as defined in §63.641.

(R)S EMV1 = Sum of the residual emissions megagrams per year, from all Group 1 marine tank vessels, as defined in §63.641.

R = 0.03 for existing sources, 0.02 for new sources.

S EMV2 = Sum of the emissions, megagrams per year from all Group 2 marine tank vessels, as defined in §63.641.

S EWW1C = Sum of the residual emissions from all Group 1 wastewater streams, as defined in §63.641. This term is calculated for each Group 1 stream according to the equation for EWWic in §63.652(h)(6).

S EWW2 = Sum of emissions from all Group 2 wastewater streams, as defined in §63.641.

The emissions level represented by this equation is dependent on the collection of emission points in the source. The level is not fixed and can change as the emissions from each emission point change or as the number of emission points in the source changes.

(h) The owner or operator of a new source subject to the requirements of this subpart shall control emissions of organic HAP's to the level represented by the equation in paragraph (g) of this section.

(i) The owner or operator of an existing source shall demonstrate compliance with the emission standard in paragraph (g) of this section by following the procedures specified in paragraph (k) of this section for all emission points, or by following the emissions averaging compliance approach specified in paragraph (l) of this section for specified emission points and the procedures specified in paragraph (k)(1) of this section.

(j) The owner or operator of a new source shall demonstrate compliance with the emission standard in paragraph (h) of this section only by following the procedures in paragraph (k) of this section. The owner or operator of a new source may not use the emissions averaging compliance approach.

(k) The owner or operator of an existing source may comply, and the owner or operator of a new source shall comply, with the applicable provisions in §§63.643 through 63.645, 63.646 or 63.660, 63.647, 63.650, and 63.651, as specified in §63.640(h).

(1) The owner or operator using this compliance approach shall also comply with the requirements of §§63.648 and/or 63.649, 63.654, 63.655, 63.657, 63.658, 63.670 and 63.671, as applicable.

(2) The owner or operator using this compliance approach is not required to calculate the annual emission rate specified in paragraph (g) of this section.

(l) The owner or operator of an existing source may elect to control some of the emission points within the source to different levels than specified under §§63.643 through 63.645, 63.646 or 63.660, 63.647, 63.650, and 63.651, as applicable according to §63.640(h), by using an emissions averaging compliance approach as long as the overall emissions for the source do not exceed the emission level specified in paragraph (g) of this section. The owner or operator using emissions averaging shall meet the requirements in paragraphs (l)(1) and (2) of this section.

(1) Calculate emission debits and credits for those emission points involved in the emissions average according to the procedures specified in §63.652; and

(2) Comply with the requirements of §§63.648 and/or 63.649, 63.654, 63.652, 63.653, 63.655, 63.657, 63.658, 63.670 and 63.671, as applicable.

(m) A State may restrict the owner or operator of an existing source to using only the procedures in paragraph (k) of this



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section to comply with the emission standard in paragraph (g) of this section. Such a restriction would preclude the source from using an emissions averaging compliance approach.

(n) At all times, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements 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, review of operation and maintenance records, and inspection of the source.

[60 FR 43260, Aug. 18, 1995; 61 FR 7051, Feb. 23, 1996, as amended at 61 FR 29879, June 12, 1996; 74 FR 55685, Oct. 28, 2009; 80 FR 75242, Dec. 1, 2015]

**# 116 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.643]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Miscellaneous process vent provisions.**

This condition is applicable to Source 109.

(a) The owner or operator of a Group 1 miscellaneous process vent as defined in §63.641 shall comply with the requirements of either paragraph (a)(1) or (2) of this section or, if applicable, paragraph (c) of this section. The owner or operator of a miscellaneous process vent that meets the conditions in paragraph (c) of this section is only required to comply with the requirements of paragraph (c) of this section and §63.655(g)(13) and (i)(12) for that vent.

(1) Reduce emissions of organic HAP's using a flare. On and after January 30, 2019, the flare shall meet the requirements of §63.670. Prior to January 30, 2019, the flare shall meet the requirements of §63.11(b) of subpart A or the requirements of §63.670.

(2) Reduce emissions of organic HAP's, using a control device, by 98 weight-percent or to a concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent. Compliance can be determined by measuring either organic HAP's or TOC's using the procedures in §63.645.

(b) If a boiler or process heater is used to comply with the percentage of reduction requirement or concentration limit specified in paragraph (a)(2) of this section, 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. Testing and monitoring is required only as specified in §§63.644(a) and 63.645 of this subpart.

(c) An owner or operator may designate a process vent as a maintenance vent if the vent is only used as a result of startup, shutdown, maintenance, or inspection of equipment where equipment is emptied, depressurized, degassed or placed into service. The owner or operator does not need to designate a maintenance vent as a Group 1 or Group 2 miscellaneous process vent. The owner or operator must comply with the applicable requirements in paragraphs (c)(1) through (3) of this section for each maintenance vent according to the compliance dates specified in table 11 of this subpart, unless an extension is requested in accordance with the provisions in §63.6(i).

(1) Prior to venting to the atmosphere, process liquids are removed from the equipment as much as practical and the equipment is depressured to a control device, fuel gas system, or back to the process until one of the following conditions, as applicable, is met.

(i) The vapor in the equipment served by the maintenance vent has a lower explosive limit (LEL) of less than 10 percent.

(ii) If there is no ability to measure the LEL of the vapor in the equipment based on the design of the equipment, the pressure in the equipment served by the maintenance vent is reduced to 5 psig or less. Upon opening the maintenance vent, active purging of the equipment cannot be used until the LEL of the vapors in the maintenance vent (or inside the equipment if the maintenance is a hatch or similar type of opening) equipment is less than 10 percent. [Compliance with this requirement assures compliance with 25 Pa. Code Section 129.55(d).]

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(iii) The equipment served by the maintenance vent contains less than 72 pounds of VOC.

(iv) If the maintenance vent is associated with equipment containing pyrophoric catalyst (e.g., hydrotreaters and hydrocrackers) at refineries that do not have a pure hydrogen supply, the LEL of the vapor in the equipment must be less than 20 percent, except for one event per year not to exceed 35 percent.

(2) Except for maintenance vents complying with the alternative in paragraph (c)(1)(iii) of this section, the owner or operator must determine the LEL or, if applicable, equipment pressure using process instrumentation or portable measurement devices and follow procedures for calibration and maintenance according to manufacturer's specifications.

(3) For maintenance vents complying with the alternative in paragraph (c)(1)(iii) of this section, the owner or operator shall determine mass of VOC in the equipment served by the maintenance vent based on the equipment size and contents after considering any contents drained or purged from the equipment. Equipment size may be determined from equipment design specifications. Equipment contents may be determined using process knowledge.

(d) After February 1, 2016 and prior to the date of compliance with the maintenance vent provisions in paragraph (c) of this section, the owner or operator must comply with the requirements in §63.642(n) for each maintenance venting event and maintain records necessary to demonstrate compliance with the requirements in §63.642(n) including, if appropriate, records of existing standard site procedures used to deinventory equipment for safety purposes.

[60 FR 43260, Aug. 18, 1995, as amended at 80 FR 75242, Dec. 1, 2015; 81 FR 45241, July 13, 2016]

**# 117 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.644]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Monitoring provisions for miscellaneous process vents.**

This condition is applicable to Source 109.

(a) Except as provided in paragraph (b) of this section, each owner or operator of a Group 1 miscellaneous process vent that uses a combustion device to comply with the requirements in §63.643(a) shall install the monitoring equipment specified in paragraph (a)(1), (2), (3), or (4) of this section, depending on the type of combustion device used. All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment will monitor accurately and, except for CPMS installed for pilot flame monitoring, must meet the applicable minimum accuracy, calibration and quality control requirements specified in table 13 of this subpart.

(1) Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required.

(i) Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(ii) Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(2) Where a flare is used prior to January 30, 2019, a device (including but not limited to a thermocouple, an ultraviolet beam sensor, or an infrared sensor) capable of continuously detecting the presence of a pilot flame is required, or the requirements of §63.670 shall be met. Where a flare is used on and after January 30, 2019, the requirements of §63.670 shall be met.

(3) 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.

(4) Any boiler or process heater less than 44 megawatts design heat capacity where the vent stream is not introduced into the flame zone is required to use a temperature monitoring device in the firebox equipped with a continuous recorder.

(b) An owner or operator of a Group 1 miscellaneous process vent may request approval to monitor parameters other than

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those listed in paragraph (a) of this section. The request shall be submitted according to the procedures specified in §63.655(h). Approval shall be requested if the owner or operator:

- (1) Uses a control device other than an incinerator, boiler, process heater, or flare; or
  - (2) Uses one of the control devices listed in paragraph (a) of this section, but seeks to monitor a parameter other than those specified in paragraph (a) of this section.
- (c) The owner or operator of a Group 1 miscellaneous process vent using a vent system that contains bypass lines that could divert a vent stream away from the control device used to comply with paragraph (a) of this section either directly to the atmosphere or to a control device that does not comply with the requirements in §63.643(a) shall comply with either paragraph (c)(1) or (2) of this section. Use of the bypass at any time to divert a Group 1 miscellaneous process vent stream to the atmosphere or to a control device that does not comply with the requirements in §63.643(a) is an emissions standards violation. Equipment such as low leg drains and equipment subject to §63.648 are not subject to this paragraph (c).
- (1) Install, calibrate and maintain a flow indicator that determines whether a vent stream flow is present at least once every hour. A manual block valve equipped with a valve position indicator may be used in lieu of a flow indicator, as long as the valve position indicator is monitored continuously. Records shall be generated as specified in §63.655(h) and (i). The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere; or
  - (2) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the non-diverting position and that the vent stream is not diverted through the bypass line.
- (d) The owner or operator shall establish a range that ensures compliance with the emissions standard for each parameter monitored under paragraphs (a) and (b) of this section. In order to establish the range, the information required in §63.655(f)(3) shall be submitted in the Notification of Compliance Status report.
- (e) Each owner or operator of a control device subject to the monitoring provisions of this section shall operate the 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, as defined in §63.655(g)(6), or failure to perform procedures required by this section shall constitute a violation of the applicable emission standard of this subpart.

[60 FR 43260, Aug. 18, 1995, as amended at 61 FR 29880, June 12, 1996; 63 FR 44141, Aug. 18, 1998; 74 FR 55685, Oct. 28, 2009; 80 FR 75243, Dec. 1, 2015]

**# 118 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.645]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Test methods and procedures for miscellaneous process vents.**

This condition is applicable to Source 042, 109.

- (a) To demonstrate compliance with §63.643, an owner or operator shall follow §63.116 except for §63.116 (a)(1), (d) and (e) of subpart G of this part except as provided in paragraphs (b) through (d) and paragraph (i) of this section.
  - (b) All references to §63.113(a)(1) or (a)(2) in §63.116 of subpart G of this part shall be replaced with §63.643(a)(1) or (a)(2), respectively.
  - (c) In §63.116(c)(4)(ii)(C) of subpart G of this part, organic HAP's in the list of HAP's in table 1 of this subpart shall be considered instead of the organic HAP's in table 2 of subpart F of this part.
  - (d) All references to §63.116(b)(1) or (b)(2) shall be replaced with paragraphs (d)(1) and (d)(2) of this section, respectively.
- (1) Any boiler or process heater with a design heat input capacity of 44 megawatts or greater.

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(2) Any boiler or process heater in which all vent streams are introduced into the flame zone.

(e) For purposes of determining the TOC emission rate, as specified under paragraph (f) of this section, the sampling site shall be after the last product recovery device (as defined in §63.641 of this subpart) (if any recovery devices are present) but prior to the inlet of any control device (as defined in §63.641 of this subpart) that is present, prior to any dilution of the process vent stream, and prior to release to the atmosphere.

(1) Methods 1 or 1A of 40 CFR part 60, appendix A-1, as appropriate, shall be used for selection of the sampling site. For vents smaller than 0.10 meter in diameter, sample at the center of the vent.

(2) No traverse site selection method is needed for vents smaller than 0.10 meter in diameter.

(f) Except as provided in paragraph (g) of this section, an owner or operator seeking to demonstrate that a process vent TOC mass flow rate is less than 33 kilograms per day for an existing source or less than 6.8 kilograms per day for a new source in accordance with the Group 2 process vent definition of this subpart shall determine the TOC mass flow rate by the following procedures:

(1) The sampling site shall be selected as specified in paragraph (e) of this section.

(2) The gas volumetric flow rate shall be determined using Methods 2, 2A, 2C, 2D, or 2F of 40 CFR part 60, appendix A-1 or Method 2G of 40 CFR part 60, appendix A-2, as appropriate.

(3) Method 18 or Method 25A of 40 CFR part 60, appendix A shall be used to measure concentration; alternatively, any other method or data that has been validated according to the protocol in Method 301 of appendix A of this part may be used. If Method 25A is used, and the TOC mass flow rate calculated from the Method 25A measurement is greater than or equal to 33 kilograms per day for an existing source or 6.8 kilograms per day for a new source, Method 18 may be used to determine any non-VOC hydrocarbons that may be deducted to calculate the TOC (minus non-VOC hydrocarbons) concentration and mass flow rate. The following procedures shall be used to calculate parts per million by volume concentration:

(i) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15-minute intervals during the run.

(ii) The TOC concentration (CTOC) is the sum of the concentrations of the individual components and shall be computed for each run using the following equation if Method 18 is used :

[Refer to the regulation for the equation]

where:

CTOC = Concentration of TOC (minus methane and ethane), dry basis, parts per million by volume.

C<sub>ji</sub> = Concentration of sample component j of the sample i, dry basis, parts per million by volume.

n = Number of components in the sample.

x = Number of samples in the sample run.

(4) The emission rate of TOC (minus methane and ethane) (ETOC) shall be calculated using the following equation if Method 18 is used:

[Refer to the regulation for the equation]

where:

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E = Emission rate of TOC (minus methane and ethane) in the sample, kilograms per day.

K2 = Constant,  $5.986 \times 10^{-5}$  (parts per million)<sup>-1</sup> (gram-mole per standard cubic meter) (kilogram per gram) (minute per day), where the standard temperature (standard cubic meter) is at 20 °C.

C<sub>j</sub> = Concentration on a dry basis of organic compound j in parts per million as measured by Method 18 of 40 CFR part 60, appendix A, as indicated in paragraph (f)(3) of this section. C<sub>j</sub> includes all organic compounds measured minus methane and ethane.

M<sub>j</sub> = Molecular weight of organic compound j, gram per gram-mole.

Q<sub>s</sub> = Vent stream flow rate, dry standard cubic meters per minute, at a temperature of 20 °C.

(5) If Method 25A is used, the emission rate of TOC (ETOC) shall be calculated using the following equation:

$$ETOC = K_2 C_{TOC} M Q_s$$

where:

ETOC = Emission rate of TOC (minus methane and ethane) in the sample, kilograms per day.

K2 = Constant,  $5.986 \times 10^{-5}$  (parts per million)<sup>-1</sup> (gram-mole per standard cubic meter) (kilogram per gram)(minute per day), where the standard temperature (standard cubic meter) is at 20 °C.

C<sub>TOC</sub> = Concentration of TOC on a dry basis in parts per million volume as measured by Method 25A of 40 CFR part 60, appendix A, as indicated in paragraph (f)(3) of this section.

M = Molecular weight of organic compound used to express units of C<sub>TOC</sub>, gram per gram-mole.

Q<sub>s</sub> = Vent stream flow rate, dry standard cubic meters per minute, at a temperature of 20 °C.

(g) Engineering assessment may be used to determine the TOC emission rate for the representative operating condition expected to yield the highest daily emission rate.

(1) Engineering assessment includes, but is not limited to, the following:

- (i) Previous test results provided the tests are representative of current operating practices at the process unit.
- (ii) Bench-scale or pilot-scale test data representative of the process under representative operating conditions.
- (iii) TOC emission rate specified or implied within a permit limit applicable to the process vent.

(iv) Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to:

- (A) Use of material balances based on process stoichiometry to estimate maximum TOC concentrations;
  - (B) Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities;
- and
- (C) Estimation of TOC concentrations based on saturation conditions.

(v) All data, assumptions, and procedures used in the engineering assessment shall be documented.

(h) The owner or operator of a Group 2 process vent shall recalculate the TOC emission rate for each process vent, as necessary, whenever process changes are made to determine whether the vent is in Group 1 or Group 2. Examples of

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process changes include, but are not limited to, changes in production capacity, production rate, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. For purposes of this paragraph, process changes do not include: process upsets; unintentional, temporary process changes; and changes that are within the range on which the original calculation was based.

(1) The TOC emission rate shall be recalculated based on measurements of vent stream flow rate and TOC as specified in paragraphs (e) and (f) of this section, as applicable, or on best engineering assessment of the effects of the change. Engineering assessments shall meet the specifications in paragraph (g) of this section.

(2) Where the recalculated TOC emission rate is greater than 33 kilograms per day for an existing source or greater than 6.8 kilograms per day for a new source, the owner or operator shall submit a report as specified in §63.655(f), (g), or (h) and shall comply with the appropriate provisions in §63.643 by the dates specified in §63.640.

(i) A compliance determination for visible emissions shall be conducted within 150 days of the compliance date using Method 22 of 40 CFR part 60, appendix A, to determine visible emissions.

[60 FR 43260, Aug. 18, 1995, as amended at 61 FR 29880, June 12, 1996; 63 FR 44141, Aug. 18, 1998; 74 FR 55685, Oct. 28, 2009; 80 FR 75243, Dec. 1, 2015]

**# 119 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.646]**  
**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**  
**Storage vessel provisions.**

This condition is applicable to Sources 205, 206, 212, 213, 214, 207, 203, 204, 209, & 216.

[Refer to 40 CFR 63.646 for the actual text of this paragraph]

Upon a demonstration of compliance with the standards in §63.660 by the compliance dates specified in §63.640(h), the standards in this section shall no longer apply.

**# 120 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.647]**  
**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**  
**Wastewater provisions.**

This condition is applicable to Sources 219 & 220.

(a) Except as provided in paragraphs (b) and (c) of this section, each owner or operator of a Group 1 wastewater stream shall comply with the requirements of §§61.340 through 61.355 of this chapter for each process wastewater stream that meets the definition in §63.641.

(b) As used in this section, all terms not defined in §63.641 shall have the meaning given them in the Clean Air Act or in 40 CFR part 61, subpart FF, §61.341.

(c) If a flare is used as a control device, on and after January 30, 2019, the flare shall meet the requirements of §63.670. Prior to January 30, 2019, the flare shall meet the applicable requirements of part 61, subpart FF of this chapter, or the requirements of §63.670.

(d) Each owner or operator required under subpart FF of 40 CFR part 61 to perform periodic measurement of benzene concentration in wastewater, or to monitor process or control device operating parameters shall operate in a manner consistent with the minimum or maximum (as appropriate) permitted concentration or operating parameter values. Operation of the process, treatment unit, or control device resulting in a measured concentration or operating parameter value outside the permitted limits shall constitute a violation of the emission standards. Failure to perform required leak monitoring for closed vent systems and control devices or failure to repair leaks within the time period specified in subpart FF of 40 CFR part 61 shall constitute a violation of the standard.

[60 FR 43260, Aug. 18, 1995, as amended at 80 FR 75244, Dec. 1, 2015]

**SECTION C. Site Level Requirements****# 121 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.648]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Equipment leak standards.**

This condition is applicable to Sources 042, 105, 106, 107, 108, 109, 211, 219, & 220.

(a) Each owner or operator of an existing source subject to the provisions of this subpart shall comply with the provisions of 40 CFR part 60, subpart VV, and paragraph (b) of this section except as provided in paragraphs (a)(1) and (2), (c) through (i), and (j)(1) and (2) of this section. Each owner or operator of a new source subject to the provisions of this subpart shall comply with subpart H of this part except as provided in paragraphs (c) through (i) and (j)(1) and (2) of this section.

(1) For purposes of compliance with this section, the provisions of 40 CFR part 60, subpart VV apply only to equipment in organic HAP service, as defined in §63.641 of this subpart.

(2) Calculation of percentage leaking equipment components for subpart VV of 40 CFR part 60 may be done on a process unit basis or a sourcewide basis. Once the owner or operator has decided, all subsequent calculations shall be on the same basis unless a permit change is made.

(3) If a flare is used as a control device, on and after January 30, 2019, the flare shall meet the requirements of §63.670. Prior to January 30, 2019, the flare shall meet the applicable requirements of part 60, subpart VV of this chapter, or the requirements of §63.670.

(b) The use of monitoring data generated before August 18, 1995 to qualify for less frequent monitoring of valves and pumps as provided under 40 CFR part 60 subpart VV or subpart H of this part and paragraph (c) of this section (i.e., quarterly or semiannually) is governed by the requirements of paragraphs (b)(1) and (b)(2) of this section.

(1) Monitoring data must meet the test methods and procedures specified in §60.485(b) of 40 CFR part 60, subpart VV or §63.180(b)(1) through (b)(5) of subpart H of this part except for minor departures.

(2) Departures from the criteria specified in §60.485(b) of 40 CFR part 60 subpart VV or §63.180(b)(1) through (b)(5) of subpart H of this part or from the monitoring frequency specified in subpart VV or in paragraph (c) of this section (such as every 6 weeks instead of monthly or quarterly) are minor and do not significantly affect the quality of the data. An example of a minor departure is monitoring at a slightly different frequency (such as every 6 weeks instead of monthly or quarterly). Failure to use a calibrated instrument is not considered a minor departure.

(c) In lieu of complying with the existing source provisions of paragraph (a) in this section, an owner or operator may elect to comply with the requirements of §§63.161 through 63.169, 63.171, 63.172, 63.175, 63.176, 63.177, 63.179, and 63.180 of subpart H except as provided in paragraphs (c)(1) through (12) and (e) through (i) of this section.

(1) The instrument readings that define a leak for light liquid pumps subject to §63.163 of subpart H of this part and gas/vapor and light liquid valves subject to §63.168 of subpart H of this part are specified in table 2 of this subpart.

(2) In phase III of the valve standard, the owner or operator may monitor valves for leaks as specified in paragraphs (c)(2)(i) or (c)(2)(ii) of this section.

(i) If the owner or operator does not elect to monitor connectors, then the owner or operator shall monitor valves according to the frequency specified in table 8 of this subpart.

(ii) If an owner or operator elects to monitor connectors according to the provisions of §63.649, paragraphs (b), (c), or (d), then the owner or operator shall monitor valves at the frequencies specified in table 9 of this subpart.

(3) The owner or operator shall decide no later than the first required monitoring period after the phase I compliance date specified in §63.640(h) whether to calculate the percentage leaking valves on a process unit basis or on a sourcewide basis. Once the owner or operator has decided, all subsequent calculations shall be on the same basis unless a permit change is made.

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- (4) The owner or operator shall decide no later than the first monitoring period after the phase III compliance date specified in §63.640(h) whether to monitor connectors according to the provisions in §63.649, paragraphs (b), (c), or (d).
- (5) Connectors in gas/vapor service or light liquid service are subject to the requirements for connectors in heavy liquid service in §63.169 of subpart H of this part (except for the agitator provisions). The leak definition for valves, connectors, and instrumentation systems subject to §63.169 is 1,000 parts per million.
- (6) In phase III of the pump standard, except as provided in paragraph (c)(7) of this section, owners or operators that achieve less than 10 percent of light liquid pumps leaking or three light liquid pumps leaking, whichever is greater, shall monitor light liquid pumps monthly.
- (7) Owners or operators that achieve less than 3 percent of light liquid pumps leaking or one light liquid pump leaking, whichever is greater, shall monitor light liquid pumps quarterly.
- (8) An owner or operator may make the election described in paragraphs (c)(3) and (c)(4) of this section at any time except that any election to change after the initial election shall be treated as a permit modification according to the terms of part 70 of this chapter.
- (9) When complying with the requirements of §63.168(e)(3)(i), non-repairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and non-repairable. Otherwise, a number of non-repairable valves up to a maximum of 1 percent per year of the total number of valves in organic HAP service up to a maximum of 3 percent may be excluded from calculation of percent leaking valves for subsequent monitoring periods. When the number of non-repairable valves exceeds 3 percent of the total number of valves in organic HAP service, the number of non-repairable valves exceeding 3 percent of the total number shall be included in the calculation of percent leaking valves.
- (10) If in phase III of the valve standard any valve is designated as being leakless, the owner or operator has the option of following the provisions of 40 CFR 60.482-7(f). If an owner or operator chooses to comply with the provisions of 40 CFR 60.482-7(f), the valve is exempt from the valve monitoring provisions of §63.168 of subpart H of this part.
- (11) [Reserved]
- (12) If a flare is used as a control device, on and after January 30, 2019, the flare shall meet the requirements of §63.670. Prior to January 30, 2019, the flare shall meet the applicable requirements of §§63.172 and 63.180, or the requirements of §63.670.
- (d) Upon startup of new sources, the owner or operator shall comply with §63.163(a)(1)(ii) of subpart H of this part for light liquid pumps and §63.168(a)(1)(ii) of subpart H of this part for gas/vapor and light liquid valves.
- (e) For reciprocating pumps in heavy liquid service and agitators in heavy liquid service, owners and operators are not required to comply with the requirements in §63.169 of subpart H of this part.
- (f) Reciprocating pumps in light liquid service are exempt from §§63.163 and 60.482 if recasting the distance piece or reciprocating pump replacement is required.
- (g) Compressors in hydrogen service are exempt from the requirements of paragraphs (a) and (c) of this section if an owner or operator demonstrates that a compressor is in hydrogen service.
- (1) Each compressor is presumed not to be in hydrogen service unless an owner or operator demonstrates that the piece of equipment is in hydrogen service.
- (2) For a piece of equipment to be considered in hydrogen service, it must be determined that the percentage hydrogen content can be reasonably expected always to exceed 50 percent by volume.
- (i) For purposes of determining the percentage hydrogen content in the process fluid that is contained in or contacts a compressor, the owner or operator shall use either:



**SECTION C. Site Level Requirements**

(A) Procedures that conform to those specified in §60.593(b)(2) of 40 part 60, subpart GGG.

(B) Engineering judgment to demonstrate that the percentage content exceeds 50 percent by volume, provided the engineering judgment demonstrates that the content clearly exceeds 50 percent by volume.

(1) When an owner or operator and the Administrator do not agree on whether a piece of equipment is in hydrogen service, the procedures in paragraph (g)(2)(i)(A) of this section shall be used to resolve the disagreement.

(2) If an owner or operator determines that a piece of equipment is in hydrogen service, the determination can be revised only by following the procedures in paragraph (g)(2)(i)(A) of this section.

(h) Each owner or operator of a source subject to the provisions of this subpart must maintain all records for a minimum of 5 years.

(i) Reciprocating compressors are exempt from seal requirements if recasting the distance piece or compressor replacement is required.

(j) Except as specified in paragraph (j)(4) of this section, the owner or operator must comply with the requirements specified in paragraphs (j)(1) and (2) of this section for pressure relief devices, such as relief valves or rupture disks, in organic HAP gas or vapor service instead of the pressure relief device requirements of §60.482-4 or §63.165, as applicable. Except as specified in paragraphs (j)(4) and (5) of this section, the owner or operator must also comply with the requirements specified in paragraph (j)(3) of this section for all pressure relief devices.

(1) Operating requirements. Except during a pressure release, operate each pressure relief device in organic HAP gas or vapor service with an instrument reading of less than 500 ppm above background as detected by Method 21 of 40 CFR part 60, appendix A-7.

(2) Pressure release requirements. For pressure relief devices in organic HAP gas or vapor service, the owner or operator must comply with the applicable requirements in paragraphs (j)(2)(i) through (iii) of this section following a pressure release.

(i) If the pressure relief device does not consist of or include a rupture disk, conduct instrument monitoring, as specified in §60.485(b) or §63.180(c), as applicable, no later than 5 calendar days after the pressure relief device returns to organic HAP gas or vapor service following a pressure release to verify that the pressure relief device is operating with an instrument reading of less than 500 ppm.

(ii) If the pressure relief device includes a rupture disk, either comply with the requirements in paragraph (j)(2)(i) of this section (not replacing the rupture disk) or install a replacement disk as soon as practicable after a pressure release, but no later than 5 calendar days after the pressure release. The owner or operator must conduct instrument monitoring, as specified in §60.485(b) or §63.180(c), as applicable, no later than 5 calendar days after the pressure relief device returns to organic HAP gas or vapor service following a pressure release to verify that the pressure relief device is operating with an instrument reading of less than 500 ppm.

(iii) If the pressure relief device consists only of a rupture disk, install a replacement disk as soon as practicable after a pressure release, but no later than 5 calendar days after the pressure release. The owner or operator may not initiate startup of the equipment served by the rupture disk until the rupture disk is replaced. The owner or operator must conduct instrument monitoring, as specified in §60.485(b) or §63.180(c), as applicable, no later than 5 calendar days after the pressure relief device returns to organic HAP gas or vapor service following a pressure release to verify that the pressure relief device is operating with an instrument reading of less than 500 ppm.

(3) Pressure release management. Except as specified in paragraphs (j)(4) and (5) of this section, the owner or operator shall comply with the requirements specified in paragraphs (j)(3)(i) through (v) of this section for all pressure relief devices in organic HAP service no later than January 30, 2019.

(i) The owner or operator must equip each affected pressure relief device with a device(s) or use a monitoring system that is capable of:

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(A) Identifying the pressure release;

(B) Recording the time and duration of each pressure release; and

(C) Notifying operators immediately that a pressure release is occurring. The device or monitoring system may be either specific to the pressure relief device itself or may be associated with the process system or piping, sufficient to indicate a pressure release to the atmosphere. Examples of these types of devices and systems include, but are not limited to, a rupture disk indicator, magnetic sensor, motion detector on the pressure relief valve stem, flow monitor, or pressure monitor.

(ii) The owner or operator must apply at least three redundant prevention measures to each affected pressure relief device and document these measures. Examples of prevention measures include:

(A) Flow, temperature, level and pressure indicators with deadman switches, monitors, or automatic actuators.

(B) Documented routine inspection and maintenance programs and/or operator training (maintenance programs and operator training may count as only one redundant prevention measure).

(C) Inherently safer designs or safety instrumentation systems.

(D) Deluge systems.

(E) Staged relief system where initial pressure relief valve (with lower set release pressure) discharges to a flare or other closed vent system and control device.

(iii) If any affected pressure relief device releases to atmosphere as a result of a pressure release event, the owner or operator must perform root cause analysis and corrective action analysis according to the requirement in paragraph (j)(6) of this section and implement corrective actions according to the requirements in paragraph (j)(7) of this section. The owner or operator must also calculate the quantity of organic HAP released during each pressure release event and report this quantity as required in §63.655(g)(10)(iii). Calculations may be based on data from the pressure relief device monitoring alone or in combination with process parameter monitoring data and process knowledge.

(iv) The owner or operator shall determine the total number of release events occurred during the calendar year for each affected pressure relief device separately. The owner or operator shall also determine the total number of release events for each pressure relief device for which the root cause analysis concluded that the root cause was a force majeure event, as defined in this subpart.

(v) Except for pressure relief devices described in paragraphs (j)(4) and (5) of this section, the following release events are a violation of the pressure release management work practice standards.

(A) Any release event for which the root cause of the event was determined to be operator error or poor maintenance.

(B) A second release event not including force majeure events from a single pressure relief device in a 3 calendar year period for the same root cause for the same equipment.

(C) A third release event not including force majeure events from a single pressure relief device in a 3 calendar year period for any reason.

(4) Pressure relief devices routed to a control device. If all releases and potential leaks from a pressure relief device are routed through a closed vent system to a control device, back into the process or to the fuel gas system, the owner or operator is not required to comply with paragraph (j)(1), (2), or (3) (if applicable) of this section. Both the closed vent system and control device (if applicable) must meet the requirements of §63.644. When complying with this paragraph (j)(4), all references to "Group 1 miscellaneous process vent" in §63.644 mean "pressure relief device." If a pressure relief device complying with this paragraph (j)(4) is routed to the fuel gas system, then on and after January 30, 2019, any flares receiving gas from that fuel gas system must be in compliance with §63.670.

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(5) Pressure relief devices exempted from pressure release management requirements. The following types of pressure relief devices are not subject to the pressure release management requirements in paragraph (j)(3) of this section.

(i) Pressure relief devices in heavy liquid service, as defined in §63.641.

(ii) Pressure relief devices that only release material that is liquid at standard conditions (1 atmosphere and 68 degrees Fahrenheit) and that are hard-piped to a controlled drain system (i.e., a drain system meeting the requirements for Group 1 wastewater streams in §63.647(a)) or piped back to the process or pipeline.

(iii) Thermal expansion relief valves.

(iv) Pressure relief devices designed with a set relief pressure of less than 2.5 psig.

(v) Pressure relief devices that do not have the potential to emit 72 lbs/day or more of VOC based on the valve diameter, the set release pressure, and the equipment contents.

(vi) Pressure relief devices on mobile equipment.

(6) Root cause analysis and corrective action analysis. A root cause analysis and corrective action analysis must be completed as soon as possible, but no later than 45 days after a release event. Special circumstances affecting the number of root cause analyses and/or corrective action analyses are provided in paragraphs (j)(6)(i) through (iv) of this section.

(i) You may conduct a single root cause analysis and corrective action analysis for a single emergency event that causes two or more pressure relief devices installed on the same equipment to release.

(ii) You may conduct a single root cause analysis and corrective action analysis for a single emergency event that causes two or more pressure relief devices to release, regardless of the equipment served, if the root cause is reasonably expected to be a force majeure event, as defined in this subpart.

(iii) Except as provided in paragraphs (j)(6)(i) and (ii) of this section, if more than one pressure relief device has a release during the same time period, an initial root cause analysis shall be conducted separately for each pressure relief device that had a release. If the initial root cause analysis indicates that the release events have the same root cause(s), the initially separate root cause analyses may be recorded as a single root cause analysis and a single corrective action analysis may be conducted.

(7) Corrective action implementation. Each owner or operator required to conduct a root cause analysis and corrective action analysis as specified in paragraphs (j)(3)(iii) and (j)(6) of this section shall implement the corrective action(s) identified in the corrective action analysis in accordance with the applicable requirements in paragraphs (j)(7)(i) through (iii) of this section.

(i) All corrective action(s) must be implemented within 45 days of the event for which the root cause and corrective action analyses were required or as soon thereafter as practicable. If an owner or operator concludes that no corrective action should be implemented, the owner or operator shall record and explain the basis for that conclusion no later than 45 days following the event.

(ii) For corrective actions that cannot be fully implemented within 45 days following the event for which the root cause and corrective action analyses were required, the owner or operator shall develop an implementation schedule to complete the corrective action(s) as soon as practicable.

(iii) No later than 45 days following the event for which a root cause and corrective action analyses were required, the owner or operator shall record the corrective action(s) completed to date, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

[60 FR 43260, Aug. 18, 1995, as amended at 61 FR 29880, June 12, 1996; 63 FR 44141, Aug. 18, 1998; 80 FR 75244, Dec.

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1, 2015; 81 FR 45241, July 13, 2016]

**# 122 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.649]**  
**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**  
**Alternative means of emission limitation: Connectors in gas/vapor service and light liquid service.**

This condition is applicable to Sources 042, 105, 106, 107, 108, 109, 211, 219, & 220.

- (a) If an owner or operator elects to monitor valves according to the provisions of 40 CFR 63.648(c)(2)(ii), the owner or operator shall implement one of the connector monitoring programs specified in paragraphs (b), (c), or (d) of this section.
- (b) Random 200 connector alternative. {See 40 CFR 63.649(b)}
- (c) Connector inspection alternative. {See 40 CFR 63.649(c)}
- (d) Subpart H program. The owner or operator shall implement a program to comply with the provisions in 40 CFR 63.174 of this part.
- (e) Delay of repair of connectors for which leaks have been detected is allowed if repair is not technically feasible by normal repair techniques without a process unit shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown.
- (1) Delay of repair is allowed for equipment that is isolated from the process and that does not remain in organic HAP service.
- (2) Delay of repair for connectors is also allowed if:
- (i) The owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair, and
- (ii) When repair procedures are accomplished, the purged material would be collected and destroyed or recovered in a control device.
- (f) Any connector that is designated as an unsafe-to-repair connector is exempt from the requirements of paragraphs (b)(3) and (b)(4), (c)(3) and (c)(4), or (d) of this section if:
- (1) The owner or operator determines that repair personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (b)(3) and (b)(4), (c)(3) and (c)(4), of this section; or
- (2) The connector will be repaired before the end of the next scheduled process unit shutdown.
- (g) The owner or operator shall maintain records to document that the connector monitoring or inspections have been conducted as required and to document repair of leaking connectors as applicable.

**# 123 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.650]**  
**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**  
**Gasoline loading rack provisions.**

This condition is applicable to Source 211.

- (a) Except as provided in paragraphs (b) through (d) of this section, each owner or operator of a Group 1 gasoline loading rack classified under Standard Industrial Classification code 2911 located within a contiguous area and under common control with a petroleum refinery shall comply with subpart R of this part, §§63.421, 63.422(a) through (c) and (e), 63.425(a) through (c) and (e) through (i), 63.427(a) and (b), and 63.428(b), (c), (g)(1), (h)(1) through (3), and (k).
- (b) As used in this section, all terms not defined in §63.641 shall have the meaning given them in subpart A or in 40 CFR

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part 63, subpart R. The §63.641 definition of “affected source” applies under this section.

(c) Gasoline loading racks regulated under this subpart are subject to the compliance dates specified in §63.640(h).

(d) If a flare is used as a control device, on and after January 30, 2019, the flare shall meet the requirements of §63.670. Prior to January 30, 2019, the flare shall meet the applicable requirements of subpart R of this part, or the requirements of §63.670.

[60 FR 43260, Aug. 18, 1995, as amended at 61 FR 29880, June 12, 1996; 74 FR 55685, Oct. 28, 2009; 80 FR 75245, Dec. 1, 2015]

**# 124 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.654]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Heat exchange systems.**

(a) Except as specified in paragraph (b) of this section, the owner or operator of a heat exchange system that meets the criteria in §63.640(c)(8) must comply with the requirements of paragraphs (c) through (g) of this section.

(b) A heat exchange system is exempt from the requirements in paragraphs (c) through (g) of this section if all heat exchangers within the heat exchange system either:

(1) Operate with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side; or

(2) Employ an intervening cooling fluid containing less than 5 percent by weight of total organic HAP, as determined according to the provisions of §63.180(d) of this part and table 1 of this subpart, between the process and the cooling water. This intervening fluid must serve to isolate the cooling water from the process fluid and must not be sent through a cooling tower or discharged. For purposes of this section, discharge does not include emptying for maintenance purposes.

(c) The owner or operator must perform monitoring to identify leaks of total strippable volatile organic compounds (VOC) from each heat exchange system subject to the requirements of this subpart according to the procedures in paragraphs (c)(1) through (6) of this section.

(1) Monitoring locations for closed-loop recirculation heat exchange systems. For each closed loop recirculating heat exchange system, collect and analyze a sample from the location(s) described in either paragraph (c)(1)(i) or (c)(1)(ii) of this section.

(i) Each cooling tower return line or any representative riser within the cooling tower prior to exposure to air for each heat exchange system.

(ii) Selected heat exchanger exit line(s) so that each heat exchanger or group of heat exchangers within a heat exchange system is covered by the selected monitoring location(s).

(2) Monitoring locations for once-through heat exchange systems. For each once-through heat exchange system, collect and analyze a sample from the location(s) described in paragraph (c)(2)(i) of this section. The owner or operator may also elect to collect and analyze an additional sample from the location(s) described in paragraph (c)(2)(ii) of this section.

(i) Selected heat exchanger exit line(s) so that each heat exchanger or group of heat exchangers within a heat exchange system is covered by the selected monitoring location(s). The selected monitoring location may be at a point where discharges from multiple heat exchange systems are combined provided that the combined cooling water flow rate at the monitoring location does not exceed 40,000 gallons per minute.

(ii) The inlet water feed line for a once-through heat exchange system prior to any heat exchanger. If multiple heat exchange systems use the same water feed (i.e., inlet water from the same primary water source), the owner or operator may monitor at one representative location and use the monitoring results for that sampling location for all heat exchange systems that use that same water feed.

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(3) Monitoring method. Determine the total strippable hydrocarbon concentration (in parts per million by volume (ppmv) as methane) at each monitoring location using the "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources" Revision Number One, dated January 2003, Sampling Procedures Manual, Appendix P: Cooling Tower Monitoring, prepared by Texas Commission on Environmental Quality, January 31, 2003 (incorporated by reference—see §63.14) using a flame ionization detector (FID) analyzer for on-site determination as described in Section 6.1 of the Modified El Paso Method.

(4) Monitoring frequency and leak action level for existing sources. For a heat exchange system at an existing source, the owner or operator must comply with the monitoring frequency and leak action level as defined in paragraph (c)(4)(i) of this section or comply with the monitoring frequency and leak action level as defined in paragraph (c)(4)(ii) of this section. The owner or operator of an affected heat exchange system may choose to comply with paragraph (c)(4)(i) of this section for some heat exchange systems at the petroleum refinery and comply with paragraph (c)(4)(ii) of this section for other heat exchange systems. However, for each affected heat exchange system, the owner or operator of an affected heat exchange system must elect one monitoring alternative that will apply at all times. If the owner or operator intends to change the monitoring alternative that applies to a heat exchange system, the owner or operator must notify the Administrator 30 days in advance of such a change. All "leaks" identified prior to changing monitoring alternatives must be repaired. The monitoring frequencies specified in paragraphs (c)(4)(i) and (ii) of this section also apply to the inlet water feed line for a once-through heat exchange system, if monitoring of the inlet water feed is elected as provided in paragraph (c)(2)(ii) of this section.

(i) Monitor monthly using a leak action level defined as a total strippable hydrocarbon concentration (as methane) in the stripping gas of 6.2 ppmv.

(ii) Monitor quarterly using a leak action level defined as a total strippable hydrocarbon concentration (as methane) in the stripping gas of 3.1 ppmv unless repair is delayed as provided in paragraph (f) of this section. If a repair is delayed as provided in paragraph (f) of this section, monitor monthly.

(5) Monitoring frequency and leak action level for new sources. For a heat exchange system at a new source, the owner or operator must monitor monthly using a leak action level defined as a total strippable hydrocarbon concentration (as methane) in the stripping gas of 3.1 ppmv.

(6) Leak definition. A leak is defined as described in paragraph (c)(6)(i) or (c)(6)(ii) of this section, as applicable.

(i) For once-through heat exchange systems for which the inlet water feed is monitored as described in paragraph (c)(2)(ii) of this section, a leak is detected if the difference in the measurement value of the sample taken from a location specified in paragraph (c)(2)(i) of this section and the measurement value of the corresponding sample taken from the location specified in paragraph (c)(2)(ii) of this section equals or exceeds the leak action level.

(ii) For all other heat exchange systems, a leak is detected if a measurement value of the sample taken from a location specified in either paragraph (c)(1)(i), (c)(1)(ii), or (c)(2)(i) of this section equals or exceeds the leak action level.

(d) If a leak is detected, the owner or operator must repair the leak to reduce the measured concentration to below the applicable action level as soon as practicable, but no later than 45 days after identifying the leak, except as specified in paragraphs (e) and (f) of this section. Repair includes re-monitoring at the monitoring location where the leak was identified according to the method specified in paragraph (c)(3) of this section to verify that the measured concentration is below the applicable action level. Actions that can be taken to achieve repair include but are not limited to:

- (1) Physical modifications to the leaking heat exchanger, such as welding the leak or replacing a tube;
- (2) Blocking the leaking tube within the heat exchanger;
- (3) Changing the pressure so that water flows into the process fluid;
- (4) Replacing the heat exchanger or heat exchanger bundle; or
- (5) Isolating, bypassing, or otherwise removing the leaking heat exchanger from service until it is otherwise repaired.

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(e) If the owner or operator detects a leak when monitoring a cooling tower return line under paragraph (c)(1)(i) of this section, the owner or operator may conduct additional monitoring of each heat exchanger or group of heat exchangers associated with the heat exchange system for which the leak was detected as provided under paragraph (c)(1)(ii) of this section. If no leaks are detected when monitoring according to the requirements of paragraph (c)(1)(ii) of this section, the heat exchange system is considered to meet the repair requirements through re-monitoring of the heat exchange system as provided in paragraph (d) of this section.

(f) The owner or operator may delay the repair of a leaking heat exchanger when one of the conditions in paragraph (f)(1) or (f)(2) of this section is met and the leak is less than the delay of repair action level specified in paragraph (f)(3) of this section. The owner or operator must determine if a delay of repair is necessary as soon as practicable, but no later than 45 days after first identifying the leak.

(1) If the repair is technically infeasible without a shutdown and the total strippable hydrocarbon concentration is initially and remains less than the delay of repair action level for all monthly monitoring periods during the delay of repair, the owner or operator may delay repair until the next scheduled shutdown of the heat exchange system. If, during subsequent monthly monitoring, the delay of repair action level is exceeded, the owner or operator must repair the leak within 30 days of the monitoring event in which the leak was equal to or exceeded the delay of repair action level.

(2) If the necessary equipment, parts, or personnel are not available and the total strippable hydrocarbon concentration is initially and remains less than the delay of repair action level for all monthly monitoring periods during the delay of repair, the owner or operator may delay the repair for a maximum of 120 calendar days. The owner or operator must demonstrate that the necessary equipment, parts, or personnel were not available. If, during subsequent monthly monitoring, the delay of repair action level is exceeded, the owner or operator must repair the leak within 30 days of the monitoring event in which the leak was equal to or exceeded the delay of repair action level.

(3) The delay of repair action level is a total strippable hydrocarbon concentration (as methane) in the stripping gas of 62 ppmv. The delay of repair action level is assessed as described in paragraph (f)(3)(i) or (f)(3)(ii) of this section, as applicable.

(i) For once-through heat exchange systems for which the inlet water feed is monitored as described in paragraph (c)(2)(ii) of this section, the delay of repair action level is exceeded if the difference in the measurement value of the sample taken from a location specified in paragraph (c)(2)(i) of this section and the measurement value of the corresponding sample taken from the location specified in paragraph (c)(2)(ii) of this section equals or exceeds the delay of repair action level.

(ii) For all other heat exchange systems, the delay of repair action level is exceeded if a measurement value of the sample taken from a location specified in either paragraphs (c)(1)(i), (c)(1)(ii), or (c)(2)(i) of this section equals or exceeds the delay of repair action level.

(g) To delay the repair under paragraph (f) of this section, the owner or operator must record the information in paragraphs (g)(1) through (4) of this section.

(1) The reason(s) for delaying repair.

(2) A schedule for completing the repair as soon as practical.

(3) The date and concentration of the leak as first identified and the results of all subsequent monthly monitoring events during the delay of repair.

(4) An estimate of the potential strippable hydrocarbon emissions from the leaking heat exchange system or heat exchanger for each required delay of repair monitoring interval following the procedures in paragraphs (g)(4)(i) through (iv) of this section.

(i) Determine the leak concentration as specified in paragraph (c) of this section and convert the stripping gas leak concentration (in ppmv as methane) to an equivalent liquid concentration, in parts per million by weight (ppmw), using equation 7-1 from "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound

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Emissions from Water Sources" Revision Number One, dated January 2003, Sampling Procedures Manual, Appendix P: Cooling Tower Monitoring, prepared by Texas Commission on Environmental Quality, January 31, 2003 (incorporated by reference—see §63.14) and the molecular weight of 16 grams per mole (g/mol) for methane.

(ii) Determine the mass flow rate of the cooling water at the monitoring location where the leak was detected. If the monitoring location is an individual cooling tower riser, determine the total cooling water mass flow rate to the cooling tower. Cooling water mass flow rates may be determined using direct measurement, pump curves, heat balance calculations, or other engineering methods. Volumetric flow measurements may be used and converted to mass flow rates using the density of water at the specific monitoring location temperature or using the default density of water at 25 degrees Celsius, which is 997 kilograms per cubic meter or 8.32 pounds per gallon.

(iii) For delay of repair monitoring intervals prior to repair of the leak, calculate the potential strippable hydrocarbon emissions for the leaking heat exchange system or heat exchanger for the monitoring interval by multiplying the leak concentration in the cooling water, ppmw, determined in (g)(4)(i) of this section, by the mass flow rate of the cooling water determined in (g)(4)(ii) of this section and by the duration of the delay of repair monitoring interval. The duration of the delay of repair monitoring interval is the time period starting at midnight on the day of the previous monitoring event or at midnight on the day the repair would have had to be completed if the repair had not been delayed, whichever is later, and ending at midnight of the day the of the current monitoring event.

(iv) For delay of repair monitoring intervals ending with a repaired leak, calculate the potential strippable hydrocarbon emissions for the leaking heat exchange system or heat exchanger for the final delay of repair monitoring interval by multiplying the duration of the final delay of repair monitoring interval by the leak concentration and cooling water flow rates determined for the last monitoring event prior to the re-monitoring event used to verify the leak was repaired. The duration of the final delay of repair monitoring interval is the time period starting at midnight of the day of the last monitoring event prior to re-monitoring to verify the leak was repaired and ending at the time of the re-monitoring event that verified that the leak was repaired.

[74 FR 55686, Oct. 28, 2009, as amended at 75 FR 37731, June 30, 2010; 78 FR 37146, June 20, 2013]

**# 125 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.655]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Reporting and recordkeeping requirements.**

This condition is applicable to Sources 042, 101A, 105, 106, 107, 108, 109, 211, 219, & 220.

(a) Each owner or operator subject to the wastewater provisions in §63.647 shall comply with the recordkeeping and reporting provisions in §§61.356 and 61.357 of 40 CFR part 61, subpart FF unless they are complying with the wastewater provisions specified in paragraph (o)(2)(ii) of §63.640. There are no additional reporting and recordkeeping requirements for wastewater under this subpart unless a wastewater stream is included in an emissions average. Recordkeeping and reporting for emissions averages are specified in §63.653 and in paragraphs (f)(5) and (g)(8) of this section.

(b) Each owner or operator subject to the gasoline loading rack provisions in §63.650 shall comply with the recordkeeping and reporting provisions in §63.428 (b) and (c), (g)(1), (h)(1) through (h)(3), and (k) of subpart R. These requirements are summarized in table 4 of this subpart. There are no additional reporting and recordkeeping requirements for gasoline loading racks under this subpart unless a loading rack is included in an emissions average. Recordkeeping and reporting for emissions averages are specified in §63.653 and in paragraphs (f)(5) and (g)(8) of this section.

(c) Each owner or operator subject to the marine tank vessel loading operation standards in §63.651 shall comply with the recordkeeping and reporting provisions in §§63.567(a) and 63.567(c) through (k) of subpart Y. These requirements are summarized in table 5 of this subpart. There are no additional reporting and recordkeeping requirements for marine tank vessel loading operations under this subpart unless marine tank vessel loading operations are included in an emissions average. Recordkeeping and reporting for emissions averages are specified in §63.653 and in paragraphs (f)(5) and (g)(8) of this section.

(d) Each owner or operator subject to the equipment leaks standards in §63.648 shall comply with the recordkeeping and reporting provisions in paragraphs (d)(1) through (d)(6) of this section.



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(1) Sections 60.486 and 60.487 of subpart VV of part 60 except as specified in paragraph (d)(1)(i) of this section; or §§63.181 and 63.182 of subpart H of this part except for §§63.182(b), (c)(2), and (c)(4).

(i) The signature of the owner or operator (or designate) whose decision it was that a repair could not be effected without a process shutdown is not required to be recorded. Instead, the name of the person whose decision it was that a repair could not be effected without a process shutdown shall be recorded and retained for 2 years.

(ii) [Reserved]

(2) The Notification of Compliance Status report required by §63.182(c) of subpart H and the initial semiannual report required by §60.487(b) of 40 CFR part 60, subpart VV shall be submitted within 150 days of the compliance date specified in §63.640(h); the requirements of subpart H of this part are summarized in table 3 of this subpart.

(3) An owner or operator who determines that a compressor qualifies for the hydrogen service exemption in §63.648 shall also keep a record of the demonstration required by §63.648.

(4) An owner or operator must keep a list of identification numbers for valves that are designated as leakless per §63.648(c)(10).

(5) An owner or operator must identify, either by list or location (area or refining process unit), equipment in organic HAP service less than 300 hours per year within refining process units subject to this subpart.

(6) An owner or operator must keep a list of reciprocating pumps and compressors determined to be exempt from seal requirements as per §§63.648 (f) and (i).

(e) Each owner or operator of a source subject to this subpart shall submit the reports listed in paragraphs (e)(1) through (e)(3) of this section except as provided in paragraph (h)(5) of this section, and shall keep records as described in paragraph (i) of this section.

(1) A Notification of Compliance Status report as described in paragraph (f) of this section;

(2) Periodic Reports as described in paragraph (g) of this section; and

(3) Other reports as described in paragraph (h) of this section.

(f) Each owner or operator of a source subject to this subpart shall submit a Notification of Compliance Status report within 150 days after the compliance dates specified in §63.640(h) with the exception of Notification of Compliance Status reports submitted to comply with §63.640(l)(3) and for storage vessels subject to the compliance schedule specified in §63.640(h)(2). Notification of Compliance Status reports required by §63.640(l)(3) and for storage vessels subject to the compliance dates specified in §63.640(h)(2) shall be submitted according to paragraph (f)(6) of this section. This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination of the three. If the required information has been submitted before the date 150 days after the compliance date specified in §63.640(h), a separate Notification of Compliance Status report is not required within 150 days after the compliance dates specified in §63.640(h). If an owner or operator submits the information specified in paragraphs (f)(1) through (5) of this section at different times, and/or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the previously submitted information. Each owner or operator of a gasoline loading rack classified under Standard Industrial Classification Code 2911 located within a contiguous area and under common control with a petroleum refinery subject to the standards of this subpart shall submit the Notification of Compliance Status report required by subpart R of this part within 150 days after the compliance dates specified in §63.640(h).

(1) The Notification of Compliance Status report shall include the information specified in paragraphs (f)(1)(i) through (viii) of this section.

(i) For storage vessels, this report shall include the information specified in paragraphs (f)(1)(i)(A) through (f)(1)(i)(D) of this section.

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(A) Identification of each storage vessel subject to this subpart, and for each Group 1 storage vessel subject to this subpart, the information specified in paragraphs (f)(1)(i)(A)(1) through (3) of this section. This information is to be revised each time a Notification of Compliance Status report is submitted for a storage vessel subject to the compliance schedule specified in §63.640(h)(2) or to comply with §63.640(l)(3).

(1) For each Group 1 storage vessel complying with §63.646 that is not included in an emissions average, the method of compliance (i.e., internal floating roof, external floating roof, or closed vent system and control device).

(2) For storage vessels subject to the compliance schedule specified in §63.640(h)(2) that are not complying with §63.646, the anticipated compliance date.

(3) For storage vessels subject to the compliance schedule specified in §63.640(h)(2) that are complying with §63.646 and the Group 1 storage vessels described in §63.640(l), the actual compliance date.

(B) If a closed vent system and a control device other than a flare is used to comply with §63.646 or §63.660, the owner or operator shall submit:

(1) A description of the parameter or parameters to be monitored to ensure that the control device is being properly operated and maintained, an explanation of the criteria used for selection of that parameter (or parameters), and the frequency with which monitoring will be performed; and either

(2) The design evaluation documentation specified in §63.120(d)(1)(i) of subpart G or §63.985(b)(1)(i) of subpart SS (as applicable), if the owner or operator elects to prepare a design evaluation; or

(3) If the owner or operator elects to submit the results of a performance test, identification of the storage vessel and control device for which the performance test will be submitted, and identification of the emission point(s) that share the control device with the storage vessel and for which the performance test will be conducted.

(C) If a closed vent system and control device other than a flare is used, the owner or operator shall submit:

(1) The operating range for each monitoring parameter. The specified operating range shall represent the conditions for which the control device is being properly operated and maintained.

(2) If a performance test is conducted instead of a design evaluation, results of the performance test demonstrating that the control device achieves greater than or equal to the required control efficiency. A performance test conducted prior to the compliance date of this subpart can be used to comply with this requirement, provided that the test was conducted using EPA methods and that the test conditions are representative of current operating practices.

(D) If a closed vent system and a flare is used, the owner or operator shall submit:

(1) Flare design (e.g., steam-assisted, air-assisted, or nonassisted);

(2) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by §63.120(e) of subpart G or §63.987(b) of subpart SS or §63.670(h), as applicable; and

(3) All periods during the compliance determination when the pilot flame is absent.

(ii) For miscellaneous process vents, identification of each miscellaneous process vent subject to this subpart, whether the process vent is Group 1 or Group 2, and the method of compliance for each Group 1 miscellaneous process vent that is not included in an emissions average (e.g., use of a flare or other control device meeting the requirements of §63.643(a)).

(iii) For miscellaneous process vents controlled by control devices required to be tested under §63.645 of this subpart and §63.116(c) of subpart G of this part, performance test results including the information in paragraphs (f)(1)(iii)(A) and (B) of this section. Results of a performance test conducted prior to the compliance date of this subpart can be used

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provided that the test was conducted using the methods specified in §63.645 and that the test conditions are representative of current operating conditions.

(A) The percentage of reduction of organic HAP's or TOC, or the outlet concentration of organic HAP's or TOC (parts per million by volume on a dry basis corrected to 3 percent oxygen), determined as specified in §63.116(c) of subpart G of this part; and

(B) The value of the monitored parameters specified in table 10 of this subpart, or a site-specific parameter approved by the permitting authority, averaged over the full period of the performance test,

(iv) For miscellaneous process vents controlled by flares, initial compliance test results including the information in paragraphs (f)(1)(iv)(A) and (B) of this section.

(A) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by §§63.645 and 63.116(a) of subpart G or §63.670(h), as applicable; and

(B) A statement of whether a flame was present at the pilot light over the full period of the compliance determination.

(v) For equipment leaks complying with §63.648(c) (i.e., complying with the requirements of subpart H of this part), the Notification of Compliance Report Status report information required by §63.182(c) of subpart H and whether the percentage of leaking valves will be reported on a process unit basis or a sourcewide basis.

(vi) For each heat exchange system, identification of the heat exchange systems that are subject to the requirements of this subpart. For heat exchange systems at existing sources, the owner or operator shall indicate whether monitoring will be conducted as specified in §63.654(c)(4)(i) or §63.654(c)(4)(ii).

(vii) For pressure relief devices in organic HAP service subject to the requirements in §63.648(j)(3)(i) and (ii), this report shall include the information specified in paragraphs (f)(1)(vii)(A) and (B) of this section.

(A) A description of the monitoring system to be implemented, including the relief devices and process parameters to be monitored, and a description of the alarms or other methods by which operators will be notified of a pressure release.

(B) A description of the prevention measures to be implemented for each affected pressure relief device.

(viii) Not applicable [No Delayed coking unit]

(2) If initial performance tests are required by §§63.643 through 63.653, the Notification of Compliance Status report shall include one complete test report for each test method used for a particular source. On and after February 1, 2016, performance tests shall be submitted according to paragraph (h)(9) of this section.

(i) For additional tests performed using the same method, the results specified in paragraph (f)(1) of this section shall be submitted, but a complete test report is not required.

(ii) A complete test report shall include a sampling site description, description of sampling and analysis procedures and any modifications to standard procedures, quality assurance procedures, record of operating conditions during the test, record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, documentation of calculations, and any other information required by the test method.

(iii) Performance tests are required only if specified by §§63.643 through 63.653 of this subpart. Initial performance tests are required for some kinds of emission points and controls. Periodic testing of the same emission point is not required.

(3) For each monitored parameter for which a range is required to be established under §63.120(d) of subpart G or §63.985(b) of subpart SS for storage vessels or §63.644 for miscellaneous process vents, the Notification of Compliance



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Status report shall include the information in paragraphs (f)(3)(i) through (iii) of this section.

(i) The specific range of the monitored parameter(s) for each emission point;

(ii) The rationale for the specific range for each parameter for each emission point, including any data and calculations used to develop the range and a description of why the range ensures compliance with the emission standard.

(A) If a performance test is required by this subpart for a control device, the range shall be based on the parameter values measured during the performance test supplemented by engineering assessments and manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of permitted parameter values.

(B) If a performance test is not required by this subpart for a control device, the range may be based solely on engineering assessments and manufacturers' recommendations.

(iii) A definition of the source's operating day for purposes of determining daily average values of monitored parameters. The definition shall specify the times at which an operating day begins and ends.

(4) Results of any continuous monitoring system performance evaluations shall be included in the Notification of Compliance Status report.

(5) For emission points included in an emissions average, the Notification of Compliance Status report shall include the values of the parameters needed for input to the emission credit and debit equations in §63.652(g) and (h), calculated or measured according to the procedures in §63.652(g) and (h), and the resulting credits and debits for the first quarter of the year. The first quarter begins on the compliance date specified in §63.640.

(6) Notification of Compliance Status reports required by §63.640(l)(3) and for storage vessels subject to the compliance dates specified in §63.640(h)(2) shall be submitted no later than 60 days after the end of the 6-month period during which the change or addition was made that resulted in the Group 1 emission point or the existing Group 1 storage vessel was brought into compliance, and may be combined with the periodic report. Six-month periods shall be the same 6-month periods specified in paragraph (g) of this section. The Notification of Compliance Status report shall include the information specified in paragraphs (f)(1) through (f)(5) of this section. This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, as part of the periodic report, or in any combination of these four. If the required information has been submitted before the date 60 days after the end of the 6-month period in which the addition of the Group 1 emission point took place, a separate Notification of Compliance Status report is not required within 60 days after the end of the 6-month period. If an owner or operator submits the information specified in paragraphs (f)(1) through (f)(5) of this section at different times, and/or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the previously submitted information.

(g) The owner or operator of a source subject to this subpart shall submit Periodic Reports no later than 60 days after the end of each 6-month period when any of the information specified in paragraphs (g)(1) through (7) of this section or paragraphs (g)(9) through (14) of this section is collected. The first 6-month period shall begin on the date the Notification of Compliance Status report is required to be submitted. A Periodic Report is not required if none of the events identified in paragraphs (g)(1) through (7) of this section or paragraphs (g)(9) through (14) of this section occurred during the 6-month period unless emissions averaging is utilized. Quarterly reports must be submitted for emission points included in emission averages, as provided in paragraph (g)(8) of this section. An owner or operator may submit reports required by other regulations in place of or as part of the Periodic Report required by this paragraph (g) if the reports contain the information required by paragraphs (g)(1) through (14) of this section.

(1) For storage vessels, Periodic Reports shall include the information specified for Periodic Reports in paragraphs (g)(2) through (5) of this section. Information related to gaskets, slotted membranes, and sleeve seals is not required for storage vessels that are part of an existing source complying with §63.646.

(2) Internal floating roofs.

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(i) An owner or operator who elects to comply with §63.646 by using a fixed roof and an internal floating roof or by using an external floating roof converted to an internal floating roof shall submit the results of each inspection conducted in accordance with §63.120(a) of subpart G in which a failure is detected in the control equipment.

(A) For vessels for which annual inspections are required under §63.120(a)(2)(i) or (a)(3)(ii) of subpart G, the specifications and requirements listed in paragraphs (g)(2)(i)(A)(1) through (3) of this section apply.

(1) A failure is defined as any time in which the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached from the internal floating roof; or there are holes, tears, or other openings in the seal or seal fabric; or there are visible gaps between the seal and the wall of the storage vessel.

(2) Except as provided in paragraph (g)(2)(i)(A)(3) of this section, each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made or the date the storage vessel was emptied.

(3) If an extension is utilized in accordance with §63.120(a)(4) of subpart G, the owner or operator shall, in the next Periodic Report, identify the vessel; include the documentation specified in §63.120(a)(4) of subpart G; and describe the date the storage vessel was emptied and the nature of and date the repair was made.

(B) For vessels for which inspections are required under §63.120(a)(2)(ii), (a)(3)(i), or (a)(3)(iii) of subpart G (i.e., internal inspections), the specifications and requirements listed in paragraphs (g)(2)(i)(B)(1) and (2) of this section apply.

(1) A failure is defined as any time in which the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal (if one has been installed) has holes, tears, or other openings in the seal or the seal fabric; or, for a storage vessel that is part of a new source, the gaskets no longer close off the liquid surface from the atmosphere; or, for a storage vessel that is part of a new source, the slotted membrane has more than a 10 percent open.

(2) Each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made.

(ii) An owner or operator who elects to comply with §63.660 by using a fixed roof and an internal floating roof shall submit the results of each inspection conducted in accordance with §63.1063(c)(1), (d)(1), and (d)(2) of subpart WW in which a failure is detected in the control equipment. For vessels for which inspections are required under §63.1063(c) and (d), the specifications and requirements listed in paragraphs (g)(2)(ii)(A) through (C) of this section apply.

(A) A failure is defined in §63.1063(d)(1) of subpart WW.

(B) Each Periodic Report shall include a copy of the inspection record required by §63.1065(b) of subpart WW when a failure occurs.

(C) An owner or operator who elects to use an extension in accordance with §63.1063(e)(2) of subpart WW shall, in the next Periodic Report, submit the documentation required by §63.1063(e)(2).

(3) External floating roofs.

(i) An owner or operator who elects to comply with §63.646 by using an external floating roof shall meet the periodic reporting requirements specified in paragraphs (g)(3)(i)(A) through (C) of this section.

(A) The owner or operator shall submit, as part of the Periodic Report, documentation of the results of each seal gap measurement made in accordance with §63.120(b) of subpart G in which the seal and seal gap requirements of §63.120(b)(3), (4), (5), or (6) of subpart G are not met. This documentation shall include the information specified in paragraphs (g)(3)(i)(A)(1) through (4) of this section.

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(1) The date of the seal gap measurement.

(2) The raw data obtained in the seal gap measurement and the calculations described in §63.120(b)(3) and (4) of subpart G.

(3) A description of any seal condition specified in §63.120(b)(5) or (6) of subpart G that is not met.

(4) A description of the nature of and date the repair was made, or the date the storage vessel was emptied.

(B) If an extension is utilized in accordance with §63.120(b)(7)(ii) or (b)(8) of subpart G, the owner or operator shall, in the next Periodic Report, identify the vessel; include the documentation specified in §63.120(b)(7)(ii) or (b)(8) of subpart G, as applicable; and describe the date the vessel was emptied and the nature of and date the repair was made.

(C) The owner or operator shall submit, as part of the Periodic Report, documentation of any failures that are identified during visual inspections required by §63.120(b)(10) of subpart G. This documentation shall meet the specifications and requirements in paragraphs (g)(3)(i)(C)(1) and (2) of this section.

(1) A failure is defined as any time in which the external floating roof has defects; or the primary seal has holes 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; or, for a storage vessel that is part of a new source, the gaskets no longer close off the liquid surface from the atmosphere; or, for a storage vessel that is part of a new source, the slotted membrane has more than 10 percent open area.

(2) Each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made.

(ii) An owner or operator who elects to comply with §63.660 by using an external floating roof shall meet the periodic reporting requirements specified in paragraphs (g)(3)(ii)(A) and (B) of this section.

(A) For vessels for which inspections are required under §63.1063(c)(2), (d)(1), and (d)(3) of subpart WW, the owner or operator shall submit, as part of the Periodic Report, a copy of the inspection record required by §63.1065(b) of subpart WW when a failure occurs. A failure is defined in §63.1063(d)(1).

(B) An owner or operator who elects to use an extension in accordance with §63.1063(e)(2) or (c)(2)(iv)(B) of subpart WW shall, in the next Periodic Report, submit the documentation required by those paragraphs.

(4) [Reserved]

(5) An owner or operator who elects to comply with §63.646 or §63.660 by installing a closed vent system and control device shall submit, as part of the next Periodic Report, the information specified in paragraphs (g)(5)(i) through (v) of this section, as applicable.

(i) The Periodic Report shall include the information specified in paragraphs (g)(5)(i)(A) and (B) of this section for those planned routine maintenance operations that would require the control device not to meet the requirements of either §63.119(e)(1) or (2) of subpart G, §63.985(a) and (b) of subpart SS, or §63.670, as applicable.

(A) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6 months. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

(B) A description of the planned routine maintenance that was performed for the control device during the previous 6 months. This description shall include the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the requirements of either §63.119(e)(1) or (2) of subpart G, §63.985(a) and (b) of subpart SS, or §63.670, as applicable, due to planned routine maintenance.

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(ii) If a control device other than a flare is used, the Periodic Report shall describe each occurrence when the monitored parameters were outside of the parameter ranges documented in the Notification of Compliance Status report. The description shall include: Identification of the control device for which the measured parameters were outside of the established ranges, and causes for the measured parameters to be outside of the established ranges.

(iii) If a flare is used prior to January 30, 2019 and prior to electing to comply with the requirements in §63.670, the Periodic Report shall describe each occurrence when the flare does not meet the general control device requirements specified in §63.11(b) of subpart A and shall include: Identification of the flare that does not meet the general requirements specified in §63.11(b) of subpart A, and reasons the flare did not meet the general requirements specified in §63.11(b) of subpart A.

(iv) If a flare is used on or after the date for which compliance with the requirements in §63.670 is elected, which can be no later than January 30, 2019, the Periodic Report shall include the items specified in paragraph (g)(11) of this section.

(v) An owner or operator who elects to comply with §63.660 by installing an alternate control device as described in §63.1064 of subpart WW shall submit, as part of the next Periodic Report, a written application as described in §63.1066(b)(3) of subpart WW.

(6) For miscellaneous process vents for which continuous parameter monitors are required by this subpart, periods of excess emissions shall be identified in the Periodic Reports and shall be used to determine compliance with the emission standards.

(i) Period of excess emission means any of the following conditions:

(A) An operating day when the daily average value of a monitored parameter, except presence of a flare pilot flame, is outside the range specified in the Notification of Compliance Status report. Monitoring data recorded during periods of monitoring system breakdown, repairs, calibration checks and zero (low-level) and high-level adjustments shall not be used in computing daily average values of monitored parameters.

(B) An operating day when all pilot flames of a flare are absent.

(C) An operating day when monitoring data required to be recorded in paragraphs (i)(3) (i) and (ii) of this section are available for less than 75 percent of the operating hours.

(D) For data compression systems under paragraph (h)(5)(iii) of this section, an operating day when the monitor operated for less than 75 percent of the operating hours or a day when less than 18 monitoring values were recorded.

(ii) For miscellaneous process vents, excess emissions shall be reported for the operating parameters specified in table 10 of this subpart unless other site-specific parameter(s) have been approved by the operating permit authority.

(iii) For periods in closed vent systems when a Group 1 miscellaneous process vent stream was detected in the bypass line or diverted from the control device and either directly to the atmosphere or to a control device that does not comply with the requirements in §63.643(a), report the date, time, duration, estimate of the volume of gas, the concentration of organic HAP in the gas and the resulting mass emissions of organic HAP that bypassed the control device. For periods when the flow indicator is not operating, report the date, time, and duration.

(7) If a performance test for determination of compliance for a new emission point subject to this subpart or for an emission point that has changed from Group 2 to Group 1 is conducted during the period covered by a Periodic Report, the results of the performance test shall be included in the Periodic Report.

(i) Results of the performance test shall include the identification of the source tested, the date of the test, the percentage of emissions reduction or outlet pollutant concentration reduction (whichever is needed to determine compliance) for each run and for the average of all runs, and the values of the monitored operating parameters.

(ii) The complete test report shall be maintained onsite.

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(8) The owner or operator of a source shall submit quarterly reports for all emission points included in an emissions average.

(i) The quarterly reports shall be submitted no later than 60 calendar days after the end of each quarter. The first report shall be submitted with the Notification of Compliance Status report no later than 150 days after the compliance date specified in §63.640.

(ii) The quarterly reports shall include:

(A) The information specified in this paragraph and in paragraphs (g)(2) through (g)(7) of this section for all storage vessels and miscellaneous process vents included in an emissions average;

(B) The information required to be reported by §63.428 (h)(1), (h)(2), and (h)(3) for each gasoline loading rack included in an emissions average, unless this information has already been submitted in a separate report;

(C) The information required to be reported by §63.567(e)(4) and (j)(3) of subpart Y for each marine tank vessel loading operation included in an emissions average, unless the information has already been submitted in a separate report;

(D) Any information pertaining to each wastewater stream included in an emissions average that the source is required to report under the Implementation Plan for the source;

(E) The credits and debits calculated each month during the quarter;

(F) A demonstration that debits calculated for the quarter are not more than 1.30 times the credits calculated for the quarter, as required under §§63.652(e)(4);

(G) The values of any inputs to the credit and debit equations in §63.652 (g) and (h) that change from month to month during the quarter or that have changed since the previous quarter; and

(H) Any other information the source is required to report under the Implementation Plan for the source.

(iii) Every fourth quarterly report shall include the following:

(A) A demonstration that annual credits are greater than or equal to annual debits as required by §63.652(e)(3); and

(B) A certification of compliance with all the emissions averaging provisions in §63.652 of this subpart.

(9) For heat exchange systems, Periodic Reports must include the following information:

(i) The number of heat exchange systems at the plant site subject to the monitoring requirements in §63.654.

(ii) The number of heat exchange systems at the plant site found to be leaking.

(iii) For each monitoring location where the total strippable hydrocarbon concentration was determined to be equal to or greater than the applicable leak definitions specified in §63.654(c)(6), identification of the monitoring location (e.g., unique monitoring location or heat exchange system ID number), the measured total strippable hydrocarbon concentration, the date the leak was first identified, and, if applicable, the date the source of the leak was identified;

(iv) For leaks that were repaired during the reporting period (including delayed repairs), identification of the monitoring location associated with the repaired leak, the total strippable hydrocarbon concentration measured during re-monitoring to verify repair, and the re-monitoring date (i.e., the effective date of repair); and

(v) For each delayed repair, identification of the monitoring location associated with the leak for which repair is delayed, the date when the delay of repair began, the date the repair is expected to be completed (if the leak is not repaired



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during the reporting period), the total strippable hydrocarbon concentration and date of each monitoring event conducted on the delayed repair during the reporting period, and an estimate of the potential strippable hydrocarbon emissions over the reporting period associated with the delayed repair.

(10) For pressure relief devices subject to the requirements §63.648(j), Periodic Reports must include the information specified in paragraphs (g)(10)(i) through (iii) of this section.

(i) For pressure relief devices in organic HAP gas or vapor service, pursuant to §63.648(j)(1), report any instrument reading of 500 ppm or greater.

(ii) For pressure relief devices in organic HAP gas or vapor service subject to §63.648(j)(2), report confirmation that any monitoring required to be done during the reporting period to show compliance was conducted.

(iii) For pressure relief devices in organic HAP service subject to §63.648(j)(3), report each pressure release to the atmosphere, including duration of the pressure release and estimate of the mass quantity of each organic HAP released, and the results of any root cause analysis and corrective action analysis completed during the reporting period, including the corrective actions implemented during the reporting period and, if applicable, the implementation schedule for planned corrective actions to be implemented subsequent to the reporting period.

(11) For flares subject to §63.670, Periodic Reports must include the information specified in paragraphs (g)(11)(i) through (iv) of this section.

(i) Records as specified in paragraph (i)(9)(i) of this section for each 15-minute block during which there was at least one minute when regulated material is routed to a flare and no pilot flame is present.

(ii) Visible emission records as specified in paragraph (i)(9)(ii)(C) of this section for each period of 2 consecutive hours during which visible emissions exceeded a total of 5 minutes.

(iii) The 15-minute block periods for which the applicable operating limits specified in §63.670(d) through (f) are not met. Indicate the date and time for the period, the net heating value operating parameter(s) determined following the methods in §63.670(k) through (n) as applicable.

(iv) For flaring events meeting the criteria in §63.670(o)(3):

(A) The start and stop time and date of the flaring event.

(B) The length of time for which emissions were visible from the flare during the event.

(C) The periods of time that the flare tip velocity exceeds the maximum flare tip velocity determined using the methods in §63.670(d)(2) and the maximum 15-minute block average flare tip velocity recorded during the event.

(D) Results of the root cause and corrective actions analysis completed during the reporting period, including the corrective actions implemented during the reporting period and, if applicable, the implementation schedule for planned corrective actions to be implemented subsequent to the reporting period.

(12) For delayed coking units [Not applicable]

(13) For maintenance vents subject to the requirements in §63.643(c), Periodic Reports must include the information specified in paragraphs (g)(13)(i) through (iv) of this section for any release exceeding the applicable limits in §63.643(c)(1). For the purposes of this reporting requirement, owners or operators complying with §63.643(c)(1)(iv) must report each venting event for which the lower explosive limit is 20 percent or greater.

(i) Identification of the maintenance vent and the equipment served by the maintenance vent.

(ii) The date and time the maintenance vent was opened to the atmosphere.

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(iii) The lower explosive limit, vessel pressure, or mass of VOC in the equipment, as applicable, at the start of atmospheric venting. If the 5 psig vessel pressure option in §63.643(c)(1)(ii) was used and active purging was initiated while the lower explosive limit was 10 percent or greater, also include the lower explosive limit of the vapors at the time active purging was initiated.

(iv) An estimate of the mass of organic HAP released during the entire atmospheric venting event.

(14) Any changes in the information provided in a previous Notification of Compliance Status report.

(h) Other reports shall be submitted as specified in subpart A of this part and as follows:

(1) [Reserved]

(2) For storage vessels, notifications of inspections as specified in paragraphs (h)(2)(i) and (ii) of this section.

(i) In order to afford the Administrator the opportunity to have an observer present, the owner or operator shall notify the Administrator of the refilling of each Group 1 storage vessel that has been emptied and degassed.

(A) Except as provided in paragraphs (h)(2)(i) (B) and (C) of this section, the owner or operator shall notify the Administrator in writing at least 30 calendar days prior to filling or refilling of each storage vessel with organic HAP's to afford the Administrator the opportunity to inspect the storage vessel prior to refilling.

(B) Except as provided in paragraph (h)(2)(i)(C) of this section, if the internal inspection required by §63.120(a)(2), (a)(3), or (b)(10) of subpart G or §63.1063(d)(1) of subpart WW is not planned and the owner or operator could not have known about the inspection 30 calendar days in advance of refilling the vessel with organic HAP, the owner or operator shall notify the Administrator at least 7 calendar days prior to refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. This notification, including the written documentation, may also be made in writing and sent so that it is received by the Administrator at least 7 calendar days prior to the refilling.

(C) The State or local permitting authority can waive the notification requirements of paragraphs (h)(2)(i)(A) and/or (h)(2)(i)(B) of this section for all or some storage vessels at petroleum refineries subject to this subpart. The State or local permitting authority may also grant permission to refill storage vessels sooner than 30 days after submitting the notification required by paragraph (h)(2)(i)(A) of this section, or sooner than 7 days after submitting the notification required by paragraph (h)(2)(i)(B) of this section for all storage vessels, or for individual storage vessels on a case-by-case basis.

(ii) In order to afford the Administrator the opportunity to have an observer present, the owner or operator of a storage vessel equipped with an external floating roof shall notify the Administrator of any seal gap measurements. The notification shall be made in writing at least 30 calendar days in advance of any gap measurements required by §63.120(b)(1) or (2) of subpart G or §63.1062(d)(3) of subpart WW. The State or local permitting authority can waive this notification requirement for all or some storage vessels subject to the rule or can allow less than 30 calendar days' notice.

(3) For owners or operators of sources required to request approval for a nominal control efficiency for use in calculating credits for an emissions average, the information specified in §63.652(h).

(4) The owner or operator who requests approval to monitor a different parameter than those listed in §63.644 for miscellaneous process vents or who is required by §63.653(a)(8) to establish a site-specific monitoring parameter for a point in an emissions average shall submit the information specified in paragraphs (h)(4)(i) through (h)(4)(iii) of this section. For new or reconstructed sources, the information shall be submitted with the application for approval of construction or reconstruction required by §63.5(d) of subpart A and for existing sources, and the information shall be submitted no later than 18 months prior to the compliance date. The information may be submitted in an operating permit application, in an amendment to an operating permit application, or in a separate submittal.

(i) A description of the parameter(s) to be monitored to determine whether excess emissions occur and an explanation of the criteria used to select the parameter(s).

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(ii) A description of the methods and procedures that will be used to demonstrate that the parameter can be used to determine excess emissions and the schedule for this demonstration. The owner or operator must certify that they will establish a range for the monitored parameter as part of the Notification of Compliance Status report required in paragraphs (e) and (f) of this section.

(iii) The frequency and content of monitoring, recording, and reporting if: monitoring and recording are not continuous; or if periods of excess emissions, as defined in paragraph (g)(6) of this section, will not be identified in Periodic Reports required under paragraphs (e) and (g) of this section. The rationale for the proposed monitoring, recording, and reporting system shall be included.

(5) An owner or operator may request approval to use alternatives to the continuous operating parameter monitoring and recordkeeping provisions listed in paragraph (i) of this section.

(i) Requests shall be submitted with the Application for Approval of Construction or Reconstruction for new sources and no later than 18 months prior to the compliance date for existing sources. The information may be submitted in an operating permit application, in an amendment to an operating permit application, or in a separate submittal. Requests shall contain the information specified in paragraphs (h)(5)(iii) through (h)(5)(iv) of this section, as applicable.

(ii) The provisions in §63.8(f)(5)(i) of subpart A of this part shall govern the review and approval of requests.

(iii) An owner or operator may use an automated data compression recording system that does not record monitored operating parameter values at a set frequency (for example, once every hour) but records all values that meet set criteria for variation from previously recorded values.

(A) The system shall be designed to:

(1) Measure the operating parameter value at least once every hour.

(2) Record at least 24 values each day during periods of operation.

(3) Record the date and time when monitors are turned off or on.

(4) Recognize unchanging data that may indicate the monitor is not functioning properly, alert the operator, and record the incident.

(5) Compute daily average values of the monitored operating parameter based on recorded data.

(B) You must maintain a record of the description of the monitoring system and data compression recording system including the criteria used to determine which monitored values are recorded and retained, the method for calculating daily averages, and a demonstration that the system meets all criteria of paragraph (h)(5)(iii)(A) of this section.

(iv) An owner or operator may request approval to use other alternative monitoring systems according to the procedures specified in §63.8(f) of subpart A of this part.

(6) The owner or operator shall submit the information specified in paragraphs (h)(6)(i) through (h)(6)(iii) of this section, as applicable. For existing sources, this information shall be submitted in the initial Notification of Compliance Status report. For a new source, the information shall be submitted with the application for approval of construction or reconstruction required by §63.5(d) of subpart A of this part. The information may be submitted in an operating permit application, in an amendment to an operating permit application, or in a separate submittal.

(i) The determination of applicability of this subpart to petroleum refining process units that are designed and operated as flexible operation units.

(ii) The determination of applicability of this subpart to any storage vessel for which use varies from year to year.

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(iii) The determination of applicability of this subpart to any distillation unit for which use varies from year to year.

(7) The owner or operator of a heat exchange system at an existing source must notify the Administrator at least 30 calendar days prior to changing from one of the monitoring options specified in §63.654(c)(4) to the other.

(8) For fence-line monitoring systems subject to §63.658, within 45 calendar days after the end of each reporting period, each owner or operator shall submit the following information to the EPA's Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). The owner or operator need not transmit these data prior to obtaining 12 months of data.

(i) Individual sample results for each monitor for each sampling period during the quarterly reporting period. For the first reporting period and for any period in which a passive monitor is added or moved, the owner or operator shall report the coordinates of all of the passive monitor locations. The owner or operator shall determine the coordinates using an instrument with an accuracy of at least 3 meters. Coordinates shall be in decimal degrees with at least five decimal places.

(ii) The biweekly annual average concentration difference (delta c) values for benzene for the quarterly reporting period.

(iii) Notation for each biweekly value that indicates whether background correction was used, all measurements in the sampling period were below detection, or whether an outlier was removed from the sampling period data set.

(9) On and after February 1, 2016, if required to submit the results of a performance test or CEMS performance evaluation, the owner or operator shall submit the results according to the procedures in paragraphs (h)(9)(i) and (ii) of this section.

(i) Within 60 days after the date of completing each performance test as required by this subpart, the owner or operator shall submit the results of the performance tests following the procedure specified in either paragraph (h)(9)(i)(A) or (B) of this section.

(A) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (<http://www.epa.gov/ttn/chief/ert/index.html>) at the time of the test, the owner or operator must submit the results of the performance test to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. If an owner or operator claims that some of the performance test information being submitted is confidential business information (CBI), the owner or operator must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive or other commonly used electronic storage media to the EPA. The electronic storage media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph (h)(9)(i)(A).

(B) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, the owner or operator must submit the results of the performance test to the Administrator at the appropriate address listed in §63.13.

(ii) Within 60 days after the date of completing each CEMS performance evaluation as required by this subpart, the owner or operator must submit the results of the performance evaluation following the procedure specified in either paragraph (h)(9)(ii)(A) or (B) of this section.

(A) For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, the owner or operator must submit the results of the performance evaluation to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) Performance evaluation data must be submitted in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT Web site. If an owner or operator claims that some of the performance evaluation information being submitted is CBI, the owner or operator must

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submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive or other commonly used electronic storage media to the EPA. The electronic storage media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph (h)(9)(ii)(A).

(B) For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, the owner or operator must submit the results of the performance evaluation to the Administrator at the appropriate address listed in §63.13.

(i) Recordkeeping. Each owner or operator of a source subject to this subpart shall keep copies of all applicable reports and records required by this subpart for at least 5 years except as otherwise specified in paragraphs (i)(1) through (12) of this section. 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, flash drive, floppy disk, magnetic tape, or microfiche.

(1) Each owner or operator subject to the storage vessel provisions in §63.646 shall keep the records specified in §63.123 of subpart G except as specified in paragraphs (i)(1)(i) through (iv) of this section. Each owner or operator subject to the storage vessel provisions in §63.660 shall keep records as specified in paragraphs (i)(1)(v) and (vi) of this section.

(i) Records related to gaskets, slotted membranes, and sleeve seals are not required for storage vessels within existing sources.

(ii) All references to §63.122 in §63.123 of subpart G shall be replaced with §63.655(e).

(iii) All references to §63.150 in §63.123 of subpart G of this part shall be replaced with §63.652.

(iv) If a storage vessel is determined to be Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent for existing sources or 2 percent for new sources, a record of any data, assumptions, and procedures used to make this determination shall be retained.

(v) Each owner or operator of a Group 1 storage vessel subject to the provisions in §63.660 shall keep records as specified in §63.1065 or §63.998, as applicable.

(vi) Each owner or operator of a Group 2 storage vessel shall keep the records specified in §63.1065(a) of subpart WW. If a storage vessel is determined to be Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent for existing sources or 2 percent for new sources, a record of any data, assumptions, and procedures used to make this determination shall be retained.

(2) Each owner or operator required to report the results of performance tests under paragraphs (f) and (g)(7) of this section shall retain a record of all reported results as well as a complete test report, as described in paragraph (f)(2)(ii) of this section for each emission point tested.

(3) Each owner or operator required to continuously monitor operating parameters under §63.644 for miscellaneous process vents or under §§63.652 and 63.653 for emission points in an emissions average shall keep the records specified in paragraphs (i)(3)(i) through (i)(3)(v) of this section unless an alternative recordkeeping system has been requested and approved under paragraph (h) of this section.

(i) The monitoring system shall measure data values at least once every hour.

(ii) The owner or operator shall record either:

(A) Each measured data value; or

(B) Block average values for 1 hour or shorter periods calculated from all measured data values during each

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period. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the hourly (or shorter period) block average instead of all measured values.

(iii) Daily average values of each continuously monitored parameter shall be calculated for each operating day and retained for 5 years except as specified in paragraph (i)(3)(iv) of this section.

(A) The daily average shall be calculated as the average of all values for a monitored parameter recorded during the operating day. The average shall cover a 24-hour period if operation is continuous, or the number of hours of operation per day if operation is not continuous.

(B) The operating day shall be the period defined in the Notification of Compliance Status report. It may be from midnight to midnight or another daily period.

(iv) If all recorded values for a monitored parameter during an operating day are within the range established in the Notification of Compliance Status report, the owner or operator may record that all values were within the range and retain this record for 5 years rather than calculating and recording a daily average for that day. For these days, the records required in paragraph (i)(3)(ii) of this section shall also be retained for 5 years.

(v) Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments shall not be included in any average computed under this subpart. Records shall be kept of the times and durations of all such periods and any other periods during process or control device operation when monitors are not operating.

(4) For each closed vent system that contains bypass lines that could divert a vent stream away from the control device and either directly to the atmosphere or to a control device that does not comply with the requirements in §63.643(a), the owner or operator shall keep a record of the information specified in either paragraph (i)(4)(i) or (ii) of this section, as applicable.

(i) The owner or operator shall maintain records of periods when flow was detected in the bypass line, including the date and time and the duration of the flow in the bypass line. For each flow event, the owner or operator shall maintain records sufficient to determine whether or not the detected flow included flow of a Group 1 miscellaneous process vent stream requiring control. For periods when the Group 1 miscellaneous process vent stream requiring control is diverted from the control device and released either directly to the atmosphere or to a control device that does not comply with the requirements in §63.643(a), the owner or operator shall include an estimate of the volume of gas, the concentration of organic HAP in the gas and the resulting emissions of organic HAP that bypassed the control device using process knowledge and engineering estimates.

(ii) Where a seal mechanism is used to comply with §63.644(c)(2), hourly records of flow are not required. In such cases, the owner or operator shall record the date that the monthly visual inspection of the seals or closure mechanisms is completed. The owner or operator shall also record the occurrence of all periods when the seal or closure mechanism is broken, the bypass line valve position has changed or the key for a lock-and-key type lock has been checked out. The owner or operator shall include an estimate of the volume of gas, the concentration of organic HAP in the gas and the resulting mass emissions of organic HAP from the Group 1 miscellaneous process vent stream requiring control that bypassed the control device or records sufficient to demonstrate that there was no flow of a Group 1 miscellaneous process vent stream requiring control during the period.

(5) The owner or operator of a heat exchange system subject to this subpart shall comply with the recordkeeping requirements in paragraphs (i)(5)(i) through (v) of this section and retain these records for 5 years.

(6) All other information required to be reported under paragraphs (a) through (h) of this section shall be retained for 5 years.

(7) Not applicable

(8) For fenceline monitoring systems subject to §63.658, each owner or operator shall keep the records specified in paragraphs (i)(8)(i) through (x) of this section on an ongoing basis.

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- (i) Coordinates of all passive monitors, including replicate samplers and field blanks, and if applicable, the meteorological station. The owner or operator shall determine the coordinates using an instrument with an accuracy of at least 3 meters. The coordinates shall be in decimal degrees with at least five decimal places.
- (ii) The start and stop times and dates for each sample, as well as the tube identifying information.
- (iii) Sampling period average temperature and barometric pressure measurements.
- (iv) For each outlier determined in accordance with Section 9.2 of Method 325A of appendix A of this part, the sampler location of and the concentration of the outlier and the evidence used to conclude that the result is an outlier.
- (v) For samples that will be adjusted for a background, the location of and the concentration measured simultaneously by the background sampler, and the perimeter samplers to which it applies.
- (vi) Individual sample results, the calculated delta c for benzene for each sampling period and the two samples used to determine it, whether background correction was used, and the annual average delta c calculated after each sampling period.
- (vii) Method detection limit for each sample, including co-located samples and blanks.
- (viii) Documentation of corrective action taken each time the action level was exceeded.
- (ix) Other records as required by Methods 325A and 325B of appendix A of this part.
- (x) If a near-field source correction is used as provided in §63.658(i), records of hourly meteorological data, including temperature, barometric pressure, wind speed and wind direction, calculated daily unit vector wind direction and daily sigma theta, and other records specified in the site-specific monitoring plan.

**# 126 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.655]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Reporting and recordkeeping requirements.**

- (i) (9) For each flare subject to §63.670, each owner or operator shall keep the records specified in paragraphs (i)(9)(i) through (xii) of this section up-to-date and readily accessible, as applicable.
  - (i) Retain records of the output of the monitoring device used to detect the presence of a pilot flame as required in §63.670(b) for a minimum of 2 years. Retain records of each 15-minute block during which there was at least one minute that no pilot flame is present when regulated material is routed to a flare for a minimum of 5 years.
  - (ii) Retain records of daily visible emissions observations or video surveillance images required in §63.670(h) as specified in the paragraphs (i)(9)(ii)(A) through (C), as applicable, for a minimum of 3 years.
    - (A) If visible emissions observations are performed using Method 22 at 40 CFR part 60, appendix A-7, the record must identify whether the visible emissions observation was performed, the results of each observation, total duration of observed visible emissions, and whether it was a 5-minute or 2-hour observation. If the owner or operator performs visible emissions observations more than one time during a day, the record must also identify the date and time of day each visible emissions observation was performed.
    - (B) If video surveillance camera is used, the record must include all video surveillance images recorded, with time and date stamps.
    - (C) For each 2 hour period for which visible emissions are observed for more than 5 minutes in 2 consecutive hours, the record must include the date and time of the 2 hour period and an estimate of the cumulative number of minutes in the 2 hour period for which emissions were visible.
  - (iii) The 15-minute block average cumulative flows for flare vent gas and, if applicable, total steam, perimeter assist air, and premix assist air specified to be monitored under §63.670(i), along with the date and time interval for the 15-minute

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block. If multiple monitoring locations are used to determine cumulative vent gas flow, total steam, perimeter assist air, and premix assist air, retain records of the 15-minute block average flows for each monitoring location for a minimum of 2 years, and retain the 15-minute block average cumulative flows that are used in subsequent calculations for a minimum of 5 years. If pressure and temperature monitoring is used, retain records of the 15-minute block average temperature, pressure and molecular weight of the flare vent gas or assist gas stream for each measurement location used to determine the 15-minute block average cumulative flows for a minimum of 2 years, and retain the 15-minute block average cumulative flows that are used in subsequent calculations for a minimum of 5 years.

(iv) The flare vent gas compositions specified to be monitored under §63.670(j). Retain records of individual component concentrations from each compositional analyses for a minimum of 2 years. If NHVvg analyzer is used, retain records of the 15-minute block average values for a minimum of 5 years.

(v) Each 15-minute block average operating parameter calculated following the methods specified in §63.670(k) through (n), as applicable.

(vi) [Reserved]

(vii) All periods during which operating values are outside of the applicable operating limits specified in §63.670(d) through (f) when regulated material is being routed to the flare.

(viii) All periods during which the owner or operator does not perform flare monitoring according to the procedures in §63.670(g) through (j).

(ix) Records of periods when there is flow of vent gas to the flare, but when there is no flow of regulated material to the flare, including the start and stop time and dates of periods of no regulated material flow.

(x) Records when the flow of vent gas exceeds the smokeless capacity of the flare, including start and stop time and dates of the flaring event.

(xi) Records of the root cause analysis and corrective action analysis conducted as required in §63.670(o)(3), including an identification of the affected facility, the date and duration of the event, a statement noting whether the event resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under §63.670(o)(5)(i).

(xii) For any corrective action analysis for which implementation of corrective actions are required in §63.670(o)(5), a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(10) [Reserved]

(11) For each pressure relief device subject to the pressure release management work practice standards in §63.648(j)(3), the owner or operator shall keep the records specified in paragraphs (i)(11)(i) through (iii) of this section.

(i) Records of the prevention measures implemented as required in §63.648(j)(3)(ii), if applicable.

(ii) Records of the number of releases during each calendar year and the number of those releases for which the root cause was determined to be a force majeure event. Keep these records for the current calendar year and the past five calendar years.

(iii) For each release to the atmosphere, the owner or operator shall keep the records specified in paragraphs (i)(11)(iii)(A) through (D) of this section.

(A) The start and end time and date of each pressure release to the atmosphere.

(B) Records of any data, assumptions, and calculations used to estimate of the mass quantity of each organic HAP released during the event.



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(C) Records of the root cause analysis and corrective action analysis conducted as required in §63.648(j)(3)(iii), including an identification of the affected facility, the date and duration of the event, a statement noting whether the event resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under §63.648(j)(7)(i).

(D) For any corrective action analysis for which implementation of corrective actions are required in §63.648(j)(7), a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(12) For each maintenance vent opening subject to the requirements in §63.643(c), the owner or operator shall keep the applicable records specified in (i)(12)(i) through (v) of this section.

(i) The owner or operator shall maintain standard site procedures used to deinventory equipment for safety purposes (e.g., hot work or vessel entry procedures) to document the procedures used to meet the requirements in §63.643(c). The current copy of the procedures shall be retained and available on-site at all times. Previous versions of the standard site procedures, if applicable, shall be retained for five years.

(ii) If complying with the requirements of §63.643(c)(1)(i) and the lower explosive limit at the time of the vessel opening exceeds 10 percent, identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and the lower explosive limit at the time of the vessel opening.

(iii) If complying with the requirements of §63.643(c)(1)(ii) and either the vessel pressure at the time of the vessel opening exceeds 5 psig or the lower explosive limit at the time of the active purging was initiated exceeds 10 percent, identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, the pressure of the vessel or equipment at the time of discharge to the atmosphere and, if applicable, the lower explosive limit of the vapors in the equipment when active purging was initiated.

(iv) If complying with the requirements of §63.643(c)(1)(iii), identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and records used to estimate the total quantity of VOC in the equipment at the time the maintenance vent was opened to the atmosphere for each applicable maintenance vent opening.

(v) If complying with the requirements of §63.643(c)(1)(iv), identification of the maintenance vent, the process units or equipment associated with the maintenance vent, records documenting the lack of a pure hydrogen supply, the date of maintenance vent opening, and the lower explosive limit of the vapors in the equipment at the time of discharge to the atmosphere for each applicable maintenance vent opening.

[60 FR 43260, Aug. 18, 1995, as amended at 61 FR 29881, June 12, 1996; 63 FR 44141, Aug. 18, 1998. Redesignated and amended at 74 FR 55686, 55687, Oct. 28, 2009; 75 FR 37731, June 30, 2010; 78 FR 37148, June 20, 2013; 80 FR 75246, Dec. 1, 2015; 81 FR 45241, July 13, 2016]

**# 127 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.658]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**  
**Fenceline monitoring provisions**

(a) The owner or operator shall conduct sampling along the facility property boundary and analyze the samples in accordance with Methods 325A and 325B of appendix A of this part and paragraphs (b) through (k) of this section.

(b) The target analyte is benzene.

(c) The owner or operator shall determine passive monitor locations in accordance with Section 8.2 of Method 325A of appendix A of this part.

(1) As it pertains to this subpart, known sources of VOCs, as used in Section 8.2.1.3 in Method 325A of appendix A of this part for siting passive monitors, means a wastewater treatment unit, process unit, or any emission source requiring control according to the requirements of this subpart, including marine vessel loading operations. For marine vessel loading operations, one passive monitor should be sited on the shoreline adjacent to the dock.

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(2) The owner or operator may collect one or more background samples if the owner or operator believes that an offsite upwind source or an onsite source excluded under §63.640(g) may influence the sampler measurements. If the owner or operator elects to collect one or more background samples, the owner or operator must develop and submit a site-specific monitoring plan for approval according to the requirements in paragraph (i) of this section. Upon approval of the site-specific monitoring plan, the background sampler(s) should be operated co-currently with the routine samplers.

(3) The owner or operator shall collect at least one co-located duplicate sample for every 10 field samples per sampling period and at least two field blanks per sampling period, as described in Section 9.3 in Method 325A of appendix A of this part. The co-located duplicates may be collected at any one of the perimeter sampling locations.

(4) The owner or operator shall follow the procedure in Section 9.6 of Method 325B of appendix A of this part to determine the detection limit of benzene for each sampler used to collect samples, background samples (if the owner or operator elects to do so), co-located samples and blanks.

(d) The owner or operator shall collect and record meteorological data according to the applicable requirements in paragraphs (d)(1) through (3) of this section.

(1) If a near-field source correction is used as provided in paragraph (i)(1) of this section or if an alternative test method is used that provides time-resolved measurements, the owner or operator shall:

(i) Use an on-site meteorological station in accordance with Section 8.3 of Method 325A of appendix A of this part.

(ii) Collect and record hourly average meteorological data, including temperature, barometric pressure, wind speed and wind direction and calculate daily unit vector wind direction and daily sigma theta.

(2) For cases other than those specified in paragraph (d)(1) of this section, the owner or operator shall collect and record sampling period average temperature and barometric pressure using either an on-site meteorological station in accordance with Section 8.3 of Method 325A of appendix A of this part or, alternatively, using data from a United States Weather Service (USWS) meteorological station provided the USWS meteorological station is within 40 kilometers (25 miles) of the refinery.

(3) If an on-site meteorological station is used, the owner or operator shall follow the calibration and standardization procedures for meteorological measurements in EPA-454/B-08-002 (incorporated by reference—see §63.14).

(e) The owner or operator shall use a sampling period and sampling frequency as specified in paragraphs (e)(1) through (3) of this section.

(1) Sampling period. A 14-day sampling period shall be used, unless a shorter sampling period is determined to be necessary under paragraph (g) or (i) of this section. A sampling period is defined as the period during which sampling tube is deployed at a specific sampling location with the diffusive sampling end cap in-place and does not include the time required to analyze the sample. For the purpose of this subpart, a 14-day sampling period may be no shorter than 13 calendar days and no longer than 15 calendar days, but the routine sampling period shall be 14 calendar days.

(2) Base sampling frequency. Except as provided in paragraph (e)(3) of this section, the frequency of sample collection shall be once each contiguous 14-day sampling period, such that the beginning of the next 14-day sampling period begins immediately upon the completion of the previous 14-day sampling period.

(3) Alternative sampling frequency for burden reduction. When an individual monitor consistently achieves results at or below  $0.9 \mu\text{g}/\text{m}^3$ , the owner or operator may elect to use the applicable minimum sampling frequency specified in paragraphs (e)(3)(i) through (v) of this section for that monitoring site. When calculating delta c for the monitoring period when using this alternative for burden reduction, zero shall be substituted for the sample result for the monitoring site for any period where a sample is not taken.

(i) If every sample at a monitoring site is at or below  $0.9 \mu\text{g}/\text{m}^3$  for 2 years (52 consecutive samples), every other sampling period can be skipped for that monitoring site, i.e., sampling will occur approximately once per month.

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(ii) If every sample at a monitoring site that is monitored at the frequency specified in paragraph (e)(3)(i) of this section is at or below  $0.9 \mu\text{g}/\text{m}^3$  for 2 years (i.e., 26 consecutive "monthly" samples), five 14-day sampling periods can be skipped for that monitoring site following each period of sampling, i.e., sampling will occur approximately once per quarter.

(iii) If every sample at a monitoring site that is monitored at the frequency specified in paragraph (e)(3)(ii) of this section is at or below  $0.9 \mu\text{g}/\text{m}^3$  for 2 years (i.e., 8 consecutive quarterly samples), twelve 14-day sampling periods can be skipped for that monitoring site following each period of sampling, i.e., sampling will occur twice a year.

(iv) If every sample at a monitoring site that is monitored at the frequency specified in paragraph (e)(3)(iii) of this section is at or below  $0.9 \mu\text{g}/\text{m}^3$  for an 2 years (i.e., 4 consecutive semi-annual samples), only one sample per year is required for that monitoring site. For yearly sampling, samples shall occur at least 10 months but no more than 14 months apart.

(v) If at any time a sample for a monitoring site that is monitored at the frequency specified in paragraphs (e)(3)(i) through (iv) of this section returns a result that is above  $0.9 \mu\text{g}/\text{m}^3$ , the sampling site must return to the original sampling requirements of contiguous 14-day sampling periods with no skip periods for one quarter (six 14-day sampling periods). If every sample collected during this quarter is at or below  $0.9 \mu\text{g}/\text{m}^3$ , the owner or operator may revert back to the reduced monitoring schedule applicable for that monitoring site prior to the sample reading exceeding  $0.9 \mu\text{g}/\text{m}^3$ . If any sample collected during this quarter is above  $0.9 \mu\text{g}/\text{m}^3$ , that monitoring site must return to the original sampling requirements of contiguous 14-day sampling periods with no skip periods for a minimum of two years. The burden reduction requirements can be used again for that monitoring site once the requirements of paragraph (e)(3)(i) of this section are met again, i.e., after 52 contiguous 14-day samples with no results above  $0.9 \mu\text{g}/\text{m}^3$ .

(f) Within 45 days of completion of each sampling period, the owner or operator shall determine whether the results are above or below the action level as follows:

(1) The owner or operator shall determine the facility impact on the benzene concentration ( $\Delta c$ ) for each 14-day sampling period according to either paragraph (f)(1)(i) or (ii) of this section, as applicable.

(i) Except when near-field source correction is used as provided in paragraph (i) of this section, the owner or operator shall determine the highest and lowest sample results for benzene concentrations from the sample pool and calculate  $\Delta c$  as the difference in these concentrations. The owner or operator shall adhere to the following procedures when one or more samples for the sampling period are below the method detection limit for benzene:

(A) If the lowest detected value of benzene is below detection, the owner or operator shall use zero as the lowest sample result when calculating  $\Delta c$ .

(B) If all sample results are below the method detection limit, the owner or operator shall use the method detection limit as the highest sample result.

(ii) When near-field source correction is used as provided in paragraph (i) of this section, the owner or operator shall determine  $\Delta c$  using the calculation protocols outlined in the approved site-specific monitoring plan and in paragraph (i) of this section.

(2) The owner or operator shall calculate the annual average  $\Delta c$  based on the average of the 26 most recent 14-day sampling periods. The owner or operator shall update this annual average value after receiving the results of each subsequent 14-day sampling period.

(3) The action level for benzene is 9 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) on an annual average basis. If the annual average  $\Delta c$  value for benzene is less than or equal to  $9 \mu\text{g}/\text{m}^3$ , the concentration is below the action level. If the annual average  $\Delta c$  value for benzene is greater than  $9 \mu\text{g}/\text{m}^3$ , the concentration is above the action level, and the owner or operator shall conduct a root cause analysis and corrective action in accordance with paragraph (g) of this section.

(g) Within 5 days of determining that the action level has been exceeded for any annual average  $\Delta c$  and no longer than 50 days after completion of the sampling period, the owner or operator shall initiate a root cause analysis to determine the cause of such exceedance and to determine appropriate corrective action, such as those described in paragraphs (g)(1)

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through (4) of this section. The root cause analysis and initial corrective action analysis shall be completed and initial corrective actions taken no later than 45 days after determining there is an exceedance. Root cause analysis and corrective action may include, but is not limited to:

- (1) Leak inspection using Method 21 of part 60, appendix A-7 of this chapter and repairing any leaks found.
  - (2) Leak inspection using optical gas imaging and repairing any leaks found.
  - (3) Visual inspection to determine the cause of the high benzene emissions and implementing repairs to reduce the level of emissions.
  - (4) Employing progressively more frequent sampling, analysis and meteorology (e.g., using shorter sampling periods for Methods 325A and 325B of appendix A of this part, or using active sampling techniques).
- (h) If, upon completion of the corrective action analysis and corrective actions such as those described in paragraph (g) of this section, the delta c value for the next 14-day sampling period for which the sampling start time begins after the completion of the corrective actions is greater than  $9 \mu\text{g}/\text{m}^3$  or if all corrective action measures identified require more than 45 days to implement, the owner or operator shall develop a corrective action plan that describes the corrective action(s) completed to date, additional measures that the owner or operator proposes to employ to reduce fence-line concentrations below the action level, and a schedule for completion of these measures. The owner or operator shall submit the corrective action plan to the Administrator within 60 days after receiving the analytical results indicating that the delta c value for the 14-day sampling period following the completion of the initial corrective action is greater than  $9 \mu\text{g}/\text{m}^3$  or, if no initial corrective actions were identified, no later than 60 days following the completion of the corrective action analysis required in paragraph (g) of this section.
- (i) An owner or operator may request approval from the Administrator for a site-specific monitoring plan to account for offsite upwind sources or onsite sources excluded under §63.640(g) according to the requirements in paragraphs (i)(1) through (4) of this section.
- (1) The owner or operator shall prepare and submit a site-specific monitoring plan and receive approval of the site-specific monitoring plan prior to using the near-field source alternative calculation for determining delta c provided in paragraph (i)(2) of this section. The site-specific monitoring plan shall include, at a minimum, the elements specified in paragraphs (i)(1)(i) through (v) of this section. The procedures in Section 12 of Method 325A of appendix A of this part are not required, but may be used, if applicable, when determining near-field source contributions.
    - (i) Identification of the near-field source or sources. For onsite sources, documentation that the onsite source is excluded under §63.640(g) and identification of the specific provision in §63.640(g) that applies to the source.
    - (ii) Location of the additional monitoring stations that shall be used to determine the uniform background concentration and the near-field source concentration contribution.
    - (iii) Identification of the fence-line monitoring locations impacted by the near-field source. If more than one near-field source is present, identify the near-field source or sources that are expected to contribute to the concentration at that monitoring location.
    - (iv) A description of (including sample calculations illustrating) the planned data reduction and calculations to determine the near-field source concentration contribution for each monitoring location.
    - (v) If more frequent monitoring or a monitoring station other than a passive diffusive tube monitoring station is proposed, provide a detailed description of the measurement methods, measurement frequency, and recording frequency for determining the uniform background or near-field source concentration contribution.
  - (2) When an approved site-specific monitoring plan is used, the owner or operator shall determine delta c for comparison with the  $9 \mu\text{g}/\text{m}^3$  action level using the requirements specified in paragraphs (i)(2)(i) through (iii) of this section.

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(i) For each monitoring location, calculate delta ci using the following equation.

$$\text{delta ci} = \text{MFCi} - \text{NFSi} - \text{UB}$$

Where:

delta ci = The fenceline concentration, corrected for background, at measurement location i, micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ).

MFCi = The measured fenceline concentration at measurement location i,  $\mu\text{g}/\text{m}^3$ .

NFSi = The near-field source contributing concentration at measurement location i determined using the additional measurements and calculation procedures included in the site-specific monitoring plan,  $\mu\text{g}/\text{m}^3$ . For monitoring locations that are not included in the site-specific monitoring plan as impacted by a near-field source, use NFSi = 0  $\mu\text{g}/\text{m}^3$ .

UB = The uniform background concentration determined using the additional measurements included in the site-specific monitoring plan,  $\mu\text{g}/\text{m}^3$ . If no additional measurements are specified in the site-specific monitoring plan for determining the uniform background concentration, use UB = 0  $\mu\text{g}/\text{m}^3$ .

(ii) When one or more samples for the sampling period are below the method detection limit for benzene, adhere to the following procedures:

(A) If the benzene concentration at the monitoring location used for the uniform background concentration is below the method detection limit, the owner or operator shall use zero for UB for that monitoring period.

(B) If the benzene concentration at the monitoring location(s) used to determine the near-field source contributing concentration is below the method detection limit, the owner or operator shall use zero for the monitoring location concentration when calculating NFSi for that monitoring period.

(C) If a fenceline monitoring location sample result is below the method detection limit, the owner or operator shall use the method detection limit as the sample result.

(iii) Determine delta c for the monitoring period as the maximum value of delta ci from all of the fenceline monitoring locations for that monitoring period.

(3) The site-specific monitoring plan shall be submitted and approved as described in paragraphs (i)(3)(i) through (iv) of this section.

(i) The site-specific monitoring plan must be submitted to the Administrator for approval.

(ii) The site-specific monitoring plan shall also be submitted to the following address: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, U.S. EPA Mailroom (E143-01), Attention: Refinery Sector Lead, 109 T.W. Alexander Drive, Research Triangle Park, NC 27711. Electronic copies in lieu of hard copies may also be submitted to refineryrtr@epa.gov.

(iii) The Administrator shall approve or disapprove the plan in 90 days. The plan shall be considered approved if the Administrator either approves the plan in writing, or fails to disapprove the plan in writing. The 90-day period shall begin when the Administrator receives the plan.

(iv) If the Administrator finds any deficiencies in the site-specific monitoring plan and disapproves the plan in writing, the owner or operator may revise and resubmit the site-specific monitoring plan following the requirements in paragraphs (i)(3)(i) and (ii) of this section. The 90-day period starts over with the resubmission of the revised monitoring plan.

(4) The approval by the Administrator of a site-specific monitoring plan will be based on the completeness, accuracy and reasonableness of the request for a site-specific monitoring plan. Factors that the Administrator will consider in reviewing

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the request for a site-specific monitoring plan include, but are not limited to, those described in paragraphs (i)(4)(i) through (v) of this section.

- (i) The identification of the near-field source or sources. For onsite sources, the documentation provided that the onsite source is excluded under §63.640(g).
- (ii) The monitoring location selected to determine the uniform background concentration or an indication that no uniform background concentration monitor will be used.
- (iii) The location(s) selected for additional monitoring to determine the near-field source concentration contribution.
- (iv) The identification of the fenceline monitoring locations impacted by the near-field source or sources.
- (v) The appropriateness of the planned data reduction and calculations to determine the near-field source concentration contribution for each monitoring location.
- (vi) If more frequent monitoring is proposed, the adequacy of the description of the measurement and recording frequency proposed and the adequacy of the rationale for using the alternative monitoring frequency.
- (j) The owner or operator shall comply with the applicable recordkeeping and reporting requirements in §63.655(h) and (i).
- (k) As outlined in §63.7(f), the owner or operator may submit a request for an alternative test method. At a minimum, the request must follow the requirements outlined in paragraphs (k)(1) through (7) of this section.
  - (1) The alternative method may be used in lieu of all or a partial number of passive samplers required in Method 325A of appendix A of this part.
  - (2) The alternative method must be validated according to Method 301 in appendix A of this part or contain performance based procedures and indicators to ensure self-validation.
  - (3) The method detection limit must nominally be at least an order of magnitude below the action level, i.e., 0.9 µg/m<sup>3</sup> benzene. The alternate test method must describe the procedures used to provide field verification of the detection limit.
  - (4) The spatial coverage must be equal to or better than the spatial coverage provided in Method 325A of appendix A of this part.
    - (i) For path average concentration open-path instruments, the physical path length of the measurement shall be no more than a passive sample footprint (the spacing that would be provided by the sorbent traps when following Method 325A). For example, if Method 325A requires spacing monitors A and B 610 meters (2000 feet) apart, then the physical path length limit for the measurement at that portion of the fenceline shall be no more than 610 meters (2000 feet).
    - (ii) For range resolved open-path instrument or approach, the instrument or approach must be able to resolve an average concentration over each passive sampler footprint within the path length of the instrument.
    - (iii) The extra samplers required in Sections 8.2.1.3 of Method 325A may be omitted when they fall within the path length of an open-path instrument.
  - (5) At a minimum, non-integrating alternative test methods must provide a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
  - (6) For alternative test methods capable of real time measurements (less than a 5 minute sampling and analysis cycle), the alternative test method may allow for elimination of data points corresponding to outside emission sources for purpose of calculation of the high point for the two week average. The alternative test method approach must have wind speed, direction and stability class of the same time resolution and within the footprint of the instrument.
  - (7) For purposes of averaging data points to determine the delta c for the 14-day average high sample result, all results

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measured under the method detection limit must use the method detection limit. For purposes of averaging data points for the 14-day average low sample result, all results measured under the method detection limit must use zero.

[80 FR 75254, Dec. 1, 2015, as amended at 81 FR 45241, July 13, 2016]

**# 128 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.660]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Storage vessel provisions.**

On and after the applicable compliance date for a Group 1 storage vessel located at a new or existing source as specified in §63.640(h), the owner or operator of a Group 1 storage vessel that is part of a new or existing source shall comply with the requirements in subpart WW or SS of this part according to the requirements in paragraphs (a) through (i) of this section.

(a) As used in this section, all terms not defined in §63.641 shall have the meaning given them in subpart A, WW, or SS of this part. The definitions of "Group 1 storage vessel" (paragraph (2)) and "Storage vessel" in §63.641 shall apply in lieu of the definition of "Storage vessel" in §63.1061.

(1) An owner or operator may use good engineering judgment or test results to determine the stored liquid weight percent total organic HAP for purposes of group determination. Data, assumptions, and procedures used in the determination shall be documented.

(2) When an owner or operator and the Administrator do not agree on whether the annual average weight percent organic HAP in the stored liquid is above or below 4 percent for a storage vessel at an existing source or above or below 2 percent for a storage vessel at a new source, an appropriate method (based on the type of liquid stored) as published by EPA or a consensus-based standards organization shall be used. Consensus-based standards organizations include, but are not limited to, the following: ASTM International (100 Barr Harbor Drive, P.O. Box CB700, West Conshohocken, Pennsylvania 19428-B2959, (800) 262-1373, <http://www.astm.org>), the American National Standards Institute (ANSI, 1819 L Street NW., 6th Floor, Washington, DC 20036, (202) 293-8020, <http://www.ansi.org>), the American Gas Association (AGA, 400 North Capitol Street NW., 4th Floor, Washington, DC 20001, (202) 824-7000, <http://www.aga.org>), the American Society of Mechanical Engineers (ASME, Three Park Avenue, New York, NY 10016-5990, (800) 843-2763, <http://www.asme.org>), the American Petroleum Institute (API, 1220 L Street NW., Washington, DC 20005-4070, (202) 682-8000, <http://www.api.org>), and the North American Energy Standards Board (NAESB, 801 Travis Street, Suite 1675, Houston, TX 77002, (713) 356-0060, <http://www.naesb.org>).

(b) A floating roof storage vessel complying with the requirements of subpart WW of this part may comply with the control option specified in paragraph (b)(1) of this section and, if equipped with a ladder having at least one slotted leg, shall comply with one of the control options as described in paragraph (b)(2) of this section.

(1) In addition to the options presented in §§63.1063(a)(2)(viii)(A) and (B) and 63.1064, a floating roof storage vessel may comply with §63.1063(a)(2)(vii) using a flexible enclosure device and either a gasketed or welded cap on the top of the guidepole.

(2) Each opening through a floating roof for a ladder having at least one slotted leg shall be equipped with one of the configurations specified in paragraphs (b)(2)(i) through (iii) of this section.

(i) A pole float in the slotted leg and pole wipers for both legs. The wiper or seal of the pole float must be at or above the height of the pole wiper.

(ii) A ladder sleeve and pole wipers for both legs of the ladder.

(iii) A flexible enclosure device and either a gasketed or welded cap on the top of the slotted leg.

(c) For the purposes of this subpart, references shall apply as specified in paragraphs (c)(1) through (6) of this section.

(1) All references to "the proposal date for a referencing subpart" and "the proposal date of the referencing subpart" in subpart WW of this part mean June 30, 2014.

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- (2) All references to “promulgation of the referencing subpart” and “the promulgation date of the referencing subpart” in subpart WW of this part mean February 1, 2016.
- (3) All references to “promulgation date of standards for an affected source or affected facility under a referencing subpart” in subpart SS of this part mean February 1, 2016.
- (4) All references to “the proposal date of the relevant standard established pursuant to CAA section 112(f)” in subpart SS of this part mean June 30, 2014.
- (5) All references to “the proposal date of a relevant standard established pursuant to CAA section 112(d)” in subpart SS of this part mean July 14, 1994.
- (6) All references to the “required control efficiency” in subpart SS of this part mean reduction of organic HAP emissions by 95 percent or to an outlet concentration of 20 ppmv.
- (d) For an uncontrolled fixed roof storage vessel that commenced construction on or before June 30, 2014, and that meets the definition of “Group 1 storage vessel”, paragraph (2), in §63.641 but not the definition of “Group 1 storage vessel”, paragraph (1), in §63.641, the requirements of §63.982 and/or §63.1062 do not apply until the next time the storage vessel is completely emptied and degassed, or January 30, 2026, whichever occurs first.
- (e) Failure to perform inspections and monitoring required by this section shall constitute a violation of the applicable standard of this subpart.
- (f) References in §63.1066(a) to initial startup notification requirements do not apply.
- (g) References to the Notification of Compliance Status in §63.999(b) mean the Notification of Compliance Status required by §63.655(f).
- (h) References to the Periodic Reports in §§63.1066(b) and 63.999(c) mean the Periodic Report required by §63.655(g).
- (i) Owners or operators electing to comply with the requirements in subpart SS of this part for a Group 1 storage vessel must comply with the requirements in paragraphs (i)(1) through (3) of this section.
- (1) If a flare is used as a control device, the flare shall meet the requirements of §63.670 instead of the flare requirements in §63.987.
- (2) If a closed vent system contains a bypass line, the owner or operator shall comply with the provisions of either §63.983(a)(3)(i) or (ii) for each closed vent system that contains bypass lines that could divert a vent stream either directly to the atmosphere or to a control device that does not comply with the requirements in subpart SS of this part. Except as provided in paragraphs (i)(2)(i) and (ii) of this section, use of the bypass at any time to divert a Group 1 storage vessel to either directly to the atmosphere or to a control device that does not comply with the requirements in subpart SS of this part is an emissions standards violation. Equipment such as low leg drains and equipment subject to §63.648 are not subject to this paragraph (i)(2).
- (i) If planned routine maintenance of the control device cannot be performed during periods that storage vessel emissions are vented to the control device or when the storage vessel is taken out of service for inspections or other planned maintenance reasons, the owner or operator may bypass the control device.
- (ii) Periods for which storage vessel control device may be bypassed for planned routine maintenance of the control device shall not exceed 240 hours per calendar year.
- (3) If storage vessel emissions are routed to a fuel gas system or process, the fuel gas system or process shall be operating at all times when regulated emissions are routed to it. The exception in §63.984(a)(1) does not apply.

[80 FR 75257, Dec. 1, 2015]



**SECTION C. Site Level Requirements****# 129 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.670]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Requirements for flare control devices.**

On or before January 30, 2019, the owner or operator of a flare used as a control device for an emission point subject to this subpart shall meet the applicable requirements for flares as specified in paragraphs (a) through (q) of this section and the applicable requirements in §63.671. The owner or operator may elect to comply with the requirements of paragraph (r) of this section in lieu of the requirements in paragraphs (d) through (f) of this section, as applicable.

(a) [Reserved]

(b) Pilot flame presence. The owner or operator shall operate each flare with a pilot flame present at all times when regulated material is routed to the flare. Each 15-minute block during which there is at least one minute where no pilot flame is present when regulated material is routed to the flare is a deviation of the standard. Deviations in different 15-minute blocks from the same event are considered separate deviations. The owner or operator shall monitor for the presence of a pilot flame as specified in paragraph (g) of this section.

(c) Visible emissions. The owner or operator shall specify the smokeless design capacity of each flare and operate with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, when regulated material is routed to the flare and the flare vent gas flow rate is less than the smokeless design capacity of the flare. The owner or operator shall monitor for visible emissions from the flare as specified in paragraph (h) of this section.

(d) Flare tip velocity. For each flare, the owner or operator shall comply with either paragraph (d)(1) or (2) of this section, provided the appropriate monitoring systems are in-place, whenever regulated material is routed to the flare for at least 15-minutes and the flare vent gas flow rate is less than the smokeless design capacity of the flare.

(1) Except as provided in paragraph (d)(2) of this section, the actual flare tip velocity ( $V_{tip}$ ) must be less than 60 feet per second. The owner or operator shall monitor  $V_{tip}$  using the procedures specified in paragraphs (i) and (k) of this section.

(2)  $V_{tip}$  must be less than 400 feet per second and also less than the maximum allowed flare tip velocity ( $V_{max}$ ) as calculated according to the following equation. The owner or operator shall monitor  $V_{tip}$  using the procedures specified in paragraphs (i) and (k) of this section and monitor gas composition and determine  $NH_{Vg}$  using the procedures specified in paragraphs (j) and (l) of this section.

[Refer to 40 CFR 63.670(d)(2) for the equation]

Where:

$V_{max}$  = Maximum allowed flare tip velocity, ft/sec.

$NH_{Vg}$  = Net heating value of flare vent gas, as determined by paragraph (l)(4) of this section, Btu/scf.

1,212 = Constant.

850 = Constant.

(e) Combustion zone operating limits. For each flare, the owner or operator shall operate the flare to maintain the net heating value of flare combustion zone gas ( $NH_{Vcz}$ ) at or above 270 British thermal units per standard cubic feet (Btu/scf) determined on a 15-minute block period basis when regulated material is routed to the flare for at least 15-minutes. The owner or operator shall monitor and calculate  $NH_{Vcz}$  as specified in paragraph (m) of this section.

(f) Dilution operating limits for flares with perimeter assist air. For each flare actively receiving perimeter assist air, the owner or operator shall operate the flare to maintain the net heating value dilution parameter ( $NH_{Vdil}$ ) at or above 22 British thermal units per square foot (Btu/ft<sup>2</sup>) determined on a 15-minute block period basis when regulated material is being routed to the flare for at least 15-minutes. The owner or operator shall monitor and calculate  $NH_{Vdil}$  as specified in paragraph (n) of this section.

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(g) Pilot flame monitoring. The owner or operator shall continuously monitor the presence of the pilot flame(s) using a device (including, but not limited to, a thermocouple, ultraviolet beam sensor, or infrared sensor) capable of detecting that the pilot flame(s) is present.

(h) Visible emissions monitoring. The owner or operator shall monitor visible emissions while regulated materials are vented to the flare. An initial visible emissions demonstration must be conducted using an observation period of 2 hours using Method 22 at 40 CFR part 60, appendix A-7. Subsequent visible emissions observations must be conducted using either the methods in paragraph (h)(1) of this section or, alternatively, the methods in paragraph (h)(2) of this section. The owner or operator must record and report any instances where visible emissions are observed for more than 5 minutes during any 2 consecutive hours as specified in §63.655(g)(11)(ii).

(1) At least once per day, conduct visible emissions observations using an observation period of 5 minutes using Method 22 at 40 CFR part 60, appendix A-7. If at any time the owner or operator sees visible emissions, even if the minimum required daily visible emission monitoring has already been performed, the owner or operator shall immediately begin an observation period of 5 minutes using Method 22 at 40 CFR part 60, appendix A-7. If visible emissions are observed for more than one continuous minute during any 5-minute observation period, the observation period using Method 22 at 40 CFR part 60, appendix A-7 must be extended to 2 hours or until 5-minutes of visible emissions are observed.

(2) Use a video surveillance camera to continuously record (at least one frame every 15 seconds with time and date stamps) images of the flare flame and a reasonable distance above the flare flame at an angle suitable for visual emissions observations. The owner or operator must provide real-time video surveillance camera output to the control room or other continuously manned location where the camera images may be viewed at any time.

(i) Flare vent gas, steam assist and air assist flow rate monitoring. The owner or operator shall install, operate, calibrate, and maintain a monitoring system capable of continuously measuring, calculating, and recording the volumetric flow rate in the flare header or headers that feed the flare as well as any supplemental natural gas used. Different flow monitoring methods may be used to measure different gaseous streams that make up the flare vent gas provided that the flow rates of all gas streams that contribute to the flare vent gas are determined. If assist air or assist steam is used, the owner or operator shall install, operate, calibrate, and maintain a monitoring system capable of continuously measuring, calculating, and recording the volumetric flow rate of assist air and/or assist steam used with the flare. If pre-mix assist air and perimeter assist are both used, the owner or operator shall install, operate, calibrate, and maintain a monitoring system capable of separately measuring, calculating, and recording the volumetric flow rate of premix assist air and perimeter assist air used with the flare. Continuously monitoring fan speed or power and using fan curves is an acceptable method for continuously monitoring assist air flow rates.

(1) The flow rate monitoring systems must be able to correct for the temperature and pressure of the system and output parameters in standard conditions (i.e., a temperature of 20 °C (68 °F) and a pressure of 1 atmosphere).

(2) Mass flow monitors may be used for determining volumetric flow rate of flare vent gas provided the molecular weight of the flare vent gas is determined using compositional analysis as specified in paragraph (j) of this section so that the mass flow rate can be converted to volumetric flow at standard conditions using the following equation.

$$Q_{vol} = (Q_{mass})(385.3) / MW_t$$

Where:

$Q_{vol}$  = Volumetric flow rate, standard cubic feet per second.

$Q_{mass}$  = Mass flow rate, pounds per second.

385.3 = Conversion factor, standard cubic feet per pound-mole.

$MW_t$  = Molecular weight of the gas at the flow monitoring location, pounds per pound-mole.

(3) Mass flow monitors may be used for determining volumetric flow rate of assist air or assist steam. Use equation in

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paragraph (i)(2) of this section to convert mass flow rates to volumetric flow rates. Use a molecular weight of 18 pounds per pound-mole for assist steam and use a molecular weight of 29 pounds per pound-mole for assist air.

(4) Continuous pressure/temperature monitoring system(s) and appropriate engineering calculations may be used in lieu of a continuous volumetric flow monitoring systems provided the molecular weight of the gas is known. For assist steam, use a molecular weight of 18 pounds per pound-mole. For assist air, use a molecular weight of 29 pounds per pound-mole. For flare vent gas, molecular weight must be determined using compositional analysis as specified in paragraph (j) of this section.

(j) Flare vent gas composition monitoring. The owner or operator shall determine the concentration of individual components in the flare vent gas using either the methods provided in paragraph (j)(1) or (2) of this section, to assess compliance with the operating limits in paragraph (e) of this section and, if applicable, paragraphs (d) and (f) of this section. Alternatively, the owner or operator may elect to directly monitor the net heating value of the flare vent gas following the methods provided in paragraphs (j)(3) of this section and, if desired, may directly measure the hydrogen concentration in the flare vent gas following the methods provided in paragraphs (j)(4) of this section. The owner or operator may elect to use different monitoring methods for different gaseous streams that make up the flare vent gas using different methods provided the composition or net heating value of all gas streams that contribute to the flare vent gas are determined.

(1) Except as provided in paragraphs (j)(5) and (6) of this section, the owner or operator shall install, operate, calibrate, and maintain a monitoring system capable of continuously measuring (i.e., at least once every 15-minutes), calculating, and recording the individual component concentrations present in the flare vent gas.

(2) Except as provided in paragraphs (j)(5) and (6) of this section, the owner or operator shall install, operate, and maintain a grab sampling system capable of collecting an evacuated canister sample for subsequent compositional analysis at least once every eight hours while there is flow of regulated material to the flare. Subsequent compositional analysis of the samples must be performed according to Method 18 of 40 CFR part 60, appendix A-6, ASTM D6420-99 (Reapproved 2010), ASTM D1945-03 (Reapproved 2010), ASTM D1945-14 or ASTM UOP539-12 (all incorporated by reference—see §63.14).

(3) Except as provided in paragraphs (j)(5) and (6) of this section, the owner or operator shall install, operate, calibrate, and maintain a calorimeter capable of continuously measuring, calculating, and recording NHV<sub>g</sub> at standard conditions.

(4) If the owner or operator uses a continuous net heating value monitor according to paragraph (j)(3) of this section, the owner or operator may, at their discretion, install, operate, calibrate, and maintain a monitoring system capable of continuously measuring, calculating, and recording the hydrogen concentration in the flare vent gas.

(5) Direct compositional or net heating value monitoring is not required for purchased (“pipeline quality”) natural gas streams. The net heating value of purchased natural gas streams may be determined using annual or more frequent grab sampling at any one representative location. Alternatively, the net heating value of any purchased natural gas stream can be assumed to be 920 Btu/scf.

(6) Direct compositional or net heating value monitoring is not required for gas streams that have been demonstrated to have consistent composition (or a fixed minimum net heating value) according to the methods in paragraphs (j)(6)(i) through (v) of this section.

(i) The owner or operator shall submit to the Administrator a written application for an exemption from monitoring. The application must contain the following information:

(A) A description of the flare gas stream/system to be considered, including submission of a portion of the appropriate piping diagrams indicating the boundaries of the flare gas stream/system and the affected flare(s) to be considered;

(B) A statement that there are no crossover or entry points to be introduced into the flare gas stream/system (this should be shown in the piping diagrams) prior to the point where the flow rate of the gas streams is measured;

(C) An explanation of the conditions that ensure that the flare gas net heating value is consistent and, if flare gas

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net heating value is expected to vary (e.g., due to product loading of different material), the conditions expected to produce the flare gas with the lowest net heating value;

(D) The supporting test results from sampling the requested flare gas stream/system for the net heating value. Sampling data must include, at minimum, 2 weeks of daily measurement values (14 grab samples) for frequently operated flare gas streams/systems; for infrequently operated flare gas streams/systems, seven grab samples must be collected unless other additional information would support reduced sampling. If the flare gas stream composition can vary, samples must be taken during those conditions expected to result in lowest net heating value identified in paragraph (j)(6)(i)(C) of this section. The owner or operator shall determine net heating value for the gas stream using either gas composition analysis or net heating value monitor (with optional hydrogen concentration analyzer) according to the method provided in paragraph (l) of this section; and

(E) A description of how the 2 weeks (or seven samples for infrequently operated flare gas streams/systems) of monitoring results compares to the typical range of net heating values expected for the flare gas stream/system going to the affected flare (e.g., "the samples are representative of typical operating conditions of the flare gas stream going to the loading rack flare" or "the samples are representative of conditions expected to yield the lowest net heating value of the flare gas stream going to the loading rack flare").

(F) The net heating value to be used for all flows of the flare vent gas from the flare gas stream/system covered in the application. A single net heating value must be assigned to the flare vent gas either by selecting the lowest net heating value measured in the sampling program or by determining the 95th percent confidence interval on the mean value of all samples collected using the t-distribution statistic (which is 1.943 for 7 grab samples or 1.771 for 14 grab samples).

(ii) The effective date of the exemption is the date of submission of the information required in paragraph (j)(6)(i) of this section.

(iii) No further action is required unless refinery operating conditions change in such a way that affects the exempt fuel gas stream/system (e.g., the stream composition changes). If such a change occurs, the owner or operator shall follow the procedures in paragraph (j)(6)(iii)(A), (B), or (C) of this section.

(A) If the operation change results in a flare vent gas net heating value that is still within the range of net heating values included in the original application, the owner or operator shall determine the net heating value on a grab sample and record the results as proof that the net heating value assigned to the vent gas stream in the original application is still appropriate.

(B) If the operation change results in a flare vent gas net heating value that is lower than the net heating value assigned to the vent gas stream in the original application, the owner or operator may submit new information following the procedures of paragraph (j)(6)(i) of this section within 60 days (or within 30 days after the seventh grab sample is tested for infrequently operated process units).

(C) If the operation change results in a flare vent gas net heating value has greater variability in the flare gas stream/system such the owner or operator chooses not to submit new information to support an exemption, the owner or operator must begin monitoring the composition or net heat content of the flare vent gas stream using the methods in this section (i.e., grab samples every 8 hours until such time a continuous monitor, if elected, is installed).

(k) Calculation methods for cumulative flow rates and determining compliance with  $V_{tip}$  operating limits. The owner or operator shall determine  $V_{tip}$  on a 15-minute block average basis according to the following requirements.

(1) The owner or operator shall use design and engineering principles to determine the unobstructed cross sectional area of the flare tip. The unobstructed cross sectional area of the flare tip is the total tip area that vent gas can pass through. This area does not include any stability tabs, stability rings, and upper steam or air tubes because flare vent gas does not exit through them.

(2) The owner or operator shall determine the cumulative volumetric flow of flare vent gas for each 15-minute block average period using the data from the continuous flow monitoring system required in paragraph (i) of this section according to the following requirements, as applicable. If desired, the cumulative flow rate for a 15-minute block period only

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needs to include flow during those periods when regulated material is sent to the flare, but owners or operators may elect to calculate the cumulative flow rates across the entire 15-minute block period for any 15-minute block period where there is regulated material flow to the flare.

(i) Use set 15-minute time periods starting at 12 midnight to 12:15 a.m., 12:15 a.m. to 12:30 a.m. and so on concluding at 11:45 p.m. to midnight when calculating 15-minute block average flow volumes.

(ii) If continuous pressure/temperature monitoring system(s) and engineering calculations are used as allowed under paragraph (i)(4) of this section, the owner or operator shall, at a minimum, determine the 15-minute block average temperature and pressure from the monitoring system and use those values to perform the engineering calculations to determine the cumulative flow over the 15-minute block average period. Alternatively, the owner or operator may divide the 15-minute block average period into equal duration subperiods (e.g., three 5-minute periods) and determine the average temperature and pressure for each subperiod, perform engineering calculations to determine the flow for each subperiod, then add the volumetric flows for the subperiods to determine the cumulative volumetric flow of vent gas for the 15-minute block average period.

(3) The 15-minute block average  $V_{tip}$  shall be calculated using the following equation.

$$V_{tip} = Q_{cum} / \text{Area}(900)$$

Where:

$V_{tip}$  = Flare tip velocity, feet per second.

$Q_{cum}$  = Cumulative volumetric flow over 15-minute block average period, actual cubic feet.

Area = Unobstructed area of the flare tip, square feet.

900 = Conversion factor, seconds per 15-minute block average.

(4) If the owner or operator chooses to comply with paragraph (d)(2) of this section, the owner or operator shall also determine the net heating value of the flare vent gas following the requirements in paragraphs (j) and (l) of this section and calculate  $V_{max}$  using the equation in paragraph (d)(2) of this section in order to compare  $V_{tip}$  to  $V_{max}$  on a 15-minute block average basis.

(l) Calculation methods for determining flare vent gas net heating value. The owner or operator shall determine the net heating value of the flare vent gas (NHV<sub>g</sub>) based on the composition monitoring data on a 15-minute block average basis according to the following requirements.

(1) If compositional analysis data are collected as provided in paragraph (j)(1) or (2) of this section, the owner or operator shall determine NHV<sub>g</sub> of a specific sample by using the following equation.

[Refer to Regulation for equation]

Where:

NHV<sub>g</sub> = Net heating value of flare vent gas, Btu/scf.

$i$  = Individual component in flare vent gas.

$n$  = Number of components in flare vent gas.

$x_i$  = Concentration of component  $i$  in flare vent gas, volume fraction.

NHV <sub>$i$</sub>  = Net heating value of component  $i$  according to table 12 of this subpart, Btu/scf. If the component is not specified in table 12 of this subpart, the heats of combustion may be determined using any published values where the net enthalpy

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per mole of offgas is based on combustion at 25 °C and 1 atmosphere (or constant pressure) with offgas water in the gaseous state, but the standard temperature for determining the volume corresponding to one mole of vent gas is 20 °C.

(2) If direct net heating value monitoring data are collected as provided in paragraph (j)(3) of this section but a hydrogen concentration monitor is not used, the owner or operator shall use the direct output of the monitoring system(s) (in Btu/scf) to determine the NHV<sub>g</sub> for the sample.

(3) If direct net heating value monitoring data are collected as provided in paragraph (j)(3) of this section and hydrogen concentration monitoring data are collected as provided in paragraph (j)(4) of this section, the owner or operator shall use the following equation to determine NHV<sub>g</sub> for each sample measured via the net heating value monitoring system.

$$\text{NHV}_g = \text{NHV}_{\text{measured}} + 938x_{\text{H}_2}$$

Where:

NHV<sub>g</sub> = Net heating value of flare vent gas, Btu/scf.

NHV<sub>measured</sub> = Net heating value of flare vent gas stream as measured by the continuous net heating value monitoring system, Btu/scf.

x<sub>H<sub>2</sub></sub> = Concentration of hydrogen in flare vent gas at the time the sample was input into the net heating value monitoring system, volume fraction.

938 = Net correction for the measured heating value of hydrogen (1,212 - 274), Btu/scf.

(4) Use set 15-minute time periods starting at 12 midnight to 12:15 a.m., 12:15 a.m. to 12:30 a.m. and so on concluding at 11:45 p.m. to midnight when calculating 15-minute block averages.

(5) When a continuous monitoring system is used as provided in paragraph (j)(1) or (3) of this section and, if applicable, paragraph (j)(4) of this section, the owner or operator may elect to determine the 15-minute block average NHV<sub>g</sub> using either the calculation methods in paragraph (l)(5)(i) of this section or the calculation methods in paragraph (l)(5)(ii) of this section. The owner or operator may choose to comply using the calculation methods in paragraph (l)(5)(i) of this section for some flares at the petroleum refinery and comply using the calculation methods (l)(5)(ii) of this section for other flares. However, for each flare, the owner or operator must elect one calculation method that will apply at all times, and use that method for all continuously monitored flare vent streams associated with that flare. If the owner or operator intends to change the calculation method that applies to a flare, the owner or operator must notify the Administrator 30 days in advance of such a change.

(i) Feed-forward calculation method. When calculating NHV<sub>g</sub> for a specific 15-minute block:

(A) Use the results from the first sample collected during an event, (for periodic flare vent gas flow events) for the first 15-minute block associated with that event.

(B) If the results from the first sample collected during an event (for periodic flare vent gas flow events) are not available until after the second 15-minute block starts, use the results from the first sample collected during an event for the second 15-minute block associated with that event.

(C) For all other cases, use the results that are available from the most recent sample prior to the 15-minute block period for that 15-minute block period for all flare vent gas streams. For the purpose of this requirement, use the time that the results become available rather than the time the sample was collected. For example, if a sample is collected at 12:25 a.m. and the analysis is completed at 12:38 a.m., the results are available at 12:38 a.m. and these results would be used to determine compliance during the 15-minute block period from 12:45 a.m. to 1:00 a.m.

(ii) Direct calculation method. When calculating NHV<sub>g</sub> for a specific 15-minute block:

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(A) If the results from the first sample collected during an event (for periodic flare vent gas flow events) are not available until after the second 15-minute block starts, use the results from the first sample collected during an event for the first 15-minute block associated with that event.

(B) For all other cases, use the arithmetic average of all NHVg measurement data results that become available during a 15-minute block to calculate the 15-minute block average for that period. For the purpose of this requirement, use the time that the results become available rather than the time the sample was collected. For example, if a sample is collected at 12:25 a.m. and the analysis is completed at 12:38 a.m., the results are available at 12:38 a.m. and these results would be used to determine compliance during the 15-minute block period from 12:30 a.m. to 12:45 a.m.

(6) When grab samples are used to determine flare vent gas composition:

(i) Use the analytical results from the first grab sample collected for an event for all 15-minute periods from the start of the event through the 15-minute block prior to the 15-minute block in which a subsequent grab sample is collected.

(ii) Use the results from subsequent grab sampling events for all 15 minute periods starting with the 15-minute block in which the sample was collected and ending with the 15-minute block prior to the 15-minute block in which the next grab sample is collected. For the purpose of this requirement, use the time the sample was collected rather than the time the analytical results become available.

(7) If the owner or operator monitors separate gas streams that combine to comprise the total flare vent gas flow, the 15-minute block average net heating value shall be determined separately for each measurement location according to the methods in paragraphs (l)(1) through (6) of this section and a flow-weighted average of the gas stream net heating values shall be used to determine the 15-minute block average net heating value of the cumulative flare vent gas.

(m) Calculation methods for determining combustion zone net heating value. The owner or operator shall determine the net heating value of the combustion zone gas (NHVcz) as specified in paragraph (m)(1) or (2) of this section, as applicable.

(1) Except as specified in paragraph (m)(2) of this section, determine the 15-minute block average NHVcz based on the 15-minute block average vent gas and assist gas flow rates using the following equation. For periods when there is no assist steam flow or premix assist air flow,  $NHVcz = NHVg$ .

$$NHVcz = (Qvg)(NHVg) / (Qvg + Qs + Qa,premix)$$

Where:

NHVcz = Net heating value of combustion zone gas, Btu/scf.

NHVg = Net heating value of flare vent gas for the 15-minute block period, Btu/scf.

Qvg = Cumulative volumetric flow of flare vent gas during the 15-minute block period, scf.

Qs = Cumulative volumetric flow of total steam during the 15-minute block period, scf.

Qa,premix = Cumulative volumetric flow of premix assist air during the 15-minute block period, scf.

(2) Owners or operators of flares that use the feed-forward calculation methodology in paragraph (l)(5)(i) of this section and that monitor gas composition or net heating value in a location representative of the cumulative vent gas stream and that directly monitor supplemental natural gas flow additions to the flare must determine the 15-minute block average NHVcz using the following equation.

$$NHVcz = [(Qvg - QNG2 + QNG1) \times NHVg + (QNG2 - QNG1) \times NHVNG] / (Qvg + Qs + Qa,premix)$$

Where:

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NHVcz = Net heating value of combustion zone gas, Btu/scf.

NHVvg = Net heating value of flare vent gas for the 15-minute block period, Btu/scf.

Qvg = Cumulative volumetric flow of flare vent gas during the 15-minute block period, scf.

QNG2 = Cumulative volumetric flow of supplemental natural gas to the flare during the 15-minute block period, scf.

QNG1 = Cumulative volumetric flow of supplemental natural gas to the flare during the previous 15-minute block period, scf. For the first 15-minute block period of an event, use the volumetric flow value for the current 15-minute block period, i.e., QNG1=QNG2.

NHVNG = Net heating value of supplemental natural gas to the flare for the 15-minute block period determined according to the requirements in paragraph (j)(5) of this section, Btu/scf.

Qs = Cumulative volumetric flow of total steam during the 15-minute block period, scf.

Qa,premix = Cumulative volumetric flow of premix assist air during the 15-minute block period, scf.

(n) Calculation methods for determining the net heating value dilution parameter. The owner or operator shall determine the net heating value dilution parameter (NHVdil) as specified in paragraph (n)(1) or (2) of this section, as applicable.

(1) Except as specified in paragraph (n)(2) of this section, determine the 15-minute block average NHVdil based on the 15-minute block average vent gas and perimeter assist air flow rates using the following equation only during periods when perimeter assist air is used. For 15-minute block periods when there is no cumulative volumetric flow of perimeter assist air, the 15-minute block average NHVdil parameter does not need to be calculated.

$$\text{NHVdil} = [\text{Qvg} \times \text{Diam} \times \text{NHVvg}] / (\text{Qvg} + \text{Qs} + \text{Qa,premix} + \text{Qa,perimeter})$$

Where:

NHVdil = Net heating value dilution parameter, Btu/ft<sup>2</sup>.

NHVvg = Net heating value of flare vent gas determined for the 15-minute block period, Btu/scf.

Qvg = Cumulative volumetric flow of flare vent gas during the 15-minute block period, scf.

Diam = Effective diameter of the unobstructed area of the flare tip for flare vent gas flow, ft. Use the area as determined in paragraph (k)(1) of this section and determine the diameter as

$$\text{Diam} = 2 \times \text{square root of } (\text{Area}/\pi)$$

Qs = Cumulative volumetric flow of total steam during the 15-minute block period, scf.

Qa,premix = Cumulative volumetric flow of premix assist air during the 15-minute block period, scf.

Qa,perimeter = Cumulative volumetric flow of perimeter assist air during the 15-minute block period, scf.

(2) Owners or operators of flares that use the feed-forward calculation methodology in paragraph (l)(5)(i) of this section and that monitor gas composition or net heating value in a location representative of the cumulative vent gas stream and that directly monitor supplemental natural gas flow additions to the flare must determine the 15-minute block average NHVdil using the following equation only during periods when perimeter assist air is used. For 15-minute block periods when there is no cumulative volumetric flow of perimeter assist air, the 15-minute block average NHVdil parameter does not need to be calculated.

[Refer to regulation for equation]



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Where:

NHVdil = Net heating value dilution parameter, Btu/ft<sup>2</sup>.

NHVvg = Net heating value of flare vent gas determined for the 15-minute block period, Btu/scf.

Qvg = Cumulative volumetric flow of flare vent gas during the 15-minute block period, scf.

QNG2 = Cumulative volumetric flow of supplemental natural gas to the flare during the 15-minute block period, scf.

QNG1 = Cumulative volumetric flow of supplemental natural gas to the flare during the previous 15-minute block period, scf. For the first 15-minute block period of an event, use the volumetric flow value for the current 15-minute block period, i.e., QNG1 = QNG2.

NHVNG = Net heating value of supplemental natural gas to the flare for the 15-minute block period determined according to the requirements in paragraph (j)(5) of this section, Btu/scf.

Diam = Effective diameter of the unobstructed area of the flare tip for flare vent gas flow, ft. Use the area as determined in paragraph (k)(1) of this section and determine the diameter as

$$\text{Diam} = 2 \times \text{square root of } (\text{Area} / \text{pi})$$

Qs = Cumulative volumetric flow of total steam during the 15-minute block period, scf.

Qa,premix = Cumulative volumetric flow of premix assist air during the 15-minute block period, scf.

Qa,perimeter = Cumulative volumetric flow of perimeter assist air during the 15-minute block period, scf.

(o) Emergency flaring provisions. The owner or operator of a flare that has the potential to operate above its smokeless capacity under any circumstance shall comply with the provisions in paragraphs (o)(1) through (8) of this section.

(1) Develop a flare management plan to minimize flaring during periods of startup, shutdown, or emergency releases. The flare management plan must include the information described in paragraphs (o)(1)(i) through (vii) of this section.

(i) A listing of all refinery process units, ancillary equipment, and fuel gas systems connected to the flare for each affected flare.

(ii) An assessment of whether discharges to affected flares from these process units, ancillary equipment and fuel gas systems can be minimized or prevented during periods of startup, shutdown, or emergency releases. The flare minimization assessment must (at a minimum) consider the items in paragraphs (o)(1)(ii)(A) through (C) of this section. The assessment must provide clear rationale in terms of costs (capital and annual operating), natural gas offset credits (if applicable), technical feasibility, secondary environmental impacts and safety considerations for the selected minimization alternative(s) or a statement, with justifications, that flow reduction could not be achieved. Based upon the assessment, each owner or operator of an affected flare shall identify the minimization alternatives that it has implemented by the due date of the flare management plan and shall include a schedule for the prompt implementation of any selected measures that cannot reasonably be completed as of that date.

(A) Modification in startup and shutdown procedures to reduce the quantity of process gas discharge to the flare.

(B) Implementation of prevention measures listed for pressure relief devices in §63.648(j)(5) for each pressure relief device that can discharge to the flare.

(C) Installation of a flare gas recovery system or, for facilities that are fuel gas rich, a flare gas recovery system and a co-generation unit or combined heat and power unit.

(iii) A description of each affected flare containing the information in paragraphs (o)(1)(iii)(A) through (G) of this

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section.

(A) A general description of the flare, including whether it is a ground flare or elevated (including height), the type of assist system (e.g., air, steam, pressure, non-assisted), whether the flare is used on a routine basis or if it is only used during periods of startup, shutdown or emergency release, and whether the flare is equipped with a flare gas recovery system.

(B) The smokeless capacity of the flare based on design conditions. Note: A single value must be provided for the smokeless capacity of the flare.

(C) The maximum vent gas flow rate (hydraulic load capacity).

(D) The maximum supplemental gas flow rate.

(E) For flares that receive assist steam, the minimum total steam rate and the maximum total steam rate.

(F) For flares that receive assist air, an indication of whether the fan/blower is single speed, multi-fixed speed (e.g., high, medium, and low speeds), or variable speeds. For fans/blowers with fixed speeds, provide the estimated assist air flow rate at each fixed speed. For variable speeds, provide the design fan curve (e.g., air flow rate as a function of power input).

(G) Simple process flow diagram showing the locations of the flare following components of the flare: Flare tip (date installed, manufacturer, nominal and effective tip diameter, tip drawing); knockout or surge drum(s) or pot(s) (including dimensions and design capacities); flare header(s) and subheader(s); assist system; and ignition system.

(iv) Description and simple process flow diagram showing all gas lines (including flare waste gas, purge or sweep gas (as applicable), supplemental gas) that are associated with the flare. For purge, sweep, supplemental gas, identify the type of gas used. Designate which lines are exempt from composition or net heating value monitoring and why (e.g., natural gas, gas streams that have been demonstrated to have consistent composition, pilot gas). Designate which lines are monitored and identify on the process flow diagram the location and type of each monitor. Designate the pressure relief devices that are vented to the flare.

(v) For each flow rate, gas composition, net heating value or hydrogen concentration monitor identified in paragraph (o)(1)(iv) of this section, provide a detailed description of the manufacturer's specifications, including, but not limited to, make, model, type, range, precision, accuracy, calibration, maintenance and quality assurance procedures.

(vi) For each pressure relief device vented to the flare identified in paragraph (o)(1)(iv) of this section, provide a detailed description of each pressure release device, including type of relief device (rupture disc, valve type) diameter of the relief device opening, set pressure of the relief device and listing of the prevention measures implemented. This information may be maintained in an electronic database on-site and does not need to be submitted as part of the flare management plan unless requested to do so by the Administrator.

(vii) Procedures to minimize or eliminate discharges to the flare during the planned startup and shutdown of the refinery process units and ancillary equipment that are connected to the affected flare, together with a schedule for the prompt implementation of any procedures that cannot reasonably be implemented as of the date of the submission of the flare management plan.

(2) Each owner or operator required to develop and implement a written flare management plan as described in paragraph (o)(1) of this section must submit the plan to the Administrator as described in paragraphs (o)(2)(i) through (iii) of this section.

(i) The owner or operator must develop and implement the flare management plan no later than January 30, 2019 or at startup for a new flare that commenced construction on or after February 1, 2016.

(ii) The owner or operator must comply with the plan as submitted by the date specified in paragraph (o)(2)(i) of this section. The plan should be updated periodically to account for changes in the operation of the flare, such as new



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connections to the flare or the installation of a flare gas recovery system, but the plan need be re-submitted to the Administrator only if the owner or operator alters the design smokeless capacity of the flare. The owner or operator must comply with the updated plan as submitted.

(iii) All versions of the plan submitted to the Administrator shall also be submitted to the following address: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, U.S. EPA Mailroom (E143-01), Attention: Refinery Sector Lead, 109 T.W. Alexander Drive, Research Triangle Park, NC 27711. Electronic copies in lieu of hard copies may also be submitted to refineryRTR@epa.gov.

(3) The owner or operator of a flare subject to this subpart shall conduct a root cause analysis and a corrective action analysis for each flow event that contains regulated material and that meets either the criteria in paragraph (o)(3)(i) or (ii) of this section.

(i) The vent gas flow rate exceeds the smokeless capacity of the flare and visible emissions are present from the flare for more than 5 minutes during any 2 consecutive hours during the release event.

(ii) The vent gas flow rate exceeds the smokeless capacity of the flare and the 15-minute block average flare tip velocity exceeds the maximum flare tip velocity determined using the methods in paragraph (d)(2) of this section.

(4) A root cause analysis and corrective action analysis must be completed as soon as possible, but no later than 45 days after a flare flow event meeting the criteria in paragraph (o)(3)(i) or (ii) of this section. Special circumstances affecting the number of root cause analyses and/or corrective action analyses are provided in paragraphs (o)(4)(i) through (v) of this section.

(i) You may conduct a single root cause analysis and corrective action analysis for a single continuous flare flow event that meets both of the criteria in paragraphs (o)(3)(i) and (ii) of this section.

(ii) You may conduct a single root cause analysis and corrective action analysis for a single continuous flare flow event regardless of the number of 15-minute block periods in which the flare tip velocity was exceeded or the number of 2 hour periods that contain more the 5 minutes of visible emissions.

(iii) You may conduct a single root cause analysis and corrective action analysis for a single event that causes two or more flares that are operated in series (i.e., cascaded flare systems) to have a flow event meeting the criteria in paragraph (o)(3)(i) or (ii) of this section.

(iv) You may conduct a single root cause analysis and corrective action analysis for a single event that causes two or more flares to have a flow event meeting the criteria in paragraph (o)(3)(i) or (ii) of this section, regardless of the configuration of the flares, if the root cause is reasonably expected to be a force majeure event, as defined in this subpart.

(v) Except as provided in paragraphs (o)(4)(iii) and (iv) of this section, if more than one flare has a flow event that meets the criteria in paragraph (o)(3)(i) or (ii) of this section during the same time period, an initial root cause analysis shall be conducted separately for each flare that has a flow event meeting the criteria in paragraph (o)(3)(i) or (ii) of this section. If the initial root cause analysis indicates that the flow events have the same root cause(s), the initially separate root cause analyses may be recorded as a single root cause analysis and a single corrective action analysis may be conducted.

(5) Each owner or operator of a flare required to conduct a root cause analysis and corrective action analysis as specified in paragraphs (o)(3) and (4) of this section shall implement the corrective action(s) identified in the corrective action analysis in accordance with the applicable requirements in paragraphs (o)(5)(i) through (iii) of this section.

(i) All corrective action(s) must be implemented within 45 days of the event for which the root cause and corrective action analyses were required or as soon thereafter as practicable. If an owner or operator concludes that no corrective action should be implemented, the owner or operator shall record and explain the basis for that conclusion no later than 45 days following the event.

(ii) For corrective actions that cannot be fully implemented within 45 days following the event for which the root cause

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and corrective action analyses were required, the owner or operator shall develop an implementation schedule to complete the corrective action(s) as soon as practicable.

(iii) No later than 45 days following the event for which a root cause and corrective action analyses were required, the owner or operator shall record the corrective action(s) completed to date, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(6) The owner or operator shall determine the total number of events for which a root cause and corrective action analyses was required during the calendar year for each affected flare separately for events meeting the criteria in paragraph (o)(3)(i) of this section and those meeting the criteria in paragraph (o)(3)(ii) of this section. For the purpose of this requirement, a single root cause analysis conducted for an event that met both of the criteria in paragraphs (o)(3)(i) and (ii) of this section would be counted as an event under each of the separate criteria counts for that flare. Additionally, if a single root cause analysis was conducted for an event that caused multiple flares to meet the criteria in paragraph (o)(3)(i) or (ii) of this section, that event would count as an event for each of the flares for each criteria in paragraph (o)(3) of this section that was met during that event. The owner or operator shall also determine the total number of events for which a root cause and correct action analyses was required and the analyses concluded that the root cause was a force majeure event, as defined in this subpart.

(7) The following events would be a violation of this emergency flaring work practice standard.

(i) Any flow event for which a root cause analysis was required and the root cause was determined to be operator error or poor maintenance.

(ii) Two visible emissions exceedance events meeting the criteria in paragraph (o)(3)(i) of this section that were not caused by a force majeure event from a single flare in a 3 calendar year period for the same root cause for the same equipment.

(iii) Two flare tip velocity exceedance events meeting the criteria in paragraph (o)(3)(ii) of this section that were not caused by a force majeure event from a single flare in a 3 calendar year period for the same root cause for the same equipment.

(iv) Three visible emissions exceedance events meeting the criteria in paragraph (o)(3)(i) of this section that were not caused by a force majeure event from a single flare in a 3 calendar year period for any reason.

(v) Three flare tip velocity exceedance events meeting the criteria in paragraph (o)(3)(ii) of this section that were not caused by a force majeure event from a single flare in a 3 calendar year period for any reason.

(p) Flare monitoring records. The owner or operator shall keep the records specified in §63.655(i)(9).

(q) Reporting. The owner or operator shall comply with the reporting requirements specified in §63.655(g)(11).

(r) Alternative means of emissions limitation. An owner or operator may request approval from the Administrator for site-specific operating limits that shall apply specifically to a selected flare. Site-specific operating limits include alternative threshold values for the parameters specified in paragraphs (d) through (f) of this section as well as threshold values for operating parameters other than those specified in paragraphs (d) through (f) of this section. The owner or operator must demonstrate that the flare achieves 96.5 percent combustion efficiency (or 98 percent destruction efficiency) using the site-specific operating limits based on a performance evaluation as described in paragraph (r)(1) of this section. The request shall include information as described in paragraph (r)(2) of this section. The request shall be submitted and followed as described in paragraph (r)(3) of this section.

(1) The owner or operator shall prepare and submit a site-specific test plan and receive approval of the site-specific performance evaluation plan prior to conducting any flare performance evaluation test runs intended for use in developing site-specific operating limits. The site-specific performance evaluation plan shall include, at a minimum, the elements specified in paragraphs (r)(1)(i) through (ix) of this section. Upon approval of the site-specific performance evaluation plan, the owner or operator shall conduct performance evaluation test runs for the flare following the procedures described in the site-specific performance evaluation plan.

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(i) The design and dimensions of the flare, flare type (air-assisted only, steam-assisted only, air- and steam-assisted, pressure-assisted, or non-assisted), and description of gas being flared, including quantity of gas flared, frequency of flaring events (if periodic), expected net heating value of flare vent gas, minimum total steam assist rate.

(ii) The operating conditions (vent gas compositions, vent gas flow rates and assist flow rates, if applicable) likely to be encountered by the flare during normal operations and the operating conditions for the test period.

(iii) A description of (including sample calculations illustrating) the planned data reduction and calculations to determine the flare combustion or destruction efficiency.

(iv) Site-specific operating parameters to be monitored continuously during the flare performance evaluation. These parameters may include but are not limited to vent gas flow rate, steam and/or air assist flow rates, and flare vent gas composition. If new operating parameters are proposed for use other than those specified in paragraphs (d) through (f) of this section, an explanation of the relevance of the proposed operating parameter(s) as an indicator of flare combustion performance and why the alternative operating parameter(s) can adequately ensure that the flare achieves the required combustion efficiency.

(v) A detailed description of the measurement methods, monitored pollutant(s), measurement locations, measurement frequency, and recording frequency proposed for both emission measurements and flare operating parameters.

(vi) A description of (including sample calculations illustrating) the planned data reduction and calculations to determine the flare operating parameters.

(vii) The minimum number and length of test runs and range of operating values to be evaluated during the performance evaluation. A sufficient number of test runs shall be conducted to identify the point at which the combustion/destruction efficiency of the flare deteriorates.

(viii) [Reserved]

(ix) Test schedule.

(2) The request for flare-specific operating limits shall include sufficient and appropriate data, as determined by the Administrator, to allow the Administrator to confirm that the selected site-specific operating limit(s) adequately ensures that the flare destruction efficiency is 98 percent or greater or that the flare combustion efficiency is 96.5 percent or greater at all times. At a minimum, the request shall contain the information described in paragraphs (r)(2)(i) through (iv) of this section.

(i) The design and dimensions of the flare, flare type (air-assisted only, steam-assisted only, air- and steam-assisted, pressure-assisted, or non-assisted), and description of gas being flared, including quantity of gas flared, frequency of flaring events (if periodic), expected net heating value of flare vent gas, minimum total steam assist rate.

(ii) Results of each performance evaluation test run conducted, including, at a minimum:

(A) The measured combustion/destruction efficiency.

(B) The measured or calculated operating parameters for each test run. If operating parameters are calculated, the raw data from which the parameters are calculated must be included in the test report.

(C) Measurement location descriptions for both emission measurements and flare operating parameters.

(D) Description of sampling and analysis procedures (including number and length of test runs) and any modifications to standard procedures. If there were deviations from the approved test plan, a detailed description of the deviations and rationale why the test results or calculation procedures used are appropriate.

(E) Operating conditions (e.g., vent gas composition, assist rates, etc.) that occurred during the test.

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(F) Quality assurance procedures.

(G) Records of calibrations.

(H) Raw data sheets for field sampling.

(I) Raw data sheets for field and laboratory analyses.

(J) Documentation of calculations.

(iii) The selected flare-specific operating limit values based on the performance evaluation test results, including the averaging time for the operating limit(s), and rationale why the selected values and averaging times are sufficiently stringent to ensure proper flare performance. If new operating parameters or averaging times are proposed for use other than those specified in paragraphs (d) through (f) of this section, an explanation of why the alternative operating parameter(s) or averaging time(s) adequately ensures the flare achieves the required combustion efficiency.

(iv) The means by which the owner or operator will document on-going, continuous compliance with the selected flare-specific operating limit(s), including the specific measurement location and frequencies, calculation procedures, and records to be maintained.

(3) The request shall be submitted as described in paragraphs (r)(3)(i) through (iv) of this section.

(i) The owner or operator may request approval from the Administrator at any time upon completion of a performance evaluation conducted following the methods in an approved site-specific performance evaluation plan for an operating limit(s) that shall apply specifically to that flare.

(ii) The request must be submitted to the Administrator for approval. The owner or operator must continue to comply with the applicable standards for flares in this subpart until the requirements in §63.6(g)(1) are met and a notice is published in the Federal Register allowing use of such an alternative means of emission limitation.

(iii) The request shall also be submitted to the following address: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, U.S. EPA Mailroom (E143-01), Attention: Refinery Sector Lead, 109 T.W. Alexander Drive, Research Triangle Park, NC 27711. Electronic copies in lieu of hard copies may also be submitted to refineryrtr@epa.gov.

(iv) If the Administrator finds any deficiencies in the request, the request must be revised to address the deficiencies and be re-submitted for approval within 45 days of receipt of the notice of deficiencies. The owner or operator must comply with the revised request as submitted until it is approved.

(4) The approval process for a request for a flare-specific operating limit(s) is described in paragraphs (r)(4)(i) through (iii) of this section.

(i) Approval by the Administrator of a flare-specific operating limit(s) request will be based on the completeness, accuracy and reasonableness of the request. Factors that the EPA will consider in reviewing the request for approval include, but are not limited to, those described in paragraphs (r)(4)(i)(A) through (C) of this section.

(A) The description of the flare design and operating characteristics.

(B) If a new operating parameter(s) other than those specified in paragraphs (d) through (f) of this section is proposed, the explanation of how the proposed operating parameter(s) serves a good indicator(s) of flare combustion performance.

(C) The results of the flare performance evaluation test runs and the establishment of operating limits that ensures that the flare destruction efficiency is 98 percent or greater or that the flare combustion efficiency is 96.5 percent or greater at all times.

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(D) The completeness of the flare performance evaluation test report.

(ii) If the request is approved by the Administrator, a flare-specific operating limit(s) will be established at the level(s) demonstrated in the approved request.

(iii) If the Administrator finds any deficiencies in the request, the request must be revised to address the deficiencies and be re-submitted for approval.

[80 FR 75258, Dec. 1, 2015, as amended at 81 FR 45241, July 13, 2016]

**# 130 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.671]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Requirements for flare monitoring systems.**

(a) Operation of CPMS. For each CPMS installed to comply with applicable provisions in §63.670, the owner or operator shall install, operate, calibrate, and maintain the CPMS as specified in paragraphs (a)(1) through (8) of this section.

(1) Except for CPMS installed for pilot flame monitoring, all monitoring equipment must meet the applicable minimum accuracy, calibration and quality control requirements specified in table 13 of this subpart.

(2) The owner or operator shall ensure the readout (that portion of the CPMS that provides a visual display or record) or other indication of the monitored operating parameter from any CPMS required for compliance is readily accessible onsite for operational control or inspection by the operator of the source.

(3) All CPMS must complete a minimum of one cycle of operation (sampling, analyzing and data recording) for each successive 15-minute period.

(4) Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall operate all CPMS and collect data continuously at all times when regulated emissions are routed to the flare.

(5) The owner or operator shall operate, maintain, and calibrate each CPMS according to the CPMS monitoring plan specified in paragraph (b) of this section.

(6) For each CPMS except for CPMS installed for pilot flame monitoring, the owner or operator shall comply with the out-of-control procedures described in paragraph (c) of this section.

(7) The owner or operator shall reduce data from a CPMS as specified in paragraph (d) of this section.

(8) The CPMS must be capable of measuring the appropriate parameter over the range of values expected for that measurement location. The data recording system associated with each CPMS must have a resolution that is equal to or better than the required system accuracy.

(b) CPMS monitoring plan. The owner or operator shall develop and implement a CPMS quality control program documented in a CPMS monitoring plan that covers each flare subject to the provisions in §63.670 and each CPMS installed to comply with applicable provisions in §63.670. The owner or operator shall have the CPMS monitoring plan readily available on-site at all times and shall submit a copy of the CPMS monitoring plan to the Administrator upon request by the Administrator. The CPMS monitoring plan must contain the information listed in paragraphs (b)(1) through (5) of this section.

(1) Identification of the specific flare being monitored and the flare type (air-assisted only, steam-assisted only, air- and steam-assisted, pressure-assisted, or non-assisted).

(2) Identification of the parameter to be monitored by the CPMS and the expected parameter range, including worst case and normal operation.

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(3) Description of the monitoring equipment, including the information specified in paragraphs (b)(3)(i) through (vii) of this section.

(i) Manufacturer and model number for all monitoring equipment components installed to comply with applicable provisions in §63.670.

(ii) Performance specifications, as provided by the manufacturer, and any differences expected for this installation and operation.

(iii) The location of the CPMS sampling probe or other interface and a justification of how the location meets the requirements of paragraph (a)(1) of this section.

(iv) Placement of the CPMS readout, or other indication of parameter values, indicating how the location meets the requirements of paragraph (a)(2) of this section.

(v) Span of the CPMS. The span of the CPMS sensor and analyzer must encompass the full range of all expected values.

(vi) How data outside of the span of the CPMS will be handled and the corrective action that will be taken to reduce and eliminate such occurrences in the future.

(vii) Identification of the parameter detected by the parametric signal analyzer and the algorithm used to convert these values into the operating parameter monitored to demonstrate compliance, if the parameter detected is different from the operating parameter monitored.

(4) Description of the data collection and reduction systems, including the information specified in paragraphs (b)(4)(i) through (iii) of this section.

(i) A copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard and to calculate the applicable averages.

(ii) Identification of whether the algorithm excludes data collected during CPMS breakdowns, out-of-control periods, repairs, maintenance periods, instrument adjustments or checks to maintain precision and accuracy, calibration checks, and zero (low-level), mid-level (if applicable) and high-level adjustments.

(iii) If the data acquisition algorithm does not exclude data collected during CPMS breakdowns, out-of-control periods, repairs, maintenance periods, instrument adjustments or checks to maintain precision and accuracy, calibration checks, and zero (low-level), mid-level (if applicable) and high-level adjustments, a description of the procedure for excluding this data when the averages calculated as specified in paragraph (e) of this section are determined.

(5) Routine quality control and assurance procedures, including descriptions of the procedures listed in paragraphs (b)(5)(i) through (vi) of this section and a schedule for conducting these procedures. The routine procedures must provide an assessment of CPMS performance.

(i) Initial and subsequent calibration of the CPMS and acceptance criteria.

(ii) Determination and adjustment of the calibration drift of the CPMS.

(iii) Daily checks for indications that the system is responding. If the CPMS system includes an internal system check, the owner or operator may use the results to verify the system is responding, as long as the system provides an alarm to the owner or operator or the owner or operator checks the internal system results daily for proper operation and the results are recorded.

(iv) Preventive maintenance of the CPMS, including spare parts inventory.

(v) Data recording, calculations and reporting.



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(vi) Program of corrective action for a CPMS that is not operating properly.

(c) Out-of-control periods. For each CPMS installed to comply with applicable provisions in §63.670 except for CPMS installed for pilot flame monitoring, the owner or operator shall comply with the out-of-control procedures described in paragraphs (c)(1) and (2) of this section.

(1) A CPMS is out-of-control if the zero (low-level), mid-level (if applicable) or high-level calibration drift exceeds two times the accuracy requirement of table 13 of this subpart.

(2) When the CPMS is out of control, the owner or operator shall take the necessary corrective action and repeat all necessary tests that indicate 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 a performance check (e.g., calibration drift) that indicates an exceedance of the performance requirements established in this section is conducted. 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. The owner or operator shall not use data recorded during periods the CPMS is out of control in data averages and calculations, used to report emissions or operating levels, as specified in paragraph (d)(3) of this section.

(d) CPMS data reduction. The owner or operator shall reduce data from a CPMS installed to comply with applicable provisions in §63.670 as specified in paragraphs (d)(1) through (3) of this section.

(1) The owner or operator may round the data to the same number of significant digits used in that operating limit.

(2) Periods of non-operation of the process unit (or portion thereof) resulting in cessation of the emissions to which the monitoring applies must not be included in the 15-minute block averages.

(3) Periods when the CPMS is out of control must not be included in the 15-minute block averages.

(e) Additional requirements for gas chromatographs. For monitors used to determine compositional analysis for net heating value per §63.670(j)(1), the gas chromatograph must also meet the requirements of paragraphs (e)(1) through (3) of this section.

(1) The quality assurance requirements are in table 13 of this subpart.

(2) The calibration gases must meet one of the following options:

(i) The owner or operator must use a calibration gas or multiple gases that include all of compounds listed in paragraphs (e)(2)(i)(A) through (K) of this section that may be reasonably expected to exist in the flare gas stream and optionally include any of the compounds listed in paragraphs (e)(2)(i)(L) through (O) of this section. All of the calibration gases may be combined in one cylinder. If multiple calibration gases are necessary to cover all compounds, the owner or operator must calibrate the instrument on all of the gases.

(A) Hydrogen.

(B) Methane.

(C) Ethane.

(D) Ethylene.

(E) Propane.

(F) Propylene.

(G) n-Butane.

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(H) iso-Butane.

(I) Butene (general). It is not necessary to separately speciate butene isomers, but the net heating value of trans-butene must be used for co-eluting butene isomers.

(J) 1,3-Butadiene. It is not necessary to separately speciate butadiene isomers, but you must use the response factor and net heating value of 1,3-butadiene for co-eluting butadiene isomers.

(K) n-Pentane. Use the response factor for n-pentane to quantify all C5+ hydrocarbons.

(L) Acetylene (optional).

(M) Carbon monoxide (optional).

(N) Propadiene (optional).

(O) Hydrogen sulfide (optional).

(ii) The owner or operator must use a surrogate calibration gas consisting of hydrogen and C1 through C5 normal hydrocarbons. All of the calibration gases may be combined in one cylinder. If multiple calibration gases are necessary to cover all compounds, the owner or operator must calibrate the instrument on all of the gases.

(3) If the owner or operator chooses to use a surrogate calibration gas under paragraph (e)(2)(ii) of this section, the owner or operator must comply with paragraphs (e)(3)(i) and (ii) of this section.

(i) Use the response factor for the nearest normal hydrocarbon (i.e., n-alkane) in the calibration mixture to quantify unknown components detected in the analysis.

(ii) Use the response factor for n-pentane to quantify unknown components detected in the analysis that elute after n-pentane.

[80 FR 75266, Dec. 1, 2015]

**# 131 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.7]****Subpart A--General Provisions****Performance testing requirements.**

This condition is applicable to Sources 101A, 105, 106, 107, 108, 109, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 216, 217, 219, 220, 221, 222, & 224.

(a) Applicability and performance test dates. (1) The applicability of this section is set out in §63.1(a)(4).

(2) Except as provided in paragraph (a)(4) of this section, if required to do performance testing by a relevant standard, and unless a waiver of performance testing is obtained under this section or the conditions of paragraph (c)(3)(ii)(B) of this section apply, the owner or operator of the affected source must perform such tests within 180 days of the compliance date for such source.

(i)-(viii) [Reserved]

(ix) Except as provided in paragraph (a)(4) of this section, when an emission standard promulgated under this part is more stringent than the standard proposed (see §63.6(b)(3)), the owner or operator of a new or reconstructed source subject to that standard for which construction or reconstruction is commenced between the proposal and promulgation dates of the standard shall comply with performance testing requirements within 180 days after the standard's effective date, or within 180 days after startup of the source, whichever is later. If the promulgated standard is more stringent than the proposed standard, the owner or operator may choose to demonstrate compliance with either the proposed or the promulgated standard. If the owner or operator chooses to comply with the proposed standard initially, the owner or operator shall conduct a second performance test within 3 years and 180 days after the effective date of the standard, or after startup of



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the source, whichever is later, to demonstrate compliance with the promulgated standard.

(3) The Administrator may require an owner or operator to conduct performance tests at the affected source at any other time when the action is authorized by section 114 of the Act.

(4) If a force majeure is about to occur, occurs, or has occurred for which the affected owner or operator intends to assert a claim of force majeure:

(i) The owner or operator shall notify the Administrator, in writing as soon as practicable following the date the owner or operator first knew, or through due diligence should have known that the event may cause or caused a delay in testing beyond the regulatory deadline specified in paragraph (a)(2) or (a)(3) of this section, or elsewhere in this part, but the notification must occur before the performance test deadline unless the initial force majeure or a subsequent force majeure event delays the notice, and in such cases, the notification shall occur as soon as practicable.

(ii) The owner or operator shall provide to the Administrator a written description of the force majeure event and a rationale for attributing the delay in testing beyond the regulatory deadline to the force majeure; describe the measures taken or to be taken to minimize the delay; and identify a date by which the owner or operator proposes to conduct the performance test. The performance test shall be conducted as soon as practicable after the force majeure occurs.

(iii) The decision as to whether or not to grant an extension to the performance test deadline is solely within the discretion of the Administrator. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an extension as soon as practicable.

(iv) Until an extension of the performance test deadline has been approved by the Administrator under paragraphs (a)(4)(i), (a)(4)(ii), and (a)(4)(iii) of this section, the owner or operator of the affected facility remains strictly subject to the requirements of this part.

(b) Notification of performance test. (1) The owner or operator of an affected source must notify the Administrator in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin to allow the Administrator, upon request, to review and approve the site-specific test plan required under paragraph (c) of this section and to have an observer present during the test.

(2) In the event the owner or operator is unable to conduct the performance test on the date specified in the notification requirement specified in paragraph (b)(1) of this section due to unforeseeable circumstances beyond his or her control, the owner or operator must notify the Administrator as soon as practicable and without delay prior to the scheduled performance test date and specify the date when the performance test is rescheduled. This notification of delay in conducting the performance test shall not relieve the owner or operator of legal responsibility for compliance with any other applicable provisions of this part or with any other applicable Federal, State, or local requirement, nor will it prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(c) Quality assurance program. (1) The results of the quality assurance program required in this paragraph will be considered by the Administrator when he/she determines the validity of a performance test.

(2)(i) Submission of site-specific test plan. Before conducting a required performance test, the owner or operator of an affected source shall develop and, if requested by the Administrator, shall submit a site-specific test plan to the Administrator for approval. The test plan shall include a test program summary, the test schedule, data quality objectives, and both an internal and external quality assurance (QA) program. Data quality objectives are the pretest expectations of precision, accuracy, and completeness of data.

(ii) The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of test data precision; an example of internal QA is the sampling and analysis of replicate samples.

(iii) The performance testing shall include a test method performance audit (PA) during the performance test. The PAs consist of blind audit samples supplied by an accredited audit sample provider and analyzed during the performance test in order to provide a measure of test data bias. Gaseous audit samples are designed to audit the performance of the sampling system as well as the analytical system and must be collected by the sampling system during the compliance



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test just as the compliance samples are collected. If a liquid or solid audit sample is designed to audit the sampling system, it must also be collected by the sampling system during the compliance test. If multiple sampling systems or sampling trains are used during the compliance test for any of the test methods, the tester is only required to use one of the sampling systems per method to collect the audit sample. The audit sample must be analyzed by the same analyst using the same analytical reagents and analytical system and at the same time as the compliance samples. Retests are required when there is a failure to produce acceptable results for an audit sample. However, if the audit results do not affect the compliance or noncompliance status of the affected facility, the compliance authority may waive the reanalysis requirement, further audits, or retests and accept the results of the compliance test. Acceptance of the test results shall constitute a waiver of the reanalysis requirement, further audits, or retests. The compliance authority may also use the audit sample failure and the compliance test results as evidence to determine the compliance or noncompliance status of the affected facility. A blind audit sample is a sample whose value is known only to the sample provider and is not revealed to the tested facility until after they report the measured value of the audit sample. For pollutants that exist in the gas phase at ambient temperature, the audit sample shall consist of an appropriate concentration of the pollutant in air or nitrogen that can be introduced into the sampling system of the test method at or near the same entry point as a sample from the emission source. If no gas phase audit samples are available, an acceptable alternative is a sample of the pollutant in the same matrix that would be produced when the sample is recovered from the sampling system as required by the test method. For samples that exist only in a liquid or solid form at ambient temperature, the audit sample shall consist of an appropriate concentration of the pollutant in the same matrix that would be produced when the sample is recovered from the sampling system as required by the test method. An accredited audit sample provider (AASP) is an organization that has been accredited to prepare audit samples by an independent, third party accrediting body.

(A) The source owner, operator, or representative of the tested facility shall obtain an audit sample, if commercially available, from an AASP for each test method used for regulatory compliance purposes. No audit samples are required for the following test methods: Methods 3A and 3C of appendix A-3 of part 60 of this chapter; Methods 6C, 7E, 9, and 10 of appendix A-4 of part 60; Methods 18 and 19 of appendix A-6 of part 60; Methods 20, 22, and 25A of appendix A-7 of part 60; Methods 30A and 30B of appendix A-8 of part 60; and Methods 303, 318, 320, and 321 of appendix A of this part. If multiple sources at a single facility are tested during a compliance test event, only one audit sample is required for each method used during a compliance test. The compliance authority responsible for the compliance test may waive the requirement to include an audit sample if they believe that an audit sample is not necessary. "Commercially available" means that two or more independent AASPs have blind audit samples available for purchase. If the source owner, operator, or representative cannot find an audit sample for a specific method, the owner, operator, or representative shall consult the EPA Web site at the following URL, [www.epa.gov/ttn/emc](http://www.epa.gov/ttn/emc), to confirm whether there is a source that can supply an audit sample for that method. If the EPA Web site does not list an available audit sample at least 60 days prior to the beginning of the compliance test, the source owner, operator, or representative shall not be required to include an audit sample as part of the quality assurance program for the compliance test. When ordering an audit sample, the source owner, operator, or representative shall give the sample provider an estimate for the concentration of each pollutant that is emitted by the source or the estimated concentration of each pollutant based on the permitted level and the name, address, and phone number of the compliance authority. The source owner, operator, or representative shall report the results for the audit sample along with a summary of the emission test results for the audited pollutant to the compliance authority and shall report the results of the audit sample to the AASP. The source owner, operator, or representative shall make both reports at the same time and in the same manner or shall report to the compliance authority first and then report to the AASP. If the method being audited is a method that allows the samples to be analyzed in the field and the tester plans to analyze the samples in the field, the tester may analyze the audit samples prior to collecting the emission samples provided a representative of the compliance authority is present at the testing site. The tester may request, and the compliance authority may grant, a waiver to the requirement that a representative of the compliance authority must be present at the testing site during the field analysis of an audit sample. The source owner, operator, or representative may report the results of the audit sample to the compliance authority and then report the results of the audit sample to the AASP prior to collecting any emission samples. The test protocol and final test report shall document whether an audit sample was ordered and utilized and the pass/fail results as applicable.

(B) An AASP shall have and shall prepare, analyze, and report the true value of audit samples in accordance with a written technical criteria document that describes how audit samples will be prepared and distributed in a manner that will ensure the integrity of the audit sample program. An acceptable technical criteria document shall contain standard operating procedures for all of the following operations:

(1) Preparing the sample;

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- (2) Confirming the true concentration of the sample;
  - (3) Defining the acceptance limits for the results from a well qualified tester. This procedure must use well established statistical methods to analyze historical results from well qualified testers. The acceptance limits shall be set so that there is 95 percent confidence that 90 percent of well qualified labs will produce future results that are within the acceptance limit range;
  - (4) Providing the opportunity for the compliance authority to comment on the selected concentration level for an audit sample;
  - (5) Distributing the sample to the user in a manner that guarantees that the true value of the sample is unknown to the user;
  - (6) Recording the measured concentration reported by the user and determining if the measured value is within acceptable limits;
  - (7) Reporting the results from each audit sample in a timely manner to the compliance authority and to the source owner, operator, or representative by the AASP. The AASP shall make both reports at the same time and in the same manner or shall report to the compliance authority first and then report to the source owner, operator, or representative. The results shall include the name of the facility tested, the date on which the compliance test was conducted, the name of the company performing the sample collection, the name of the company that analyzed the compliance samples including the audit sample, the measured result for the audit sample, and whether the testing company passed or failed the audit. The AASP shall report the true value of the audit sample to the compliance authority. The AASP may report the true value to the source owner, operator, or representative if the AASP's operating plan ensures that no laboratory will receive the same audit sample twice.
  - (8) Evaluating the acceptance limits of samples at least once every two years to determine in consultation with the voluntary consensus standard body if they should be changed.
  - (9) Maintaining a database, accessible to the compliance authorities, of results from the audit that shall include the name of the facility tested, the date on which the compliance test was conducted, the name of the company performing the sample collection, the name of the company that analyzed the compliance samples including the audit sample, the measured result for the audit sample, the true value of the audit sample, the acceptance range for the measured value, and whether the testing company passed or failed the audit.
- (C) The accrediting body shall have a written technical criteria document that describes how it will ensure that the AASP is operating in accordance with the AASP technical criteria document that describes how audit samples are to be prepared and distributed. This document shall contain standard operating procedures for all of the following operations:
- (1) Checking audit samples to confirm their true value as reported by the AASP.
  - (2) Performing technical systems audits of the AASP's facilities and operating procedures at least once every two years.
  - (3) Providing standards for use by the voluntary consensus standard body to approve the accrediting body that will accredit the audit sample providers.
- (D) The technical criteria documents for the accredited sample providers and the accrediting body shall be developed through a public process guided by a voluntary consensus standards body (VCSB). The VCSB shall operate in accordance with the procedures and requirements in the Office of Management and Budget Circular A-119. A copy of Circular A-119 is available upon request by writing the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW., Washington, DC 20503, by calling (202) 395-6880 or downloading online at [http://standards.gov/standards\\_gov/a119.cfm](http://standards.gov/standards_gov/a119.cfm). The VCSB shall approve all accrediting bodies. The Administrator will review all technical criteria documents. If the technical criteria documents do not meet the minimum technical requirements in paragraphs (c)(2)(iii)(B) through (C) of this section, the technical criteria documents are not acceptable and the proposed audit sample program is not capable of producing audit samples of sufficient quality to be used in a compliance test. All acceptable technical criteria documents shall be posted on the EPA Web site at the following URL,

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<http://www.epa.gov/ttn/emc>.

(iv) The owner or operator of an affected source shall submit the site-specific test plan to the Administrator upon the Administrator's request at least 60 calendar days before the performance test is scheduled to take place, that is, simultaneously with the notification of intention to conduct a performance test required under paragraph (b) of this section, or on a mutually agreed upon date.

(v) The Administrator may request additional relevant information after the submittal of a site-specific test plan.

(3) Approval of site-specific test plan. (i) The Administrator will notify the owner or operator of approval or intention to deny approval of the site-specific test plan (if review of the site-specific test plan is requested) within 30 calendar days after receipt of the original plan and within 30 calendar days after receipt of any supplementary information that is submitted under paragraph (c)(3)(i)(B) of this section. Before disapproving any site-specific test plan, the Administrator will notify the applicant of the Administrator's intention to disapprove the plan together with—

(A) Notice of the information and findings on which the intended disapproval is based; and

(B) Notice of opportunity for the owner or operator to present, within 30 calendar days after he/she is notified of the intended disapproval, additional information to the Administrator before final action on the plan.

(ii) In the event that the Administrator fails to approve or disapprove the site-specific test plan within the time period specified in paragraph (c)(3)(i) of this section, the following conditions shall apply:

(A) If the owner or operator intends to demonstrate compliance using the test method(s) specified in the relevant standard or with only minor changes to those tests methods (see paragraph (e)(2)(i) of this section), the owner or operator must conduct the performance test within the time specified in this section using the specified method(s);

(B) If the owner or operator intends to demonstrate compliance by using an alternative to any test method specified in the relevant standard, the owner or operator is authorized to conduct the performance test using an alternative test method after the Administrator approves the use of the alternative method when the Administrator approves the site-specific test plan (if review of the site-specific test plan is requested) or after the alternative method is approved (see paragraph (f) of this section). However, the owner or operator is authorized to conduct the performance test using an alternative method in the absence of notification of approval 45 days after submission of the site-specific test plan or request to use an alternative method. The owner or operator is authorized to conduct the performance test within 60 calendar days after he/she is authorized to demonstrate compliance using an alternative test method. Notwithstanding the requirements in the preceding three sentences, the owner or operator may proceed to conduct the performance test as required in this section (without the Administrator's prior approval of the site-specific test plan) if he/she subsequently chooses to use the specified testing and monitoring methods instead of an alternative.

(iii) Neither the submission of a site-specific test plan for approval, nor the Administrator's approval or disapproval of a plan, nor the Administrator's failure to approve or disapprove a plan in a timely manner shall—

(A) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this part or with any other applicable Federal, State, or local requirement; or

(B) Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(d) Performance testing facilities. If required to do performance testing, the owner or operator of each new source and, at the request of the Administrator, the owner or operator of each existing source, shall provide performance testing facilities as follows:

(1) Sampling ports adequate for test methods applicable to such source. This includes:

(i) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures; and

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- (ii) Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures;
- (2) Safe sampling platform(s);
- (3) Safe access to sampling platform(s);
- (4) Utilities for sampling and testing equipment; and
- (5) Any other facilities that the Administrator deems necessary for safe and adequate testing of a source.
- (e) Conduct of performance tests.
  - (1) Not applicable.
  - (2) Performance tests shall be conducted and data shall be reduced in accordance with the test methods and procedures set forth in this section, in each relevant standard, and, if required, in applicable appendices of parts 51, 60, 61, and 63 of this chapter unless the Administrator—
    - (i) Specifies or approves, in specific cases, the use of a test method with minor changes in methodology (see definition in §63.90(a)). Such changes may be approved in conjunction with approval of the site-specific test plan (see paragraph (c) of this section); or
    - (ii) Approves the use of an intermediate or major change or alternative to a test method (see definitions in §63.90(a)), the results of which the Administrator has determined to be adequate for indicating whether a specific affected source is in compliance; or
    - (iii) Approves shorter sampling times or smaller sample volumes when necessitated by process variables or other factors; or
    - (iv) Waives the requirement for performance tests because the owner or operator of an affected source has demonstrated by other means to the Administrator's satisfaction that the affected source is in compliance with the relevant standard.
  - (3) Unless otherwise specified in a relevant standard or test method, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the relevant standard. For the purpose of determining compliance with a relevant standard, the arithmetic mean of the results of the three runs shall apply. Upon receiving approval from the Administrator, results of a test run may be replaced with results of an additional test run in the event that—
    - (i) A sample is accidentally lost after the testing team leaves the site; or
    - (ii) Conditions occur in which one of the three runs must be discontinued because of forced shutdown; or
    - (iii) Extreme meteorological conditions occur; or
    - (iv) Other circumstances occur that are beyond the owner or operator's control.
  - (4) Nothing in paragraphs (e)(1) through (e)(3) of this section shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.
  - (f) Use of an alternative test method—
    - (1) General. Until authorized to use an intermediate or major change or alternative to a test method, the owner or operator of an affected source remains subject to the requirements of this section and the relevant standard.
    - (2) The owner or operator of an affected source required to do performance testing by a relevant standard may use an alternative test method from that specified in the standard provided that the owner or operator—

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- (i) Notifies the Administrator of his or her intention to use an alternative test method at least 60 days before the performance test is scheduled to begin;
- (ii) Uses Method 301 in appendix A of this part to validate the alternative test method. This may include the use of specific procedures of Method 301 if use of such procedures are sufficient to validate the alternative test method; and
- (iii) Submits the results of the Method 301 validation process along with the notification of intention and the justification for not using the specified test method. The owner or operator may submit the information required in this paragraph well in advance of the deadline specified in paragraph (f)(2)(i) of this section to ensure a timely review by the Administrator in order to meet the performance test date specified in this section or the relevant standard.
- (3) The Administrator will determine whether the owner or operator's validation of the proposed alternative test method is adequate and issue an approval or disapproval of the alternative test method. If the owner or operator intends to demonstrate compliance by using an alternative to any test method specified in the relevant standard, the owner or operator is authorized to conduct the performance test using an alternative test method after the Administrator approves the use of the alternative method. However, the owner or operator is authorized to conduct the performance test using an alternative method in the absence of notification of approval/disapproval 45 days after submission of the request to use an alternative method and the request satisfies the requirements in paragraph (f)(2) of this section. The owner or operator is authorized to conduct the performance test within 60 calendar days after he/she is authorized to demonstrate compliance using an alternative test method. Notwithstanding the requirements in the preceding three sentences, the owner or operator may proceed to conduct the performance test as required in this section (without the Administrator's prior approval of the site-specific test plan) if he/she subsequently chooses to use the specified testing and monitoring methods instead of an alternative.
- (4) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative test method for the purposes of demonstrating compliance with a relevant standard, the Administrator may require the use of a test method specified in a relevant standard.
- (5) If the owner or operator uses an alternative test method for an affected source during a required performance test, the owner or operator of such source shall continue to use the alternative test method for subsequent performance tests at that affected source until he or she receives approval from the Administrator to use another test method as allowed under §63.7(f).
- (6) Neither the validation and approval process nor the failure to validate an alternative test method shall abrogate the owner or operator's responsibility to comply with the requirements of this part.
- (g) Data analysis, recordkeeping, and reporting. (1) Unless otherwise specified in a relevant standard or test method, or as otherwise approved by the Administrator in writing, results of a performance test shall include the analysis of samples, determination of emissions, and raw data. A performance test is "completed" when field sample collection is terminated. The owner or operator of an affected source shall report the results of the performance test to the Administrator before the close of business on the 60th day following the completion of the performance test, unless specified otherwise in a relevant standard or as approved otherwise in writing by the Administrator (see §63.9(i)). The results of the performance test shall be submitted as part of the notification of compliance status required under §63.9(h). Before a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall send the results of the performance test to the Administrator. After a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall send the results of the performance test to the appropriate permitting authority.
- (2) Contents of report (electronic or paper submitted copy). Unless otherwise specified in a relevant standard or test method, or as otherwise approved by the Administrator in writing, the report for a performance test shall include the elements identified in paragraphs (g)(2)(i) through (vi) of this section.
- (i) General identification information for the facility including a mailing address, the physical address, the owner or operator or responsible official (where applicable) and his/her email address, and the appropriate Federal Registry System (FRS) number for the facility.
- (ii) Purpose of the test including the applicable regulation requiring the test, the pollutant(s) and other parameters being



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measured, the applicable emission standard, and any process parameter component, and a brief process description.

(iii) Description of the emission unit tested including fuel burned, control devices, and vent characteristics; the appropriate source classification code (SCC); the permitted maximum process rate (where applicable); and the sampling location.

(iv) Description of sampling and analysis procedures used and any modifications to standard procedures, quality assurance procedures and results, record of process operating conditions that demonstrate the applicable test conditions are met, and values for any operating parameters for which limits were being set during the test.

(v) Where a test method requires you record or report, the following shall be included in your report: Record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, chain-of-custody documentation, and example calculations for reported results.

(vi) Identification of the company conducting the performance test including the primary office address, telephone number, and the contact for this test including his/her email address.

(3) For a minimum of 5 years after a performance test is conducted, the owner or operator shall retain and make available, upon request, for inspection by the Administrator the records or results of such performance test and other data needed to determine emissions from an affected source.

(h) Waiver of performance tests. (1) Until a waiver of a performance testing requirement has been granted by the Administrator under this paragraph, the owner or operator of an affected source remains subject to the requirements of this section.

(2) Individual performance tests may be waived upon written application to the Administrator if, in the Administrator's judgment, the source is meeting the relevant standard(s) on a continuous basis, or the source is being operated under an extension of compliance, or the owner or operator has requested an extension of compliance and the Administrator is still considering that request.

(3) Request to waive a performance test. (i) If a request is made for an extension of compliance under §63.6(i), the application for a waiver of an initial performance test shall accompany the information required for the request for an extension of compliance. If no extension of compliance is requested or if the owner or operator has requested an extension of compliance and the Administrator is still considering that request, the application for a waiver of an initial performance test shall be submitted at least 60 days before the performance test if the site-specific test plan under paragraph (c) of this section is not submitted.

(ii) If an application for a waiver of a subsequent performance test is made, the application may accompany any required compliance progress report, compliance status report, or excess emissions and continuous monitoring system performance report [such as those required under §63.6(i), §63.9(h), and §63.10(e) or specified in a relevant standard or in the source's title V permit], but it shall be submitted at least 60 days before the performance test if the site-specific test plan required under paragraph (c) of this section is not submitted.

(iii) Any application for a waiver of a performance test shall include information justifying the owner or operator's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the affected source performing the required test.

(4) Approval of request to waive performance test. The Administrator will approve or deny a request for a waiver of a performance test made under paragraph (h)(3) of this section when he/she—

(i) Approves or denies an extension of compliance under §63.6(i)(8); or

(ii) Approves or disapproves a site-specific test plan under §63.7(c)(3); or

(iii) Makes a determination of compliance following the submission of a required compliance status report or excess emissions and continuous monitoring systems performance report; or

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(iv) Makes a determination of suitable progress towards compliance following the submission of a compliance progress report, whichever is applicable.

(5) Approval of any waiver granted under this section shall not abrogate the Administrator's authority under the Act or in any way prohibit the Administrator from later canceling the waiver. The cancellation will be made only after notice is given to the owner or operator of the affected source.

[59 FR 12430, Mar. 16, 1994, as amended at 65 FR 62215, Oct. 17, 2000; 67 FR 16602, Apr. 5, 2002; 72 FR 27443, May 16, 2007; 75 FR 55655, Sept. 13, 2010; 79 FR 11277, Feb. 27, 2014; 81 FR 59825, Aug. 30, 2016]

**# 132 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.8]****Subpart A--General Provisions****Monitoring requirements.**

This condition is applicable to Sources 101A, 105, 106, 107, 108, 109, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 216, 217, 219, 220, 221, 222, & 224.

(a) Applicability. (1) The applicability of this section is set out in §63.1(a)(4).

(2) For the purposes of this part, all CMS required under relevant standards shall be subject to the provisions of this section upon promulgation of performance specifications for CMS as specified in the relevant standard or otherwise by the Administrator.

(3) [Reserved]

(4) Additional monitoring requirements for control devices used to comply with provisions in relevant standards of this part are specified in §63.11.

(b) Conduct of monitoring. (1) Monitoring shall be conducted as set forth in this section and the relevant standard(s) unless the Administrator—

(i) Specifies or approves the use of minor changes in methodology for the specified monitoring requirements and procedures (see §63.90(a) for definition); or

(ii) Approves the use of an intermediate or major change or alternative to any monitoring requirements or procedures (see §63.90(a) for definition).

(iii) Owners or operators with flares subject to §63.11(b) are not subject to the requirements of this section unless otherwise specified in the relevant standard.

(2)(i) When the emissions from two or more affected sources are combined before being released to the atmosphere, the owner or operator may install an applicable CMS for each emission stream or for the combined emissions streams, provided the monitoring is sufficient to demonstrate compliance with the relevant standard.

(ii) If the relevant standard is a mass emission standard and the emissions from one affected source are released to the atmosphere through more than one point, the owner or operator must install an applicable CMS at each emission point unless the installation of fewer systems is—

(A) Approved by the Administrator; or

(B) Provided for in a relevant standard (e.g., instead of requiring that a CMS be installed at each emission point before the effluents from those points are channeled to a common control device, the standard specifies that only one CMS is required to be installed at the vent of the control device).

(3) When more than one CMS is used to measure the emissions from one affected source (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required for each CMS. However, when one CMS is used as a backup to another CMS, the owner or operator shall report the results from the CMS used to meet the monitoring



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requirements of this part. If both such CMS are used during a particular reporting period to meet the monitoring requirements of this part, then the owner or operator shall report the results from each CMS for the relevant compliance period.

(c) Operation and maintenance of continuous monitoring systems. (1) 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) Not applicable.

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

(iii) Not applicable.

(2)(i) 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.

(3) All CMS shall be installed, operational, and the data verified as specified in the relevant standard either prior to or in conjunction with conducting performance tests under §63.7. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system.

(4) 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.

(5) Unless otherwise approved by the Administrator, minimum procedures for COMS shall include a method for producing a simulated zero opacity condition and an upscale (high-level) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of all the analyzer's internal optical surfaces and all electronic circuitry, including the lamp and photodetector assembly normally used in the measurement of opacity.

(6) The owner or operator of a CMS that is not a CPMS, 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. For COMS, all optical and instrumental surfaces exposed to the effluent gases must be cleaned prior to performing the zero (low-level) and high-level drift adjustments; the optical surfaces and instrumental surfaces must be cleaned when the cumulative automatic zero compensation, if applicable, exceeds 4 percent opacity. The CPMS must be calibrated prior to use for the purposes of complying with this section. The CPMS must be checked daily for indication that the system is responding. If the CPMS system includes an internal system check, results must be recorded and checked daily for proper operation.

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(7)(i) 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

(C) The COMS CD exceeds two times the limit in the applicable performance specification in the relevant standard.

(ii) 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.

(8) 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).

(d) Quality control program. (1) 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.

(2) 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.

(3) 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.

(e) Performance evaluation of continuous monitoring systems—(1) General. When required by a relevant standard, and at any other time the Administrator may require under section 114 of the Act, the owner or operator of an affected source being monitored shall conduct a performance evaluation of the CMS. Such performance evaluation shall be conducted according

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to the applicable specifications and procedures described in this section or in the relevant standard.

(2) Notification of performance evaluation. The owner or operator shall notify the Administrator in writing of the date of the performance evaluation simultaneously with the notification of the performance test date required under §63.7(b) or at least 60 days prior to the date the performance evaluation is scheduled to begin if no performance test is required.

(3)(i) Submission of site-specific performance evaluation test plan. Before conducting a required CMS performance evaluation, the owner or operator of an affected source shall develop and submit a site-specific performance evaluation test plan to the Administrator for approval upon request. The performance evaluation test plan shall include the evaluation program objectives, an evaluation program summary, the performance evaluation schedule, data quality objectives, and both an internal and external QA program. Data quality objectives are the pre-evaluation expectations of precision, accuracy, and completeness of data.

(ii) The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of CMS performance. The external QA program shall include, at a minimum, systems audits that include the opportunity for on-site evaluation by the Administrator of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities.

(iii) The owner or operator of an affected source shall submit the site-specific performance evaluation test plan to the Administrator (if requested) at least 60 days before the performance test or performance evaluation is scheduled to begin, or on a mutually agreed upon date, and review and approval of the performance evaluation test plan by the Administrator will occur with the review and approval of the site-specific test plan (if review of the site-specific test plan is requested).

(iv) The Administrator may request additional relevant information after the submittal of a site-specific performance evaluation test plan.

(v) In the event that the Administrator fails to approve or disapprove the site-specific performance evaluation test plan within the time period specified in §63.7(c)(3), the following conditions shall apply:

(A) If the owner or operator intends to demonstrate compliance using the monitoring method(s) specified in the relevant standard, the owner or operator shall conduct the performance evaluation within the time specified in this subpart using the specified method(s);

(B) If the owner or operator intends to demonstrate compliance by using an alternative to a monitoring method specified in the relevant standard, the owner or operator shall refrain from conducting the performance evaluation until the Administrator approves the use of the alternative method. If the Administrator does not approve the use of the alternative method within 30 days before the performance evaluation is scheduled to begin, the performance evaluation deadlines specified in paragraph (e)(4) of this section may be extended such that the owner or operator shall conduct the performance evaluation within 60 calendar days after the Administrator approves the use of the alternative method. Notwithstanding the requirements in the preceding two sentences, the owner or operator may proceed to conduct the performance evaluation as required in this section (without the Administrator's prior approval of the site-specific performance evaluation test plan) if he/she subsequently chooses to use the specified monitoring method(s) instead of an alternative.

(vi) Neither the submission of a site-specific performance evaluation test plan for approval, nor the Administrator's approval or disapproval of a plan, nor the Administrator's failure to approve or disapprove a plan in a timely manner shall—

(A) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this part or with any other applicable Federal, State, or local requirement; or

(B) Prevent the Administrator from implementing or enforcing this part or taking any other action under the Act.

(4) Conduct of performance evaluation and performance evaluation dates. The owner or operator of an affected source shall conduct a performance evaluation of a required CMS during any performance test required under §63.7 in accordance with the applicable performance specification as specified in the relevant standard. Notwithstanding the requirement in the previous sentence, if the owner or operator of an affected source elects to submit COMS data for compliance with a relevant

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opacity emission standard as provided under §63.6(h)(7), he/she shall conduct a performance evaluation of the COMS as specified in the relevant standard, before the performance test required under §63.7 is conducted in time to submit the results of the performance evaluation as specified in paragraph (e)(5)(ii) of this section. If a performance test is not required, or the requirement for a performance test has been waived under §63.7(h), the owner or operator of an affected source shall conduct the performance evaluation not later than 180 days after the appropriate compliance date for the affected source, as specified in §63.7(a), or as otherwise specified in the relevant standard.

(5) Reporting performance evaluation results. (i) The owner or operator shall furnish the Administrator a copy of a written report of the results of the performance evaluation simultaneously with the results of the performance test required under §63.7 or within 60 days of completion of the performance evaluation if no test is required, unless otherwise specified in a relevant standard. The Administrator may request that the owner or operator submit the raw data from a performance evaluation in the report of the performance evaluation results.

(ii) The owner or operator of an affected source using a COMS to determine opacity compliance during any performance test required under §63.7 and described in §63.6(d)(6) shall furnish the Administrator two or, upon request, three copies of a written report of the results of the COMS performance evaluation under this paragraph. The copies shall be provided at least 15 calendar days before the performance test required under §63.7 is conducted.

(f) Use of an alternative monitoring method—(1) General. Until permission to use an alternative monitoring procedure (minor, intermediate, or major changes; see definition in §63.90(a)) has been granted by the Administrator under this paragraph (f)(1), the owner or operator of an affected source remains subject to the requirements of this section and the relevant standard.

(2) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring methods or procedures of this part including, but not limited to, the following:

(i) Alternative monitoring requirements when installation of a CMS specified by a relevant standard would not provide accurate measurements due to liquid water or other interferences caused by substances within the effluent gases;

(ii) Alternative monitoring requirements when the affected source is infrequently operated;

(iii) Alternative monitoring requirements to accommodate CEMS that require additional measurements to correct for stack moisture conditions;

(iv) Alternative locations for installing CMS when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements;

(v) Alternate methods for converting pollutant concentration measurements to units of the relevant standard;

(vi) Alternate procedures for performing daily checks of zero (low-level) and high-level drift that do not involve use of high-level gases or test cells;

(vii) Alternatives to the American Society for Testing and Materials (ASTM) test methods or sampling procedures specified by any relevant standard;

(viii) Alternative CMS that do not meet the design or performance requirements in this part, but adequately demonstrate a definite and consistent relationship between their measurements and the measurements of opacity by a system complying with the requirements as specified in the relevant standard. The Administrator may require that such demonstration be performed for each affected source; or

(ix) Alternative monitoring requirements when the effluent from a single affected source or the combined effluent from two or more affected sources is released to the atmosphere through more than one point.

(3) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative monitoring method, requirement, or procedure, the Administrator may require the use of a method, requirement, or procedure specified in this section or in the relevant standard. If the results of the specified and alternative method, requirement, or procedure do not

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agree, the results obtained by the specified method, requirement, or procedure shall prevail.

(4)(i) Request to use alternative monitoring procedure. An owner or operator who wishes to use an alternative monitoring procedure must submit an application to the Administrator as described in paragraph (f)(4)(ii) of this section. The application may be submitted at any time provided that the monitoring procedure is not the performance test method used to demonstrate compliance with a relevant standard or other requirement. If the alternative monitoring procedure will serve as the performance test method that is to be used to demonstrate compliance with a relevant standard, the application must be submitted at least 60 days before the performance evaluation is scheduled to begin and must meet the requirements for an alternative test method under §63.7(f).

(ii) The application must contain a description of the proposed alternative monitoring system which addresses the four elements contained in the definition of monitoring in §63.2 and a performance evaluation test plan, if required, as specified in paragraph (e)(3) of this section. In addition, the application must include information justifying the owner or operator's request for an alternative monitoring method, such as the technical or economic infeasibility, or the impracticality, of the affected source using the required method.

(iii) The owner or operator may submit the information required in this paragraph well in advance of the submittal dates specified in paragraph (f)(4)(i) above to ensure a timely review by the Administrator in order to meet the compliance demonstration date specified in this section or the relevant standard.

(iv) Application for minor changes to monitoring procedures, as specified in paragraph (b)(1) of this section, may be made in the site-specific performance evaluation plan.

(5) Approval of request to use alternative monitoring procedure. (i) The Administrator will notify the owner or operator of approval or intention to deny approval of the request to use an alternative monitoring method within 30 calendar days after receipt of the original request and within 30 calendar days after receipt of any supplementary information that is submitted. If a request for a minor change is made in conjunction with site-specific performance evaluation plan, then approval of the plan will constitute approval of the minor change. Before disapproving any request to use an alternative monitoring method, the Administrator will notify the applicant of the Administrator's intention to disapprove the request together with—

(A) Notice of the information and findings on which the intended disapproval is based; and

(B) Notice of opportunity for the owner or operator to present additional information to the Administrator before final action on the request. At the time the Administrator notifies the applicant of his or her intention to disapprove the request, the Administrator will specify how much time the owner or operator will have after being notified of the intended disapproval to submit the additional information.

(ii) The Administrator may establish general procedures and criteria in a relevant standard to accomplish the requirements of paragraph (f)(5)(i) of this section.

(iii) If the Administrator approves the use of an alternative monitoring method for an affected source under paragraph (f)(5)(i) of this section, the owner or operator of such source shall continue to use the alternative monitoring method until he or she receives approval from the Administrator to use another monitoring method as allowed by §63.8(f).

(6) Alternative to the relative accuracy test. An alternative to the relative accuracy test for CEMS specified in a relevant standard may be requested as follows:

(i) Criteria for approval of alternative procedures. An alternative to the test method for determining relative accuracy is available for affected sources with emission rates demonstrated to be less than 50 percent of the relevant standard. The owner or operator of an affected source may petition the Administrator under paragraph (f)(6)(ii) of this section to substitute the relative accuracy test in section 7 of Performance Specification 2 with the procedures in section 10 if the results of a performance test conducted according to the requirements in §63.7, or other tests performed following the criteria in §63.7, demonstrate that the emission rate of the pollutant of interest in the units of the relevant standard is less than 50 percent of the relevant standard. For affected sources subject to emission limitations expressed as control efficiency levels, the owner or operator may petition the Administrator to substitute the relative accuracy test with the procedures in section 10 of Performance Specification 2 if the control device exhaust emission rate is less than 50 percent of the level needed to meet

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the control efficiency requirement. The alternative procedures do not apply if the CEMS is used continuously to determine compliance with the relevant standard.

(ii) Petition to use alternative to relative accuracy test. The petition to use an alternative to the relative accuracy test shall include a detailed description of the procedures to be applied, the location and the procedure for conducting the alternative, the concentration or response levels of the alternative relative accuracy materials, and the other equipment checks included in the alternative procedure(s). The Administrator will review the petition for completeness and applicability. The Administrator's determination to approve an alternative will depend on the intended use of the CEMS data and may require specifications more stringent than in Performance Specification 2.

(iii) Rescission of approval to use alternative to relative accuracy test. The Administrator will review the permission to use an alternative to the CEMS relative accuracy test and may rescind such permission if the CEMS data from a successful completion of the alternative relative accuracy procedure indicate that the affected source's emissions are approaching the level of the relevant standard. The criterion for reviewing the permission is that the collection of CEMS data shows that emissions have exceeded 70 percent of the relevant standard for any averaging period, as specified in the relevant standard. For affected sources subject to emission limitations expressed as control efficiency levels, the criterion for reviewing the permission is that the collection of CEMS data shows that exhaust emissions have exceeded 70 percent of the level needed to meet the control efficiency requirement for any averaging period, as specified in the relevant standard. The owner or operator of the affected source shall maintain records and determine the level of emissions relative to the criterion for permission to use an alternative for relative accuracy testing. If this criterion is exceeded, the owner or operator shall notify the Administrator within 10 days of such occurrence and include a description of the nature and cause of the increased emissions. The Administrator will review the notification and may rescind permission to use an alternative and require the owner or operator to conduct a relative accuracy test of the CEMS as specified in section 7 of Performance Specification 2. The Administrator will review the notification and may rescind permission to use an alternative and require the owner or operator to conduct a relative accuracy test of the CEMS as specified in section 8.4 of Performance Specification 2.

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

(2) The owner or operator of each COMS shall reduce all data to 6-minute averages calculated from 36 or more data points equally spaced over each 6-minute period. 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.

(3) The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O<sub>2</sub> or ng/J of pollutant).

(4) 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).

(5) Not applicable.

[59 FR 12430, Mar. 16, 1994, as amended at 64 FR 7468, Feb. 12, 1999; 67 FR 16603, Apr. 5, 2002; 71 FR 20455, Apr. 20, 2006; 79 FR 11277, Feb. 27, 2014]

**# 133 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.9]**

**Subpart A--General Provisions**

**Notification requirements.**

This condition is applicable to Sources 101A, 105, 106, 107, 108, 109, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 216, 217, 219, 220, 221, 222, & 224.



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- (a) Applicability and general information. (1) The applicability of this section is set out in §63.1(a)(4).
- (2) For affected sources that have been granted an extension of compliance under subpart D of this part, the requirements of this section do not apply to those sources while they are operating under such compliance extensions.
- (3) If any State requires a notice that contains all the information required in a notification listed in this section, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section for that notification.
- (4)(i) Before a State has been delegated the authority to implement and enforce notification requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit notifications to the appropriate Regional Office of the EPA (to the attention of the Director of the Division indicated in the list of the EPA Regional Offices in §63.13).
- (ii) After a State has been delegated the authority to implement and enforce notification requirements established under this part, the owner or operator of an affected source in such State subject to such requirements shall submit notifications to the delegated State authority (which may be the same as the permitting authority). In addition, if the delegated (permitting) authority is the State, the owner or operator shall send a copy of each notification submitted to the State to the appropriate Regional Office of the EPA, as specified in paragraph (a)(4)(i) of this section. The Regional Office may waive this requirement for any notifications at its discretion.
- (b) Initial notifications. (1)(i) The requirements of this paragraph apply to the owner or operator of an affected source when such source becomes subject to a relevant standard.
- (ii) If an area source that otherwise would be subject to an emission standard or other requirement established under this part if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that the source is a major source that is subject to the emission standard or other requirement, such source shall be subject to the notification requirements of this section.
- (iii) Affected sources that are required under this paragraph to submit an initial notification may use the application for approval of construction or reconstruction under §63.5(d) of this subpart, if relevant, to fulfill the initial notification requirements of this paragraph.
- (2) 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 Administrator 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 the notification and the source's compliance date;
- (iv) A brief description of the nature, 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 types of hazardous air pollutants emitted; and
- (v) A statement of whether the affected source is a major source or an area source.
- (3) [Reserved]
- (4) 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 Administrator:

**SECTION C. Site Level Requirements**

- (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)-(iv) [Reserved]
- (v) A notification of the actual date of startup of the source, delivered or postmarked within 15 calendar days after that date.
- (5) The owner or operator of a new or reconstructed affected source for which an application for approval of construction or reconstruction is not required under §63.5(d) must provide the following information in writing to the Administrator:
- (i) A notification of intention to construct a new affected source, reconstruct an affected source, or reconstruct a source such that the source becomes an affected source, and
- (ii) A notification of the actual date of startup of the source, delivered or postmarked within 15 calendar days after that date.
- (iii) Unless the owner or operator has requested and received prior permission from the Administrator to submit less than the information in §63.5(d), the notification must include the information required on the application for approval of construction or reconstruction as specified in §63.5(d)(1)(i).
- (c) Request for extension of compliance. If the owner or operator of an affected source cannot comply with a relevant standard by the applicable compliance date for that source, or if the owner or operator has installed BACT or technology to meet LAER consistent with §63.6(i)(5) of this subpart, he/she may submit to the Administrator (or the State with an approved permit program) a request for an extension of compliance as specified in §63.6(i)(4) through §63.6(i)(6).
- (d) Notification that source is subject to special compliance requirements. An owner or operator of a new source that is subject to special compliance requirements as specified in §63.6(b)(3) and §63.6(b)(4) shall notify the Administrator of his/her compliance obligations not later than the notification dates established in paragraph (b) of this section for new sources that are not subject to the special provisions.
- (e) Notification of performance test. 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 60 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.
- (f) Notification of opacity and visible emission observations. The owner or operator of an affected source shall notify the Administrator in writing of the anticipated date for conducting the opacity or visible emission observations specified in §63.6(h)(5), if such observations are required for the source by a relevant standard. The notification shall be submitted with the notification of the performance test date, as specified in paragraph (e) of this section, or if no performance test is required or visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the initial performance test required under §63.7, the owner or operator shall deliver or postmark the notification not less than 30 days before the opacity or visible emission observations are scheduled to take place.
- (g) Additional notification requirements for sources with continuous monitoring systems. The owner or operator of an affected source required to use a CMS by a relevant standard shall furnish the Administrator written notification as follows:
- (1) A notification of the date the CMS performance evaluation under §63.8(e) is scheduled to begin, submitted simultaneously with the notification of the performance test date required under §63.7(b). If no performance test is required, or if the requirement to conduct a performance test has been waived for an affected source under §63.7(h), the owner or operator shall notify the Administrator in writing of the date of the performance evaluation at least 60 calendar days before the evaluation is scheduled to begin;
- (2) A notification that COMS data results will be used to determine compliance with the applicable opacity emission standard during a performance test required by §63.7 in lieu of Method 9 or other opacity emissions test method data, as allowed by §63.6(h)(7)(ii), if compliance with an opacity emission standard is required for the source by a relevant standard. The notification shall be submitted at least 60 calendar days before the performance test is scheduled to begin;

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and

(3) A notification that the criterion necessary to continue use of an alternative to relative accuracy testing, as provided by §63.8(f)(6), has been exceeded. The notification shall be delivered or postmarked not later than 10 days after the occurrence of such exceedance, and it shall include a description of the nature and cause of the increased emissions.

(h) Notification of compliance status. (1) The requirements of paragraphs (h)(2) through (h)(4) of this section apply when an affected source becomes subject to a relevant standard.

(2)(i) Before a title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under this part, the owner or operator of such source shall submit to the Administrator a notification of compliance status, signed by the responsible official who shall certify its accuracy, attesting to whether the source has complied with the relevant standard. The notification shall list—

(A) The methods that were used to determine compliance;

(B) The results of any performance tests, opacity or visible emission observations, continuous monitoring system (CMS) performance evaluations, and/or other monitoring procedures or methods that were conducted;

(C) The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods;

(D) The type and quantity of hazardous air pollutants emitted by the source (or surrogate pollutants if specified in the relevant standard), reported in units and averaging times and in accordance with the test methods specified in the relevant standard;

(E) If the relevant standard applies to both major and area sources, an analysis demonstrating whether the affected source is a major source (using the emissions data generated for this notification);

(F) A description of the air pollution control equipment (or method) for each emission point, including each control device (or method) for each hazardous air pollutant and the control efficiency (percent) for each control device (or method); and

(G) A statement by the owner or operator of the affected existing, new, or reconstructed source as to whether the source has complied with the relevant standard or other requirements.

(ii) The notification must be sent before the close of business on the 60th day following the completion of the relevant compliance demonstration activity specified in the relevant standard (unless a different reporting period is specified in the standard, in which case the letter must be sent before the close of business on the day the report of the relevant testing or monitoring results is required to be delivered or postmarked). For example, the notification shall be sent before close of business on the 60th (or other required) day following completion of the initial performance test and again before the close of business on the 60th (or other required) day following the completion of any subsequent required performance test. If no performance test is required but opacity or visible emission observations are required to demonstrate compliance with an opacity or visible emission standard under this part, the notification of compliance status shall be sent before close of business on the 30th day following the completion of opacity or visible emission observations. Notifications may be combined as long as the due date requirement for each notification is met.

(3) After a title V permit has been issued to the owner or operator of an affected source, the owner or operator of such source shall comply with all requirements for compliance status reports contained in the source's title V permit, including reports required under this part. After a title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under this part, the owner or operator of such source shall submit the notification of compliance status to the appropriate permitting authority following completion of the relevant compliance demonstration activity specified in the relevant standard.

(4) [Reserved]

(5) If an owner or operator of an affected source submits estimates or preliminary information in the application for approval

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of construction or reconstruction required in §63.5(d) in place of the actual emissions data or control efficiencies required in paragraphs (d)(1)(ii)(H) and (d)(2) of §63.5, the owner or operator shall submit the actual emissions data and other correct information as soon as available but no later than with the initial notification of compliance status required in this section.

(6) Advice on a notification of compliance status may be obtained from the Administrator.

(i) Adjustment to time periods or postmark deadlines for submittal and review of required communications. (1)(i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (i)(2) and (i)(3) of this section, the owner or operator of an affected source remains strictly subject to the requirements of this part.

(ii) An owner or operator shall request the adjustment provided for in paragraphs (i)(2) and (i)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in this part.

(2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.

(3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

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

[59 FR 12430, Mar. 16, 1994, as amended at 64 FR 7468, Feb. 12, 1999; 67 FR 16604, Apr. 5, 2002; 68 FR 32601, May 30, 2003]

**# 134 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.982]****Subpart SS - National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process Requirements.**

(a) General compliance requirements for storage vessels, process vents, transfer racks, and equipment leaks. An owner or operator who is referred to this subpart for controlling regulated material emissions from storage vessels, process vents, low and high throughput transfer racks, or equipment leaks by venting emissions through a closed vent system to a flare, nonflare control device or routing to a fuel gas system or process shall comply with the applicable requirements of paragraphs (a)(1) through (4) of this section.

(1) Storage vessels. The owner or operator shall comply with the applicable provisions of paragraphs (b), (c)(1), and (d) of this section.

(2) Process vents. The owner or operator shall comply with the applicable provisions of paragraphs (b), (c)(2), and (e) of this section.

(3) Transfer racks. (i) For low throughput transfer racks, the owner or operator shall comply with the applicable provisions of paragraphs (b), (c)(1), and (d) of this section.

(ii) For high throughput transfer racks, the owner or operator shall comply with the applicable provisions of paragraphs (b),

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(c)(2), and (d) of this section.

(4) Equipment leaks. The owner or operator shall comply with the applicable provisions of paragraphs (b), (c)(3), and (d) of this section.

(b) Closed vent system and flare. Owners or operators that vent emissions through a closed vent system to a flare shall meet the requirements in §63.983 for closed vent systems; §63.987 for flares; §63.997 (a), (b) and (c) for provisions regarding flare compliance assessments; the monitoring, recordkeeping, and reporting requirements referenced therein; and the applicable recordkeeping and reporting requirements of §§63.998 and 63.999. No other provisions of this subpart apply to emissions vented through a closed vent system to a flare.

(c) Closed vent system and nonflare control device. Owners or operators who control emissions through a closed vent system to a nonflare control device shall meet the requirements in §63.983 for closed vent systems, the applicable recordkeeping and reporting requirements of §§63.998 and 63.999, and the applicable requirements listed in paragraphs (c)(1) through (3) of this section.

(1) For storage vessels and low throughput transfer racks, the owner or operator shall meet the requirements in §63.985 for nonflare control devices and the monitoring, recordkeeping, and reporting requirements referenced therein. No other provisions of this subpart apply to low throughput transfer rack emissions or storage vessel emissions vented through a closed vent system to a nonflare control device unless specifically required in the monitoring plan submitted under §63.985(c).

(2) For process vents and high throughput transfer racks, the owner or operator shall meet the requirements applicable to the control devices being used in §63.988, §63.990 or §63.995; the applicable general monitoring requirements of §63.996 and the applicable performance test requirements and procedures of §63.997; and the monitoring, recordkeeping and reporting requirements referenced therein. Owners or operators subject to halogen reduction device requirements under a referencing subpart must also comply with §63.994 and the monitoring, recordkeeping, and reporting requirements referenced therein. The requirements of §§63.984 through 63.986 do not apply to process vents or high throughput transfer racks.

(3) For equipment leaks, owners or operators shall meet the requirements in §63.986 for nonflare control devices used for equipment leak emissions and the monitoring, recordkeeping, and reporting requirements referenced therein. No other provisions of this subpart apply to equipment leak emissions vented through a closed vent system to a nonflare control device.

(d) Route to a fuel gas system or process. Owners or operators that route emissions to a fuel gas system or to a process shall meet the requirements in §63.984, the monitoring, recordkeeping, and reporting requirements referenced therein, and the applicable recordkeeping and reporting requirements of §§63.998 and 63.999. No other provisions of this subpart apply to emissions being routed to a fuel gas system or process.

(e) Final recovery devices. Owners or operators who use a final recovery device to maintain a TRE above a level specified in a referencing subpart shall meet the requirements in §63.993 and the monitoring, recordkeeping, and reporting requirements referenced therein that are applicable to the recovery device being used; the applicable monitoring requirements in §63.996 and the recordkeeping and reporting requirements referenced therein; and the applicable recordkeeping and reporting requirements of §§63.998 and 63.999. No other provisions of this subpart apply to process vent emissions routed to a final recovery device.

(f) Combined emissions. When emissions from different emission types (e.g., emissions from process vents, transfer racks, and/or storage vessels) are combined, an owner or operator shall comply with the requirements of either paragraph (f)(1) or (2) of this section.

(1) Comply with the applicable requirements of this subpart for each kind of emissions in the stream (e.g., the requirements of paragraph (a)(2) of this section for process vents, and the requirements of paragraph (a)(3) of this section for transfer racks); or

(2) Comply with the first set of requirements identified in paragraphs (f)(2)(i) through (iii) of this section which applies to any

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individual emission stream that is included in the combined stream. Compliance with paragraphs (f)(2)(i) through (iii) of this section constitutes compliance with all other emissions requirements for other emission streams.

- (i) The requirements of §63.982(a)(2) for process vents, including applicable monitoring, recordkeeping, and reporting;
- (ii) The requirements of §63.982(a)(3)(ii) for high throughput transfer racks, including applicable monitoring, recordkeeping, and reporting;
- (iii) The requirements of §63.982(a)(1) or (a)(3)(i) for control of emissions from storage vessels or low throughput transfer racks, including applicable monitoring, recordkeeping, and reporting.

[64 FR 34866, June 29, 1999, as amended at 64 FR 63705, Nov. 22, 1999]

**# 135 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.983]****Subpart SS - National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process****Closed vent systems.**

(a) Closed vent system equipment and operating requirements. Except for closed vent systems operated and maintained under negative pressure, the provisions of this paragraph apply to closed vent systems collecting regulated material from a regulated source.

(1) Collection of emissions. Each closed vent system shall be designed and operated to collect the regulated material vapors from the emission point, and to route the collected vapors to a control device.

(2) Period of operation. Closed vent systems used to comply with the provisions of this subpart shall be operated at all times when emissions are vented to, or collected by, them.

(3) Bypass monitoring. Except for equipment needed for safety purposes such as pressure relief devices, low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines, the owner or operator shall comply with the provisions of either paragraphs (a)(3)(i) or (ii) of this section for each closed vent system that contains bypass lines that could divert a vent stream to the atmosphere.

(i) Properly install, maintain, and operate a flow indicator that is capable of taking periodic readings. Records shall be generated as specified in §63.998(d)(1)(ii)(A). The flow indicator shall be installed at the entrance to any bypass line.

(ii) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. Records shall be generated as specified in §63.998(d)(1)(ii)(B).

(4) Loading arms at transfer racks. Each closed vent system collecting regulated material from a transfer rack shall be designed and operated so that regulated material vapors collected at one loading arm will not pass through another loading arm in the rack to the atmosphere.

(5) Pressure relief devices in a transfer rack's closed vent system. The owner or operator of a transfer rack subject to the provisions of this subpart shall ensure that no pressure relief device in the transfer rack's closed vent system shall open to the atmosphere during loading. Pressure relief devices needed for safety purposes are not subject to this paragraph.

(b) Closed vent system inspection and monitoring requirements. The provisions of this subpart apply to closed vent systems collecting regulated material from a regulated source. Inspection records shall be generated as specified in §63.998(d)(1)(iii) and (iv) of this section.

(1) Except for any closed vent systems that are designated as unsafe or difficult to inspect as provided in paragraphs (b)(2) and (3) of this section, each closed vent system shall be inspected as specified in paragraph (b)(1)(i) or (ii) of this section.

(i) If the closed vent system is constructed of hard-piping, the owner or operator shall comply with the requirements specified in paragraphs (b)(1)(i)(A) and (B) of this section.

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- (A) Conduct an initial inspection according to the procedures in paragraph (c) of this section; and
- (B) Conduct annual inspections for visible, audible, or olfactory indications of leaks.
- (ii) If the closed vent system is constructed of ductwork, the owner or operator shall conduct an initial and annual inspection according to the procedures in paragraph (c) of this section.
- (2) Any parts of the closed vent system that are designated, as described in §63.998(d)(1)(i), as unsafe to inspect are exempt from the inspection requirements of paragraph (b)(1) of this section if the conditions of paragraphs (b)(2)(i) and (ii) of this section are met.
- (i) The owner or operator determines that the equipment is unsafe-to-inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraph (b)(1) of this section; and
- (ii) The owner or operator has a written plan that requires inspection of the equipment as frequently as practical during safe-to-inspect times. Inspection is not required more than once annually.
- (3) Any parts of the closed vent system that are designated, as described in §63.998(d)(1)(i), as difficult-to-inspect are exempt from the inspection requirements of paragraph (b)(1) of this section if the provisions of paragraphs (b)(3)(i) and (ii) of this section apply.
- (i) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters (7 feet) above a support surface; and
- (ii) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years.
- (4) For each bypass line, the owner or operator shall comply with paragraph (b)(4)(i) or (ii) of this section.
- (i) If a flow indicator is used, take a reading at least once every 15 minutes.
- (ii) If the bypass line valve is secured in the non-diverting position, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the non-diverting position, and the vent stream is not diverted through the bypass line.
- (c) Closed vent system inspection procedures. The provisions of this paragraph apply to closed vent systems collecting regulated material from a regulated source.
- (1) Each closed vent system subject to this paragraph shall be inspected according to the procedures specified in paragraphs (c)(1)(i) through (vii) of this section.
- (i) Inspections shall be conducted in accordance with Method 21 of 40 CFR part 60, appendix A, except as specified in this section.
- (ii) Except as provided in (c)(1)(iii) of this section, the detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 must be for the representative composition of the process fluid and not of each individual VOC in the stream. For process streams that contain nitrogen, air, water, or other inerts that are not organic HAP or VOC, the representative stream response factor must be determined on an inert-free basis. The response factor may be determined at any concentration for which the monitoring for leaks will be conducted.
- (iii) If no instrument is available at the plant site that will meet the performance criteria of Method 21 specified in paragraph (c)(1)(ii) of this section, the instrument readings may be adjusted by multiplying by the representative response factor of the process fluid, calculated on an inert-free basis as described in paragraph (c)(1)(ii) of this section.
- (iv) The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.

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(v) Calibration gases shall be as specified in paragraphs (c)(1)(v)(A) through (C) of this section.

(A) Zero air (less than 10 parts per million hydrocarbon in air); and

(B) Mixtures of methane in air at a concentration less than 10,000 parts per million. A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in paragraph (c)(1)(ii) of this section. In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.

(C) If the detection instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,500 parts per million.

(vi) An owner or operator may elect to adjust or not adjust instrument readings for background. If an owner or operator elects not to adjust readings for background, all such instrument readings shall be compared directly to 500 parts per million to determine whether there is a leak. If an owner or operator elects to adjust instrument readings for background, the owner or operator shall measure background concentration using the procedures in this section. The owner or operator shall subtract the background reading from the maximum concentration indicated by the instrument.

(vii) If the owner or operator elects to adjust for background, the arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared with 500 parts per million for determining whether there is a leak.

(2) The instrument probe shall be traversed around all potential leak interfaces as described in Method 21 of 40 CFR part 60, appendix A.

(3) Except as provided in paragraph (c)(4) of this section, inspections shall be performed when the equipment is in regulated material service, or in use with any other detectable gas or vapor.

(4) Inspections of the closed vent system collecting regulated material from a transfer rack shall be performed only while a tank truck or railcar is being loaded or is otherwise pressurized to normal operating conditions with regulated material or any other detectable gas or vapor.

(d) Closed vent system leak repair provisions. The provisions of this paragraph apply to closed vent systems collecting regulated material from a regulated source.

(1) If there are visible, audible, or olfactory indications of leaks at the time of the annual visual inspections required by paragraph (b)(1)(i)(B) of this section, the owner or operator shall follow the procedure specified in either paragraph (d)(1)(i) or (ii) of this section.

(i) The owner or operator shall eliminate the leak.

(ii) The owner or operator shall monitor the equipment according to the procedures in paragraph (c) of this section.

(2) Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practical, except as provided in paragraph (d)(3) of this section. Records shall be generated as specified in §63.998(d)(1)(iii) when a leak is detected.

(i) A first attempt at repair shall be made no later than 5 days after the leak is detected.

(ii) Except as provided in paragraph (d)(3) of this section, repairs shall be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later.

(3) Delay of repair of a closed vent system for which leaks have been detected is allowed if repair within 15 days after a leak is detected is technically infeasible or unsafe without a closed vent system shutdown, as defined in §63.981, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of such equipment shall be completed as soon as practical, but not later than the end of the



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next closed vent system shutdown.

[64 FR 34866, June 29, 1999, as amended at 64 FR 63705, Nov. 22, 1999; 67 FR 46277, July 12, 2002]

**VIII. COMPLIANCE CERTIFICATION.**

The permittee shall submit within thirty days of 12/30/2001 a certificate of compliance with all permit terms and conditions set forth in this Title V permit as required under condition #026 of section B of this permit, and annually thereafter.

**IX. COMPLIANCE SCHEDULE.**

No compliance milestones exist.

**\*\*\* Permit Shield In Effect \*\*\***

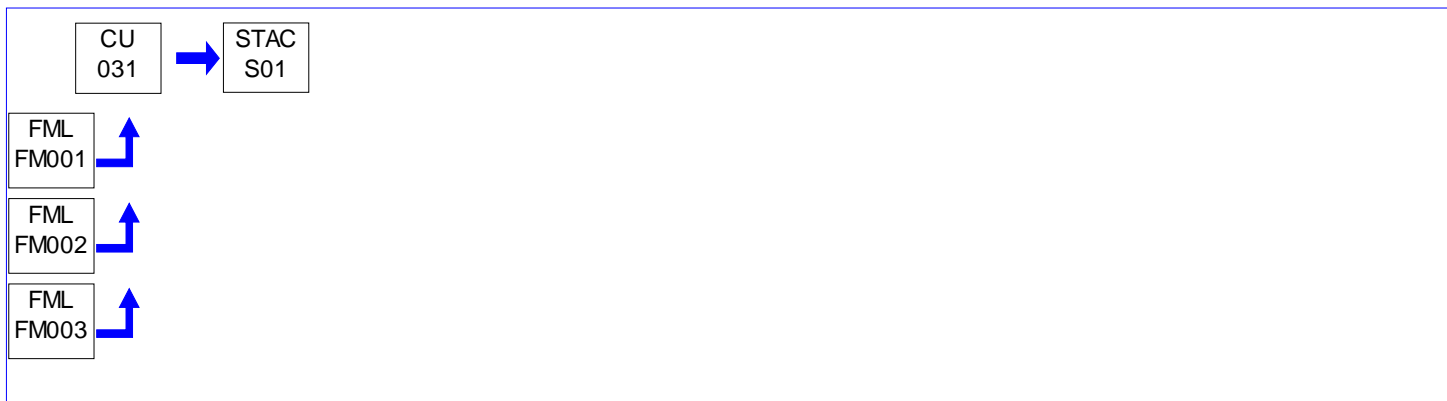
**SECTION D. Source Level Requirements**

Source ID: 031

Source Name: BOILER 1

Source Capacity/Throughput:	60.000	MMBTU/HR	
	60.000	MCF/HR	Refinery Gas
	60.000	MCF/HR	Natural Gas
	445.000	Gal/HR	#2 Oil
	445.000	Gal/HR	REFINERY FUEL OIL

Conditions for this source occur in the following groups: 11- METHOD OF COMPLIANCE  
6 - SO2 PERMIT MONITORING  
BOILER / PROCESS HEATER MACT  
CO&A FOR 1-HR SO2 NAAQS  
PA 62-017G & SUBSEQUENT PA TESTING  
PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The NOx emissions shall not exceed 0.246 lbs/mmbtu.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- The NOx emissions from boilers 1,2,and 3 combined shall not exceed 21.4 #/hr.
- The CO emissions from boilers 1,2,and 3 combined shall not exceed 15 #/hr.
- The VOC emissions from boilers 1,2,and 3 combined shall not exceed 1 #/hr.
- The TSP emissions from boilers 1,2,and 3 combined shall not exceed 6.9 #/hr.
- The PM-10 emissions from boilers 1,2,and 3 combined shall not exceed 6.2 #/hr.
- The SOx emissions from boilers 1,2,and 3 combined shall not exceed 27.42 #/hr.

[Compliance with the SOx emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 4 and the Consent Order & Agreement for the 1 hour SO2 NAAQS signed 9/29/2017.]

**# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- The NOx emissions from boilers 1,2,and 3 combined shall not exceed 39 TPY based on a consecutive 12-month period.

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- b) The CO emissions from boilers 1,2,and 3 combined shall not exceed 21.6 TPY based on a consecutive 12-month period.
- c) The VOC emissions from boilers 1,2,and 3 combined shall not exceed 1.4 TPY based on a consecutive 12-month period.
- d) The TSP emissions from boilers 1,2,and 3 combined shall not exceed 22.7 TPY based on a consecutive 12-month period.
- e) The PM-10 emissions from boilers 1,2,and 3 combined shall not exceed 20 TPY based on a consecutive 12-month period.
- f) The SOx emissions from boilers 1,2,and 3 combined shall not exceed 119 TPY based on a consecutive 12-month period.

[Compliance with the SOx emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 4]

**II. TESTING REQUIREMENTS.****# 004 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall perform a tuneup on an annual basis, using a portable gas analyzer to determine the final CO and NOx emission rates as required under Condition #005 with regards to the annual tune-up.

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.****# 005 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall perform an annual tune-up on the combustion process. The emissions of NOx shall be minimized by annual combustion tuning, good operating practices and good air pollution control practices. The annual tune-up shall include, but not be limited to, the following:

1. Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.
2. Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NOx, and to the extent practicable minimize emissions of CO.
3. Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.

**SECTION D. Source Level Requirements**

4. Recording all adjustments in a permanently bound log book containing, at a minimum, the following information:

- a) The date of the tuning procedure.
- b) The name of the service company and technicians.
- c) The final operating rate or load.
- d) The final CO and NO<sub>x</sub> emission rates in lb/mmbtu.
- e) The final excess oxygen rate.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 006 [25 Pa. Code §127.511]**

**Monitoring and related recordkeeping and reporting requirements.**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 1]

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

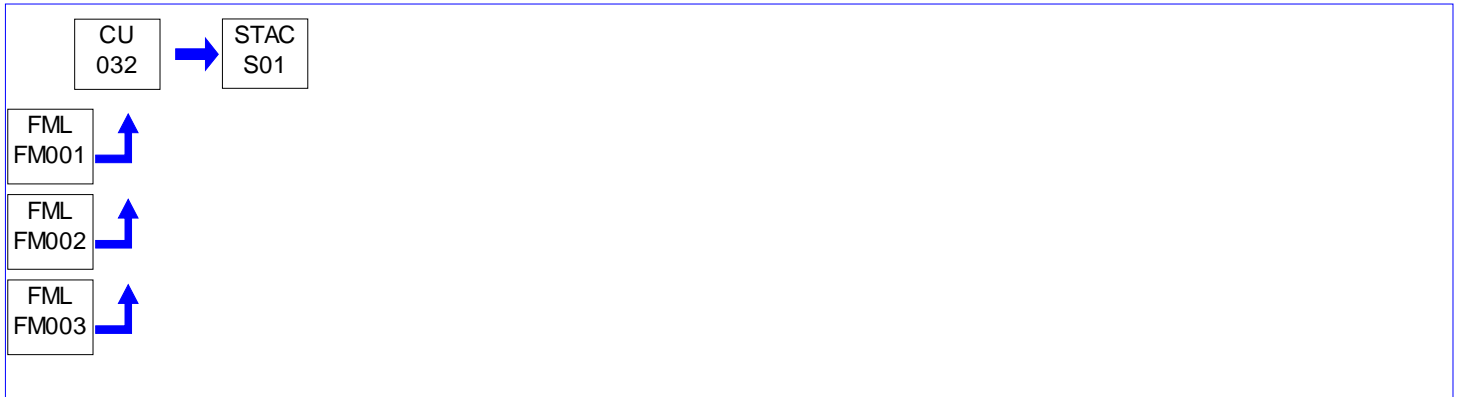
**SECTION D. Source Level Requirements**

Source ID: 032

Source Name: BOILER 2

Source Capacity/Throughput:	60.000	MMBTU/HR	
	60.000	MCF/HR	Refinery Gas
	60.000	MCF/HR	Natural Gas
	445.000	Gal/HR	#2 Oil
	444.500	Gal/HR	REFINERY FUEL OIL

Conditions for this source occur in the following groups: 11- METHOD OF COMPLIANCE  
6 - SO2 PERMIT MONITORING  
BOILER / PROCESS HEATER MACT  
CO&A FOR 1-HR SO2 NAAQS  
PA 62-017G & SUBSEQUENT PA TESTING  
PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The NOx emissions shall not exceed 0.246 lbs/mmbtu.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- The NOx emissions from boilers 1,2,and 3 combined shall not exceed 21.4 #/hr.
- The CO emissions from boilers 1,2,and 3 combined shall not exceed 15 #/hr.
- The VOC emissions from boilers 1,2,and 3 combined shall not exceed 1 #/hr.
- The TSP emissions from boilers 1,2,and 3 combined shall not exceed 6.9 #/hr.
- The PM-10 emissions from boilers 1,2,and 3 combined shall not exceed 6.2 #/hr.
- The SOx emissions from boilers 1,2,and 3 combined shall not exceed 27.42 #/hr.

[Compliance with the SOx emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 4 and the Consent Order & Agreement for the 1 hour SO2 NAAQS signed 9/29/2017.]

**# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- The NOx emissions from boilers 1,2,and 3 combined shall not exceed 39 TPY based on a consecutive 12-month period.

**SECTION D. Source Level Requirements**

- b) The CO emissions from boilers 1,2,and 3 combined shall not exceed 21.6 TPY based on a consecutive 12-month period.
- c) The VOC emissions from boilers 1,2,and 3 combined shall not exceed 1.4 TPY based on a consecutive 12-month period.
- d) The TSP emissions from boilers 1,2,and 3 combined shall not exceed 22.7 TPY based on a consecutive 12-month period.
- e) The PM-10 emissions from boilers 1,2,and 3 combined shall not exceed 20 TPY based on a consecutive 12-month period.
- f) The SOx emissions from boilers 1,2,and 3 combined shall not exceed 119 TPY based on a consecutive 12-month period.

[Compliance with the SOx emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 4]

**II. TESTING REQUIREMENTS.****# 004 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall perform a tuneup on an annual basis, using a portable gas analyzer to determine the final CO and NOx emission rates as required under Condition #005 with regards to the annual tune-up.

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.****# 005 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall perform an annual tune-up on the combustion process. The emissions of NOx shall be minimized by annual combustion tuning, good operating practices and good air pollution control practices. The annual tune-up shall include, but not be limited to, the following:

1. Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.
2. Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NOx, and to the extent practicable minimize emissions of CO.
3. Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.

**SECTION D. Source Level Requirements**

4. Recording all adjustments in a permanently bound log book containing, at a minimum, the following information:

- a) The date of the tuning procedure.
- b) The name of the service company and technicians.
- c) The final operating rate or load.
- d) The final CO and NO<sub>x</sub> emission rates in lb/mmbtu.
- e) The final excess oxygen rate.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 006 [25 Pa. Code §127.511]**

**Monitoring and related recordkeeping and reporting requirements.**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 1]

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

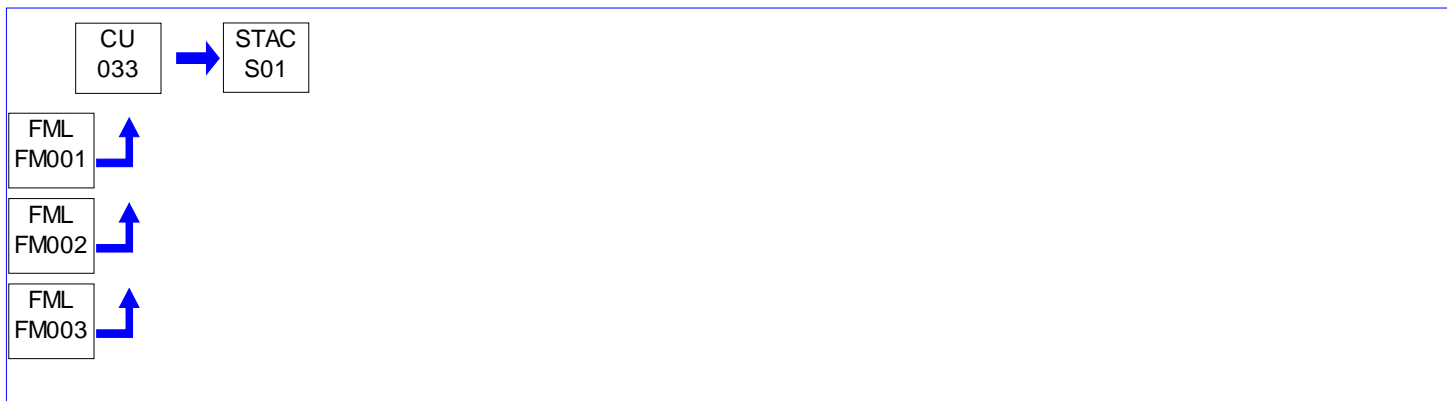
**SECTION D. Source Level Requirements**

Source ID: 033

Source Name: BOILER 3

Source Capacity/Throughput:	80.000	MMBTU/HR	
	80.000	MCF/HR	Refinery Gas
	80.000	MCF/HR	Natural Gas
	570.000	Gal/HR	#2 Oil
	592.600	Gal/HR	REFINERY FUEL OIL

Conditions for this source occur in the following groups: 11- METHOD OF COMPLIANCE  
6 - SO2 PERMIT MONITORING  
BOILER / PROCESS HEATER MACT  
CO&A FOR 1-HR SO2 NAAQS  
PA 62-017G & SUBSEQUENT PA TESTING  
PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The NOx emissions shall not exceed 0.246 lbs/mmbtu.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- The NOx emissions from boilers 1,2,and 3 combined shall not exceed 21.4 #/hr.
- The CO emissions from boilers 1,2,and 3 combined shall not exceed 15 #/hr.
- The VOC emissions from boilers 1,2,and 3 combined shall not exceed 1 #/hr.
- The TSP emissions from boilers 1,2,and 3 combined shall not exceed 6.9 #/hr.
- The PM-10 emissions from boilers 1,2,and 3 combined shall not exceed 6.2 #/hr.
- The SOx emissions from boilers 1,2,and 3 combined shall not exceed 27.42 #/hr.

[Compliance with the SOx emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 4 and the Consent Order & Agreement for the 1 hour SO2 NAAQS signed 9/29/2017.]

**# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- The NOx emissions from boilers 1,2,and 3 combined shall not exceed 39 TPY based on a consecutive 12-month period.



**SECTION D. Source Level Requirements**

- b) The CO emissions from boilers 1,2,and 3 combined shall not exceed 21.6 TPY based on a consecutive 12-month period.
- c) The VOC emissions from boilers 1,2,and 3 combined shall not exceed 1.4 TPY based on a consecutive 12-month period.
- d) The TSP emissions from boilers 1,2,and 3 combined shall not exceed 22.7 TPY based on a consecutive 12-month period.
- e) The PM-10 emissions from boilers 1,2,and 3 combined shall not exceed 20 TPY based on a consecutive 12-month period.
- f) The SOx emissions from boilers 1,2,and 3 combined shall not exceed 119 TPY based on a consecutive 12-month period.

[Compliance with the SOx emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 4]

**II. TESTING REQUIREMENTS.****# 004 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall test, annually, using a portable gas analyzer to determine the final CO and NOx emission rates as required under Condition #005 with regards to the annual tune-up.

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.****# 005 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall perform an annual tune-up on the combustion process. The emissions of NOx shall be minimized by annual combustion tuning, good operating practices and good air pollution control practices. The annual tune-up shall include, but not be limited to, the following:

1. Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.
2. Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NOx, and to the extent practicable minimize emissions of CO.
3. Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.

**SECTION D. Source Level Requirements**

4. Recording all adjustments in a permanently bound log book containing, at a minimum, the following information:

- a) The date of the tuning procedure.
- b) The name of the service company and technicians.
- c) The final operating rate or load.
- d) The final CO and NO<sub>x</sub> emission rates in lb/mmbtu.
- e) The final excess oxygen rate.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 006 [25 Pa. Code §127.511]**

**Monitoring and related recordkeeping and reporting requirements.**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 1]

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

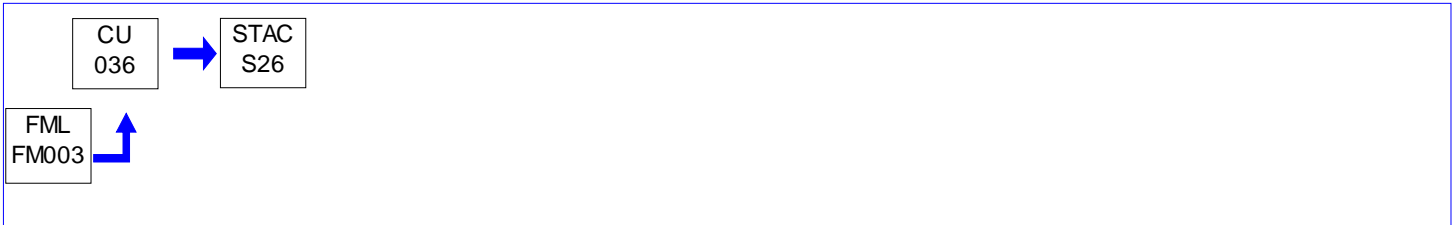
Source ID: 036

Source Name: BOILER 5B 80MMBTU/HR

Source Capacity/Throughput: 80.000 MMBTU/HR

80.000 MCF/HR Natural Gas

Conditions for this source occur in the following groups: BOILER / PROCESS HEATER MACT  
CO&A FOR 1-HR SO<sub>2</sub> NAAQS  
PA 62-017G & SUBSEQUENT PA TESTING  
PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017V]

1) Emissions of air contaminants from the source into the atmosphere shall not exceed the following:

- The NO<sub>x</sub> emissions shall not exceed 0.036 lbs./MmBtu, 12.61 tpy
- The CO emissions shall not exceed 0.0375 lbs./MmBtu, 13.14 tpy
- The VOC emissions shall not exceed 0.004 lbs./MmBtu, 1.40 tpy
- The TSP emissions shall not exceed 0.005 lbs./MmBtu, 1.75 tpy

2) The permittee may not permit the emission into the outdoor atmosphere of visible air contaminants in such a manner that the opacity of the emission is either of the following:

- Equal to or greater than 10% for a period or periods aggregating more than three minutes in any 1 hour.
- Equal to or greater than 30% at any time.

**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**SO<sub>x</sub> emissions from the source into the atmosphere shall not exceed 0.24 lb/hr.[Additional authority for this requirement based on September 29, 2017 CO&A for 1-hr SO<sub>2</sub> NAAQS Standard]**Fuel Restriction(s).****# 003 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017V]

- Only utility company supplied natural gas shall be used to fuel the burner. No other fuel shall be used.

**II. TESTING REQUIREMENTS.****# 004 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017V]

- (a) Within 90 days after achieving the normal rated capacity at which the affected source will be operated a stack test for

**SECTION D. Source Level Requirements**

NO<sub>x</sub>, CO, and VOC (NMOC) shall be performed in accordance with the provisions of Chapter 139 of the Rules and Regulations of the Department of Environmental Protection. The stack test shall be performed while the aforementioned source is operating at the maximum or normal rated capacity as stated on the application.

2) At least 60 calendar days prior to commencing an emissions testing program, a test protocol shall be submitted to the Department's Division of Source Testing and Monitoring and two copies to the appropriate Regional Office Department for review and approval. The test protocol shall meet all applicable requirements specified in the most current version of the Department's Source Testing Manual.

3) At least 15 calendar days prior to commencing an emission testing program, notification as to the date and time of testing shall be given to the appropriate Regional Office. Notification shall also be sent to the Division of Source Testing and Monitoring. Notification shall not be made without prior receipt of a protocol acceptance letter from the Department.

4) Within 15 calendar days after completion of the on-site testing portion of an emission test program, if a complete test report has not yet been submitted, an electronic mail notification shall be sent to the Department's Division of Source Testing and Monitoring and the appropriate Regional Office indicating the completion date of the on-site testing.

5) A complete test report shall be submitted to the Department no later than 60 calendar days after completion of the on-site testing portion of an emission test program. For those tests being conducted pursuant to 40 CFR Part 61, a complete test report shall be submitted within 31 days after completion of the test.

6) A complete test report shall include a summary of the emission results on the first page of the report indicating if each pollutant measured is within permitted limits and a statement of compliance or non-compliance with all applicable permit conditions. The summary results will include, at a minimum, the following information:

(a) A statement that the owner or operator has reviewed the report from the emissions testing body and agrees with the findings.

(b) Permit number(s) and condition(s) which are the basis for the evaluation.

(c) Summary of results with respect to each applicable permit condition.

(d) Statement of compliance or non-compliance with each applicable permit condition.

7) All submittals shall meet all applicable requirements specified in the most current version of the Department's Source Testing Manual.

8) All testing shall be performed in accordance with the provisions of Chapter 139 of the Rules and Regulations of the Department of Environmental Protection.

9) All submittals, besides notifications, shall be accomplished through PSIMS\*Online available through <https://www.depgreenport.state.pa.us/ecommm/Login.jsp> when it becomes available. If internet submittal can not be accomplished, one copy of the submittal shall be sent to the Pennsylvania Department of Environmental Protection, Bureau of Air Quality, Division of Source Testing and Monitoring, 400 Market Street, 12th Floor Rachael Carson State Office Building, Harrisburg, PA 17105-8468 with deadlines verified through document postmarks. In a like manner, two copies of the submittal shall be sent to the appropriate Regional Office.

10) The permittee shall ensure all federal reporting requirements contained in the applicable subpart of 40 CFR are followed, including timelines more stringent than those contained herein. In the event of an inconsistency or any conflicting requirements between state and the federal, the most stringent provision, term, condition, method or rule shall be used by default.

11) Actions Related to Noncompliance Demonstrated by a Stack Test:

(a) If the results of a stack test, performed as required by this approval, exceed the level specified in any condition of this approval, the Permittee shall take appropriate corrective actions. Within 30 days of the Permittee receiving the stack test

**SECTION D. Source Level Requirements**

results, a written description of the corrective actions shall be submitted to the Department. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. The Department shall notify the Permittee within 30 days, if the corrective actions taken are deficient. Within 30 days of receipt of the notice of deficiency, the Permittee shall submit a description of additional corrective actions to the Department. The Department reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(b) If the results of the required stack test exceed any limit defined in this plan approval, the test was not performed in accordance with the stack test protocol or the source and/or air cleaning device was not operated in accordance with the plan approval, then another stack test shall be performed to determine compliance. Within 120 days of the Permittee receiving the original stack test results, a retest shall be performed. The Department may extend the retesting deadline if the Permittee demonstrates, to the Department's satisfaction, that retesting within 120 days is not practicable. Failure of the second test to demonstrate compliance with the limits in the plan approval, not performing the test in accordance with the stack test protocol or not operating the source and/or air cleaning device in accordance with the plan approval may be grounds for immediate revocation of the plan approval to operate the affected source.

12) (b) [See Section E -Group PA 62-017G & SUBSEQUENT PA TESTING of this permit for the ongoing testing frequency]

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

**# 005 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

[Plan Approval 62-017V]

1) The fuel usage of Boiler 5B (Source 036) shall be recorded biweekly.

[This plan approval requirement for biweekly records is more stringent than the monthly recordkeeping provided in 40 CFR Section 60.48c(g) which has been streamlined from this permit].

2) All visible emission observations conducted to comply with the monitoring requirements of this source shall be recorded in a log which shall contain the following at a minimum:

- a) Time and date of observation
- b) Name, title, and signature of the observer
- c) A detailed description of the observation made
- d) Any corrective action taken as result of the observation

3) All inspection observations and maintenance performed on boiler/burner shall be recorded in a log. This record shall, at a minimum, include:

- a) Time and date of observation
- b) Name, title, and signature of the observer
- c) A detailed description of the observation made
- d) Any corrective action taken as result of the observation

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**SECTION D. Source Level Requirements****VI. WORK PRACTICE REQUIREMENTS.****# 006 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017V]

- 1) The permittee shall install and maintain the necessary meter(s) to determine and to record amount of fuel usage.
- 2) A copy of the boiler and burner manufacturer's operational and maintenance literature shall be maintained on site and shall be readily available.
- 3) The permittee shall perform an annual tune-up on the combustion process. The emissions of NO<sub>x</sub> shall be minimized by annual combustion tuning, good operating practices and good air pollution control practices. The annual tune-up shall include, but not be limited to, the following:
  - a) Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.
  - b) Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NO<sub>x</sub>, and to the extent practicable minimize emissions of CO.
  - c) Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.
  - d) Recording all adjustments in a permanently bound log book containing, at a minimum, the following information:
    - i. The date of the tuning procedure.
    - ii. The name of the service company and name, title, and signature of the technicians.
    - iii. The final operating rate or load.
    - iv. The final CO and NO<sub>x</sub> emission rates in lb/mmbtu.
    - v. The final excess oxygen rate.

**VII. ADDITIONAL REQUIREMENTS.****# 007 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017V]

- 1) The issuance of this plan approval does not alleviate the owner/operator from any applicable conditions or requirements found in the current operating permit.
- 2) This facility shall continue to comply with 40 CFR 63 Subpart CC which this source is subject to.
- 3) This source is subject to the conditions of Source Group "BOILER / PROCESS HEATER MACT" found in the facility's current operating permit. The permittee shall comply with the applicable conditions found therein.

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

Source ID: 037

Source Name: VICTORY ENERGY OPERATIONS, VOYAGER, BOILER 6

Source Capacity/Throughput:	182.780	MMBTU/HR	
	183.000	MCF/HR	Refinery Gas
	183.000	MCF/HR	Natural Gas

Conditions for this source occur in the following groups: CO&A FOR 1-HR SO<sub>2</sub> NAAQS  
PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017X]

Emissions from this source shall not exceed the following:

NO<sub>x</sub>: 0.036 lb/MMBtu, 28.8 tpy (calculated as a 12-month rolling total)

CO: 0.040 lb/MMBtu, 32.0 tpy (calculated as a 12-month rolling total)

VOC: 0.005 lb/MMBtu, 4.0 tpy (calculated as a 12-month rolling total)

SO<sub>x</sub>: 0.002 lb/MMBtu (when combusting natural gas), 0.03 lb/MMBtu (when combusting refinery gas), 7.3 tpy (calculated as a 12-month rolling total)

PM: 0.01 lb/MMBtu, 8.0 tpy (calculated as a 12-month rolling total)

PM-10: 0.01 lb/MMBtu, 8.0 tpy (calculated as a 12-month rolling total)

PM-2.5: 0.01 lb/MMBtu, 8.0 tpy (calculated as a 12-month rolling total)

[Compliance with this condition assures compliance with the NO<sub>x</sub> emission limitations of 40 CFR §60.44b]This source shall not emit into the atmosphere any gases that contain NO<sub>x</sub> (expressed as NO<sub>2</sub>) in excess of 0.20 lb/MMBtu (high heat release rate).**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**SO<sub>x</sub> emissions from the source into the atmosphere shall not exceed 4.60 lb/hr.[Additional authority for this requirement based on September 29, 2017 CO&A for 1-hr SO<sub>2</sub> NAAQS Standard]**Fuel Restriction(s).****# 003 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §60.102a(g)(1)(ii)]

The permittee shall not burn any refinery gas that contains H<sub>2</sub>S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis, and/or H<sub>2</sub>S in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis.

**SECTION D. Source Level Requirements****II. TESTING REQUIREMENTS.****# 004 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017X]

(a) Initial Application (Phase I): Proposal[s] containing information as listed in the Phase I section of the Department's Continuous Source Monitoring Manual for the CEMS[s] must be submitted at least 180 days prior to the planned initial source startup date.

(b) Performance Testing (Phase II): Testing as listed in the Phase II section of the Department's Continuous Source Monitoring Manual must be completed for the CEMS no later than 180 days after initial source startup date and no later than 60 days after source achieves normal process capacity.

(c) Final Approval (Phase III): The final report of testing as listed in the Phase III section of the Department's Continuous Source Monitoring Manual must be submitted to the Bureau no later than 60 days after completion of testing.

(d) The owner or operator of the source shall not be issued an operating permit until the CEMS has received Phase III approval, in writing from the Department, when installation of a CEMS is made a condition of the plan approval. Until Phase III Department approval is obtained, operation shall be covered solely under condition of a plan approval.

**# 005 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §60.46b(e)]

If utilizing a CEMS to demonstrate NOx compliance, conduct the performance test using the continuous system for monitoring NOx under §60.48b(b).

(1) For the initial compliance test, within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the boiler; NOx from the boiler is required to be monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NOx emission standards by calculating the average of all hourly emissions data recorded during the 30-day test period.

(2) Following the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, the permittee will upon request of the Department determine compliance with the NOx standards in §60.44b through the use of a 30-day performance test.

**III. MONITORING REQUIREMENTS.****# 006 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017X]

(a) The following continuous emission monitoring system[s] (CEMS[s]) must be installed, approved by the Department, operated and maintained in accordance with the requirements of 25 Pa. Code Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources), and the 'Submittal and Approval', 'Record Keeping and Reporting', and 'Quality Assurance' requirements of Revision No. 8 of the Department's Continuous Source Monitoring Manual, 274-0300-001.

1. CEMS #1 [This will consist of continuous measurement of NOx in the exhaust of Boiler #6; daily measurement of quantity and type(s) of fuel combusted and calculation of average hourly NOx emission rate; and calculation of pounds of NOx per MMBtu on a 30-day rolling average, calculated at the end of each operating day]

(a) Source Combination to be Monitored: Boiler #6

(b) Parameter to be Reported: NOx (as NO2)

(c) Units of Measurement to be Reported: lb/MMBtu

(d) Moisture Basis of Measurement to be Reported: n/a

(e) Correction basis of Measurements to be Reported: n/a



**SECTION D. Source Level Requirements**

(f) Data Substitution Required: Yes

(g) Emission Standards

(1) Emission Standard # 1:

(a) Emission Standard Averaging Period Description: 30-day rolling average, calculated once per operating day

(b) Emission Standard Value: 0.036 lb/MMBtu

(c) Emission Standard Direction: Violation if greater than emission standard value

(d) Variable Emission Standard: No

(b) Compliance with any subsequently issued revisions to the Continuous Source Monitoring Manual will constitute compliance with the regulations.

**# 007 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

[40 CFR §60.46b(e)(4)]

During periods when performance tests are not requested, NOx emissions data collected pursuant to §60.48b(g)(1) or §60.48b(g)(2) shall be used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but shall not be used to determine compliance with the NOx emission standards. A new 30-day rolling average emission rate shall be calculated each steam generating unit operating day as the average of all of the hourly NOx emission data for the preceding 30 steam generating unit operating days.

**# 008 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

[40 CFR §§60.48b(b-f)]

If utilizing a CEMS to demonstrate NOx compliance, the permittee shall:

(1) Install, calibrate, maintain, and operate a CEMS for measuring NOx and O<sub>2</sub> (or CO<sub>2</sub>) emissions discharged to the atmosphere, and record the output of the system.

(2) Operate the CEMS during all periods of operation of the boiler including calibration checks, and zero and span adjustments, except for CEMS breakdowns and repairs.

(3) The 1-hour average NOx emission rates measured by the continuous NOx monitor required by paragraph (b) of this condition and required under §60.13(h) shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.13(h)(2).

(4) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the NOx CEMS.

i. NOx span values shall be determined as 500 ppm for natural gas, or

ii. NOx span values will be determined according to section 2.1.2 in appendix A of 40 CFR Part 75. All span values will be rounded off according to section 2.1.2.

(5) When NOx emission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of Part 60, Method 7A of appendix A of Part 60, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

**# 009 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

[40 CFR §60.48b(g)]

The permittee shall:

**SECTION D. Source Level Requirements**

(1) Monitor the boiler's NO<sub>x</sub> emissions with a CEMS in accordance with §§60.48b(b-f)  
OR  
(2) Monitor the boiler's operating conditions and predict NO<sub>x</sub> emission rates as specified in a plan to be submitted pursuant to §60.49b(c).

**# 010 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

[40 CFR §60.107a(a)(2)]

The permittee shall comply with the H<sub>2</sub>S concentration limits in §60.102a(g)(1)(ii) through the use of the existing permitted Refinery Fuel Gas continuously monitoring system which monitors and records the concentration of H<sub>2</sub>S in the refinery fuel gases prior to use in the boiler. The monitoring, recordkeeping and reporting requirements of the existing operating permit for Part 60, Subpart Ja will assure compliance for the use of refinery fuel gas in Boiler 6.

**IV. RECORDKEEPING REQUIREMENTS.**

**# 011 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

[Plan Approval 62-017X]

All required records shall be maintained on site for a minimum of five (5) years, and shall be made available to the Department upon request.

**# 012 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

[40 CFR §60.49b(d)(1)]

The permittee shall record the amounts of each fuel combusted during each day.

**# 013 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

[40 CFR §60.49b(g)]

The permittee shall record the following information as applicable for each steam generating unit operating day:

- (1) Calendar date;
- (2) The average hourly NO<sub>x</sub> emission rate (expressed as NO<sub>2</sub>) (ng/J or lb/MMBtu heat input) measured or predicted;
- (3) The 30-day average NO<sub>x</sub> emission rate (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly NO<sub>x</sub> emission rates for the preceding 30 steam generating unit operating days;
- (4) Identification of the boiler's operating days when the calculated 30-day average NO<sub>x</sub> emission rate is in excess of the NO<sub>x</sub> emissions standard of this Plan Approval, with the reasons for such excess NO<sub>x</sub> emissions as well as a description of corrective actions taken;
- (5) Identification of the boiler's operating days for which NO<sub>x</sub> data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;
- (6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;
- (7) Identification of "F" factor used for NO<sub>x</sub> calculations, method of determination, and type of fuel combusted;
- (8) Identification of the times when the NO<sub>x</sub> concentration exceeded full span of the CEMS;
- (9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3 in Appendix B of Part 60; and
- (10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of Part 60.

**SECTION D. Source Level Requirements****# 014 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §60.48b(c)]

If a CEMS system is used to determine excess NOX emissions, the permittee shall record CEMS data during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data shall be recorded during calibration checks, and zero and span adjustments.

**# 015 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §63.7555]

The permittee shall maintain a copy of the initial notification submitted in accordance with 40 CFR §63.9(b).

The permittee shall keep records of the dates and procedures of each tune-up, and the fuel used. Maintain fuel records for at least 12 months prior to the scheduled tune-up. The record must be kept on-site and submitted to the delegated authority if requested.

**V. REPORTING REQUIREMENTS.****# 016 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §63.7545(c),(e),and (f); 40 CFR §63.7550(b)(1);40 CFR §63.7550(c)]

The permittee shall submit an initial Notification of Applicability within 15 days of actual startup in accordance with 40 CFR §63.7545(c) and 40 CFR §63.9(b)(4) and (5).

The permittee shall submit a Notification of Compliance Status within 60 days of completing the initial tune-up. The Notification of Compliance Status report must indicate that you conducted an initial tune-up of the boiler.

The permittee shall submit the results of the initial and 5 year tune-up upon request.

The permittee shall submit the first 5 year compliance report by January 31 that is at least 1 year after the compliance date, which is the date of startup of the boiler. The compliance report must contain the following elements:

- Company and facility name and address
- Process unit information
- Date of report and beginning and ending dates of the reporting period
- Include the date of the most recent tune-up. Include the date of the most recent burner inspection if it was not done on a 5 year period and was delayed until the next scheduled or unscheduled unit shutdown.
- Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

If switching fuels or making a physical change to the boiler and the fuel switch or physical change results in the applicability of a different subcategory, the permittee shall provide notice of the date upon which fuels were switched or a physical change was made within 30 days of the switch/change. The notification must identify:

- The name of the owner or operator of the affected source, the location of the source, the boiler that have switched fuels, were physically changed, and the date of the notice.
- The currently applicable subcategory.
- The date upon which the fuel switch or physical change occurred.

The permittee shall submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption. If you intend to use a fuel other than natural gas or refinery gas to fire the affected unit during a period of natural gas curtailment or supply interruption.

**SECTION D. Source Level Requirements****# 017 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §63.7550]

The permittee shall submit a 5 year compliance report which includes the date of the most recent tune-up for Boiler 6. The report shall include the date of the most recent burner inspection, if the tune-up was not done on a 5 year period and was delayed until the next scheduled or unscheduled unit shutdown.

**# 018 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §60.49b(a), (b), (c), (v), (w)]

The permittee shall submit notification of the date of initial startup, as provided by §60.7.

The permittee shall submit to the Department the performance test data from the initial performance test and the performance evaluation of the NO<sub>x</sub> CEMS using the applicable performance specifications in appendix B of Part 60.

The owner or operator of an affected facility may submit electronic quarterly reports for SO<sub>2</sub> and/or NO<sub>x</sub> and/or opacity in lieu of submitting the written reports required under paragraphs (h), (i), (j), (k) or (l) of this section. The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format.

The reporting period for the reports required under Subpart Db is each 6 month period. All reports shall be submitted to the Department and shall be postmarked by the 30th day following the end of the reporting period.

If monitoring the boiler's steam generating operating conditions and predicting NO<sub>x</sub> emission rates, the permittee shall submit to the Department for approval a plan that identifies the operating conditions to be monitored in §60.48b(g)(2) and the records to be maintained in §60.49b(g). This plan shall be submitted to the Department for approval within 360 days of the initial startup of the affected facility. The plan shall:

- (1) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and NO<sub>x</sub> emission rates (i.e., ng/J or lbs/MMBtu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (i.e., the ratio of primary air to secondary and/or tertiary air) and the level of excess air (i.e., flue gas O<sub>2</sub> level);
- (2) Include the data and information that the owner or operator used to identify the relationship between NO<sub>x</sub> emission rates and these operating conditions; and
- (3) Identify how these operating conditions, including steam generating unit load, will be monitored under §60.48b(g) on an hourly basis by the owner or operator during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the owner or operator under §60.49b(g).

**# 019 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §60.49b(h)(2), (w)]

The permittee shall submit to the Department excess emission reports for any excess emissions that occurred during the reporting period as determined under §60.48b(g)(1) or under §60.48b(g)(2). The reporting period for the reports required under this subpart is each 6 month period. All reports shall be submitted to PADEP and postmarked by the 30th day following the end of the reporting period.

**SECTION D. Source Level Requirements****VI. WORK PRACTICE REQUIREMENTS.****# 020 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §63.7500(c)]

At all times, the permittee shall operate and maintain Boiler No. 6 in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator or PADEP that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

**# 021 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §63.7515(d)]

The permittee shall conduct an initial tune-up no later than 61 months after the initial startup of the boiler. This tune-up shall, at a minimum, consist of the following:

- Inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown).
- Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
- Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly
- Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOX requirement to which the unit is subject;
- Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and
- Maintain on-site and submit, if requested by the Administrator or PADEP, a 5 year report containing the following information:
  - The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
  - A description of any corrective actions taken as a part of the tune-up; and
  - The type and amount of fuel used over the 12 months prior to the tune-up.

**# 022 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §63.7540(a)(12)]

The permittee shall conduct subsequent tune-ups every five years in accordance with 40 CFR §63.7540(a)(12). The burner inspection specified in paragraph (a)(10)(i) of this section may be delayed until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

**VII. ADDITIONAL REQUIREMENTS.****# 023 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017X]

This source shall comply with all applicable requirements of 40 CFR 60, Subpart(s) Db [Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units] and Ja [Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007], and 40 CFR 63, Subpart DDDDD [National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters]. Where permit language differs from regulatory requirements, the more stringent requirement shall apply.



**SECTION D. Source Level Requirements**

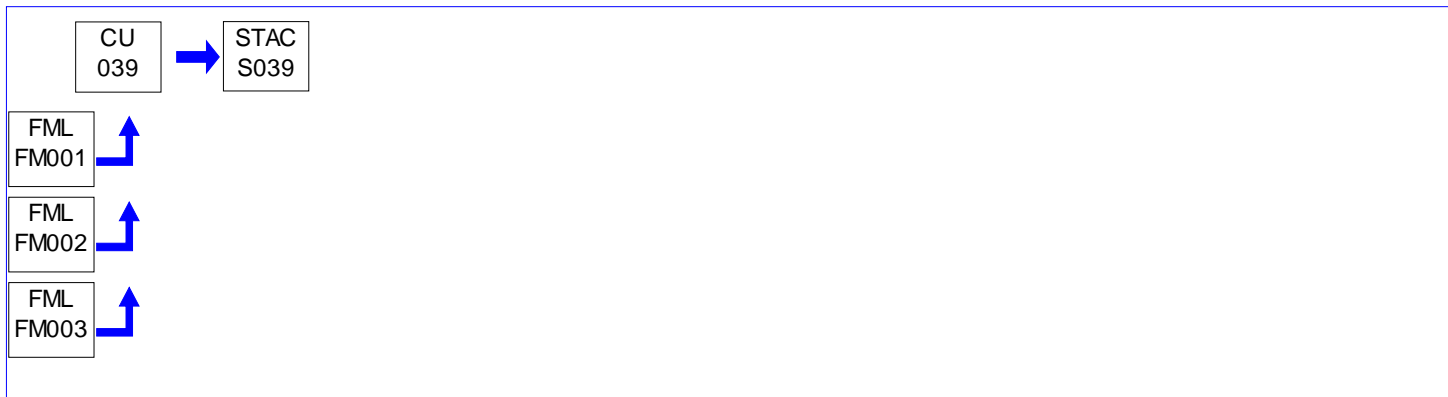
**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

Source ID: 039

Source Name: BOILER 7 (180 MMBTU/HR)

Source Capacity/Throughput:	180.000 MMBTU/HR	
	385.000 Gal/HR	#2 Oil
	180.000 MCF/HR	Natural Gas
	180.000 MCF/HR	Refinery Gas

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

a) Emissions from this source shall not exceed the following:

NO<sub>x</sub>: 0.065 lb/MMBtu, 34.0 tpy (calculated as a 12-month rolling total)  
 CO: 0.045 lb/MMBtu, 42.6 tpy (calculated as a 12-month rolling total)  
 VOC: 0.006 lb/MMBtu, 1.1 tpy (calculated as a 12-month rolling total)  
 SO<sub>x</sub>: 0.008 lb/MMBtu, 7.6 tpy (calculated as a 12-month rolling total)  
 PM: 0.011 lb/MMBtu, 8.7 tpy (calculated as a 12-month rolling total)  
 PM-10: 0.011 lb/MMBtu, 8.7 tpy (calculated as a 12-month rolling total)  
 PM-2.5: 0.011 lb/MMBtu, 8.7 tpy (calculated as a 12-month rolling total)

[Compliance with this condition assures compliance with the NO<sub>x</sub> emission limitations of 40 CFR §60.44b]

b) This source shall not emit into the atmosphere any gases that contain NO<sub>x</sub> (expressed as NO<sub>2</sub>) in excess of 0.20 lb/MMBtu (high heat release rate).

**Fuel Restriction(s).****# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §60.102a(g)(1)(ii)]

The permittee shall not burn any refinery gas that contains H<sub>2</sub>S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis, and/or H<sub>2</sub>S in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis.

**II. TESTING REQUIREMENTS.****# 003 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §60.46b(e)]

If utilizing a CEMS to demonstrate NO<sub>x</sub> compliance, conduct the performance test using the continuous system for

**SECTION D. Source Level Requirements**

monitoring NO<sub>x</sub> under §60.48b(b).

(1) For the initial compliance test, within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the boiler; NO<sub>x</sub> from the boiler is required to be monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NO<sub>x</sub> emission standards by calculating the average of all hourly emissions data recorded during the 30-day test period.

(2) Following the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, the permittee will upon request of the Department determine compliance with the NO<sub>x</sub> standards in §60.44b through the use of a 30-day performance test.

**# 004 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

(a) Within 90 days after achieving the normal rated capacity at which the affected source will be operated, a stack test for NO<sub>x</sub>, CO, VOC, PM, and SO<sub>x</sub> shall be performed in accordance with the provisions of Chapter 139 of the Rules and Regulations of the Department of Environmental Protection. The stack test shall be performed while the aforementioned source is operating at maximum normal operating conditions, while combusting refinery gas. PM testing shall consist of both filterable and condensable portions.

(b) Repeat stack testing shall be conducted a minimum of once within each subsequent five (5) year period following the initial stack test.

(c) The stack tests shall be performed in accordance with the provisions of Chapter 139 of the Rules and Regulations of the Department to demonstrate compliance with the emission limits for this source. Appropriate U.S. EPA Reference Methods shall be used to determine the emission rates of all pollutants. Testing shall occur when the subject source(s) are operating at maximum normal operating conditions, during the peak period of the pitch-off cycle.

(d) Pursuant to 25 Pa. Code § 139.3 to at least 90 calendar days prior to commencing an emissions testing program, a test protocol shall be submitted to the Department for review and approval. The test protocol shall meet all applicable requirements specified in the most current version of the Department's Source Testing Manual.

(e) Pursuant to 25 Pa. Code § 139.3 at least 15 calendar days prior to commencing an emission testing program, notification as to the date and time of testing shall be given to the appropriate Regional Office. Notification shall also be sent to the Division of Source Testing and Monitoring. Notification shall not be made without prior receipt of a protocol acceptance letter from the Department.

(f) Pursuant to 25 Pa. Code Section 139.53(a)(3) within 15 calendar days after completion of the on-site testing portion of an emission test program, if a complete test report has not yet been submitted, an electronic mail notification shall be sent to the Department's Division of Source Testing and Monitoring indicating the completion date of the on-site testing.

(g) Pursuant to 40 CFR Part 60.8(a), 40 CFR Part 61.13(f) and 40 CFR Part 63.7(g) a complete test report shall be submitted to the Department no later than 60 calendar days after completion of the on-site testing portion of an emission test program. For those tests being conducted pursuant to 40 CFR Part 61, the, a complete test report shall be submitted within 31 days after completion of the test.

(h) Pursuant to 25 Pa. Code Section 139.53(b) a complete test report shall include a summary of the emission results on the first page of the report indicating if each pollutant measured is within permitted limits and a statement of compliance or non-compliance with all applicable permit conditions. The summary results will include, at a minimum, the following information:

1. A statement that the owner or operator has reviewed the report from the emissions testing body and agrees with the findings.

2. Permit number(s) and condition(s) which are the basis for the evaluation.



**SECTION D. Source Level Requirements**

3. Summary of results with respect to each applicable permit condition.

4. Statement of compliance or non-compliance with each applicable permit condition.

(i) Pursuant to 25 Pa. Code § 139.3 to all submittals shall meet all applicable requirements specified in the most current version of the Department's Source Testing Manual.

(j) All testing shall be performed in accordance with the provisions of Chapter 139 of the Rules and Regulations of the Department of Environmental Protection.

(k) Pursuant to 25 Pa. Code Section 139.53(a)(1) and 139.53(a)(3) all submittals, besides notifications, shall be accomplished through PSIMS\*Online available through <https://www.depgreenport.state.pa.us/ecommm/Login.jsp> when it becomes available. If internet submittal can not be accomplished, three copies of the submittal shall be sent to the Pennsylvania Department of Environmental Protection, Bureau of Air Quality, Division of Source Testing and Monitoring, 400 Market Street, 12th Floor Rachael Carson State Office Building, Harrisburg, PA 17105-8468 with deadlines verified through document postmarks.

(l) The permittee shall insure all federal reporting requirements contained in the applicable subpart of 40 CFR are followed, including timelines more stringent than those contained herein. In the event of an inconsistency or any conflicting requirements between state and the federal, the most stringent provision, term, condition, method or rule shall be used by default.

(m) If the results of a stack test, performed as required by this approval, exceed the level specified in any condition of this plan approval, the Permittee shall take appropriate corrective actions. Within 30 days of the Permittee receiving the stack test results, a written description of the corrective actions shall be submitted to the Department. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. The Department shall notify the Permittee within 30 days, if the corrective actions taken are deficient. Within 30 days of receipt of the notice of deficiency, the Permittee shall submit a description of additional corrective actions to the Department. The Department reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(n) If the results of the required stack test exceed any limit defined in this plan approval, the test was not performed in accordance with the stack test protocol or the source and/or air cleaning device was not operated in accordance with the plan approval, then another stack test shall be performed to determine compliance within 120 days of the Permittee receiving the original stack test results. The Department may extend the retesting deadline if the Permittee demonstrates, to the Department's satisfaction, that retesting within 120 days is not practicable. Failure of the second test to demonstrate compliance with the limits in the plan approval, not performing the test in accordance with the stack test protocol or not operating the source and/or air cleaning device in accordance with the plan approval may be grounds for immediate revocation of the plan approval to operate the affected source.

**# 005 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

(a) Initial Application (Phase I): Proposal[s] containing information as listed in the Phase I section of the Department's Continuous Source Monitoring Manual for the CEMS[s] must be submitted at least 180 days prior to the planned initial source startup date.

(b) Performance Testing (Phase II): Testing as listed in the Phase II section of the Department's Continuous Source Monitoring Manual must be completed for the CEMS no later than 180 days after initial source startup date and no later than 60 days after source achieves normal process capacity.

(c) Final Approval (Phase III): The final report of testing as listed in the Phase III section of the Department's Continuous Source Monitoring Manual must be submitted to the Bureau no later than 60 days after completion of testing.

(d) The owner or operator of the source shall not be issued an operating permit until the CEMS has received Phase III approval, in writing from the Department, when installation of a CEMS is made a condition of the plan approval. Until Phase III Department approval is obtained, operation shall be covered solely under condition of a plan approval.

**SECTION D. Source Level Requirements****III. MONITORING REQUIREMENTS.****# 006 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §60.46b(e)(4)]

During periods when performance tests are not requested, NO<sub>x</sub> emissions data collected pursuant to §60.48b(g)(1) or §60.48b(g)(2) shall be used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but shall not be used to determine compliance with the NO<sub>x</sub> emission standards. A new 30-day rolling average emission rate shall be calculated each steam generating unit operating day as the average of all of the hourly NO<sub>x</sub> emission data for the preceding 30 steam generating unit operating days.

**# 007 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §§60.48b(b-f)]

If utilizing a CEMS to demonstrate NO<sub>x</sub> compliance, the permittee shall:

(1) Install, calibrate, maintain, and operate a CEMS for measuring NO<sub>x</sub> and O<sub>2</sub> (or CO<sub>2</sub>) emissions discharged to the atmosphere, and record the output of the system.

(2) Operate the CEMS during all periods of operation of the boiler including calibration checks, and zero and span adjustments, except for CEMS breakdowns and repairs.

(3) The 1-hour average NO<sub>x</sub> emission rates measured by the continuous NO<sub>x</sub> monitor required by paragraph (b) of this condition and required under §60.13(h) shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.13(h)(2).

(4) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the NO<sub>x</sub> CEMS.

i. NO<sub>x</sub> span values shall be determined as 500 ppm for natural gas, or

ii. NO<sub>x</sub> span values will be determined according to section 2.1.2 in appendix A of 40 CFR Part 75. All span values will be rounded off according to section 2.1.2.

(5) When NO<sub>x</sub> emission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of Part 60, Method 7A of appendix A of Part 60, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

**# 008 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §60.48b(g)]

The permittee shall:

(1) Monitor the boiler's NO<sub>x</sub> emissions with a CEMS in accordance with §§60.48b(b-f)

OR

(2) Monitor the boiler's operating conditions and predict NO<sub>x</sub> emission rates as specified in a plan to be submitted pursuant to §60.49b(c).

**# 009 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §60.107a(a)(2)]

The permittee shall comply with the H<sub>2</sub>S concentration limits in §60.102a(g)(1)(ii) through the use of the existing permitted Refinery Fuel Gas continuously monitoring system which monitors and records the concentration of H<sub>2</sub>S in the refinery fuel

**SECTION D. Source Level Requirements**

gases prior to use in the boiler. The monitoring, recordkeeping and reporting requirements of the existing operating permit for Part 60, Subpart Ja will assure compliance for the use of refinery fuel gas in Boiler 7.

**# 010 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

(a) The following continuous emission monitoring system[s] (CEMS[s]) must be installed, approved by the Department, operated and maintained in accordance with the requirements of 25 Pa. Code Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources), and the 'Submittal and Approval', 'Record Keeping and Reporting', and 'Quality Assurance' requirements of Revision No. 8 of the Department's Continuous Source Monitoring Manual, 274-0300-001.

1. CEMS #1 [This will consist of continuous measurement of NO<sub>x</sub> in the exhaust of Boiler #7; daily measurement of quantity and type(s) of fuel combusted and calculation of average hourly NO<sub>x</sub> emission rate; and calculation of pounds of NO<sub>x</sub> per MMBtu on a 30-day rolling average, calculated at the end of each operating day]

(a) Source Combination to be Monitored: Boiler #7

(b) Parameter to be Reported: NO<sub>x</sub> (as NO<sub>2</sub>)

(c) Units of Measurement to be Reported: lb/MMBtu

(d) Moisture Basis of Measurement to be Reported: n/a

(e) Correction basis of Measurements to be Reported: n/a

(f) Data Substitution Required: No

(g) Emission Standards

(1) Emission Standard # 1:

(a) Emission Standard Averaging Period Description: 30-day rolling average, calculated once per operating day

(b) Emission Standard Value: 0.065 lb/MMBtu

(c) Emission Standard Direction: Violation if greater than emission standard value

(d) Variable Emission Standard: No

(b) Compliance with any subsequently issued revisions to the Continuous Source Monitoring Manual will constitute compliance with the regulations.

**IV. RECORDKEEPING REQUIREMENTS.****# 011 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §60.49b(d)(1)]

The permittee shall record the amounts of each fuel combusted during each day.

**# 012 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §60.49b(g)]

The permittee shall record the following information as applicable for each steam generating unit operating day:

(1) Calendar date;

(2) The average hourly NO<sub>x</sub> emission rate (expressed as NO<sub>2</sub>) (ng/J or lb/MMBtu heat input) measured or predicted;

(3) The 30-day average NO<sub>x</sub> emission rate (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly NO<sub>x</sub> emission rates for the preceding 30 steam generating unit operating days;

(4) Identification of the boiler's operating days when the calculated 30-day average NO<sub>x</sub> emission rate is in excess of the NO<sub>x</sub> emissions standard of this Plan Approval, with the reasons for such excess NO<sub>x</sub> emissions as well as a description of corrective actions taken;

(5) Identification of the boiler's operating days for which NO<sub>x</sub> data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

(6) Identification of the times when emission data have been excluded from the calculation of average emission rates and

**SECTION D. Source Level Requirements**

the reasons for excluding data;

(7) Identification of "F" factor used for NO<sub>x</sub> calculations, method of determination, and type of fuel combusted;

(8) Identification of the times when the NO<sub>x</sub> concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3 in Appendix B of Part 60; and

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of Part 60.

**# 013 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

[40 CFR §60.48b(c)]

If a CEMS system is used to determine excess NO<sub>x</sub> emissions, the permittee shall record CEMS data during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data shall be recorded during calibration checks, and zero and span adjustments.

**V. REPORTING REQUIREMENTS.**

**# 014 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

[40 CFR §60.49b(a), (b), (c), (v), (w)]

(a) The permittee shall submit notification of the date of initial startup, as provided by §60.7.

(b) The permittee shall submit to the Department the performance test data from the initial performance test and the performance evaluation of the NO<sub>x</sub> CEMS using the applicable performance specifications in appendix B of Part 60.

(c) The owner or operator of an affected facility may submit electronic quarterly reports for SO<sub>2</sub> and/or NO<sub>x</sub> and/or opacity in lieu

of submitting the written reports required under paragraphs (h), (i), (j), (k) or (l) of this section. The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format.

(d) The reporting period for the reports required under Subpart Db is each 6 month period. All reports shall be submitted to the

Department and shall be postmarked by the 30th day following the end of the reporting period.

(e) If monitoring the boiler's steam generating operating conditions and predicting NO<sub>x</sub> emission rates, the permittee shall submit to the Department for approval a plan that identifies the operating conditions to be monitored in §60.48b(g)(2) and the records to be maintained in §60.49b(g). This plan shall be submitted to the Department for approval within 360 days of the initial startup of the affected facility. The plan shall:

(1) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and NO<sub>x</sub> emission rates (i.e., ng/J or lbs/MMBtu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (i.e., the ratio of primary air to secondary and/or tertiary air) and the level of excess air (i.e., flue gas O<sub>2</sub> level);

(2) Include the data and information that the owner or operator used to identify the relationship between NO<sub>x</sub> emission rates and these operating conditions; and

(3) Identify how these operating conditions, including steam generating unit load, will be monitored under §60.48b(g) on an hourly basis by the owner or operator during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the owner or operator under §60.49b(g).

**SECTION D. Source Level Requirements****# 015 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §60.49b(h)(2), (w)]

The permittee shall submit to the Department excess emission reports for any excess emissions that occurred during the reporting period as determined under §60.48b(g)(1) or under §60.48b(g)(2). The reporting period for the reports required under this subpart is each 6 month period. All reports shall be submitted to PADEP and postmarked by the 30th day following the end of the reporting period.

**# 016 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §63.7545(c),(e),and (f); 40 CFR §63.7550(b)(1);40 CFR §63.7550(c)]

(a) The permittee shall submit an initial Notification of Applicability within 15 days of actual startup in accordance with 40 CFR

§63.7545(c) and 40 CFR §63.9(b)(4) and (5).

(b) The permittee shall submit a Notification of Compliance Status within 60 days of completing the initial tune-up. The Notification of Compliance Status report must indicate that you conducted an initial tune-up of the boiler.

(c) The permittee shall submit the results of the initial and 5 year tune-up upon request.

(d) The permittee shall submit the first 5 year compliance report by January 31 that is at least 1 year after the compliance date,

which is the date of startup of the boiler. The compliance report must contain the following elements:

- Company and facility name and address
- Process unit information
- Date of report and beginning and ending dates of the reporting period
- Include the date of the most recent tune-up. Include the date of the most recent burner inspection if it was not done on a 5 year period and was delayed until the next scheduled or unscheduled unit shutdown.
- Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(e) If switching fuels or making a physical change to the boiler and the fuel switch or physical change results in the applicability

of a different subcategory, the permittee shall provide notice of the date upon which fuels were switched or a physical change was made within 30 days of the switch/change. The notification must identify:

- The name of the owner or operator of the affected source, the location of the source, the boiler that have switched fuels, were physically changed, and the date of the notice.
- The currently applicable subcategory.
- The date upon which the fuel switch or physical change occurred.

(f) The permittee shall submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption. If you intend to use a fuel other than natural gas or refinery gas to fire the affected unit during a period of natural gas curtailment or supply interruption.

**# 017 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §63.7550]

The permittee shall submit a 5 year compliance report which includes the date of the most recent tune-up for Boiler 7. The report shall include the date of the most recent burner inspection, if the tune-up was not done on a 5 year period and was delayed until the next scheduled or unscheduled unit shutdown.

**SECTION D. Source Level Requirements****VI. WORK PRACTICE REQUIREMENTS.****# 018 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §63.7555]

- (a) The permittee shall maintain a copy of the initial notification submitted in accordance with 40 CFR §63.9(b).
- (b) The permittee shall keep records of the dates and procedures of each tune-up, and the fuel used. Maintain fuel records for at least 12 months prior to the scheduled tune-up. The record must be kept on-site and submitted to the delegated authority if requested.

**# 019 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

All required records shall be maintained on site for a minimum of five (5) years, and shall be made available to the Department upon request.

**# 020 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §63.7500(c)]

At all times, the permittee shall operate and maintain Boiler No. 7 in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator or PADEP that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

**# 021 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §63.7515(d)]

The permittee shall conduct an initial tune-up no later than 61 months after the initial startup of the boiler. This tune-up shall, at a minimum, consist of the following:

- Inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown).
- Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
- Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly
- Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOX requirement to which the unit is subject;
- Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and
- Maintain on-site and submit, if requested by the Administrator or PADEP, a 5 year report containing the following information:
  - The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
  - A description of any corrective actions taken as a part of the tune-up; and
  - The type and amount of fuel used over the 12 months prior to the tune-up.

**# 022 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[40 CFR §63.7540(a)(12)]

The permittee shall conduct subsequent tune-ups every five years in accordance with 40 CFR §63.7540(a)(12). The burner

**SECTION D. Source Level Requirements**

inspection specified in paragraph (a)(10)(i) of this section may be delayed until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months.

**VII. ADDITIONAL REQUIREMENTS.****# 023 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

This source shall comply with all applicable requirements of 40 CFR 60, Subpart(s) Db [Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units] and Ja [Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007], and 40 CFR 63, Subpart DDDDD [National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters]. Where permit language differs from regulatory requirements, the more stringent requirement shall apply.

**# 024 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Fugitive emissions associated with this source shall be accounted & reported under Source ID 109 (NSPS Fugitive Emissions) or 109A (State Fugitive Emissions), as applicable.

**\*\*\* Permit Shield in Effect. \*\*\***

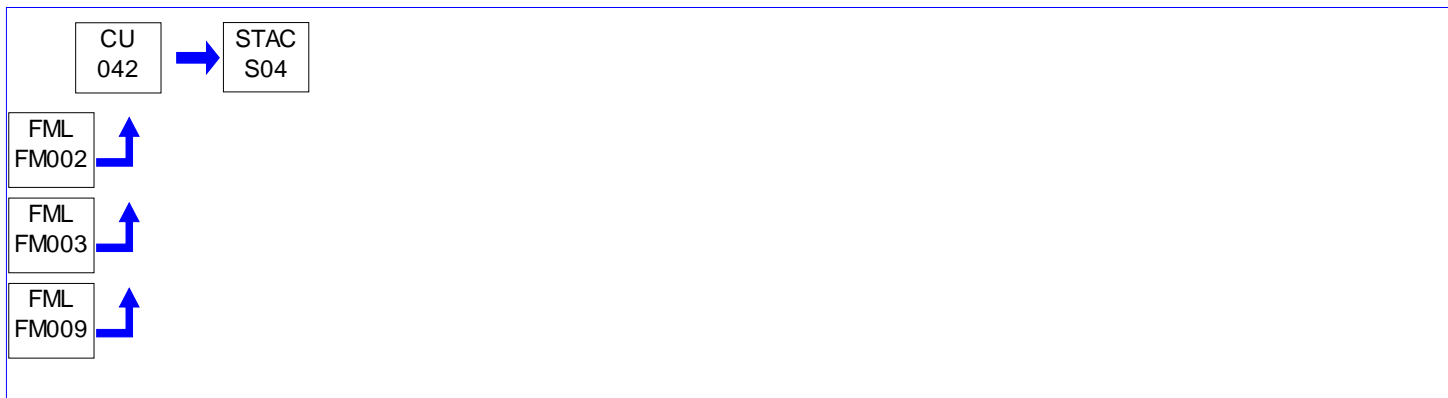
**SECTION D. Source Level Requirements**

Source ID: 042

Source Name: FCC HEATER (NEW UNIT)

Source Capacity/Throughput:	65.600 MMBTU/HR	
	65.000 MCF/HR	REFINERY FUEL GAS
	63.700 MCF/HR	
	464.000 Gal/HR	DISTILLATE OIL

Conditions for this source occur in the following groups: 11- METHOD OF COMPLIANCE  
 BART  
 BOILER / PROCESS HEATER MACT  
 CEM MONITORING  
 CO&A FOR 1-HR SO<sub>2</sub> NAAQS  
 PA 62-017G & SUBSEQUENT PA TESTING  
 PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The NO<sub>x</sub> emissions from the FCC heater shall not exceed 0.05 lb/MMBTU. The fugitive VOC emissions from the FCC Charge heater shall not exceed 51.0 TPY (based on a consecutive 12-month period).

[From Plan Approval 62-017H, Condition 10]

[Compliance with this permit condition, assures compliance with RACT OP 62-017, Condition 3]

**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- The NO<sub>x</sub> emissions shall not exceed 1.9 #/hr.
- The CO emissions shall not exceed 3.8 #/hr.
- The VOC emissions shall not exceed 0.3 #/hr.
- The TSP emissions shall not exceed 0.34 #/hr.
- The PM-10 emissions shall not exceed 0.34 #/hr.
- The SO<sub>x</sub> emissions shall not exceed 1.1 #/hr.

[Compliance with the SO<sub>x</sub> emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 4]



**SECTION D. Source Level Requirements****# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- a) The NO<sub>x</sub> emissions shall not exceed 9.4 TPY based on a consecutive 12-month period.
- b) The CO emissions shall not exceed 15.4 TPY based on a consecutive 12-month period.
- c) The VOC emissions shall not exceed 1.1 TPY based on a consecutive 12-month period.
- d) The TSP emissions shall not exceed 1.5 TPY based on a consecutive 12-month period.
- e) The PM-10 emissions shall not exceed 1.5 TPY based on a consecutive 12-month period.
- f) [The SO<sub>2</sub> emission limit is streamlined by the SO<sub>2</sub> limit in Group BART of this permit].

[Compliance with the SO<sub>x</sub> emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 5]

**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104]****Subpart J - Standards of Performance for Petroleum Refineries  
Standards for sulfur oxides.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.104(a)(1)

**# 005 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.642]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
General standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for Condition] as identified below:

40 C.F.R §63.642(a) - (n)

**# 006 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.643]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Miscellaneous process vent provisions.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §63.643(a) - (d)

**Fuel Restriction(s).****# 007 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017Q]

The permittee shall only burn refinery fuel gas, commercial natural gas, or refinery fuel oil in the FCC heater. [This condition replaces Condition 15 from 62-017H]

**SECTION D. Source Level Requirements****II. TESTING REQUIREMENTS.****# 008 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

If a visual inspection by Department personnel indicates that the source is not in compliance with the applicable Rules and Regulations of the Department, then the permittee shall perform a stack test.

[PA 62-312-010]

**# 009 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall perform a tuneup on an annual basis, using a portable gas analyzer to determine the final CO and NOx emission rates as required under Condition #018 with regards to the annual tune-up.

**# 010 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]****Subpart J - Standards of Performance for Petroleum Refineries****Test methods and procedures.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.106(e)

**# 011 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.645]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Test methods and procedures for miscellaneous process vents.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §63.645(a) - (i)

**III. MONITORING REQUIREMENTS.****# 012 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]****Subpart J - Standards of Performance for Petroleum Refineries****Monitoring of emissions and operations.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.105(a)(3), (4), (e)(3)

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 5]

**# 013 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.644]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Monitoring provisions for miscellaneous process vents.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §63.644(a) - (e)

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**SECTION D. Source Level Requirements****V. REPORTING REQUIREMENTS.****# 014 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]****Subpart J - Standards of Performance for Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.107 (f) and (g)

**# 015 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4]****Subpart A - General Provisions****Address.**

The permittee shall comply with the following applicable requirements [ See Section C, Site Level Requirements, Reporting Requirements/condition] as identified below:

40 C.F.R §60.4

**# 016 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.13]****Subpart A--General Provisions****Addresses of State air pollution control agencies and EPA Regional Offices.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §63.13

**# 017 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.655]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §63.655(d) - (i)

**VI. WORK PRACTICE REQUIREMENTS.****# 018 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall perform an annual tune-up on the combustion process. The emissions of NOx shall be minimized by annual combustion tuning, good operating practices and good air pollution control practices. The annual tune-up shall include, but not be limited to, the following:

1. Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.
2. Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NOx, and to the extent practicable minimize emissions of CO.
3. Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.
4. Recording all adjustments in a permanently bound log book containing, at a minimum, the following information:
  - a) The date of the tuning procedure.
  - b) The name of the service company and technicians.
  - c) The final operating rate or load.
  - d) The final CO and NOx emission rates in lb/mmbtu.
  - e) The final excess oxygen rate.

**SECTION D. Source Level Requirements**

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 019 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 1]

**# 020 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.592]****Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries Standards.**

The permittee shall comply with the following requirements [See Section C, Site level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §60.592(a) - (e)

**# 021 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.593]****Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries Exceptions.**

The permittee shall comply with the following requirements [See Section C, Site level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §60.593(a), (d) & (e)

**# 022 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.648]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries Equipment leak standards.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §63.648(a) - (i)

**# 023 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.649]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries Alternative means of emission limitation: Connectors in gas/vapor service and light liquid service.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §63.649(a) - (g)

**VII. ADDITIONAL REQUIREMENTS.****# 024 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]****Subpart J - Standards of Performance for Petroleum Refineries Applicability, designation of affected facility, and reconstruction.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.100(a), (b), (e)

\*\*\* Permit Shield in Effect. \*\*\*

**SECTION D. Source Level Requirements**

Source ID: 044

Source Name: D.H.T. HEATER 1

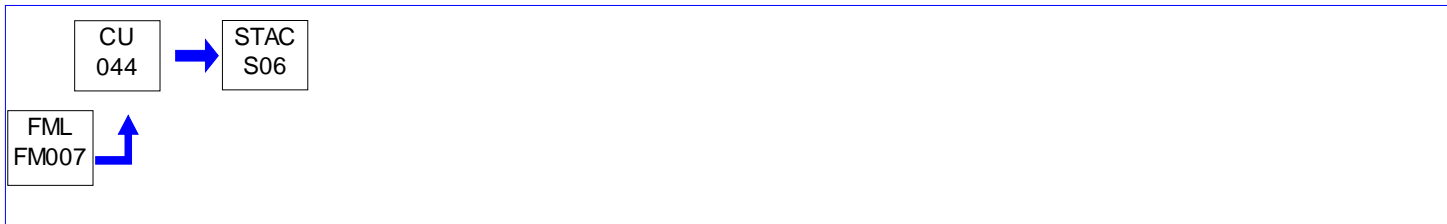
Source Capacity/Throughput:

9.000 MMBTU/HR

8.823 MCF/HR

Refinery Gas

Conditions for this source occur in the following groups: 11- METHOD OF COMPLIANCE  
 6 - SO2 PERMIT MONITORING  
 BOILER / PROCESS HEATER MACT  
 CO&A FOR 1-HR SO2 NAAQS  
 PA 62-017G & SUBSEQUENT PA TESTING  
 PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- The NO<sub>x</sub> emissions shall not exceed 0.7 #/hr.
- The CO emissions shall not exceed 0.8 #/hr.
- The VOC emissions shall not exceed 0.1 #/hr.
- The TSP emissions shall not exceed 0.1 #/hr.
- The PM-10 emissions shall not exceed 0.1 #/hr.
- The SO<sub>x</sub> emissions shall not exceed 0.1 #/hr.

[Compliance with the streamlined particulate and SO<sub>x</sub> emissions above assures compliance with the provisions in 25 Pa. Code Sections 123.11 and 123.22, respectively].

[Compliance with the SO<sub>x</sub> emissions above assures compliance with condition #4 of permit number SO2 PA: 62-017E].

[From Plan Approval 62-017M Condition #004]

**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- The NO<sub>x</sub> emissions shall not exceed 2.8 TPY based on a consecutive 12-month period.
- The CO emissions shall not exceed 3.2 TPY based on a consecutive 12-month period.
- The VOC emissions shall not exceed 0.2 TPY based on a consecutive 12-month period.
- The TSP emissions shall not exceed 0.3 TPY based on a consecutive 12-month period.
- The PM-10 emissions shall not exceed 0.3 TPY based on a consecutive 12-month period.
- The SO<sub>x</sub> emissions shall not exceed 0.4 TPY based on a consecutive 12-month period.

[Compliance with the SO<sub>x</sub> emission limit specified in this streamlined permit condition assures compliance with the

**SECTION D. Source Level Requirements**

provisions in: SO2 PA: 62-017E condition 5]

**Fuel Restriction(s).****# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

a) The permittee shall use only refinery gas for this source.

[From Plan Approval 62-017M Condition #005. During the stack test it was noted that the source was not connected to a #6 oil fuel and on October 11, 2006, United notified the Department that no oil will be fired in this source and therefore the conditions pertaining to oil firing were removed.]

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.****# 004 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

a) The permittee shall monitor the refinery gas used by the DHT1 heater using a gas flow meter or equivalent method as determined by the Department on a daily basis.

[From Plan Approval 62-017M Condition #008. During the stack test it was noted that the source was not connected to a #6 oil fuel and on October 11, 2006, United notified the Department that no oil will be fired in this source and therefore the conditions pertaining to oil firing were removed.]

**# 005 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall monitor the H2S concentration in the refinery fuel gas for the DHT1 heater. The H2S monitor for the source shall be installed, calibrated, maintained, and operated by the owner or operator in compliance with the requirements of the Department Continuous Emission Monitor (CEM) Manual.

[SO2 PA: 62-017E condition #5].

**# 006 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

a) Twice a week a Gas Chromatograph (GC) analysis of the fuel gas shall be conducted to provide the specific heat content for the refinery gas.

[From Plan Approval 62-017M Condition #010. During the stack test it was noted that the source was not connected to a #6 oil fuel and on October 11, 2006, United notified the Department that no oil will be fired in this source and therefore the conditions pertaining to oil firing were removed.]

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**SECTION D. Source Level Requirements****V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.****# 007 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

[From Plan Approval 62-017M Condition #012]

**# 008 [25 Pa. Code §129.93]****Presumptive RACT emission limitations**

c) For the following source types, presumptive RACT emission limitations are the installation, maintenance and operation of the source in accordance with manufacturer's specifications:

(1) Boilers and other combustion sources with individual rated gross heat inputs less than 20 million Btu/hour of operation.

**VII. ADDITIONAL REQUIREMENTS.****# 009 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The facility shall install a refinery gas fuel flow meter on the DHT1 to measure the daily refinery gas fuel usage.

[From Plan Approval 62-017M Condition #013]

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

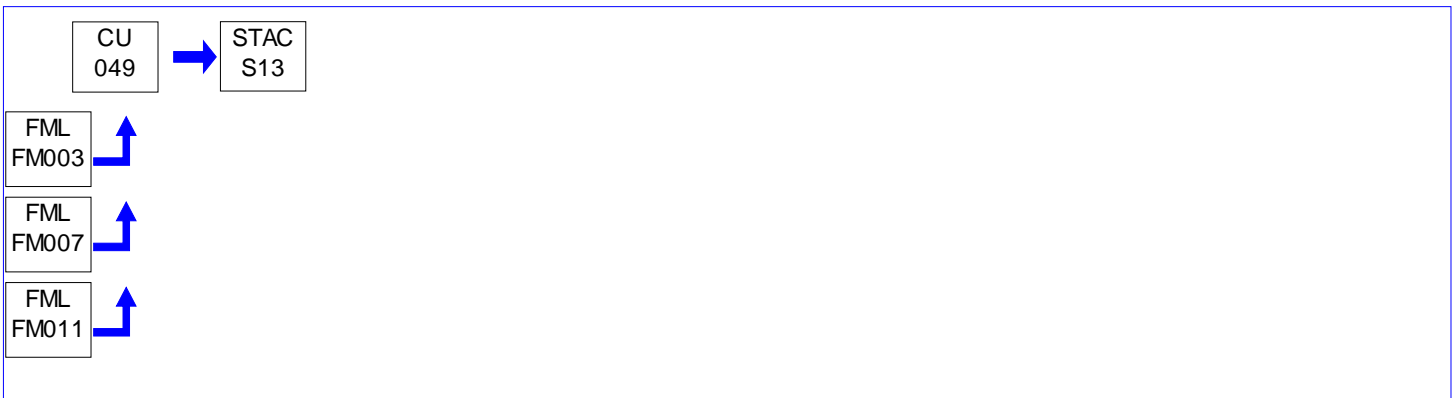
Source ID: 049

Source Name: EAST REFORMER HEATER

Source Capacity/Throughput:	105.000	MMBTU/HR	
	105.000	MCF/HR	Natural Gas
	102.940	MCF/HR	Refinery Gas
	700.000	Gal/HR	REFINERY FUEL OIL

Conditions for this source occur in the following groups:

- 10- MACT SUBPART UUU
- 11- METHOD OF COMPLIANCE
- BART
- BOILER / PROCESS HEATER MACT
- CEM MONITORING
- CO&A FOR 1-HR SO2 NAAQS
- PA 62-017G & SUBSEQUENT PA TESTING
- PA 62-017O REQUIREMENTS
- PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

a) The fugitive VOC emissions from the reformer unit shall not exceed 12.4 TPY.

[From Plan Approval 62-017K Condition #001]

**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The NOx emissions shall not exceed 0.246 lbs/mmbtu.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

a) The NOx emissions shall not exceed 59.9 TPY based on a consecutive 12-month period.

b) The CO emissions shall not exceed 24.1 TPY based on a consecutive 12-month period.

c) The VOC emissions shall not exceed 1.5 TPY based on a consecutive 12-month period.

d) The TSP emissions shall not exceed 14.7 TPY based on a consecutive 12-month period.



**SECTION D. Source Level Requirements**

e) The PM-10 emissions shall not exceed 13.0 TPY based on a consecutive 12-month period.

f) [The SO<sub>2</sub> emission limit is streamlined by the SO<sub>2</sub> limit in Group BART of this permit]

[Compliance with the SO<sub>x</sub> emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 4]

**# 004 [25 Pa. Code §127.441]**

**Operating permit terms and conditions.**

[Plan Approval 62-017G]

a) The NO<sub>x</sub> emissions shall not exceed 17.1 #/hr.

b) The CO emissions shall not exceed 6.6 #/hr.

c) The VOC emissions shall not exceed 0.42 #/hr.

d) The TSP emissions shall not exceed 3.82 #/hr.

e) The PM-10 emissions shall not exceed 3.4 #/hr.

f) The SO<sub>x</sub> emissions shall not exceed 22.42 #/hr.

[Compliance with the SO<sub>x</sub> emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 4]

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Standards for sulfur oxides.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.104(a)(1)

**# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.592]**

**Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries**

**Standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.592(a) - (e)

**# 007 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.593]**

**Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries**

**Exceptions.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.593(a) - (e)

**II. TESTING REQUIREMENTS.**

**# 008 [25 Pa. Code §127.441]**

**Operating permit terms and conditions.**

The permittee shall perform a tuneup on an annual basis, using a portable gas analyzer to determine the final CO and NO<sub>x</sub> emission rates as required under Condition #012 with regards to the annual tune-up.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 009 [25 Pa. Code §127.441]**

**Operating permit terms and conditions.**

**SECTION D. Source Level Requirements**

The source shall be tested annually to demonstrate compliance with the NO<sub>x</sub> emission limits. Testing shall be done in accordance with the provisions of 25 PA Code Chapter 139 and the following conditions:

1. At least 90 days prior to the test, a test procedure and sketch with dimensions indicating the location of sampling ports and other data to ensure the collection of representative samples shall be submitted to the Department.
2. At least two weeks prior to the test, the Department shall be informed of the date and time of the test.
3. Within 60 days after completion of the test, the complete test report, including all operating conditions, shall be submitted to the Department for approval.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 010 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Test methods and procedures.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.106(e)

**III. MONITORING REQUIREMENTS.**

**# 011 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Monitoring of emissions and operations.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.105(a)(3), (4), (e)(3)

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 5]

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

**# 012 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Reporting and recordkeeping requirements.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.107(d), (e), (f) and (g)

**VI. WORK PRACTICE REQUIREMENTS.**

**# 013 [25 Pa. Code §127.441]**

**Operating permit terms and conditions.**

The permittee shall perform an annual tune-up on the combustion process. The emissions of NO<sub>x</sub> shall be minimized by annual combustion tuning, good operating practices and good air pollution control practices. The annual tune-up shall include, but not be limited to, the following:

**SECTION D. Source Level Requirements**

1. Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.
2. Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NO<sub>x</sub>, and to the extent practicable minimize emissions of CO.
3. Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.
4. Recording all adjustments in a permanently bound log book containing, at a minimum, the following information:
  - a) The date of the tuning procedure.
  - b) The name of the service company and technicians.
  - c) The final operating rate or load.
  - d) The final CO and NO<sub>x</sub> emission rates in lb/mmbtu.
  - e) The final excess oxygen rate.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 014 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 1]

**VII. ADDITIONAL REQUIREMENTS.****# 015 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]****Subpart J - Standards of Performance for Petroleum Refineries****Applicability, designation of affected facility, and reconstruction.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.100(a), (b), (e)

**# 016 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.590]****Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries****Applicability and designation of affected facility.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.590(a) - (d)

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

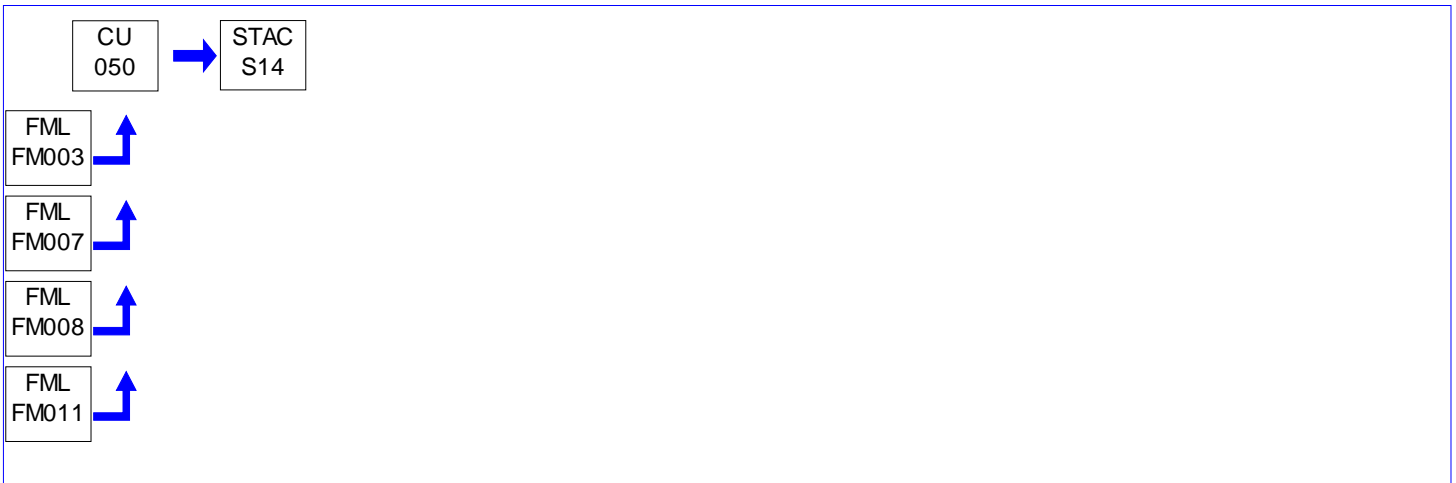
Source ID: 050

Source Name: CRUDE HEATER - NORTH

Source Capacity/Throughput:	125.000	MMBTU/HR	
	125.000	MCF/HR	Refinery Gas
	125.000	MCF/HR	Natural Gas
	908.000	Gal/HR	REFINERY FUEL OIL

Conditions for this source occur in the following groups:

- 11- METHOD OF COMPLIANCE
- BART
- BOILER / PROCESS HEATER MACT
- CEM MONITORING
- CO&A FOR 1-HR SO<sub>2</sub> NAAQS
- PA 62-017G & SUBSEQUENT PA TESTING
- PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017G]

- a) The NO<sub>x</sub> emissions shall not exceed 21.2 #/hr.
- b) The CO emissions shall not exceed 8.3 #/hr.
- c) The VOC emissions shall not exceed 0.55 #/hr.
- d) The TSP emissions shall not exceed 7.41 #/hr.
- e) The PM-10 emissions shall not exceed 6.53 #/hr.
- f) The SO<sub>x</sub> emissions shall not exceed 27.78 #/hr. [SO<sub>2</sub> CO&A 9/29/17]

[Compliance with the SO<sub>x</sub> emission rate in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 4]

- g) The maximum SO<sub>2</sub> content in sour water stripper off gas burned shall not exceed the following:

1. 5 lbs/hr
2. 21.9 tpy based on a consecutive 12-month period

[PA 62-312-003A]

**SECTION D. Source Level Requirements****# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017G]

- a) The NO<sub>x</sub> emissions shall not exceed 52.0 TPY, calculated as a 12-month rolling total. [PA 62-017Z]
- b) The CO emissions shall not exceed 18.8 TPY based on a consecutive 12-month period.
- c) The VOC emissions shall not exceed 2.3 TPY based on a consecutive 12-month period.
- d) The TSP emissions shall not exceed 31.6 TPY based on a consecutive 12-month period.
- e) The PM-10 emissions shall not exceed 27.9 TPY based on a consecutive 12-month period.
- f) [The SO<sub>2</sub> emission limit is streamlined by the SO<sub>2</sub> limit in Group BART of this permit]

[Compliance with the SO<sub>x</sub> emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 4]**# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**The NO<sub>x</sub> emissions shall not exceed 0.226 lbs/mmbtu.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104]****Subpart J - Standards of Performance for Petroleum Refineries  
Standards for sulfur oxides.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.104(a)(1)

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.592]****Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries  
Standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.592(a) - (e)

**# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.593]****Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries  
Exceptions.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.593(a) - (e)

**II. TESTING REQUIREMENTS.****# 007 [25 Pa. Code §127.441]****Operating permit terms and conditions.**The permittee shall perform a tuneup on an annual basis, using a portable gas analyzer to determine the final CO and NO<sub>x</sub> emission rates as required under Condition #012 with regards to the annual tune-up.

**SECTION D. Source Level Requirements**

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 008 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The source shall be tested annually to demonstrate compliance with the NO<sub>x</sub> emission limits. Testing shall be done in accordance with the provisions of 25 PA Code Chapter 139 and the following conditions:

1. At least 90 days prior to the test, a test procedure and sketch with dimensions indicating the location of sampling ports and other data to ensure the collection of representative samples shall be submitted to the Department.
2. At least two weeks prior to the test, the Department shall be informed of the date and time of the test.
3. Within 60 days after completion of the test, the complete test report, including all operating conditions, shall be submitted to the Department for approval.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 009 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

- a) The permittee shall test, quarterly using a Department approved procedure, the SO<sub>x</sub> content (lbs/hr) in the sour water stripper off-gas.
- b) The permittee shall submit the sour water stripper off-gas test procedure to the Department for approval six weeks prior to testing.

**# 010 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]****Subpart J - Standards of Performance for Petroleum Refineries****Test methods and procedures.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.106(e)

**III. MONITORING REQUIREMENTS.****# 011 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]****Subpart J - Standards of Performance for Petroleum Refineries****Monitoring of emissions and operations.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.105(a)(3), (4), (e)(3)

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 5]

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**SECTION D. Source Level Requirements****V. REPORTING REQUIREMENTS.****# 012 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]****Subpart J - Standards of Performance for Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.107(d), (e), (f), and (g)

**VI. WORK PRACTICE REQUIREMENTS.****# 013 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017Z]

Compliance with the emission limit for this source shall be via emission factors from the most recent stack test, and source throughput.

**# 014 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017Z]

The Bambeck system (air/fuel ratio controller) shall be online and operational a minimum of 90% of the time that the N. Crude heater is in operation, as determined on a quarterly basis.

The permittee shall maintain sufficient records to demonstrate compliance with this condition.

**# 015 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017Z]

(a) The permittee shall maintain monthly records of emissions from this source, in order to demonstrate compliance with the emission limits of this source.

(b) Required records shall be maintained on site for a period of five (5) years, and shall be made available to the Department upon request.

**# 016 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall perform an annual tune-up on the combustion process. The emissions of NO<sub>x</sub> shall be minimized by annual combustion tuning, good operating practices and good air pollution control practices. The annual tune-up shall include, but not be limited to, the following:

1. Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.
2. Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NO<sub>x</sub>, and to the extent practicable minimize emissions of CO.
3. Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.
4. Recording all adjustments in a permanently bound log book containing, at a minimum, the following information:
  - a) The date of the tuning procedure.
  - b) The name of the service company and technicians.
  - c) The final operating rate or load.

**SECTION D. Source Level Requirements**

- d) The final CO and NOx emission rates in lb/mmbtu.
- e) The final excess oxygen rate.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 017 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 1]

**VII. ADDITIONAL REQUIREMENTS.****# 018 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]****Subpart J - Standards of Performance for Petroleum Refineries****Applicability, designation of affected facility, and reconstruction.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.100(a), (b), (e)

**# 019 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.590]****Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries****Applicability and designation of affected facility.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.590(a) - (d)

**\*\*\* Permit Shield in Effect. \*\*\***



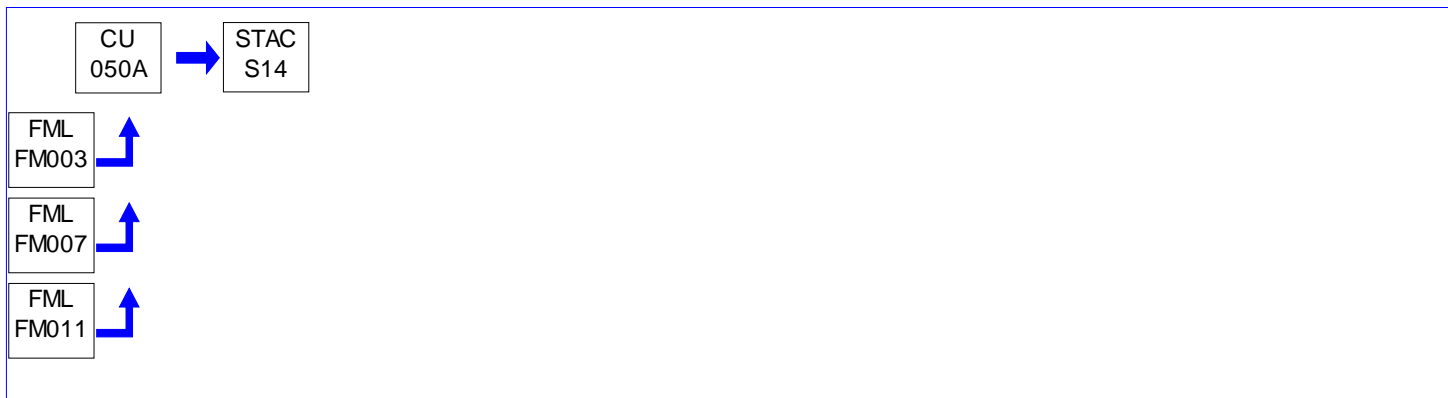
**SECTION D. Source Level Requirements**

Source ID: 050A

Source Name: CRUDE HEATER - SOUTH

Source Capacity/Throughput:	125.000	MMBTU/HR	
	125.000	MCF/HR	Refinery Gas
	125.000	MCF/HR	Natural Gas
	908.000	Gal/HR	REFINERY FUEL OIL

Conditions for this source occur in the following groups: 11- METHOD OF COMPLIANCE  
 BART  
 BOILER / PROCESS HEATER MACT  
 CEM MONITORING  
 CO&A FOR 1-HR SO2 NAAQS  
 PA 62-017G & SUBSEQUENT PA TESTING  
 PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017G]

- The NOx emissions shall not exceed 64.2 TPY based on a consecutive 12-month period.
- The CO emissions shall not exceed 18.8 TPY based on a consecutive 12-month period.
- The VOC emissions shall not exceed 2.3 TPY based on a consecutive 12-month period.
- The TSP emissions shall not exceed 31.6 TPY based on a consecutive 12-month period.
- The PM-10 emissions shall not exceed 27.9 TPY based on a consecutive 12-month period.
- [The SO2 emission limit of the plan approval is streamlined by the SO2 limit in Group BART of this permit]

[Compliance with the SOx emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 4]

**# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017G]

- The NOx emissions shall not exceed 21.2 #/hr.
- The CO emissions shall not exceed 8.3 #/hr.
- The VOC emissions shall not exceed 0.55 #/hr.

**SECTION D. Source Level Requirements**

- d) The TSP emissions shall not exceed 7.41 #/hr.  
 e) The PM-10 emissions shall not exceed 6.53 #/hr.  
 f) The SOx emissions shall not exceed 27.78 #/hr. [CO&A for SOx 9/29/17]

[Compliance with the SOx emission rate in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 4]

- g) The maximum SO2 content in sour water stripper off gas burned shall not exceed the following:

1. 5 lbs/hr
2. 21.9 tpy based on a consecutive 12-month period

[PA 62-312-003A]

**# 003 [25 Pa. Code §127.441]**

**Operating permit terms and conditions.**

The NOx emissions shall not exceed 0.226 lbs/mmbtu.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104]**

**Subpart J - Standards of Performance for Petroleum Refineries  
Standards for sulfur oxides.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.104(a)(1)

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.592]**

**Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries  
Standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.592(a) - (e)

**# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.593]**

**Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries  
Exceptions.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.593(a) - (e)

**II. TESTING REQUIREMENTS.**

**# 007 [25 Pa. Code §127.441]**

**Operating permit terms and conditions.**

The permittee shall perform a tuneup on an annual basis, using a portable gas analyzer to determine the final CO and NOx emission rates as required under Condition #012 with regards to the annual tune-up.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 008 [25 Pa. Code §127.441]**

**Operating permit terms and conditions.**

The source shall be tested annually to demonstrate compliance with the NOx emission limits. Testing shall be done in

**SECTION D. Source Level Requirements**

accordance with the provisions of 25 PA Code Chapter 139 and the following conditions:

1. At least 90 days prior to the test, a test procedure and sketch with dimensions indicating the location of sampling ports and other data to ensure the collection of representative samples shall be submitted to the Department.
2. At least two weeks prior to the test, the Department shall be informed of the date and time of the test.
3. Within 60 days after completion of the test, the complete test report, including all operating conditions, shall be submitted to the Department for approval.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 009 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

- a) The permittee shall test, quarterly using a Department approved procedure, the SO<sub>x</sub> content (lbs/hr) in the sour water stripper off-gas.
- b) The permittee shall submit the sour water stripper off-gas test procedure to the Department for approval six weeks prior to testing.

**# 010 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]****Subpart J - Standards of Performance for Petroleum Refineries****Test methods and procedures.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.106(e)

**III. MONITORING REQUIREMENTS.****# 011 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]****Subpart J - Standards of Performance for Petroleum Refineries****Monitoring of emissions and operations.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.105(a)(3), (4), (e)(3)

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 5]

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.****# 012 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]****Subpart J - Standards of Performance for Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.107(d), (e), (f) and (g)

**SECTION D. Source Level Requirements****VI. WORK PRACTICE REQUIREMENTS.****# 013 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall perform an annual tune-up on the combustion process. The emissions of NO<sub>x</sub> shall be minimized by annual combustion tuning, good operating practices and good air pollution control practices. The annual tune-up shall include, but not be limited to, the following:

1. Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.
2. Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NO<sub>x</sub>, and to the extent practicable minimize emissions of CO.
3. Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.
4. Recording all adjustments in a permanently bound log book containing, at a minimum, the following information:
  - a) The date of the tuning procedure.
  - b) The name of the service company and technicians.
  - c) The final operating rate or load.
  - d) The final CO and NO<sub>x</sub> emission rates in lb/mmbtu.
  - e) The final excess oxygen rate.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 014 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 1]

**VII. ADDITIONAL REQUIREMENTS.****# 015 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]****Subpart J - Standards of Performance for Petroleum Refineries****Applicability, designation of affected facility, and reconstruction.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.100(a), (b), (e)

**# 016 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.590]****Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries****Applicability and designation of affected facility.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.590(a) - (d)

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

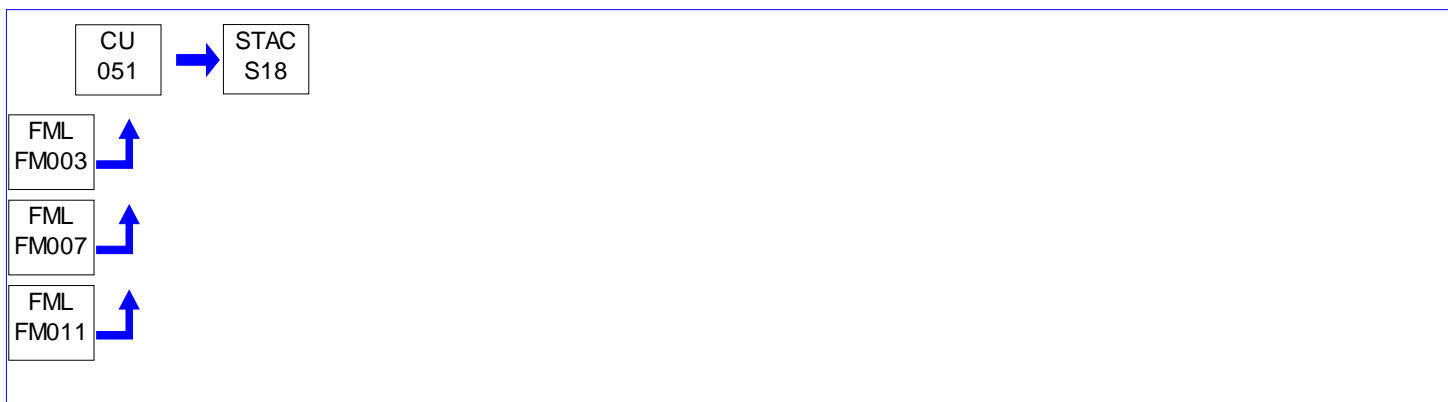
Source ID: 051

Source Name: PRETREATER HEATER

Source Capacity/Throughput:	46.000	MMBTU/HR	
	46.000	MCF/HR	Refinery Gas
	46.000	MCF/HR	Natural Gas
	341.000	Gal/HR	REFINERY FUEL OIL

Conditions for this source occur in the following groups:

- 11- METHOD OF COMPLIANCE
- 6 - SO2 PERMIT MONITORING
- BART
- BOILER / PROCESS HEATER MACT
- CASE-BY-CASE RACT 2
- CO&A FOR 1-HR SO2 NAAQS
- PA 62-017G & SUBSEQUENT PA TESTING
- PA 62-017O REQUIREMENTS

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017G]

- a) The NOx emissions shall not exceed 5.2 #/hr.
- b) The CO emissions shall not exceed 3.3 #/hr.
- c) The VOC emissions shall not exceed 0.21 #/hr.
- d) The TSP emissions shall not exceed 2.2 #/hr.
- e) The PM-10 emissions shall not exceed 2.0 #/hr.
- f) The SOx emissions shall not exceed 11.0 #/hr. [CO&A 9/29/17]

[Compliance with the SOx emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 4]

**# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017G]

- a) The NOx emissions shall not exceed 21.4 TPY based on a consecutive 12-month period.
- b) The CO emissions shall not exceed 15.3 TPY based on a consecutive 12-month period.
- c) The VOC emissions shall not exceed 0.9 TPY based on a consecutive 12-month period.
- d) The TSP emissions shall not exceed 6.4 TPY based on a consecutive 12-month period.

**SECTION D. Source Level Requirements**

e) The PM-10 emissions shall not exceed 5.7 TPY based on a consecutive 12-month period.

f) [The SO<sub>2</sub> emission limit is streamlined by the SO<sub>2</sub> limit in Group BART of this permit].

[Compliance with the SO<sub>x</sub> emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 4]

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.****# 003 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 1]

**# 004 [25 Pa. Code §129.93]****Presumptive RACT emission limitations**

b) The owner and operator shall develop and implement the following presumptive RACT emission limitations:

(1) Not applicable

(2) For a combustion unit with a rated heat input equal to or greater than 20 million Btu/hour and less than 50 million Btu/hour presumptive RACT shall be the performance of an annual adjustment or tuneup on the combustion process. This adjustment shall include, at a minimum, the following:

(i) Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.

(ii) Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NO<sub>x</sub>, and to the extent practicable minimize emissions of CO.

(iii) Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and

**SECTION D. Source Level Requirements**

operation as specified by the manufacturer.

(3) For combustion units subject to paragraph (2), the owner and operator of the adjusted equipment shall record each adjustment conducted under the procedures in paragraph (2) in a permanently bound log book or other method approved by the Department. This log shall contain, at a minimum, the following information:

- (i) The date of the tuning procedure.
- (ii) The name of the service company and technicians.
- (iii) The final operating rate or load.
- (iv) The final CO and NOx emission rates.
- (v) The final excess oxygen rate.
- (vi) Other information required by the applicable operating permit.

(4) For oil, gas and combination oil/gas units, the owner and operator shall maintain records including a certification from the fuel supplier of the type of fuel and for each shipment of distillate oils number 1 or 2, a certification that the fuel complies with ASTM D396-78 "Standard Specifications for Fuel Oils." For residual oils, minimum recordkeeping includes a certification from the fuel supplier of the nitrogen content of the fuel, and identification of the sampling method and sampling protocol.

(5) For oil and gas and combination oil/gas fired units subject to paragraph (2), the owner and operator shall make the annual adjustment in accordance with the EPA document "Combustion Efficiency Optimization Manual for Operators of Oil and Gas-fired Boilers," September 1983 (EPA-340/1-83-023) or equivalent procedures approved in writing by the Department.

**VII. ADDITIONAL REQUIREMENTS.**

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.590a]**  
**Subpart GGGa - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006**  
**Applicability and designation of affected facility.**

[For the new pretreater compressor]

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.590a (a) - (d)

**# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.592a]**  
**Subpart GGGa - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006**  
**Standards.**

[For the new pretreater compressor]

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.592a (a) - (e)

**# 007 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.593a]**  
**Subpart GGGa - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006**

**SECTION D. Source Level Requirements****Exceptions.**

[For the new pretreater compressor]

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.593a (a) - (g)

**\*\*\* Permit Shield in Effect. \*\*\***



**SECTION D. Source Level Requirements**

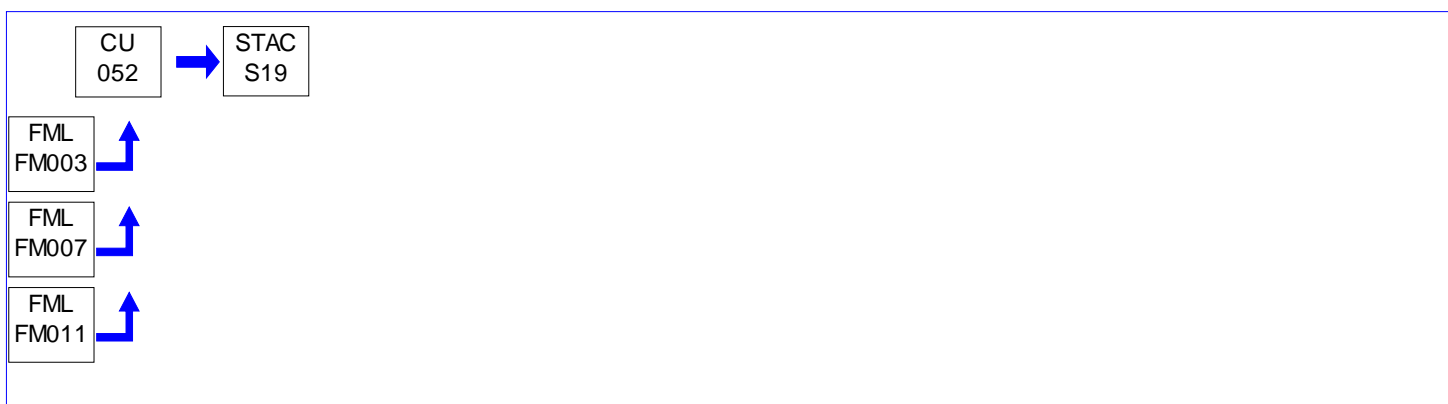
Source ID: 052

Source Name: WEST REFORMER HEATER

Source Capacity/Throughput:	112.000	MMBTU/HR	
	829.000	Gal/HR	REFINERY FUEL OIL
	112.000	MCF/HR	Refinery Gas
	112.000	MCF/HR	Natural Gas

Conditions for this source occur in the following groups:

- 10- MACT SUBPART UUU
- 11- METHOD OF COMPLIANCE
- BOILER / PROCESS HEATER MACT
- CEM MONITORING
- CO&A FOR 1-HR SO<sub>2</sub> NAAQS
- PA 62-017G & SUBSEQUENT PA TESTING
- PA 62-017O REQUIREMENTS
- PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- a) The NO<sub>x</sub> emissions shall not exceed 15.1 #/hr.
- b) The CO emissions shall not exceed 8.6 #/hr.
- c) The VOC emissions shall not exceed 0.6 #/hr.
- d) The TSP emissions shall not exceed 2.7 #/hr.
- e) The PM-10 emissions shall not exceed 0.88 #/hr.
- f) The SO<sub>x</sub> emissions shall not exceed 2.2 #/hr. [CO&A 9/29/17]

[Compliance with the SO<sub>x</sub> emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 4]

[From Plan Approval 62-017K Condition #001]

- g) Fugitive VOC emissions from the reformer unit shall not exceed 12.4 TPY.

**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**The NO<sub>x</sub> emissions shall not exceed 0.137 lbs/mmbtu.

[Authority for this condition is also derived from 25 PA Code 129.92]

**SECTION D. Source Level Requirements****# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- a) The NO<sub>x</sub> emissions shall not exceed 37.2 TPY based on a consecutive 12-month period.
- b) The CO emissions shall not exceed 22.3 TPY based on a consecutive 12-month period.
- c) The VOC emissions shall not exceed 1.7 TPY based on a consecutive 12-month period.
- d) The TSP emissions shall not exceed 4.3 TPY based on a consecutive 12-month period.
- e) The PM-10 emissions shall not exceed 2.7 TPY based on a consecutive 12-month period.
- f) The SO<sub>x</sub> emissions shall not exceed 9.6 TPY based on a consecutive 12-month period.

[Compliance with the SO<sub>x</sub> emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 4]

**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104]****Subpart J - Standards of Performance for Petroleum Refineries  
Standards for sulfur oxides.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.104(a)(1)

**II. TESTING REQUIREMENTS.****# 005 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The source shall be tested annually to demonstrate compliance with the NO<sub>x</sub> emission limits. Testing shall be done in accordance with the provisions of 25 PA Code Chapter 139 and the following conditions:

1. At least 90 days prior to the test, a test procedure and sketch with dimensions indicating the location of sampling ports and other data to ensure the collection of representative samples shall be submitted to the Department.
2. At least two weeks prior to the test, the Department shall be informed of the date and time of the test.
3. Within 60 days after completion of the test, the complete test report, including all operating conditions, shall be submitted to the Department for approval.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]****Subpart J - Standards of Performance for Petroleum Refineries  
Test methods and procedures.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.106(e)

**SECTION D. Source Level Requirements****III. MONITORING REQUIREMENTS.****# 007 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]****Subpart J - Standards of Performance for Petroleum Refineries****Monitoring of emissions and operations.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.105(a)(3), (4), (e)(3)

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 5]

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.****# 008 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]****Subpart J - Standards of Performance for Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.107(d), (e), (f) and (g)

**VI. WORK PRACTICE REQUIREMENTS.****# 009 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The permittee shall perform an annual tune-up on the combustion process. The emissions of NO<sub>x</sub> shall be minimized by annual combustion tuning, good operating practices and good air pollution control practices. The annual tune-up shall include, but not be limited to, the following:

1. Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.
2. Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NO<sub>x</sub>, and to the extent practicable minimize emissions of CO.
3. Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.
4. Recording all adjustments in a permanently bound log book containing, at a minimum, the following information:
  - a) The date of the tuning procedure.
  - b) The name of the service company and technicians.
  - c) The final operating rate or load.
  - d) The final CO and NO<sub>x</sub> emission rates in lb/mmbtu.
  - e) The final excess oxygen rate.

[Authority for this condition is also derived from 25 PA Code 129.92]

**# 010 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

**SECTION D. Source Level Requirements**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 1]

**VII. ADDITIONAL REQUIREMENTS.**

**# 011 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Applicability, designation of affected facility, and reconstruction.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.100(a), (b), (e)

**\*\*\* Permit Shield in Effect. \*\*\***

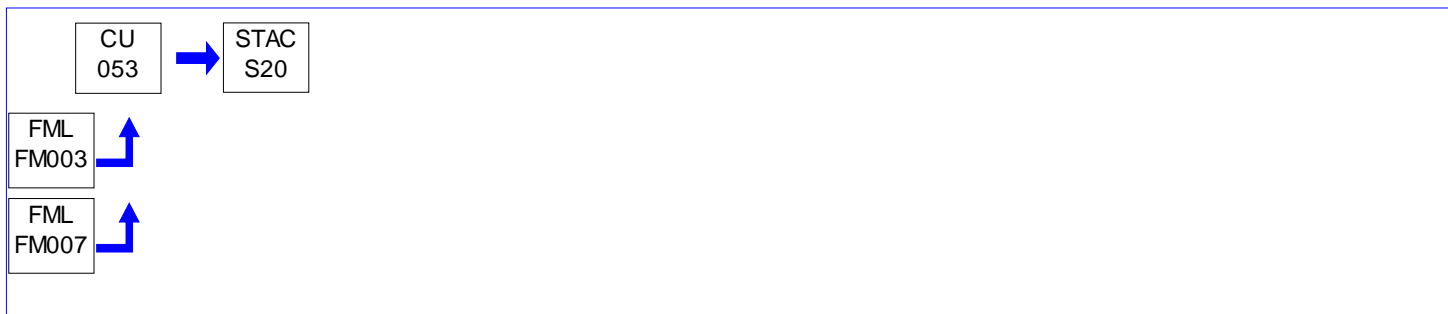
**SECTION D. Source Level Requirements**

Source ID: 053

Source Name: SAT GAS PLANT (DEBUT) REBOILER

Source Capacity/Throughput:	20.000	MMBTU/HR	
	20.000	MCF/HR	Refinery Gas
	20.000	MCF/HR	Natural Gas

Conditions for this source occur in the following groups: 11- METHOD OF COMPLIANCE  
 BOILER / PROCESS HEATER MACT  
 CASE-BY-CASE RACT 2  
 CEM MONITORING  
 CO&A FOR 1-HR SO<sub>2</sub> NAAQS  
 PA 62-017G & SUBSEQUENT PA TESTING

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- The NO<sub>x</sub> emissions shall not exceed 8.2 TPY based on a consecutive 12-month period.
- The CO emissions shall not exceed 6.8 TPY based on a consecutive 12-month period.
- The VOC emissions shall not exceed 0.4 TPY based on a consecutive 12-month period.
- The TSP emissions shall not exceed 0.6 TPY based on a consecutive 12-month period.
- The PM-10 emissions shall not exceed 0.6 TPY based on a consecutive 12-month period.
- The SO<sub>x</sub> emissions shall not exceed 1.8 TPY based on a consecutive 12-month period.

[Compliance with the SO<sub>x</sub> emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 4]

**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- The NO<sub>x</sub> emissions shall not exceed 2.0 #/hr.
- The CO emissions shall not exceed 1.7 #/hr.
- The VOC emissions shall not exceed 0.11 #/hr.
- The TSP emissions shall not exceed 0.2 #/hr.
- The PM-10 emissions shall not exceed 0.2 #/hr.
- The SO<sub>x</sub> emissions shall not exceed 0.4 #/hr.

[Compliance with the SO<sub>x</sub> emission limit specified in this streamlined permit condition assures compliance with the

**SECTION D. Source Level Requirements**

provisions in: SO2 PA: 62-017E condition 4]

**# 003 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104]****Subpart J - Standards of Performance for Petroleum Refineries  
Standards for sulfur oxides.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.104(a)(1)

**Fuel Restriction(s).****# 004 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[PA 62-017G]

This source shall only use refinery gas, natural gas or propane fuels.

**II. TESTING REQUIREMENTS.****# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]****Subpart J - Standards of Performance for Petroleum Refineries****Test methods and procedures.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.106(e)

**III. MONITORING REQUIREMENTS.****# 006 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

In accordance with 40 CFR 60.104(a)(1), the permittee shall maintain and operate a continuous monitoring device for the measurement of the hydrogen sulfide concentration in the cleansed refinery fuel gas. Recording and reporting requirements relating to this monitoring device are detailed under PA 62-312-016.

[PA 62-312-017]

**# 007 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]****Subpart J - Standards of Performance for Petroleum Refineries****Monitoring of emissions and operations.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.105(a)(3), (4), (e)(3)

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 5]

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**SECTION D. Source Level Requirements****V. REPORTING REQUIREMENTS.****# 008 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]****Subpart J - Standards of Performance for Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.107(d), (e), (f) and (g)

**VI. WORK PRACTICE REQUIREMENTS.****# 009 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 1]

**# 010 [25 Pa. Code §129.93]****Presumptive RACT emission limitations**

b) The owner and operator shall develop and implement the following presumptive RACT emission limitations:

(1) Not applicable

(2) For a combustion unit with a rated heat input equal to or greater than 20 million Btu/hour and less than 50 million Btu/hour presumptive RACT shall be the performance of an annual adjustment or tuneup on the combustion process. This adjustment shall include, at a minimum, the following:

(i) Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.

(ii) Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NO<sub>x</sub>, and to the extent practicable minimize emissions of CO.

(iii) Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.

(3) For combustion units subject to paragraph (2), the owner and operator of the adjusted equipment shall record each adjustment conducted under the procedures in paragraph (2) in a permanently bound log book or other method approved by the Department. This log shall contain, at a minimum, the following information:

(i) The date of the tuning procedure.

(ii) The name of the service company and technicians.

(iii) The final operating rate or load.

(iv) The final CO and NO<sub>x</sub> emission rates.

(v) The final excess oxygen rate.

(vi) Other information required by the applicable operating permit.

(4) For oil, gas and combination oil/gas units, the owner and operator shall maintain records including a certification from the fuel supplier of the type of fuel and for each shipment of distillate oils number 1 or 2, a certification that the fuel complies with ASTM D396-78 "Standard Specifications for Fuel Oils." For residual oils, minimum recordkeeping includes a

**SECTION D. Source Level Requirements**

certification from the fuel supplier of the nitrogen content of the fuel, and identification of the sampling method and sampling protocol.

(5) For oil and gas and combination oil/gas fired units subject to paragraph (2), the owner and operator shall make the annual adjustment in accordance with the EPA document "Combustion Efficiency Optimization Manual for Operators of Oil and Gas-fired Boilers," September 1983 (EPA-340/1-83-023) or equivalent procedures approved in writing by the Department.

**VII. ADDITIONAL REQUIREMENTS.**

**# 011 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Applicability, designation of affected facility, and reconstruction.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.100(a), (b), (e)

**\*\*\* Permit Shield in Effect. \*\*\***



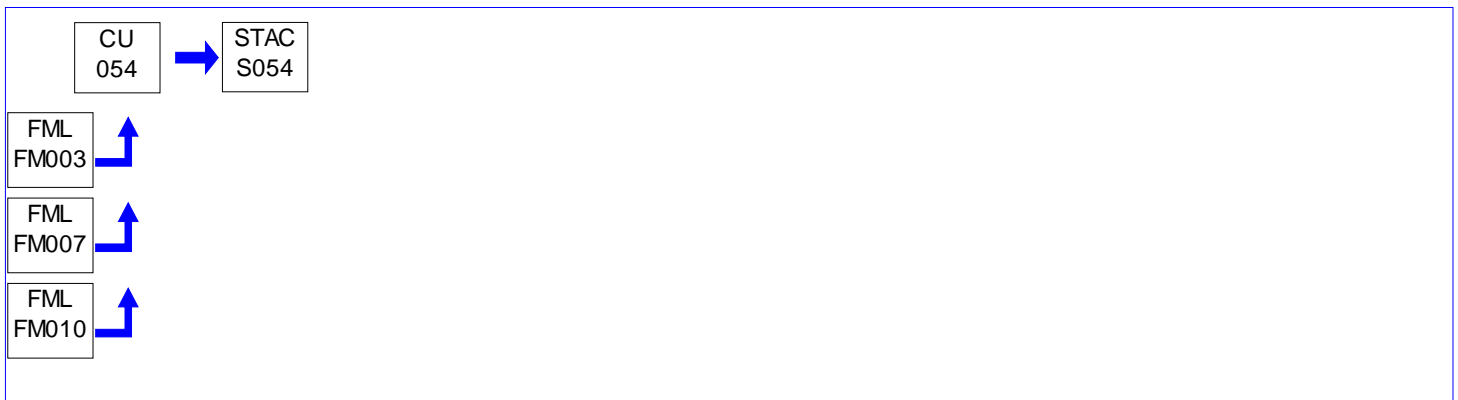
**SECTION D. Source Level Requirements**

Source ID: 054

Source Name: VACUUM PROCESS HEATER

Source Capacity/Throughput:	46.000	MMBTU/HR	
	40.000	MCF/HR	Refinery Gas
	40.000	MCF/HR	Natural Gas
	347.000	Gal/HR	DISTILLATE OIL

Conditions for this source occur in the following groups: 11- METHOD OF COMPLIANCE  
 BOILER / PROCESS HEATER MACT  
 CEM MONITORING  
 CO&A FOR 1-HR SO2 NAAQS  
 PA 62-017G & SUBSEQUENT PA TESTING  
 PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- The NO<sub>x</sub> emissions shall not exceed 1.3 #/hr.
- The CO emissions shall not exceed 4.4 #/hr.
- The VOC emissions shall not exceed 0.3 #/hr.
- The TSP emissions shall not exceed 0.4 #/hr.
- The PM-10 emissions shall not exceed 0.4 #/hr.
- The SO<sub>x</sub> emissions shall not exceed 0.8 #/hr.

[Compliance with the SO<sub>x</sub> emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 4]

**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- The NO<sub>x</sub> emissions shall not exceed 4.8 TPY based on a consecutive 12-month period.
- The CO emissions shall not exceed 16.5 TPY based on a consecutive 12-month period.
- The VOC emissions shall not exceed 1.1 TPY based on a consecutive 12-month period.
- The TSP emissions shall not exceed 1.5 TPY based on a consecutive 12-month period.
- The PM-10 emissions shall not exceed 1.5 TPY based on a consecutive 12-month period.

**SECTION D. Source Level Requirements**

f) The SOx emissions shall not exceed 3.5 TPY based on a consecutive 12-month period.

[Compliance with the SOx emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 4]

**# 003 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Standards for sulfur oxides.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.104(a)(1)

**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.592]**

**Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries**

**Standards.**

[PA 62-017G]

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.592(a) - (e)

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.593]**

**Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries**

**Exceptions.**

[PA 62-017G]

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.593(a) - (f)

**Fuel Restriction(s).**

**# 006 [25 Pa. Code §127.441]**

**Operating permit terms and conditions.**

[PA 62-017G]

This source shall only use refinery gas, natural gas or propane fuels. The vacuum heater may burn oil in emergency situations provided that the facility remains in compliance with the hourly average emissions during these period.

**II. TESTING REQUIREMENTS.**

**# 007 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Test methods and procedures.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.106(e)

**III. MONITORING REQUIREMENTS.**

**# 008 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

The permittee shall maintain and operate a continuous monitoring system for continuously monitoring and recording

**SECTION D. Source Level Requirements**

concentrations of hydrogen sulfide in fuel gas burned. The span of this continuous monitoring system shall be 300 ppm.

[PA 62-312-019]

**# 009 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Monitoring of emissions and operations.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.105(a)(3), (4), (e)(3)

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 5]

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

**# 010 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

Any three-hour period during which the average concentration of hydrogen sulfide in any fuel gas combusted exceeds 0.1 grain/dscf shall be reported to the Department.

[PA 62-312-019]

**# 011 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Reporting and recordkeeping requirements.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.107(d), (e), (f) and (g)

**VI. WORK PRACTICE REQUIREMENTS.**

**# 012 [25 Pa. Code §127.511]**

**Monitoring and related recordkeeping and reporting requirements.**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 1]

**# 013 [25 Pa. Code §129.93]**

**Presumptive RACT emission limitations**

b) The owner and operator shall develop and implement the following presumptive RACT emission limitations:

(1) Not applicable

(2) For a combustion unit with a rated heat input equal to or greater than 20 million Btu/hour and less than 50 million Btu/hour presumptive RACT shall be the performance of an annual adjustment or tuneup on the combustion process. This adjustment shall include, at a minimum, the following:

**SECTION D. Source Level Requirements**

(i) Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.

(ii) Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NO<sub>x</sub>, and to the extent practicable minimize emissions of CO.

(iii) Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.

(3) For combustion units subject to paragraph (2), the owner and operator of the adjusted equipment shall record each adjustment conducted under the procedures in paragraph (2) in a permanently bound log book or other method approved by the Department. This log shall contain, at a minimum, the following information:

(i) The date of the tuning procedure.

(ii) The name of the service company and technicians.

(iii) The final operating rate or load.

(iv) The final CO and NO<sub>x</sub> emission rates.

(v) The final excess oxygen rate.

(vi) Other information required by the applicable operating permit.

(4) For oil, gas and combination oil/gas units, the owner and operator shall maintain records including a certification from the fuel supplier of the type of fuel and for each shipment of distillate oils number 1 or 2, a certification that the fuel complies with ASTM D396-78 "Standard Specifications for Fuel Oils." For residual oils, minimum recordkeeping includes a certification from the fuel supplier of the nitrogen content of the fuel, and identification of the sampling method and sampling protocol.

(5) For oil and gas and combination oil/gas fired units subject to paragraph (2), the owner and operator shall make the annual adjustment in accordance with the EPA document "Combustion Efficiency Optimization Manual for Operators of Oil and Gas-fired Boilers," September 1983 (EPA-340/1-83-023) or equivalent procedures approved in writing by the Department.

**VII. ADDITIONAL REQUIREMENTS.**

**# 014 [25 Pa. Code §127.441]**

**Operating permit terms and conditions.**

[PA 62-017G]

The exhaust gasses from the vacuum heater shall be vented through the new separate stack only. The facility throughput of crude oil shall not increase due to the modification of the vacuum heater.

**# 015 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Applicability, designation of affected facility, and reconstruction.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.100(a), (b), (e)

**# 016 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.590]**

**Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries**

**Applicability and designation of affected facility.**

**SECTION D. Source Level Requirements**

[PA 62-017G]

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.590(a) - (e)

**\*\*\* Permit Shield in Effect. \*\*\***

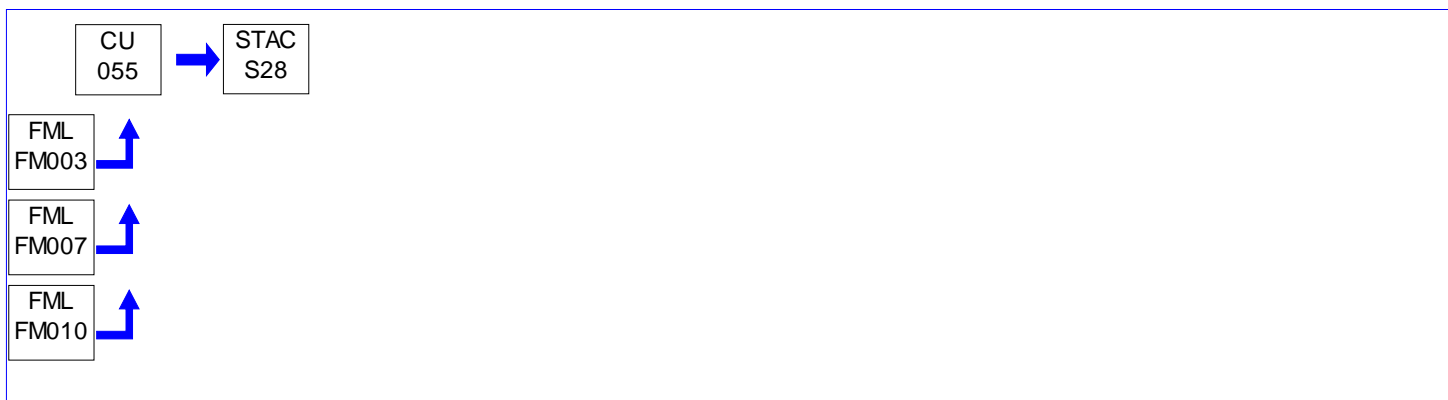
**SECTION D. Source Level Requirements**

Source ID: 055

Source Name: D.H.T. HEATER 2

Source Capacity/Throughput:	35.700	MMBTU/HR	
	35.700	MCF/HR	Refinery Gas
	35.700	MCF/HR	Natural Gas
	257.000	Gal/HR	#2 FUEL OIL

Conditions for this source occur in the following groups: 11- METHOD OF COMPLIANCE  
 BOILER / PROCESS HEATER MACT  
 CASE-BY-CASE RACT 2  
 CEM MONITORING  
 CO&A FOR 1-HR SO<sub>2</sub> NAAQS  
 PA 62-017G & SUBSEQUENT PA TESTING

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017G]

- The NO<sub>x</sub> emissions shall not exceed 4.4 #/hr.
- The CO emissions shall not exceed 6.7 #/hr.
- The VOC emissions shall not exceed 0.2 #/hr.
- The TSP emissions shall not exceed 1.03 #/hr.
- The PM-10 emissions shall not exceed 0.32 #/hr.
- The SO<sub>x</sub> emissions shall not exceed 6.36 #/hr. [CO&A 9/29/17]

[Compliance with the SO<sub>x</sub> emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 4]

**# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017G]

- The NO<sub>x</sub> emissions shall not exceed 19.3 TPY based on a consecutive 12-month period.
- The CO emissions shall not exceed 10.6 TPY based on a consecutive 12-month period.
- The VOC emissions shall not exceed 0.7 TPY based on a consecutive 12-month period.
- The TSP emissions shall not exceed 5.8 TPY based on a consecutive 12-month period.
- The PM-10 emissions shall not exceed 1.4 TPY based on a consecutive 12-month period.

**SECTION D. Source Level Requirements**

f) The SOx emissions shall not exceed 27.5 TPY based on a consecutive 12-month period.

[Compliance with the SOx emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 4]

**# 003 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Standards for sulfur oxides.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.104(a)(1)

**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.592]**

**Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries**

**Standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.592(a) - (e)

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.593]**

**Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries**

**Exceptions.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.593(a) - (e)

**Fuel Restriction(s).**

**# 006 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

[Plan Approval 62-017T]

DHT2 heater shall not combust fuel which has a sulfur content exceeding 0.5 percent.

[This condition streamlines the requirements of Plan Approval 62-312-030 which established sulfur limits for #6 oil - 1.5% by weight, and fuel oil - 2.8% by weight and the duplicated limit of 0.1 gr/dscf for H2S which is already in 40 CFR 60.104(a)(1) for this source.]

**II. TESTING REQUIREMENTS.**

**# 007 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Test methods and procedures.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.106(e)

**III. MONITORING REQUIREMENTS.**

**# 008 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Monitoring of emissions and operations.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional

**SECTION D. Source Level Requirements**

Requirements for condition] as identified below:

40 CFR 60.105(a)(3), (4), (e)(3)

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 5]

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

**# 009 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]  
Subpart J - Standards of Performance for Petroleum Refineries  
Reporting and recordkeeping requirements.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.107(d), (e), (f) and (g)

**VI. WORK PRACTICE REQUIREMENTS.**

**# 010 [25 Pa. Code §127.511]  
Monitoring and related recordkeeping and reporting requirements.**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 1]

**# 011 [25 Pa. Code §129.93]  
Presumptive RACT emission limitations**

b) The owner and operator shall develop and implement the following presumptive RACT emission limitations:

(1) Not applicable

(2) For a combustion unit with a rated heat input equal to or greater than 20 million Btu/hour and less than 50 million Btu/hour presumptive RACT shall be the performance of an annual adjustment or tuneup on the combustion process. This adjustment shall include, at a minimum, the following:

(i) Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.

(ii) Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NO<sub>x</sub>, and to the extent practicable minimize emissions of CO.

(iii) Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.

(3) For combustion units subject to paragraph (2), the owner and operator of the adjusted equipment shall record each adjustment conducted under the procedures in paragraph (2) in a permanently bound log book or other method approved by the Department. This log shall contain, at a minimum, the following information:

(i) The date of the tuning procedure.



**SECTION D. Source Level Requirements**

- (ii) The name of the service company and technicians.
- (iii) The final operating rate or load.
- (iv) The final CO and NOx emission rates.
- (v) The final excess oxygen rate.
- (vi) Other information required by the applicable operating permit.

(4) For oil, gas and combination oil/gas units, the owner and operator shall maintain records including a certification from the fuel supplier of the type of fuel and for each shipment of distillate oils number 1 or 2, a certification that the fuel complies with ASTM D396-78 "Standard Specifications for Fuel Oils." For residual oils, minimum recordkeeping includes a certification from the fuel supplier of the nitrogen content of the fuel, and identification of the sampling method and sampling protocol.

(5) For oil and gas and combination oil/gas fired units subject to paragraph (2), the owner and operator shall make the annual adjustment in accordance with the EPA document "Combustion Efficiency Optimization Manual for Operators of Oil and Gas-fired Boilers," September 1983 (EPA-340/1-83-023) or equivalent procedures approved in writing by the Department.

**VII. ADDITIONAL REQUIREMENTS.****# 012 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The DHT2 catalyst shall be handled, stored and loaded in accordance with the manufacturer's recommendations, consistent with the Material Safety Data Sheets (MSDS), and in accordance with good air pollution control practices.

[From Plan Approval 62-017K Condition #004]

**# 013 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]****Subpart J - Standards of Performance for Petroleum Refineries****Applicability, designation of affected facility, and reconstruction.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.100(a), (b), (e)

**# 014 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.590]****Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries****Applicability and designation of affected facility.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.590(a) - (d)

**\*\*\* Permit Shield in Effect. \*\*\***

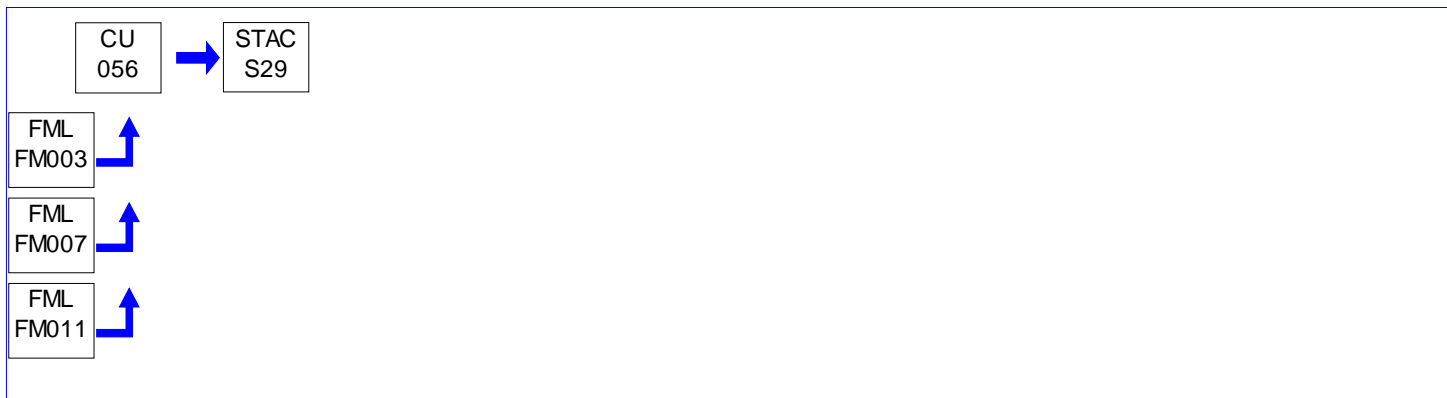
**SECTION D. Source Level Requirements**

Source ID: 056

Source Name: PREFACTIONATOR REBOILER 2

Source Capacity/Throughput:	36.000	MMBTU/HR	
	36.000	MCF/HR	Refinery Gas
	36.000	MCF/HR	Natural Gas
	267.000	Gal/HR	REFINERY FUEL OIL

Conditions for this source occur in the following groups: 11- METHOD OF COMPLIANCE  
 BOILER / PROCESS HEATER MACT  
 CASE-BY-CASE RACT 2  
 CEM MONITORING  
 CO&A FOR 1-HR SO2 NAAQS  
 PA 62-017G & SUBSEQUENT PA TESTING  
 PA 62-017O REQUIREMENTS

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017G]

- The NOx emissions shall not exceed 3.1 #/hr.
- The CO emissions shall not exceed 2.5 #/hr.
- The VOC emissions shall not exceed 0.2 #/hr.
- The TSP emissions shall not exceed 1.13 #/hr.
- The PM-10 emissions shall not exceed 0.32 #/hr.
- The SOx emissions shall not exceed 5.37 #/hr.

[Compliance with the requirement specified in this streamlined permit condition (f) assures compliance with the provisions in: SO2 PA: 62-017E condition 4]

**# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017G]

- The NOx emissions shall not exceed 19.4 TPY based on a consecutive 12-month period.
- The CO emissions shall not exceed 10.6 TPY based on a consecutive 12-month period.
- The VOC emissions shall not exceed 0.7 TPY based on a consecutive 12-month period.

**SECTION D. Source Level Requirements**

d) The TSP emissions shall not exceed 5.8 TPY based on a consecutive 12-month period.

e) The PM-10 emissions shall not exceed 1.4 TPY based on a consecutive 12-month period.

f) The SO<sub>x</sub> emissions shall not exceed 27.5 TPY based on a consecutive 12-month period.

[Compliance with the requirement specified in this streamlined permit condition (f) assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 4]

**# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The maximum VOC emissions from equipment leaks shall not exceed the following:

1. 2.28 lbs/hr
2. 7 tpy based on a consecutive 12-month period.

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: PA: 62-312-033 condition 9]

**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104]****Subpart J - Standards of Performance for Petroleum Refineries  
Standards for sulfur oxides.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.104(a)(1)

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.592]****Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries  
Standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.592(a) - (e)

**# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.593]****Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries  
Exceptions.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.593(a) - (e)

**II. TESTING REQUIREMENTS.****# 007 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]****Subpart J - Standards of Performance for Petroleum Refineries  
Test methods and procedures.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.106(e)

**SECTION D. Source Level Requirements****III. MONITORING REQUIREMENTS.****# 008 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]****Subpart J - Standards of Performance for Petroleum Refineries****Monitoring of emissions and operations.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.105(a)(3), (4), (e)(3)

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 5]

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.****# 009 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]****Subpart J - Standards of Performance for Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.107(d), (e), (f) and (g)

**VI. WORK PRACTICE REQUIREMENTS.****# 010 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 1]

**# 011 [25 Pa. Code §129.93]****Presumptive RACT emission limitations**

b) The owner and operator shall develop and implement the following presumptive RACT emission limitations:

(1) Not applicable

(2) For a combustion unit with a rated heat input equal to or greater than 20 million Btu/hour and less than 50 million Btu/hour presumptive RACT shall be the performance of an annual adjustment or tuneup on the combustion process. This adjustment shall include, at a minimum, the following:

(i) Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.

(ii) Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NO<sub>x</sub>, and to the extent practicable minimize emissions of CO.

(iii) Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.

**SECTION D. Source Level Requirements**

(3) For combustion units subject to paragraph (2), the owner and operator of the adjusted equipment shall record each adjustment conducted under the procedures in paragraph (2) in a permanently bound log book or other method approved by the Department. This log shall contain, at a minimum, the following information:

- (i) The date of the tuning procedure.
- (ii) The name of the service company and technicians.
- (iii) The final operating rate or load.
- (iv) The final CO and NO<sub>x</sub> emission rates.
- (v) The final excess oxygen rate.
- (vi) Other information required by the applicable operating permit.

(4) For oil, gas and combination oil/gas units, the owner and operator shall maintain records including a certification from the fuel supplier of the type of fuel and for each shipment of distillate oils number 1 or 2, a certification that the fuel complies with ASTM D396-78 "Standard Specifications for Fuel Oils." For residual oils, minimum recordkeeping includes a certification from the fuel supplier of the nitrogen content of the fuel, and identification of the sampling method and sampling protocol.

(5) For oil and gas and combination oil/gas fired units subject to paragraph (2), the owner and operator shall make the annual adjustment in accordance with the EPA document "Combustion Efficiency Optimization Manual for Operators of Oil and Gas-fired Boilers," September 1983 (EPA-340/1-83-023) or equivalent procedures approved in writing by the Department.

**VII. ADDITIONAL REQUIREMENTS.****# 012 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]****Subpart J - Standards of Performance for Petroleum Refineries  
Applicability, designation of affected facility, and reconstruction.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.100(a), (b), (e)

**# 013 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.590]****Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries  
Applicability and designation of affected facility.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.590(a) - (d)

\*\*\* **Permit Shield in Effect.** \*\*\*

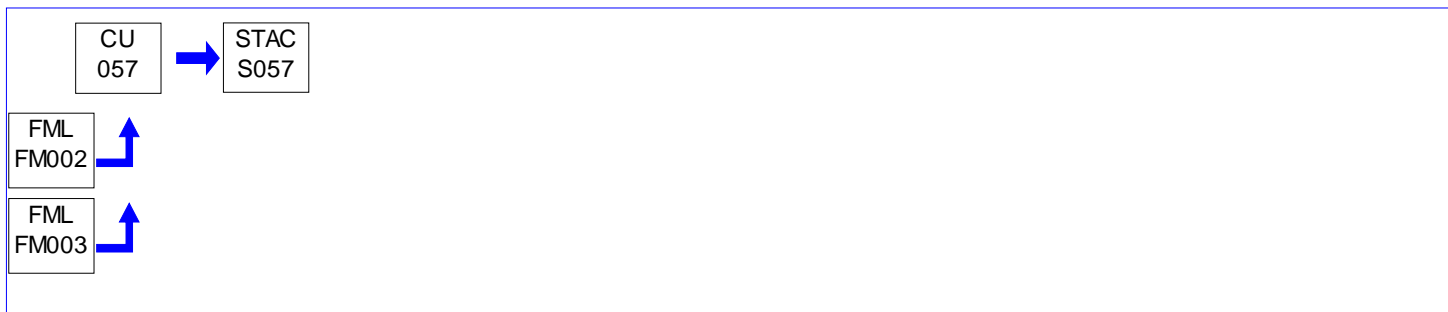
**SECTION D. Source Level Requirements**

Source ID: 057

Source Name: VOLCANIC HEATER (T-241)

Source Capacity/Throughput:	15.000	MMBTU/HR	
	15.000	MCF/HR	Refinery Gas
	15.000	MCF/HR	Natural Gas

Conditions for this source occur in the following groups: 11- METHOD OF COMPLIANCE  
 BOILER / PROCESS HEATER MACT  
 CEM MONITORING  
 CO&A FOR 1-HR SO<sub>2</sub> NAAQS  
 PA 62-017G & SUBSEQUENT PA TESTING  
 PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017G]

- The NO<sub>x</sub> emissions shall not exceed 5.6 TPY based on a consecutive 12-month period.
- The CO emissions shall not exceed 41.4 TPY based on a consecutive 12-month period.
- The VOC emissions shall not exceed 0.3 TPY based on a consecutive 12-month period.
- The TSP emissions shall not exceed 0.4 TPY based on a consecutive 12-month period.
- The PM-10 emissions shall not exceed 0.4 TPY based on a consecutive 12-month period.
- The SO<sub>x</sub> emissions shall not exceed 1.3 TPY based on a consecutive 12-month period.

[Compliance with the SO<sub>x</sub> emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 4]

**# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017G]

- The NO<sub>x</sub> emissions shall not exceed 1.3 #/hr.
- The CO emissions shall not exceed 12.2 #/hr.
- The VOC emissions shall not exceed 0.1 #/hr.
- The TSP emissions shall not exceed 0.1 #/hr.
- The PM-10 emissions shall not exceed 0.1 #/hr.
- The SO<sub>x</sub> emissions shall not exceed 0.3 #/hr.

[Compliance with the requirement specified in this streamlined permit condition part (f) assures compliance with the

**SECTION D. Source Level Requirements**

provisions in: SO2 PA: 62-017E condition 4]

**# 003 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104]  
Subpart J - Standards of Performance for Petroleum Refineries  
Standards for sulfur oxides.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.104(a)(1)

**Fuel Restriction(s).**

**# 004 [25 Pa. Code §127.12b]  
Plan approval terms and conditions.**

[PA 62-017G]

This source shall only use refinery gas, natural gas or propane fuels.

**# 005 [25 Pa. Code §127.12b]  
Plan approval terms and conditions.**

H2S content in fuel gas burned shall not exceed 0.10 grain/dscf.

[PA 62-312-035]

**II. TESTING REQUIREMENTS.**

**# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]  
Subpart J - Standards of Performance for Petroleum Refineries  
Test methods and procedures.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.106(e)

**III. MONITORING REQUIREMENTS.**

**# 007 [25 Pa. Code §127.12b]  
Plan approval terms and conditions.**

H2S continuous monitoring shall be calibrated, maintained, and operated by the permittee in compliance with the requirements of 25 PA Code Chapter 139 and the Department CEM Manual. The permittee shall also maintain a file of all maintenance and performance testing measurements and all calibration checks. The records shall be maintained for five years and shall be available to Department personnel upon request.

[PA 62-312-035]

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 5]

**# 008 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]  
Subpart J - Standards of Performance for Petroleum Refineries  
Monitoring of emissions and operations.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

**SECTION D. Source Level Requirements**

40 CFR 60.105(a)(3), (4), (e)(3)

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 5]

**IV. RECORDKEEPING REQUIREMENTS.**

**# 009 [25 Pa. Code §127.12b]**

**Plan approval terms and conditions.**

The permittee shall keep records of the Carbon Monoxide emissions from this source each month and maintain these emission records on a 12-month rolling basis.

[From Plan Approval No. 62017G, Condition No. 19]

**V. REPORTING REQUIREMENTS.**

**# 010 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]**

**Subpart J - Standards of Performance for Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.107(d), (e), (f) and (g)

**VI. WORK PRACTICE REQUIREMENTS.**

**# 011 [25 Pa. Code §127.511]**

**Monitoring and related recordkeeping and reporting requirements.**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 1]

**# 012 [25 Pa. Code §129.93]**

**Presumptive RACT emission limitations**

c) For the following source types, presumptive RACT emission limitation are the installation, maintenance and operation of the source in accordance with manufacturers specifications:

(1) Boilers and other combustion sources with individual rated gross heat inputs less than 20 million Btu/hour of operation.

**VII. ADDITIONAL REQUIREMENTS.**

**# 013 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]**

**Subpart J - Standards of Performance for Petroleum Refineries****Applicability, designation of affected facility, and reconstruction.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.100(a), (b), (e)

**\*\*\* Permit Shield in Effect. \*\*\***

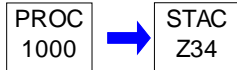


**SECTION D. Source Level Requirements**

Source ID: 1000

Source Name: LIQUID H2 TANKS

Source Capacity/Throughput:

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017S]

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

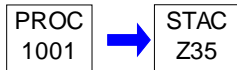
**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

Source ID: 1001

Source Name: LITE STABILIZER

Source Capacity/Throughput:

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017S]

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***

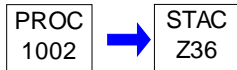
**SECTION D. Source Level Requirements**

Source ID: 1002

Source Name: ISOMERIZATION UNIT

Source Capacity/Throughput:

Conditions for this source occur in the following groups: CRUDE &amp; ISOM UNITS

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017Z]

(a) The permittee shall maintain monthly records of emissions from this source, in order to demonstrate compliance with the emission limits of this Source.

(b) Required records shall be maintained on site for a period of five (5) years, and shall be made available to the Department upon request.

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.****# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017S]

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

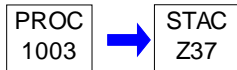
**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

Source ID: 1003

Source Name: SOUR TIPS STRIPPER UNIT

Source Capacity/Throughput:

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The subject source shall be installed, maintained, and operated in accordance with manufacturers' specifications and in accordance with good air pollution control practices.

[Plan Approval 62-017Y]

**# 002 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.592a]****Subpart GGGa - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 Standards.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.592a (a) - (e)

[Plan Approval 62-017Y]

**SECTION D. Source Level Requirements****VII. ADDITIONAL REQUIREMENTS.**

**# 003 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-1a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Standards: General.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.482-1a (a) - (g)

[Plan Approval 62-017Y]

**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-2a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Standards: Pumps in light liquid service.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.482-2a (a) - (g)

[Plan Approval 62-017Y]

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-4a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Standards: Pressure relief devices in gas/vapor service.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.482-4a (a) - (d)

[Plan Approval 62-017Y]

**# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-5a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Standards: Sampling connection systems.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.482-5a (a) - (c)

[Plan Approval 62-017Y]

**# 007 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-6a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals  
Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Standards: Open-ended valves or lines.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

**SECTION D. Source Level Requirements**

40 CFR 60.482-6a (a) - (e)

[Plan Approval 62-017Y]

**# 008 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-7a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Standards: Valves in gas/vapor service and in light liquid service.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.482-7a (a) - (h)

[Plan Approval 62-017Y]

**# 009 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-8a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Standards: Pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.482-8a (a) - (d)

[Plan Approval 62-017Y]

**# 010 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.482-9a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Standards: Delay of repair.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.482-9a (a) - (f)

[Plan Approval 62-017Y]

**# 011 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.484a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Equivalence of means of emission limitation.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.484a (a) - (f)

[Plan Approval 62-017Y]

**# 012 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.485a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006**

**SECTION D. Source Level Requirements****Test methods and procedures.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.485a (a) - (h)

[Plan Approval 62-017Y]

**# 013 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.486a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Recordkeeping requirements.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.486a (a) - (k)

[Plan Approval 62-017Y]

**# 014 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.487a]  
Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Reporting requirements.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.487a (a) - (f)

[Plan Approval 62-017Y]

**# 015 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.590a]  
Subpart GGGa - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Applicability and designation of affected facility.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.590a (a) - (e)

[Plan Approval 62-017Y]

**# 016 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.591a]  
Subpart GGGa - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Definitions.**

[Please see eCFR 40 CFR Section 60.591a for the definitions used in Subpart GGGa]

**# 017 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.593a]  
Subpart GGGa - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006  
Exceptions.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional

**SECTION D. Source Level Requirements**

Requirements for the condition] as identified below:

40 CFR 60.593a (a), (d), and (g)

[Plan Approval 62-017Y]

**# 018 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.640]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Applicability and designation of affected source.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 63.640 (a), (c)(1), (c)(4), (d), (f), (g)(2), (i) - (m), and (p)-(q)

[Plan Approval 62-017Y]

**# 019 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.641]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Definitions.**

[Please see eCFR 40 CFR Section 63.641 for the definitions used in subpart CC]

**# 020 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.642]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
General standards.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 63.642 (a) - (n)

[Plan Approval 62-017Y]

**# 021 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.643]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Miscellaneous process vent provisions.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 63.643 (a), (c), and (d)

[Plan Approval 62-017Y]

**# 022 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.648]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Equipment leak standards.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 63.648 (a) - (f), (h), (i), and (j)

[Plan Approval 62-017Y]

**# 023 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.649]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Alternative means of emission limitation: Connectors in gas/vapor service and light liquid service.**



**SECTION D. Source Level Requirements**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 63.649 (a) - (g)

[Plan Approval 62-017Y]

**# 024 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.654]**  
**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**  
**Heat exchange systems.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 63.654 (a) - (g)

[Plan Approval 62-017Y]

**# 025 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.655]**  
**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**  
**Reporting and recordkeeping requirements.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 63.655 (d) - (i)

[Plan Approval 62-017Y]

**\*\*\* Permit Shield in Effect. \*\*\***

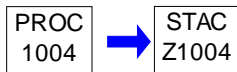
**SECTION D. Source Level Requirements**

Source ID: 1004

Source Name: CRUDE UNIT

Source Capacity/Throughput:

Conditions for this source occur in the following groups: CRUDE &amp; ISOM UNITS

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

# 001 [25 Pa. Code §127.12b]

**Plan approval terms and conditions.**

[Plan Approval 62-017Z]

(a) The permittee shall maintain monthly records of emissions from this source, in order to demonstrate compliance with the emission limits of this Source.

(b) Required records shall be maintained on site for a period of five (5) years, and shall be made available to the Department upon request.

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

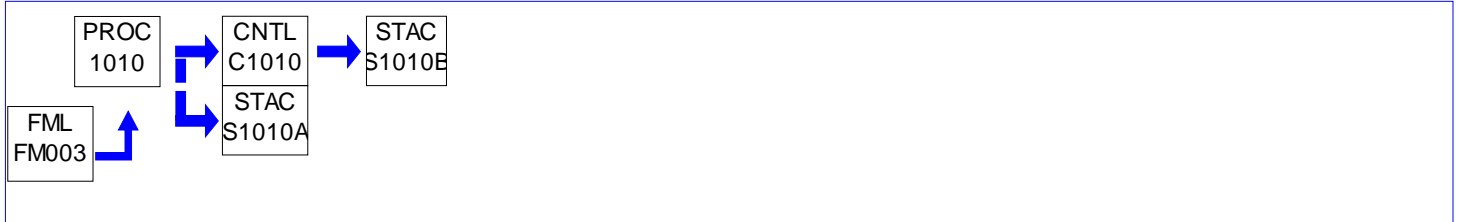
No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

Source ID: 1010                      Source Name: SMR HYDROGEN PLANT (10 MMSCFD)(112.9 MMBTU/HR)  
 Source Capacity/Throughput:                      0.218 MMCF/HR                      Natural Gas

Conditions for this source occur in the following groups: BOILER / PROCESS HEATER MACT  
 CO&A FOR 1-HR SO<sub>2</sub> NAAQS  
 PA 62-017G & SUBSEQUENT PA TESTING

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017W]

1.) The following emission limits are applicable to Source 1010 (These limits are from plan approval application 62-017W, page 3-3, Table 3-2, received at the Department on April 22, 2014).

- a) Particulate Matter (less than 10 microns in diameter) (PM<sub>10</sub>)
  - 1) 0.79 pounds per hour (lb/hr) based on a 30 day rolling average.
  - 2) 3.46 tons per year (tpy) based on a twelve (12) month rolling total.
- b) Nitrogen Oxides (NO<sub>x</sub>)
  - 1) 4.07 lb/hr based on a 30 day rolling average.
  - 2) 17.81 tpy based on a twelve (12) month rolling total.
- c) Volatile Organic Compounds (VOC)
  - 1) 0.56 lb/hr for Source 1010 at the reformer stack (S1010A).
  - 2) 2.47 tpy based on a twelve (12) month rolling total for source 1010 at the reformer stack (S1010A).
- d) Sulfur Oxides (SO<sub>x</sub>)
  - 1) 0.099 lb/hr based on a 30 day rolling average.
  - 2) 0.43 tpy based on a twelve (12) month rolling total.
- e) Carbon Monoxide (CO)
  - 1) 1.69 lb/hr based on a 30 day rolling average.
  - 2) 7.42 tpy based on a twelve (12) month rolling total.
- f) Lead (Pb)
  - 1) 0.00006 lb/hr based on a 30 day rolling average.
  - 2) 0.00024 tpy based on a twelve (12) month rolling total.

2.) The following emission limits are applicable to Control Device C1010 (Elevated Process Flare). (These limits are from plan approval application 62-017W, page 3-5, Table 3-3, received at the Department on April 22, 2014).

- a) Volatile Organic Compound (VOC) emissions shall be limited to 0.09 tons per year (tpy) based on a twelve (12) month rolling total.
- b) Particulate Matter (less than 10 microns in diameter) (PM<sub>10</sub>) emissions shall be limited to 0.12 tpy based on a twelve

**SECTION D. Source Level Requirements**

(12) month rolling total.

- c) Sulfur Oxide (SO<sub>x</sub>) emissions shall be limited to 0.01 tpy based on a twelve (12) month rolling total.
- d) Nitrogen Oxide (NO<sub>x</sub>) emissions shall be limited to 0.59 tpy based on a twelve (12) month rolling total.
- e) Carbon Monoxide (CO) emissions shall be limited to 0.89 tpy based on a twelve (12) month rolling total.

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

**# 002 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107a]  
SUBPART Ja - Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007  
Monitoring of emissions and operations for fuel gas combustion devices and flares.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.107a (a)(3)(iii) and (f)

[Plan Approval 62-017W]

**IV. RECORDKEEPING REQUIREMENTS.**

**# 003 [25 Pa. Code §127.12b]  
Plan approval terms and conditions.**

[Plan Approval 62-017W]

The permittee shall keep monthly records of the fuel combusted in control device C1010 (Elevated Process Flare). The monthly total from the previous month shall be added to the total of the eleven (11) previous months to form a twelve month rolling total.

**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.108a]  
SUBPART Ja - Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007  
Recordkeeping and reporting requirements.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.108a (c)(1)

[Plan Approval 62-017W]

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**SECTION D. Source Level Requirements****VI. WORK PRACTICE REQUIREMENTS.**

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.103a]  
SUBPART Ja - Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or  
Modification Commenced After May 14, 2007**

**Work practice standards.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.103a (a - b)

[Plan Approval 62-017W]

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

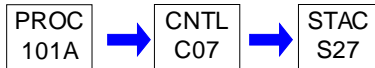
**SECTION D. Source Level Requirements**

Source ID: 101A

Source Name: FCC UNIT

Source Capacity/Throughput: 1,000.000 BBL/HR FRESH FEED

Conditions for this source occur in the following groups: 10- MACT SUBPART UUU  
 11- METHOD OF COMPLIANCE  
 CASE-BY-CASE RACT 2  
 CEM MONITORING  
 CO&A FOR 1-HR SO2 NAAQS  
 PA 62-017G & SUBSEQUENT PA TESTING

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.13]****Processes**

No person may permit the emission into the outdoor atmosphere of particulate matter in a manner that the concentration of particulate matter in the effluent gas exceeds 0.04 grain per dry standard cubic foot.

**# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017G and 62-017R]

- a) The NOx emissions shall not exceed 11.5 #/hr.
- b) The CO emissions shall not exceed 13.5 #/hr.
- c) The SOx emissions shall not exceed 131.50 #/hr. [CO&A 9/29/17]

[Compliance with the SOx emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 4]

[Authority for this condition is also derived from 25 PA Code 129.92 and 129.99 - The NOx emissions shall not exceed 71 lbs/1000 barrels FCC feed]

**# 003 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017G and 62-017R]

- a) The NOx emissions shall not exceed 17.0 TPY calculated as a 12-month rolling total.[62-017Z]
- b) The CO emissions shall not exceed 58.8 TPY based on a consecutive 12-month period.
- c) The SOx emissions shall not exceed 1248.3 TPY based on a consecutive 12-month period.

[Compliance with the SOx emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 4]

**# 004 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017U]

The emissions shall not exceed the following:

- 1. The total PMPM10/PM2.5 emissions (filterable & condensable) shall not exceed 25.52 #/hr and 111.8 tpy based on a

**SECTION D. Source Level Requirements**

consecutive 12-month period.

2. The filterable PM<sub>10</sub>/PM<sub>2.5</sub> emissions shall not exceed 9.37 #/hr and the condensable PM<sub>10</sub>/PM<sub>2.5</sub> emissions shall not exceed 16.15 #/hr.

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.102]**  
**Subpart J - Standards of Performance for Petroleum Refineries**  
**Standard for particulate matter.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.102(a)

**# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.103]**  
**Subpart J - Standards of Performance for Petroleum Refineries**  
**Standard for carbon monoxide.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.103(a)

**# 007 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.642]**  
**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**  
**General standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.642(a) - (m)

**Throughput Restriction(s).**

**# 008 [25 Pa. Code §127.12b]**  
**Plan approval terms and conditions.**

The charge rate to the FCC unit shall not exceed 25,000 barrels per day based on a 30 day rolling total.

[PA 62-329-001A]

**II. TESTING REQUIREMENTS.**

**# 009 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]**  
**Subpart J - Standards of Performance for Petroleum Refineries**  
**Test methods and procedures.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.106(a), (b), (d)

**# 010 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.108]**  
**Subpart J - Standards of Performance for Petroleum Refineries**  
**Performance test and compliance provisions.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.108(a), (c), (d), (e)

**SECTION D. Source Level Requirements****III. MONITORING REQUIREMENTS.****# 011 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall maintain and operate the following continuous emission monitoring systems (CEMS) in accordance with 25 PA Code Chapter 139:

1. Opacity
2. SO<sub>2</sub>

[PA 62-312-023A]

**# 012 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

a) A magnehelic gauge or equivalent shall be permanently installed and maintained at a conveniently readable location to indicate the pressure drop across the FCC gas scrubber located in the Sat Gas unit.

b) Equipment to measure the flow rate to the FCC gas scrubber located in the Sat Gas unit shall be permanently installed and maintained at a conveniently readable location.

[PA PA-62-017B]

[SO<sub>2</sub> PA 62-017E condition 6]

**# 013 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]****Subpart J - Standards of Performance for Petroleum Refineries****Monitoring of emissions and operations.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.105(a)(1), (c), and (e)(1)

**IV. RECORDKEEPING REQUIREMENTS.****# 014 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

a) The permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction of the FCC - catalyst regenerator, any malfunction of the air pollution control equipment, and any periods during which the monitoring devices are inoperable. The permittee shall also maintain a file suitable for inspection by Department personnel or other responsible parties of all emission measurements including continuous monitoring records and performance evaluations; all calibration checks; and any adjustments or maintenance performed on the monitoring devices. This information shall be retained for a period of at least five years from the date of occurrence.

b) The average coke burn-off rate (lbs/hr) and hours of operation of the FCC - regenerator shall be recorded daily.

[PA 62-312-023A]

c) The permittee shall keep records of the FCC process rate in barrels per day based on a 30 day rolling total. The records shall be kept for a minimum of five years.

[PA 62-329-001A]

**# 015 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017Z]

(a) The permittee shall maintain monthly records of emissions from this source, in order to demonstrate compliance with the emission limits of this source.



**SECTION D. Source Level Requirements**

(b) Required records shall be maintained on site for a period of five (5) years, and shall be made available to the Department upon request.

**# 016 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

a) The permittee shall maintain a record of all preventative maintenance inspections of the control device. These records shall, at a minimum, contain the dates of the inspections, any problems or defects, the actions taken to correct the problems or defects, and any routine maintenance performed.

b) The permittee shall record the following parameters from the operational inspection:

1. Primary and Secondary Voltage of ESP
2. Primary and Secondary Current of ESP
3. Spark Rate of ESP
4. Ammonia charge rate

**V. REPORTING REQUIREMENTS.****# 017 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]****Subpart J - Standards of Performance for Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.107(d), (e), (f) and (g)

**# 018 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.655]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §63.655(d) - (i)

**VI. WORK PRACTICE REQUIREMENTS.****# 019 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

Ammonia will be continuously injected into the flue gas stream upstream of the electrostatic precipitator at the rate of at least 10 ppm.

[PA 62-312-023A]

**# 020 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017Z]

Compliance with the emission limit for this source shall be via emission factors from the most recent stack test, and source throughput.

**# 021 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

a) The permittee shall perform a daily operational inspection of the control device.

**SECTION D. Source Level Requirements**

b) The permittee shall operate the control device at all times that the source is in operation.

c) The permittee shall maintain and operate the source and control device in accordance with the manufacturer's specifications and in accordance with good air pollution practices.

[Compliance with the requirement specified in this streamlined permit condition part (c) assures compliance with the provisions in: SO2 PA: 62-017E condition 1]

**# 022 [25 Pa. Code §129.93]**

**Presumptive RACT emission limitations**

c) For the following source types, presumptive RACT emission limitation are the installation, maintenance and operation of the source in accordance with manufacturers specifications:

(1) Boilers and other combustion sources with individual rated gross heat inputs less than 20 million Btu/hour of operation.

**VII. ADDITIONAL REQUIREMENTS.**

**# 023 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Applicability, designation of affected facility, and reconstruction.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.100(a) - (e)

**# 024 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.640]**

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**

**Applicability and designation of affected source.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.640(a), (c), (d), (f) - (m), (p), (q)

**\*\*\* Permit Shield in Effect. \*\*\***

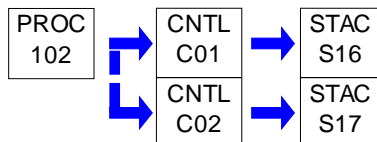
**SECTION D. Source Level Requirements**

Source ID: 102

Source Name: BLOWDOWN SYSTEM

Source Capacity/Throughput: 3,000.000 BBL/HR FRESH FEED RATE

Conditions for this source occur in the following groups: 11- METHOD OF COMPLIANCE  
6 - SO2 PERMIT MONITORING  
CO&A FOR 1-HR SO2 NAAQS

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.13]****Processes**

No person may permit the emission into the outdoor atmosphere of particulate matter in a manner that the concentration of particulate matter in the effluent gas exceeds 0.04 grain per dry standard cubic foot.

**# 002 [25 Pa. Code §123.21]****General**

No person may permit the emission into the outdoor atmosphere of sulfur oxides from a source in a manner that the concentration of the sulfur oxides, expressed as SO<sub>2</sub>, in the effluent gas exceeds 500 parts per million, by volume, dry basis.

**# 003 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017G]

The emissions from the combo flare shall not exceed the following:

- The NO<sub>x</sub> emissions shall not exceed 10.6 TPY based on a consecutive 12-month period.
- The CO emissions shall not exceed 5.8 TPY based on a consecutive 12-month period.
- The VOC emissions shall not exceed 9.8 TPY based on a consecutive 12-month period.
- The TSP emissions shall not exceed 0.5 TPY based on a consecutive 12-month period.
- The PM-10 emissions shall not exceed 0.5 TPY based on a consecutive 12-month period.
- The SO<sub>x</sub> emissions shall not exceed 1.8 TPY based on a consecutive 12-month period.

[Compliance with the SO<sub>x</sub> emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 4]

The emissions from the FCC flare shall not exceed the following:

- The NO<sub>x</sub> emissions shall not exceed 10.6 TPY based on a consecutive 12-month period.
- The CO emissions shall not exceed 5.8 TPY based on a consecutive 12-month period.
- The VOC emissions shall not exceed 9.8 TPY based on a consecutive 12-month period.

**SECTION D. Source Level Requirements**

- d) The TSP emissions shall not exceed 0.5 TPY based on a consecutive 12-month period.
- e) The PM-10 emissions shall not exceed 0.5 TPY based on a consecutive 12-month period.
- f) The SOx emissions shall not exceed 0.4 TPY based on a consecutive 12-month period.

[Compliance with the SOx emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 4]

**# 004 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017G]

The emissions from the combo flare shall not exceed the following:

- a) The NOx emissions shall not exceed 2.41 #/hr.
- b) The CO emissions shall not exceed 3.0 #/hr.
- c) The VOC emissions shall not exceed 2.24 #/hr.
- d) The TSP emissions shall not exceed 0.3 #/hr.
- e) The PM-10 emissions shall not exceed 0.3 #/hr.
- f) The SOx emissions shall not exceed 0.4 #/hr.

[Compliance with the SOx emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 4]

The emissions from the FCC flare shall not exceed the following:

- a) The NOx emissions shall not exceed 2.41 #/hr.
- b) The CO emissions shall not exceed 3.0 #/hr.
- c) The VOC emissions shall not exceed 2.24 #/hr.
- d) The TSP emissions shall not exceed 0.3 #/hr.
- e) The PM-10 emissions shall not exceed 0.3 #/hr.
- f) The SOx emissions shall not exceed 0.1 #/hr.

[Compliance with the SOx emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 4]

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.592]****Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries Standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.592(a) - (e)

**# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.593]****Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries Exceptions.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.593(a) - (e)

**SECTION D. Source Level Requirements****II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.****# 007 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall maintain a record of all preventative maintenance inspections of the control device. These records shall, at a minimum, contain the dates of the inspections, any problems or defects, the actions taken to correct the problems or defects, and any routine maintenance performed.

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.****# 008 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

- a) The permittee shall perform a daily operational inspection of the control device.
- b) The permittee shall operate the control device at all times that the source is in operation.
- c) The permittee shall maintain and operate the source and control device in accordance with the manufacturer's specifications and in accordance with good air pollution practices.

[Compliance with the requirement specified in this streamlined permit condition part (c) assures compliance with the provisions in: SO2 PA: 62-017E condition 1]

**# 009 [25 Pa. Code §129.93]****Presumptive RACT emission limitations**

This condition is applicable to the Combo Flare (C01) and the FCC Flare (C02).

For the following source types (Incinerators or thermal/catalytic oxidizers used primarily for air pollution control), presumptive RACT emission limitation are the installation, maintenance and operation of the source in accordance with manufacturers specifications.

**# 010 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.18]****Subpart A - General Provisions****General control device requirements.**

- a) Introduction. This section contains requirements for control devices used to comply with applicable subparts of parts 40 CFR 60 and 61. The requirements are placed here for administrative convenience and only apply to facilities covered by subparts referring to this section.
- b) Flares. Paragraphs (c) through (f) apply to flares.
- c)(1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

**SECTION D. Source Level Requirements**

(2) Flares shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f).

(3) Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (f).

(4)(i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (b)(4) (ii) and (iii).

(ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), 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 net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than the velocity,  $V_{max}$ , as determined by the method specified in paragraph (f)(5), and less than 122 m/sec (400 ft/sec) are allowed.

(5) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity,  $V_{max}$ , as determined by the method specified in paragraph (f)(6).

(6) Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.

d) Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices.

e) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

f)(1) Reference Method 22 shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.

(2) 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.

(3) The net heating value of the gas being combusted in a flare shall be calculated using the equation found at 40 CFR 60.18(f)(3).

(4) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

(5) The maximum permitted velocity,  $V_{max}$ , for flares complying with paragraph (c)(4)(iii) shall be determined by the equation found at 40 CFR 60.18(f)(5).

(6) The maximum permitted velocity,  $V_{max}$ , for air-assisted flares shall be determined by the equation found at 40 CFR 60.18(f)(6).

[PA 62-312-022]

**SECTION D. Source Level Requirements****VII. ADDITIONAL REQUIREMENTS.**

**# 011 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.590]**

**Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries**

**Applicability and designation of affected facility.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.590(a) - (d)

**\*\*\* Permit Shield in Effect. \*\*\***

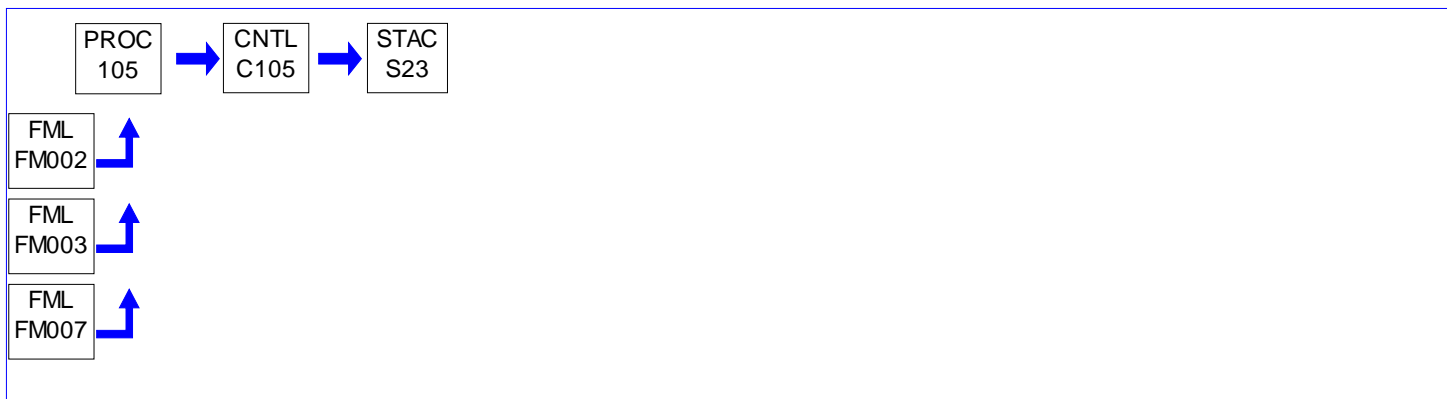
**SECTION D. Source Level Requirements**

Source ID: 105

Source Name: MIDDLE FCC KVG COMPRESSOR

Source Capacity/Throughput:	1.700 MCF/HR	Natural Gas
	1.700 MCF/HR	Refinery Gas

Conditions for this source occur in the following groups: 11- METHOD OF COMPLIANCE  
 CEM MONITORING  
 CO&A FOR 1-HR SO<sub>2</sub> NAAQS  
 PA 62-017G & SUBSEQUENT PA TESTING  
 PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**a) The maximum SO<sub>x</sub> emissions shall not exceed the following:

- 0.14 lbs/hr
- 0.6 tpy based on a consecutive 12-month period

[Compliance with the requirement specified in this streamlined permit condition part (a) assures compliance with the provision in: SO<sub>2</sub> PA 62-017E condition 4]

b) The maximum NO<sub>x</sub> emissions shall not exceed the following:

- 0.3 lbs/hr
- 1.3 tpy based on a consecutive 12-month period

c) The maximum CO emissions shall not exceed the following:

- 0.5 lbs/hr
- 1.9 tpy based on a consecutive 12-month period

d) The maximum VOC emissions shall not exceed the following:

- 0.44 lbs/hr
- 1.9 tpy based on a consecutive 12-month period

e) The maximum TSP emissions shall not exceed the following:

- 0.01 lbs/hr
- 0.02 tpy based on a consecutive 12-month period

f) The maximum pm-10 emissions shall not exceed the following:



**SECTION D. Source Level Requirements**

1. 0.01 lbs/hr
2. 0.02 tpy based on a consecutive 12-month period

[PA 62-329-001A and 62-017G]

**# 002 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104]**  
**Subpart J - Standards of Performance for Petroleum Refineries**  
**Standards for sulfur oxides.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.104(a)(1)

**# 003 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.642]**  
**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**  
**General standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.642(a) - (m)

**Fuel Restriction(s).**

**# 004 [25 Pa. Code §127.12b]**  
**Plan approval terms and conditions.**

- a) The source shall burn natural fuel gas only, except for emergency backup. During times of emergency backup (not to exceed 500 hours per year based on a consecutive 12-month period), the permittee may fuel the engines with refinery gas.
- b) The hydrogen sulfide concentration in the refinery gas burned shall not exceed 0.1 grain/dscf.

[PA 62-329-001A]

**II. TESTING REQUIREMENTS.**

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]**  
**Subpart J - Standards of Performance for Petroleum Refineries**  
**Test methods and procedures.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.106(e)

**III. MONITORING REQUIREMENTS.**

**# 006 [25 Pa. Code §127.12b]**  
**Plan approval terms and conditions.**

H<sub>2</sub>S continuous monitoring shall be calibrated, maintained, and operated by the permittee in accordance with the requirements of 25 PA Code Chapter 139 and the Department's CEM Manual. The permittee shall also maintain a file of all maintenance and performance testing measurements and all calibration checks. The records shall be maintained for five years and shall be available to Department personnel upon request.

[PA 62-329-001A]

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 5]

**SECTION D. Source Level Requirements****# 007 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

- a) A magnehelic gauge shall be permanently installed and maintained at a conveniently readable location to indicate the pressure drop across the catalyst to ensure that the catalyst is not plugged.
- b) Each engine shall be equipped with gauges to indicate the temperature across the catalyst and the oxygen content to ensure optimum stack conditions for the converter performance. The gauges shall be permanently installed and maintained at a conveniently readable location.

[PA 62-329-001A]

**# 008 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]****Subpart J - Standards of Performance for Petroleum Refineries****Monitoring of emissions and operations.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.105(a)(3), (4), (e)(3)

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 5]

**IV. RECORDKEEPING REQUIREMENTS.****# 009 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

- a) The permittee shall maintain a log of all preventative maintenance inspections of the engine and control device. The inspection logs, at a minimum, shall contain the dates of the inspections, any potential problems or defects that were encountered, the steps taken to correct them, the temperature across the catalyst, the oxygen content, and the measured pressure drop across the catalyst.
- b) The permittee shall keep records of the amount of refinery fuel gas burned during emergency backup situations, and the number of hours the refinery fuel gas is used. The records shall be based on a consecutive 12-month period. The records shall be kept for a minimum of five years.

[PA 62-329-001A]

**V. REPORTING REQUIREMENTS.****# 010 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]****Subpart J - Standards of Performance for Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.107(d), (e), (f) and (g)

**# 011 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.655]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §63.655(d) - (i)

**SECTION D. Source Level Requirements****VI. WORK PRACTICE REQUIREMENTS.****# 012 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The engine and control device shall be operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices. The permittee shall perform weekly preventative maintenance inspections of the engine and the control device and check the pressure drop across the catalyst.

[PA 62-329-001A]

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 1]

**# 013 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall operate the control device at all times that the source is in operation.

**# 014 [25 Pa. Code §129.93]****Presumptive RACT emission limitations**

c) For the following source types, presumptive RACT emission limitation are the installation, maintenance and operation of the source in accordance with manufacturers specifications:

(1) Boilers and other combustion sources with individual rated gross heat inputs less than 20 million Btu/hour of operation.

**# 015 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.648]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Equipment leak standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.648(a) - (i)

**# 016 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.649]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Alternative means of emission limitation: Connectors in gas/vapor service and light liquid service.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.649(a) - (g)

**VII. ADDITIONAL REQUIREMENTS.****# 017 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]****Subpart J - Standards of Performance for Petroleum Refineries****Applicability, designation of affected facility, and reconstruction.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.100(a), (b), (e)

**# 018 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.640]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Applicability and designation of affected source.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.640(a) - (r)



**SECTION D. Source Level Requirements**

**\*\*\* Permit Shield in Effect. \*\*\***

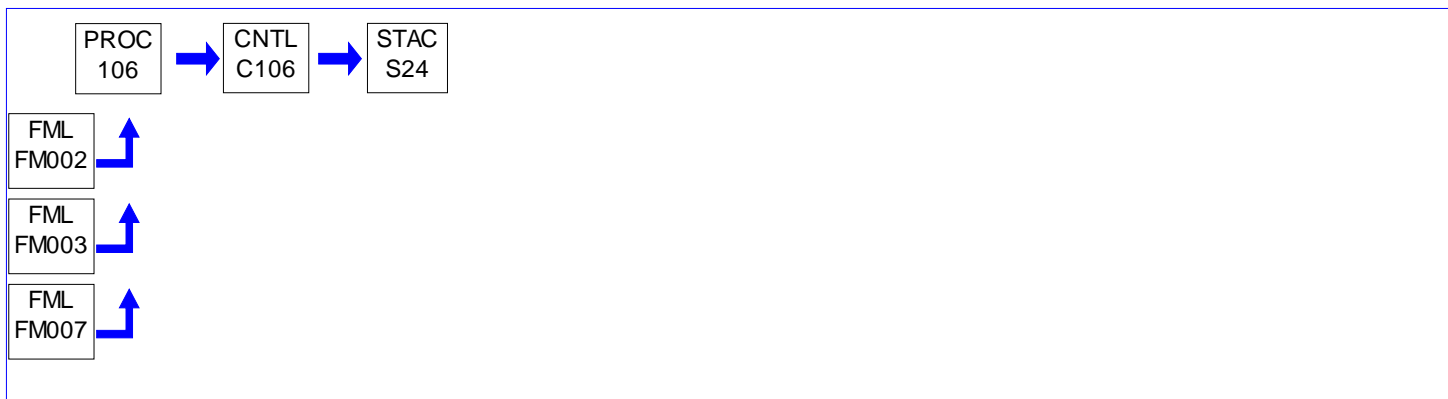
**SECTION D. Source Level Requirements**

Source ID: 106

Source Name: EAST FCC KVG COMPRESSOR

Source Capacity/Throughput:	1.700 MCF/HR	Natural Gas
	1.700 MCF/HR	Refinery Gas

Conditions for this source occur in the following groups: 11- METHOD OF COMPLIANCE  
 CEM MONITORING  
 CO&A FOR 1-HR SO2 NAAQS  
 PA 62-017G & SUBSEQUENT PA TESTING  
 PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

a) The maximum SOx emissions shall not exceed the following:

1. 0.14 lbs/hr
2. 0.6 tpy based on a consecutive 12-month period

[Compliance with the requirement specified in this streamlined permit condition part (a) assures compliance with the provision in: SO2 PA 62-017E condition 4]

b) The maximum NOx emissions shall not exceed the following:

1. 0.3 lbs/hr
2. 1.3 tpy based on a consecutive 12-month period

c) The maximum CO emissions shall not exceed the following:

1. 0.5 lbs/hr
2. 1.9 tpy based on a consecutive 12-month period

d) The maximum VOC emissions shall not exceed the following:

1. 0.44 lbs/hr
2. 1.9 tpy based on a consecutive 12-month period

e) The maximum TSP emissions shall not exceed the following:

1. 0.01 lbs/hr
2. 0.02 tpy based on a consecutive 12-month period

f) The maximum pm-10 emissions shall not exceed the following:

**SECTION D. Source Level Requirements**

1. 0.01 lbs/hr
2. 0.02 tpy based on a consecutive 12-month period

[PA 62-329-001A and 62-017G]

**# 002 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104]**  
**Subpart J - Standards of Performance for Petroleum Refineries**  
**Standards for sulfur oxides.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.104(a)(1)

**# 003 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.642]**  
**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**  
**General standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.642(a) - (m)

**Fuel Restriction(s).**

**# 004 [25 Pa. Code §127.12b]**  
**Plan approval terms and conditions.**

- a) The source shall burn natural fuel gas only, except for emergency backup. During times of emergency backup (not to exceed 500 hours per year based on a consecutive 12-month period), the permittee may fuel the engines with refinery gas.
- b) The hydrogen sulfide concentration in the refinery gas burned shall not exceed 0.1 grain/dscf.

[PA 62-329-001A]

**II. TESTING REQUIREMENTS.**

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]**  
**Subpart J - Standards of Performance for Petroleum Refineries**  
**Test methods and procedures.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.106(e)

**III. MONITORING REQUIREMENTS.**

**# 006 [25 Pa. Code §127.12b]**  
**Plan approval terms and conditions.**

H<sub>2</sub>S continuous monitoring shall be calibrated, maintained, and operated by the permittee in accordance with the requirements of 25 PA Code Chapter 139 and the Department's CEM Manual. The permittee shall also maintain a file of all maintenance and performance testing measurements and all calibration checks. The records shall be maintained for five years and shall be available to Department personnel upon request.

[PA 62-29-001A]

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 5]

**SECTION D. Source Level Requirements****# 007 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

- a) A magnehelic gauge shall be permanently installed and maintained at a conveniently readable location to indicate the pressure drop across the catalyst to ensure that the catalyst is not plugged.
- b) Each engine shall be equipped with gauges to indicate the temperature across the catalyst and the oxygen content to ensure optimum stack conditions for the converter performance. The gauges shall be permanently installed and maintained at a conveniently readable location.

[PA 62-329-001A]

**# 008 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]****Subpart J - Standards of Performance for Petroleum Refineries****Monitoring of emissions and operations.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.105(a)(3), (4), (e)(3)

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 5]

**IV. RECORDKEEPING REQUIREMENTS.****# 009 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

- a) The permittee shall maintain a log of all preventative maintenance inspections of the engine and control device. The inspection logs, at a minimum, shall contain the dates of the inspections, any potential problems or defects that were encountered, the steps taken to correct them, the temperature across the catalyst, the oxygen content, and the measured pressure drop across the catalyst.
- b) The permittee shall keep records of the amount of refinery fuel gas burned during emergency backup situations, and the number of hours the refinery fuel gas is used. The records shall be based on a consecutive 12-month period. The records shall be kept for a minimum of five years.

[PA 62-329-001A]

**V. REPORTING REQUIREMENTS.****# 010 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]****Subpart J - Standards of Performance for Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.107(d), (e), (f) and (g)

**# 011 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.655]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §63.655(d) - (i)

**SECTION D. Source Level Requirements****VI. WORK PRACTICE REQUIREMENTS.****# 012 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The engine and control device shall be operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices. The permittee shall perform weekly preventative maintenance inspections of the engine and the control device and check the pressure drop across the catalyst.

[PA 62-329-001A]

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 1]

**# 013 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall operate the control device at all times that the source is in operation.

**# 014 [25 Pa. Code §129.93]****Presumptive RACT emission limitations**

c) For the following source types, presumptive RACT emission limitation are the installation, maintenance and operation of the source in accordance with manufacturers specifications:

(1) Boilers and other combustion sources with individual rated gross heat inputs less than 20 million Btu/hour of operation.

**# 015 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.648]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Equipment leak standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.648(a) - (i)

**# 016 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.649]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Alternative means of emission limitation: Connectors in gas/vapor service and light liquid service.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.649(a) - (g)

**VII. ADDITIONAL REQUIREMENTS.****# 017 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]****Subpart J - Standards of Performance for Petroleum Refineries****Applicability, designation of affected facility, and reconstruction.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.100(a), (b), (e)

**# 018 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.640]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Applicability and designation of affected source.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.640(a) - (r)





**SECTION D. Source Level Requirements**

**\*\*\* Permit Shield in Effect. \*\*\***

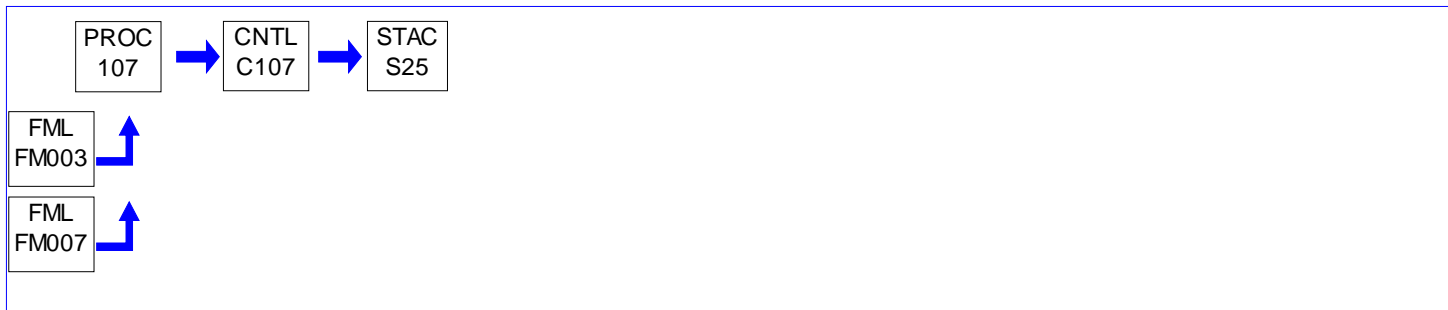
**SECTION D. Source Level Requirements**

Source ID: 107

Source Name: SAT GAS KVG COMPRESSOR

Source Capacity/Throughput:	1.700 MCF/HR	Natural Gas
	1.700 MCF/HR	Refinery Gas

Conditions for this source occur in the following groups: 11- METHOD OF COMPLIANCE  
 CEM MONITORING  
 CO&A FOR 1-HR SO2 NAAQS  
 PA 62-017G & SUBSEQUENT PA TESTING  
 PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.13]****Processes**

No person may permit the emission into the outdoor atmosphere of particulate matter in a manner that the concentration of particulate matter in the effluent gas exceeds 0.04 grain per dry standard cubic foot.

**# 002 [25 Pa. Code §123.21]****General**

No person may permit the emission into the outdoor atmosphere of sulfur oxides from a source in a manner that the concentration of the sulfur oxides, expressed as SO<sub>2</sub>, in the effluent gas exceeds 500 parts per million, by volume, dry basis.

**# 003 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The SO<sub>2</sub> emissions shall not exceed the following:

1. 0.1 lbs/hr
2. 0.4 tpy based on a consecutive 12-month period

[SO<sub>2</sub> PA: 62-017E condition 4 and 62-017G]

**# 004 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- a) The NO<sub>x</sub> emissions shall not exceed 2.2 #/hr.
- b) The CO emissions shall not exceed 2.7 #/hr.
- c) The VOC emissions shall not exceed 1.5 #/hr.
- d) The TSP emissions shall not exceed 0.01 #/hr.
- e) The PM-10 emissions shall not exceed 0.01 #/hr.

**# 005 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

**SECTION D. Source Level Requirements**

- a) The NO<sub>x</sub> emissions shall not exceed 9.4 TPY based on a consecutive 12-month period.
- b) The CO emissions shall not exceed 11.6 TPY based on a consecutive 12-month period.
- c) The VOC emissions shall not exceed 6.5 TPY based on a consecutive 12-month period.
- d) The TSP emissions shall not exceed 0.02 TPY based on a consecutive 12-month period.
- e) The PM-10 emissions shall not exceed 0.02 TPY based on a consecutive 12-month period.

**# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104]  
Subpart J - Standards of Performance for Petroleum Refineries  
Standards for sulfur oxides.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.104(a)(1)

**# 007 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.642]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
General standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.642(a) - (m)

**Fuel Restriction(s).**

**# 008 [25 Pa. Code §127.12b]  
Plan approval terms and conditions.**

Hydrogen sulfide concentration in refinery fuel gas burned shall not exceed 0.1 grain/dscf.

[PA 62-329-001]

**# 009 [25 Pa. Code §127.441]  
Operating permit terms and conditions.**

[PA 62-017G]

This source shall only use refinery gas, natural gas or propane fuels.

**Control Device Efficiency Restriction(s).**

**# 010 [25 Pa. Code §127.12b]  
Plan approval terms and conditions.**

The NO<sub>x</sub> removal efficiency of the NSCR system shall be at least 90%.

[PA 62-329-001]

**II. TESTING REQUIREMENTS.**

**# 011 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]  
Subpart J - Standards of Performance for Petroleum Refineries  
Test methods and procedures.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.106(e)

**SECTION D. Source Level Requirements****III. MONITORING REQUIREMENTS.****# 012 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]****Subpart J - Standards of Performance for Petroleum Refineries****Monitoring of emissions and operations.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.105(a)(3), (4), (e)(3)

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 5]

**IV. RECORDKEEPING REQUIREMENTS.****# 013 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

a) The permittee shall maintain a log of all preventative maintenance inspections of the engine and control device. The inspection logs, at a minimum, shall contain the dates of the inspections, any potential problems or defects that were encountered, the steps taken to correct them, the temperature across the catalyst, the oxygen content, and the measured pressure drop across the catalyst.

**V. REPORTING REQUIREMENTS.****# 014 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]****Subpart J - Standards of Performance for Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.107(d), (e), (f) and (g)

**# 015 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.655]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §63.655(d) - (i)

**VI. WORK PRACTICE REQUIREMENTS.****# 016 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

A thermal switch or equivalent shall be installed to prevent engine operation if the exhaust temperature is outside the catalyst operating range.

[PA 62-329-001]

**# 017 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

a) The engine and control device shall be operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices. The permittee shall perform weekly preventative maintenance inspections of the engine and the control device and check the pressure drop across the catalyst.

[Compliance with the requirement specified in this streamlined permit condition part (a) assures compliance with the provisions in: SO2 PA: 62-017E condition 1]

**SECTION D. Source Level Requirements**

- b) A magnehelic gauge shall be permanently installed and maintained at a conveniently readable location to indicate the pressure drop across the catalyst to ensure that the catalyst is not plugged.
- c) Each engine shall be equipped with gauges to indicate the temperature across the catalyst and the oxygen content to ensure optimum stack conditions for the converter performance. The gauges shall be permanently installed and maintained at a conveniently readable location.
- d) The permittee shall operate the control device at all times that the source is in operation.

**# 018 [25 Pa. Code §129.93]****Presumptive RACT emission limitations**

c) For the following source types, presumptive RACT emission limitation are the installation, maintenance and operation of the source in accordance with manufacturers specifications:

(1) Boilers and other combustion sources with individual rated gross heat inputs less than 20 million Btu/hour of operation.

**# 019 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.648]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Equipment leak standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.648(a) - (i)

**# 020 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.649]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Alternative means of emission limitation: Connectors in gas/vapor service and light liquid service.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.649(a) - (g)

**VII. ADDITIONAL REQUIREMENTS.****# 021 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]****Subpart J - Standards of Performance for Petroleum Refineries  
Applicability, designation of affected facility, and reconstruction.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.100(a), (b), (e)

**# 022 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.640]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Applicability and designation of affected source.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.640(a) -(r)

\*\*\* Permit Shield in Effect. \*\*\*

**SECTION D. Source Level Requirements**

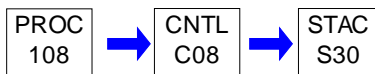
Source ID: 108

Source Name: CLAUS SULFUR PLANT 2

Source Capacity/Throughput: 3.300 Tons/HR SULFUR

Conditions for this source occur in the following groups:

- 10- MACT SUBPART UUU
- 11- METHOD OF COMPLIANCE
- CEM MONITORING
- CO&A FOR 1-HR SO2 NAAQS
- PA 62-017G & SUBSEQUENT PA TESTING
- PA 62-017O REQUIREMENTS
- PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.13]****Processes**

No person may permit the emission into the outdoor atmosphere of particulate matter in a manner that the concentration of particulate matter in the effluent gas exceeds 0.04 grain per dry standard cubic foot.

**# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

a) The maximum SO<sub>2</sub> emissions shall not exceed the following:

1. 12 lbs/hr
2. 52.6 tpy based on a consecutive 12-month period

[Compliance with the requirement specified in this streamlined permit condition part (a) assures compliance with the provisions in: SO<sub>2</sub> PA 62-017E condition 4]

b) SO<sub>2</sub> emissions shall not exceed 0.025% by volume of sulfur dioxide at zero percent oxygen on a dry basis.

[PA 62-312-031]

**# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- a) The NO<sub>x</sub> emissions shall not exceed 9.2 TPY based on a consecutive 12-month period.
- b) The CO emissions shall not exceed 36.8 TPY based on a consecutive 12-month period.
- c) The VOC emissions shall not exceed 9.2 TPY based on a consecutive 12-month period.
- d) The TSP emissions shall not exceed 0.04 TPY based on a consecutive 12-month period.
- e) The PM-10 emissions shall not exceed 0.04 TPY based on a consecutive 12-month period.
- f) The fugitive emissions from SRU2 shall not exceed 5.3 TPY based on a consecutive 12-month period.

**SECTION D. Source Level Requirements****# 004 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- a) The NO<sub>x</sub> emissions shall not exceed 2.1 #/hr.
- b) The CO emissions shall not exceed 8.4 #/hr.
- c) The VOC emissions shall not exceed 2.1 #/hr.
- d) The TSP emissions shall not exceed 0.01 #/hr.
- e) The PM-10 emissions shall not exceed 0.01 #/hr.

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104]****Subpart J - Standards of Performance for Petroleum Refineries****Standards for sulfur oxides.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.104(a)(2)

**# 006 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.642]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****General standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.642(a) - (m)

**II. TESTING REQUIREMENTS.****# 007 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]****Subpart J - Standards of Performance for Petroleum Refineries****Test methods and procedures.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.106(f)

**III. MONITORING REQUIREMENTS.****# 008 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

a) A SO<sub>2</sub> continuous monitoring system shall be calibrated, maintained, and operated by the permittee in accordance with the requirements of the Department's CEM Manual to continuously monitor and record the concentrations of SO<sub>2</sub> and oxygen content of the flue gas in the tail gas treating units.

b) Continuous monitoring system shall monitor and record concentrations of SO<sub>2</sub> in the gases discharged into the atmosphere from tail gas treating unit. The span of this continuous monitoring system shall be set at 500 ppm.

[PA 62-312-031]

c) The permittee shall monitor SO<sub>2</sub> emissions from the sources. The SO<sub>2</sub> emissions from the SRU2 shall not exceed 0.025% by volume of sulfur dioxide at 0% oxygen on a dry basis. A continuous monitoring system shall be monitored and concentrations of SO<sub>2</sub> in the gasses discharged into the atmosphere from the tail gas treating unit shall be recorded. The span of the CEM shall be set at 500 ppm. The SO<sub>2</sub> monitors for these sources shall be installed, calibrated, maintained, and operated by the owner or operator of the facility in compliance with the requirements of the Department CEM manual.

[SO<sub>2</sub> PA 62-017E condition 6]

**SECTION D. Source Level Requirements****# 009 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]****Subpart J - Standards of Performance for Petroleum Refineries****Monitoring of emissions and operations.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.105(a)(5), (e)(4)

**IV. RECORDKEEPING REQUIREMENTS.****# 010 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

a) The permittee shall maintain a record of all preventative maintenance inspections of the control device. These records shall, at a minimum, contain the dates of the inspections, any problems or defects, the actions taken to correct the problems or defects, and any routine maintenance performed.

b) The permittee shall record the following parameters from the operational inspection:

1. Exhaust temperature of Incinerator

**V. REPORTING REQUIREMENTS.****# 011 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]****Subpart J - Standards of Performance for Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.107(d), (e), (f) and (g)

**# 012 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.655]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §63.655(d) - (i)

**VI. WORK PRACTICE REQUIREMENTS.****# 013 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

a) The permittee shall perform a daily operational inspection of the control device.

b) The permittee shall operate the control device at all times that the source is in operation.

c) The permittee shall maintain and operate the source and control device in accordance with the manufacturer's specifications and in accordance with good air pollution practices.

[Compliance with the requirement specified in this streamlined permit condition part (c) assures compliance with the provisions in: SO2 PA: 62-017E condition 1]

**# 014 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.592]****Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries Standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional



**SECTION D. Source Level Requirements**

Requirements for condition] as identified below:

40 CFR 60.592(a) - (e)

**# 015 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.593]  
Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries  
Exceptions.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.593(a) - (e)

**# 016 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.648]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Equipment leak standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.648(a) - (i)

**# 017 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.649]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Alternative means of emission limitation: Connectors in gas/vapor service and light liquid service.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.649(a) - (g)

**VII. ADDITIONAL REQUIREMENTS.**

**# 018 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]  
Subpart J - Standards of Performance for Petroleum Refineries  
Applicability, designation of affected facility, and reconstruction.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.100(a), (b), (e)

**# 019 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.590]  
Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries  
Applicability and designation of affected facility.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.590(a) - (d)

**# 020 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.640]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Applicability and designation of affected source.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.640(a) - (r)

**\*\*\* Permit Shield in Effect. \*\*\***

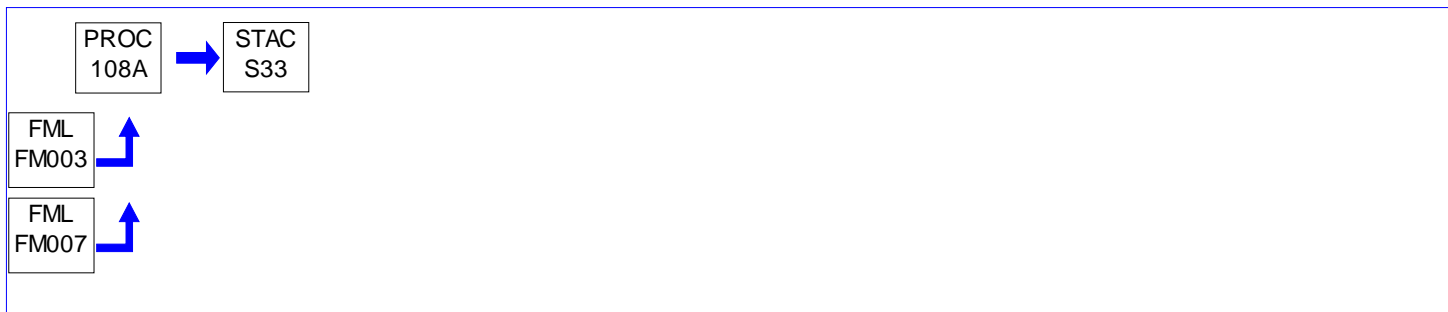
**SECTION D. Source Level Requirements**

Source ID: 108A

Source Name: SULFUR PLANT 2 HOT OIL HEATER

Source Capacity/Throughput:	5.600 MCF/HR	Refinery Gas
	5.600 MCF/HR	Natural Gas

Conditions for this source occur in the following groups: 11- METHOD OF COMPLIANCE  
 BOILER / PROCESS HEATER MACT  
 CEM MONITORING  
 CO&A FOR 1-HR SO2 NAAQS  
 PA 62-017G & SUBSEQUENT PA TESTING  
 PA 62-017O REQUIREMENTS  
 PRESUMPTIVE RACT 2

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.11]****Combustion units**

a) A person may not permit the emission into the outdoor atmosphere of particulate matter from a combustion unit in excess of the following:

(1) The rate of 0.4 pound per million Btu of heat input, when the heat input to the combustion unit in millions of Btus per hour is greater than 2.5 but less than 50.

**# 002 [25 Pa. Code §123.22]****Combustion units**

No person may permit the emission into the outdoor atmosphere of sulfur oxides, expressed as SO<sub>2</sub>, from a combustion unit in excess of the rate of 4 pounds per million Btu of heat input over any 1-hour period.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SIP Approved SO<sub>2</sub> Limits 40 CFR 52.2020(c)(1)]

**# 003 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall not exceed the following:

1. SO<sub>x</sub> 0.1 lbs/hr
2. SO<sub>x</sub> 0.4 tpy based on a consecutive 12-month period

[Compliance with the requirement specified in this streamlined permit condition part (1 & 2) assures compliance with the provisions in: SO<sub>2</sub> PA 62-017E condition 4]

**# 004 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- a) The NO<sub>x</sub> emissions shall not exceed 0.4 #/hr.
- b) The CO emissions shall not exceed 0.21 #/hr.

**SECTION D. Source Level Requirements**

- c) The VOC emissions shall not exceed 0.03 #/hr.
- d) The TSP emissions shall not exceed 0.04 #/hr.
- e) The PM-10 emissions shall not exceed 0.04 #/hr.

**# 005 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[Plan Approval 62-017G]

- a) The NOx emissions shall not exceed 1.7 TPY based on a consecutive 12-month period.
- b) The CO emissions shall not exceed 0.9 TPY based on a consecutive 12-month period.
- c) The VOC emissions shall not exceed 0.1 TPY based on a consecutive 12-month period.
- d) The TSP emissions shall not exceed 0.2 TPY based on a consecutive 12-month period.
- e) The PM-10 emissions shall not exceed 0.2 TPY based on a consecutive 12-month period.

**# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104]****Subpart J - Standards of Performance for Petroleum Refineries  
Standards for sulfur oxides.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.104(a)(1)

**Fuel Restriction(s).****# 007 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The H<sub>2</sub>S content in the fuel gas burned shall not exceed 0.1 grain/dscf.

[PA 62-312-031]

**II. TESTING REQUIREMENTS.****# 008 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]****Subpart J - Standards of Performance for Petroleum Refineries****Test methods and procedures.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.106(e)

**III. MONITORING REQUIREMENTS.****# 009 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]****Subpart J - Standards of Performance for Petroleum Refineries****Monitoring of emissions and operations.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.105(a)(3), (4), (e)(3)

[Compliance with the requirements specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 5]

**SECTION D. Source Level Requirements****IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

**# 010 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Reporting and recordkeeping requirements.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.107(d), (e), (f) and (g)

**VI. WORK PRACTICE REQUIREMENTS.**

**# 011 [25 Pa. Code §127.511]**

**Monitoring and related recordkeeping and reporting requirements.**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: SO2 PA: 62-017E condition 1]

**# 012 [25 Pa. Code §129.93]**

**Presumptive RACT emission limitations**

c) For the following source types, presumptive RACT emission limitation are the installation, maintenance and operation of the source in accordance with manufacturers specifications:

(1) Boilers and other combustion sources with individual rated gross heat inputs less than 20 million Btu/hour of operation.

**VII. ADDITIONAL REQUIREMENTS.**

**# 013 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Applicability, designation of affected facility, and reconstruction.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.100(a), (b), (e)

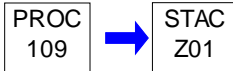
**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

Source ID: 109

Source Name: NSPS FUG EMISSIONS (VALVES/PUMPS/ETC)

Source Capacity/Throughput: 200.000 Th Gal/HR

**I. RESTRICTIONS.****Emission Restriction(s).**

**# 001 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.642]**  
**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**  
**General standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.642(a) - (m)

**# 002 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.643]**  
**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**  
**Miscellaneous process vent provisions.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.643(a) - (b)

**II. TESTING REQUIREMENTS.**

**# 003 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.645]**  
**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**  
**Test methods and procedures for miscellaneous process vents.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.645(a) - (i)

**III. MONITORING REQUIREMENTS.**

**# 004 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.644]**  
**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**  
**Monitoring provisions for miscellaneous process vents.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.644(a) - (e)

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**SECTION D. Source Level Requirements****V. REPORTING REQUIREMENTS.****# 005 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.655]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries Reporting and recordkeeping requirements.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §63.655(d) - (i)

**VI. WORK PRACTICE REQUIREMENTS.****# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.592]****Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries Standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.592(a) - (e)

**# 007 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.593]****Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries Exceptions.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.593(a) - (f)

**# 008 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.648]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries Equipment leak standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.648(a) - (i)

**# 009 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.649]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries Alternative means of emission limitation: Connectors in gas/vapor service and light liquid service.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.649(a) - (g)

**VII. ADDITIONAL REQUIREMENTS.****# 010 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.590]****Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries Applicability and designation of affected facility.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.590(a) - (d)

**# 011 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.640]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries Applicability and designation of affected source.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional

**SECTION D. Source Level Requirements**

Requirements for condition] as identified below:

40 CFR 63.640(a) - (r)

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

Source ID: 109A

Source Name: STATE FUG EMISSIONS (VALVES/PUMPS/ETC)

Source Capacity/Throughput:

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.****# 001 [25 Pa. Code §129.58]****Petroleum refineries--fugitive sources**

a) The owner or operator of a petroleum refinery shall do the following:

(1) Develop and conduct a monitoring program consistent with the provisions of subsection (d).

(2) Record leaking refinery components which have a VOC concentration exceeding 2,500 ppm when tested in accordance with the provisions of 25 PA Code 139.14 (relating to emissions of VOCs and place an identifying tag on each refinery component consistent with the provisions in subsection (d)(3).

[revised from 10,000 ppm to 2,500 ppm by Plan Approval 62-017G]

(3) Repair and retest the leaking refinery components as soon as possible. Every reasonable effort shall be made to repair each leak within 15 days unless a refinery unit shutdown is required to make the necessary repair.

(4) Identify leaking refinery components which cannot be repaired until the unit is shutdown for turnaround.

b) Except for safety pressure relief valves and fittings on all valves 1 inch or smaller, no owner or operator of a petroleum refinery shall install or operate a valve at the end of a pipe or line containing VOCs unless the pipe or line is sealed with a second valve, a blind flange, a plug or a cap. The sealing device may be removed only when a sample is being taken or during maintenance operations.

c) Pipeline valves and pressure relief valves in gaseous VOC service shall be marked in some manner that will be readily obvious to both refinery personnel performing monitoring and the Department.

d) Monitoring shall be done as follows:



**SECTION D. Source Level Requirements**

(1) The owner or operator of a petroleum refinery shall conduct a monitoring program consistent with the following requirements:

(i) Check yearly, by methods referenced in 25 PA Code 139.14, pump seals and pipeline valves in liquid service.

(ii) Check quarterly by methods referenced in 25 PA Code 139.14, compressor seals, pipeline valves in gaseous service, and pressure relief valves in gaseous service.

(iii) Check monthly, by visual methods, all pump seals.

(iv) Check within 24 hours, by methods referenced in 25 PA Code 139.14, pump seal from which VOC liquids are observed to be dripping.

(v) Check, by methods referenced in 25 PA Code 139.14, relief valve within 24 hours after it has vented to the atmosphere.

(vi) Check within 27 hours after repair, by methods referenced in 25 PA Code 139.14, refinery component that was found leaking.

(2) Pressure relief devices which are connected to an operating flare header, vapor recovery devices, inaccessible valves, storage tank valves and valves that are not externally regulated are exempt from the monitoring requirements in paragraph (1).

(3) The owner or operator of a petroleum refinery, upon the detection of a leaking refinery component, shall affix a weatherproof and readily visible tag, bearing an identification number and the date upon which the leak is located to the leaking refinery component. This tag shall remain in place until the leaking refinery component is repaired.

e) Record keeping shall comply with the following:

(1) The owner or operator of a petroleum refinery shall maintain a leaking refinery components' monitoring log which shall contain, at a minimum, the following data:

(i) The name and process unit where the refinery component is located.

(ii) The type of refinery component-- for example, valve, seal.

(iii) The tag number of refinery component.

(iv) The dates on which the leaking refinery component was discovered and repaired.

(v) The date and instrument reading of the recheck procedure after a leaking refinery component was repaired.

(vi) A record of the calibration of the monitoring instrument.

(vii) Those leaks that cannot be repaired until turnaround.

(viii) The total number of refinery components checked and the total number of refinery components found leaking.

(2) Copies of the monitoring log shall be retained by the owner for 2 years after the date on which the record was made or the report was prepared.

(3) Copies of the monitoring log shall immediately be made available to the Department, upon verbal or written request, at any reasonable time.

f) Reporting shall comply with the following:

**SECTION D. Source Level Requirements**

(1) The owner or operator of a petroleum refinery, upon completion of each yearly and quarterly monitoring procedure, shall do the following:

(i) Submit a report to the Department by the last business day of January, April, July, and October that lists all leaking refinery components that were located during the previous calendar quarter but not repaired within 15 days, all leaking refinery components awaiting unit turnaround, the total number of refinery components inspected and the total number of refinery components found leaking.

(ii) Submit a signed statement with the report attesting to the fact that, with the exception of those leaking refinery components listed in subparagraph (i), monitoring and repairs were performed as stipulated in the monitoring program.

g) The owner or operator of a petroleum refinery may submit an alternative plan for the control of leaks from petroleum refinery equipment to the Department. If the Department finds that the alternative plan will achieve an emission reduction which is equivalent to or greater than the reduction which can be achieved under this section and that the alternative plan is as enforceable as this section, then the Department will allow the implementation of this alternative plan.

h) The owner or operator of a petroleum refinery may submit to the Department a list of refinery components the inspection of which would involve a significant element of danger. The Department may exempt the refinery components on this list from the requirements of this section if the owner or operator can demonstrate to the satisfaction of the Department that a significant element of danger exists which cannot be reasonably eliminated and that these exemptions will not result in a significant reduction in the effectiveness in the control of VOC emissions.

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

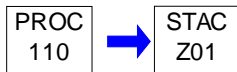
Source ID: 110

Source Name: WASTEWATER FUGITIVE EMISSION

Source Capacity/Throughput: 50,000.000 Gal/HR

PETROLEUM/SOLVENT STORAG

Conditions for this source occur in the following groups: 5 - WASTEWATER  
CASE-BY-CASE RACT 2

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

Source ID: 111

Source Name: REMEDIAL MATERIAL MANAGEMENT UNITS FUGITIVE

Source Capacity/Throughput:

Conditions for this source occur in the following groups: 8 - REMEDIATION MATERIAL MANAGEMENT UNIT

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

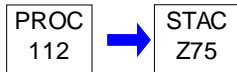
**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

Source ID: 112

Source Name: PARTS WASHERS

Source Capacity/Throughput:

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VII. ADDITIONAL REQUIREMENTS.****# 001 [25 Pa. Code §129.63]****Degreasing operations**

(a) Cold cleaning machines. Except for those subject to the Federal National emissions standards for hazardous air pollutants (NESHAP) for halogenated solvent cleaners under 40 CFR Part 63 (relating to National emission standards for hazardous air pollutants for source categories), this subsection applies to cold cleaning machines that use 2 gallons or more of solvents containing greater than 5% VOC content by weight for the cleaning of metal parts.

(1) Immersion cold cleaning machines shall have a freeboard ratio of 0.50 or greater.

(2) Immersion cold cleaning machines and remote reservoir cold cleaning machines shall:

(i) Have a permanent, conspicuous label summarizing the operating requirements in paragraph (3). In addition, the label shall include the following discretionary good operating practices:

(A) Cleaned parts should be drained at least 15 seconds or until dripping ceases, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while the part is draining. During the draining, tipping or rotating, the parts

**SECTION D. Source Level Requirements**

should be positioned so that solvent drains directly back to the cold cleaning machine.

(B) When a pump-agitated solvent bath is used, the agitator should be operated to produce a rolling motion of the solvent with no observable splashing of the solvent against the tank walls or the parts being cleaned.

(C) Work area fans should be located and positioned so that they do not blow across the opening of the degreaser unit.

(ii) Be equipped with a cover that shall be closed at all times except during cleaning of parts or the addition or removal of solvent. For remote reservoir cold cleaning machines which drain directly into the solvent storage reservoir, a perforated drain with a diameter of not more than 6 inches shall constitute an acceptable cover.

(3) Cold cleaning machines shall be operated in accordance with the following procedures:

(i) Waste solvent shall be collected and stored in closed containers. The closed containers may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container.

(ii) Flushing of parts using a flexible hose or other flushing device shall be performed only within the cold cleaning machine. The solvent spray shall be a solid fluid stream, not an atomized or shower spray.

(iii) Sponges, fabric, wood, leather, paper products and other absorbent materials may not be cleaned in the cold cleaning machine.

(iv) Air agitated solvent baths may not be used.

(v) Spills during solvent transfer and use of the cold cleaning machine shall be cleaned up immediately.

(4) After December 22, 2002, a person may not use, sell or offer for sale for use in a cold cleaning machine any solvent with a vapor pressure of 1.0 millimeter of mercury (mm Hg) or greater and containing greater than 5% VOC by weight, measured at 20°C (68°F) containing VOCs.

(5) On and after December 22, 2002, a person who sells or offers for sale any solvent containing VOCs for use in a cold cleaning machine shall provide, to the purchaser, the following written information:

(i) The name and address of the solvent supplier.

(ii) The type of solvent including the product or vendor identification number.

(iii) The vapor pressure of the solvent measured in mm hg at 20°C (68°F).

(6) A person who operates a cold cleaning machine shall maintain for at least 2 years and shall provide to the Department, on request, the information specified in paragraph (5). An invoice, bill of sale, certificate that corresponds to a number of sales, Material Safety Data Sheet (MSDS), or other appropriate documentation acceptable to the Department may be used to comply with this section.

(7) Paragraph (4) does not apply:

(i) To cold cleaning machines used in extreme cleaning service.

(ii) If the owner or operator of the cold cleaning machine demonstrates, and the Department approves in writing, that compliance with paragraph (4) will result in unsafe operating conditions.

(iii) To immersion cold cleaning machines with a freeboard ratio equal to or greater than 0.75.

(b - e) Not Applicable



**SECTION D. Source Level Requirements**

**\*\*\* Permit Shield in Effect. \*\*\***

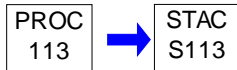
**SECTION D. Source Level Requirements**

Source ID: 113

Source Name: IC ENGINES EXEMPTED FROM PA 8-4-2008

Source Capacity/Throughput:

Conditions for this source occur in the following groups: PRESUMPTIVE RACT 2

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.****# 001 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall keep records of the hours of operation for IC2, IC3, IC5, IC9, and IC10 to demonstrate compliance with 25 Pa. Code Section 129.93(c)(5).

**V. REPORTING REQUIREMENTS.****# 002 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6640]****Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines****How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?**

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

**VI. WORK PRACTICE REQUIREMENTS.****# 003 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6602]****Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines****What emission limitations must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?**

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you.

[Excerpt from Table 2c]



**SECTION D. Source Level Requirements**

Emergency CI RICE must:

- a. change oil and filter every 500 hours of operation or annually, whichever comes first;
- b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first;
- c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Emergency SI RICE must:

- a. Change oil and filter every 500 hours of operation or annually, whichever comes first;
- b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first;
- c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.

Footnotes: Sources have the option to utilize an oil analysis program as described in §63.6625(i) and (j) in order to extend the specified oil change requirement in Table 2c of this subpart.

Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

**# 004 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6605]**

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**What are my general requirements for complying with this subpart?**

- (a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.
- (b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this 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, review of operation and maintenance records, and inspection of the source.

**# 005 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6625]**

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**What are my monitoring, installation, operation, and maintenance requirements?**

- (a) - (d) Not Applicable
- (e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:
  - (1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;
  - (2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;
  - (3) -(10) Not Applicable.
- (f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP

**SECTION D. Source Level Requirements**

emissions, you must install a non-resettable hour meter if one is not already installed.

(g) Not Applicable.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

**# 006 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6640]**

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?**

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as

**SECTION D. Source Level Requirements**

allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see § 63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Not Applicable.

**# 007 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6640]**

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?**

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

[Excerpt from Table 6 item 9]

You must demonstrate continuous compliance by:

- i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or
- ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

**VII. ADDITIONAL REQUIREMENTS.**

**# 008 [25 Pa. Code §129.93]**

**Presumptive RACT emission limitations**

- a) IC7 and IC8 (the two alkyl compressors) shall be set and maintained with a 4 degree retard relative to standard timing.
- b) IC2, IC3, IC5, IC9, and IC10 shall be operated less than 500 hours in a consecutive 12-month period.
- c) The above IC engines shall be installed, maintained, and operated in accordance with the manufacturers specifications.

**# 009 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6595]**

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**When do I have to comply with this subpart?**

**SECTION D. Source Level Requirements**

(a) Affected sources.

(1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.

**# 010 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6665]**

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**What parts of the General Provisions apply to me?**

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

**\*\*\* Permit Shield in Effect. \*\*\***

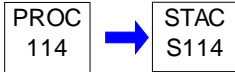
**SECTION D. Source Level Requirements**

Source ID: 114

Source Name: (3) 322 HP IC ENGINES AT EAST COOLING TOWER

Source Capacity/Throughput: 16.000 Gal/HR DIESEL FUEL

Conditions for this source occur in the following groups: PRESUMPTIVE RACT 2  
SUBPART ZZZZ FOR NON-EMERGENCY ENGINES

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

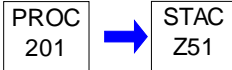
**SECTION D. Source Level Requirements**

Source ID: 201

Source Name: FUEL STORAGE TANK 409

Source Capacity/Throughput: 20,000.000 BBL/HR DISTILATE

Conditions for this source occur in the following groups: 1 - STORAGE TANKS > 40,000 GALLONS  
 3A - GROUP 2 (MACT) TANKS  
 4 - SUBPART K(B) TANKS  
 PA 62-017G THROUGHPUT

**I. RESTRICTIONS.****Emission Restriction(s).**

**# 001 [25 Pa. Code §127.12b]**  
**Plan approval terms and conditions.**

The maximum VOC emissions shall not exceed 0.3 tpy based on a consecutive 12-month period.

[PA 62-312-034]

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

**# 002 [25 Pa. Code §127.511]**  
**Monitoring and related recordkeeping and reporting requirements.**

The permittee shall calculate and record, monthly, the VOC emissions using the latest Final version of EPA's "TANKS" software.

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

**# 003 [25 Pa. Code §127.12b]**  
**Plan approval terms and conditions.**

- a) The permittee shall use Tank #409 to store Jet fuel (distillate fuel) only.
- b) The permittee shall not use this tank to store volatile organic compounds with a vapor pressure equal to or greater than 11.0 psia at actual storage conditions.

[PA 62-312-034]

**SECTION D. Source Level Requirements****VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

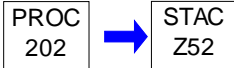
**SECTION D. Source Level Requirements**

Source ID: 202

Source Name: FUEL STORAGE TANK 410

Source Capacity/Throughput: 10,000.000 BBL/HR DISTILLATE

Conditions for this source occur in the following groups: 1 - STORAGE TANKS > 40,000 GALLONS  
 3A - GROUP 2 (MACT) TANKS  
 4 - SUBPART K(B) TANKS  
 PA 62-017G THROUGHPUT

**I. RESTRICTIONS.****Emission Restriction(s).**

**# 001 [25 Pa. Code §127.12b]**  
**Plan approval terms and conditions.**

The maximum VOC emissions shall not exceed 0.2 tpy based on a consecutive 12-month period.

[PA 62-312-034]

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

**# 002 [25 Pa. Code §127.511]**  
**Monitoring and related recordkeeping and reporting requirements.**

The permittee shall calculate and record, monthly, the VOC emissions using the latest Final version of EPA's "TANKS" software.

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

**# 003 [25 Pa. Code §127.12b]**  
**Plan approval terms and conditions.**

a) The permittee shall use Tank #410 to store Jet fuel (distillate fuel) only.

b) The permittee shall not use this tank to store volatile organic compounds with a vapor pressure equal to or greater than 11.0 psia at actual storage conditions.

[PA 62-312-034]



**SECTION D. Source Level Requirements****VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

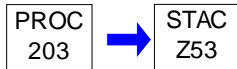
**SECTION D. Source Level Requirements**

Source ID: 203

Source Name: FUEL STORAGE TANK 430

Source Capacity/Throughput: 20,000.000 BBL/HR REFORMER CHARGE

Conditions for this source occur in the following groups: 1 - STORAGE TANKS > 40,000 GALLONS  
 3 - GROUP 1 (MACT) TANKS  
 EPA AMP  
 PA 62-017G THROUGHPUT

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

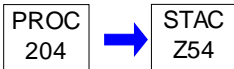
**SECTION D. Source Level Requirements**

Source ID: 204

Source Name: FUEL STORAGE TANK 431

Source Capacity/Throughput: 17,000.000 BBL/HR GASOLINE

Conditions for this source occur in the following groups: 1 - STORAGE TANKS > 40,000 GALLONS  
 3 - GROUP 1 (MACT) TANKS  
 EPA AMP  
 PA 62-017G THROUGHPUT

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.****# 001 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

a) The permittee shall record the temperature of the tank's outlet stream daily. The vapor pressure shall be obtained, weekly, using the recorded daily temperature and the Reid Vapor Pressure (RVP) determined from the sample to ensure the true vapor pressure is less than 11.0 psia. The monitoring record shall be maintained for each day the source is operated. The records shall be maintained for a minimum of 5 years.

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.****# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

a) The permittee shall not use this tank to store volatile organic compounds with a vapor pressure equal to or greater than 11.0 psia at actual storage conditions.

b) The permittee shall install and maintain the internal floating roof.

[PA 62-312-025]

**SECTION D. Source Level Requirements****VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

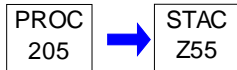
**SECTION D. Source Level Requirements**

Source ID: 205

Source Name: FUEL STORAGE TANK 234

Source Capacity/Throughput: 86,000.000 BBL/HR GASOLINE

Conditions for this source occur in the following groups: 1 - STORAGE TANKS > 40,000 GALLONS  
 3 - GROUP 1 (MACT) TANKS  
 PA 62-017G THROUGHPUT

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

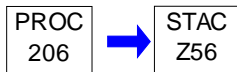
**SECTION D. Source Level Requirements**

Source ID: 206

Source Name: FUEL STORAGE TANK 236

Source Capacity/Throughput: 184,000.000 BBL/HR GASOLINE

Conditions for this source occur in the following groups: 1 - STORAGE TANKS > 40,000 GALLONS  
 3 - GROUP 1 (MACT) TANKS  
 PA 62-017G THROUGHPUT

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

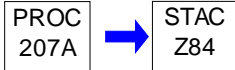
**SECTION D. Source Level Requirements**

Source ID: 207A

Source Name: NAPHTHA STORAGE TANK 337A

Source Capacity/Throughput: 87,000.000 BBL/HR NAPHTHA

Conditions for this source occur in the following groups: 2 - GENERAL PERMIT TANKS  
 3A - GROUP 2 (MACT) TANKS  
 4 - SUBPART K(B) TANKS  
 EPA AMP

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

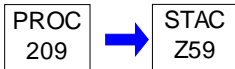
**SECTION D. Source Level Requirements**

Source ID: 209

Source Name: FUEL STORAGE TANK 432

Source Capacity/Throughput: 19,769.000 BBL/HR GASOLINE

Conditions for this source occur in the following groups: 1 - STORAGE TANKS > 40,000 GALLONS  
 3 - GROUP 1 (MACT) TANKS  
 EPA AMP  
 PA 62-017G THROUGHPUT

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall record the temperature of the tank's outlet stream every two hours and use the Reid Vapor Pressure (RVP) from the lab to ensure the true vapor pressure is less than 11.0 psia. The monitoring record shall be maintained for each day the source is operated. The records shall be maintained for a minimum of 5 years.

[PA PA-62-017D]

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.****# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall not use the tank to store volatile organic compounds with a vapor pressure equal to or greater than 11.0 psia at actual storage conditions.

[PA PA62-017D]

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).





**SECTION D. Source Level Requirements**

**\*\*\* Permit Shield in Effect. \*\*\***

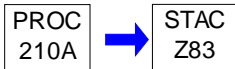
**SECTION D. Source Level Requirements**

Source ID: 210A

Source Name: FUEL STORAGE TANK 652

Source Capacity/Throughput: 29,000.000 BBL/HR CRUDE OIL

Conditions for this source occur in the following groups: 2 - GENERAL PERMIT TANKS  
 3A - GROUP 2 (MACT) TANKS  
 4 - SUBPART K(B) TANKS  
 EPA AMP

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

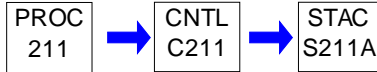
**SECTION D. Source Level Requirements**

Source ID: 211

Source Name: LOADING RACK BOTTOM LOADING

Source Capacity/Throughput: 50,000.000 Gal/HR GASOLINE

Conditions for this source occur in the following groups: 11- METHOD OF COMPLIANCE  
CO&A FOR 1-HR SO<sub>2</sub> NAAQS  
PA 62-017G & SUBSEQUENT PA TESTING

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.13]****Processes**

No person may permit the emission into the outdoor atmosphere of particulate matter in a manner that the concentration of particulate matter in the effluent gas exceeds 0.04 grain per dry standard cubic foot.

**# 002 [25 Pa. Code §123.21]****General**

No person may permit the emission into the outdoor atmosphere of sulfur oxides from a source in a manner that the concentration of the sulfur oxides, expressed as SO<sub>2</sub>, in the effluent gas exceeds 500 parts per million, by volume, dry basis.

**# 003 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

a) The emissions to the atmosphere from the vapor collection and processing systems due to the loading of gasoline cargo tanks shall not exceed 10 milligrams of total organic compounds (TOC) per liter of gasoline loaded. (The definition of TOC in 40 CFR 63.641 excludes methane and ethane).

b) The H<sub>2</sub>S content in the fuel gas (as defined in 40 CFR 60.101) combusted in the flare shall not exceed 0.10 gr/dscf.

c) The emissions from the bulk gasoline terminal shall not exceed the following:

1. Particulate 0.64 lbs/hr
2. Particulate 2.8 tpy based on a consecutive 12-month period
3. SO<sub>x</sub> 0.81 lbs/hr
4. SO<sub>x</sub> 0.76 tpy based on a consecutive 12-month period
5. NO<sub>x</sub> 7.5 lbs/hr
6. NO<sub>x</sub> 15.4 tpy based on a consecutive 12-month period
7. CO 18.8 lbs/hr
8. CO 38.4 tpy based on a consecutive 12-month period
9. VOC 18.8 lbs/hr
10. VOC 38.4 tpy based on a consecutive 12-month period

[PA/OP 62-312-014A]

[Compliance with the SO<sub>x</sub> emission limit specified in this streamlined permit condition assures compliance with the provisions in: SO<sub>2</sub> PA: 62-017E condition 4]

**# 004 [25 Pa. Code §129.59]****Bulk gasoline terminals**

a) A person may not cause or permit the loading of gasoline into a vehicular tank from a bulk gasoline terminal unless the gasoline loading racks are equipped with a vapor collection and disposal system capable of processing volatile organic vapors and gases so that no more than 0.0668 pounds (30.3 grams) of gasoline (measured as propane) are emitted to the

**SECTION D. Source Level Requirements**

atmosphere for every 100 gallons (380 liters) of gasoline loaded.

b) A person may not cause or permit the loading of gasoline into a vehicular tank from a bulk gasoline terminal unless the gasoline loading racks are equipped with a loading arm with a vapor collection adaptor and pneumatic, hydraulic or other mechanical means to force a vapor-tight seal between the adaptor and the hatch of the tank. A means shall be provided to prevent gasoline drainage from the loading device when it is not connected to the hatch, and to accomplish complete drainage before the removal. When loading is effected through means other than hatches, loading and vapor lines shall be equipped with fittings which make vaportight connections and which will be closed upon disconnection.

c) An owner or operator of a bulk gasoline plant shall maintain records of daily throughput. These records shall be retained for at least 5 years and shall be made available to the Department on request.

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.104]  
Subpart J - Standards of Performance for Petroleum Refineries  
Standards for sulfur oxides.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.104(a)(1)

[PA/OP 62-312-014A]

**# 006 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.642]  
Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
General standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.642(a) - (m)

**Throughput Restriction(s).**

**# 007 [25 Pa. Code §127.12b]  
Plan approval terms and conditions.**

The loading racks shall not process more than 225,000 gallons per hour and 21,900,000 barrels per year based on a consecutive 12-month period.

[PA/OP 62-312-014A]

**II. TESTING REQUIREMENTS.**

**# 008 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.106]  
Subpart J - Standards of Performance for Petroleum Refineries  
Test methods and procedures.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.106(a) & (e)

[PA/OP 62-312-014A]

**# 009 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.108]  
Subpart J - Standards of Performance for Petroleum Refineries  
Performance test and compliance provisions.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

**SECTION D. Source Level Requirements**

40 CFR 60.108(a)

[PA/OP 62-312-014A]

**# 010 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.425]**

**Subpart R -- National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations) SOURCE: 59 FR 64318, Dec. 14, 1994, unless otherwise noted.**

**Test methods and procedures.**

- a) Each owner or operator subject to the emission standard in 40 CFR 63.422(b) or 40 CFR 60.112b(a)(3)(ii) of this chapter shall conduct a performance test on the vapor processing system according to the test methods and procedures in 40 CFR 60.503, except a reading of 500 ppm shall be used to determine the level of leaks to be repaired under 40 CFR 60.503(b). If a flare is used to control emissions, and emissions from this device cannot be measured using these methods and procedures, the provisions of 40 CFR 63.11(b) shall apply.
- b) For each performance test conducted under paragraph (a) of this section, the owner or operator shall determine a monitored operating parameter value for the vapor processing system using the following procedure:
- (1) During the performance test, continuously record the operating parameter under 40 CFR 63.427(a);
  - (2) Determine an operating parameter value based on the parameter data monitored during the performance test, supplemented by engineering assessments and the manufacturer's recommendations; and
  - (3) Provide for the Administrator's approval the rationale for the selected operating parameter value, and monitoring frequency and averaging time, including data and calculations used to develop the value and a description of why the value, monitoring frequency, and averaging time demonstrate continuous compliance with the emission standard in 40 CFR 63.422(b) or 40 CFR 60.112b(a)(3)(ii) of this chapter.
- c) For performance tests performed after the initial test, the owner or operator shall document the reasons for any change in the operating parameter value since the previous performance test.
- d) The owner or operator of each gasoline storage vessel subject to the provisions of 40 CFR 63.423 shall comply with 40 CFR 60.113b of this chapter. If a closed vent system and control device are used, as specified in 40 CFR 60.112b(a)(3) of this chapter, to comply with the requirements in 40 CFR 63.423, the owner or operator shall also comply with the requirements in paragraph (b) of this section.
- e) Annual certification test. The annual certification test for gasoline cargo tanks shall consist of the following test methods and procedures:
- (1) Method 27, appendix A, 40 CFR part 60. Conduct the test using a time period (t) for the pressure and vacuum tests of 5 minutes. The initial pressure (Pi) for the pressure test shall be 460 mm H<sub>2</sub>O (18 in. H<sub>2</sub>O), gauge. The initial vacuum (Vi) for the vacuum test shall be 150 mm H<sub>2</sub>O (6 in. H<sub>2</sub>O), gauge. The maximum allowable pressure and vacuum changes ("p", "v") are as shown in the second column of Table 2 in 40 CFR 63 Subpart R.
  - (2) Pressure test of the cargo tank's internal vapor valve as follows:
    - (i) After completing the tests under paragraph (e)(1) of this section, use the procedures in Method 27 to repressurize the tank to 460 mm H<sub>2</sub>O (18 in. H<sub>2</sub>O), gauge. Close the tank's internal vapor valve(s), thereby isolating the vapor return line and manifold from the tank.
    - (ii) Relieve the pressure in the vapor return line to atmospheric pressure, then reseal the line. After 5 minutes, record the gauge pressure in the vapor return line and manifold. The maximum allowable 5-minute pressure increase is 130 mm H<sub>2</sub>O (5 in. H<sub>2</sub>O).
- f) Leak detection test. The leak detection test shall be performed using Method 21, appendix A, 40 CFR part 60, except omit section 4.3.2 of Method 21. A vapor-tight gasoline cargo tank shall have no leaks at any time when tested according to the procedures in this paragraph.

**SECTION D. Source Level Requirements**

(1) The leak definition shall be 21,000 ppm as propane. Use propane to calibrate the instrument, setting the span at the leak definition. The response time to 90 percent of the final stable reading shall be less than 8 seconds for the detector with the sampling line and probe attached.

(2) In addition to the procedures in Method 21, include the following procedures:

(i) Perform the test on each compartment during loading of that compartment or while the compartment is still under pressure.

(ii) To eliminate a positive instrument drift, the dwell time for each leak detection shall not exceed two times the instrument response time. Purge the instrument with ambient air between each leak detection. The duration of the purge shall be in excess of two instrument response times.

(iii) Attempt to block the wind from the area being monitored. Record the highest detector reading and location for each leak.

g) Nitrogen pressure decay field test. For those cargo tanks with manifolded product lines, this test procedure shall be conducted on each compartment.

(1) Record the cargo tank capacity. Upon completion of the loading operation, record the total volume loaded. Seal the cargo tank vapor collection system at the vapor coupler. The sealing apparatus shall have a pressure tap. Open the internal vapor valve(s) of the cargo tank and record the initial headspace pressure. Reduce or increase, as necessary, the initial headspace pressure to 460 mm H<sub>2</sub>O (18.0 in. H<sub>2</sub>O), gauge by releasing pressure or by adding commercial grade nitrogen gas from a high pressure cylinder capable of maintaining a pressure of 2,000 psig.

(i) The cylinder shall be equipped with a compatible two-stage regulator with a relief valve and a flow control metering valve. The flow rate of the nitrogen shall be no less than 2 cfm. The maximum allowable time to pressurize cargo tanks with headspace volumes of 1,000 gallons or less to the appropriate pressure is 4 minutes. For cargo tanks with a headspace of greater than 1,000 gallons, use as a maximum allowable time to pressurize 4 minutes or the result from the equation below, whichever is greater.

$$T = V_h \times 0.004$$

where:

T = maximum allowable time to pressurize the cargo tank, min;

V<sub>h</sub> = cargo tank headspace volume during testing, gal.

(2) It is recommended that after the cargo tank headspace pressure reaches approximately 460 mm H<sub>2</sub>O (18 in. H<sub>2</sub>O), gauge, a fine adjust valve be used to adjust the headspace pressure to 460 mm H<sub>2</sub>O (18.0 in. H<sub>2</sub>O), gauge for the next 30 5 seconds.

(3) Reseal the cargo tank vapor collection system and record the headspace pressure after 1 minute. The measured headspace pressure after 1 minute shall be greater than the minimum allowable final headspace pressure (PF) as calculated from the equation in 40 CFR 63.425(g)(3).

(4) Conduct the internal vapor valve portion of this test by repressurizing the cargo tank headspace with nitrogen to 460 mm H<sub>2</sub>O (18 in. H<sub>2</sub>O), gauge. Close the internal vapor valve(s), wait for 30 5 seconds, then relieve the pressure downstream of the vapor valve in the vapor collection system to atmospheric pressure. Wait 15 seconds, then reseal the vapor collection system. Measure and record the pressure every minute for 5 minutes. Within 5 seconds of the pressure measurement at the end of 5 minutes, open the vapor valve and record the headspace pressure as the "final pressure."

(5) If the decrease in pressure in the vapor collection system is less than at least one of the interval pressure change values in Table 3 of 40 CFR 63 Subpart R, or if the final pressure is equal to or greater than 20 percent of the 1-minute final headspace pressure determined in the test in paragraph (g)(3) of this section, then the cargo tank is considered to be a vapor-tight gasoline cargo tank.

h) Continuous performance pressure decay test. The continuous performance pressure decay test shall be performed

**SECTION D. Source Level Requirements**

using Method 27, appendix A, 40 CFR Part 60. Conduct only the positive pressure test using a time period (t) of 5 minutes. The initial pressure (Pi) shall be 460 mm H<sub>2</sub>O (18 in. H<sub>2</sub>O), gauge. The maximum allowable 5-minute pressure change ("p) which shall be met at any time is shown in the third column of Table 2 of 63.425(e)(1).

**III. MONITORING REQUIREMENTS.****# 011 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.105]****Subpart J - Standards of Performance for Petroleum Refineries****Monitoring of emissions and operations.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.105(a)(3), (4), & (e)(3)

[PA/OP 62-312-014A]

[EPA has approved an Alternative Monitoring Plan for H<sub>2</sub>S in Loading Rack Vapors. EPA approves the one-time monitoring plan due to the negligible amount of sulfur bearing compounds found in the waste gas/loading rack vapors going to the Vapor Combustion Unit at the refinery. No continuous emission monitor need be installed for the purpose of monitoring hydrogen sulfide in this gas stream. The authority for approving alternative monitoring methods is provided under 40 CFR 60.13(i) {Condition #012, above}

**# 012 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.13]****Subpart A - General Provisions****Monitoring requirements.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.13(i)

**IV. RECORDKEEPING REQUIREMENTS.****# 013 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

a) The permittee shall maintain a record of all preventative maintenance inspections of the control device. These records shall, at a minimum, contain the dates of the inspections, any problems or defects, the actions taken to correct the problems or defects, and any routine maintenance performed.

b) The permittee shall record the following parameter from the operational inspection of the vapor combustion unit when in operation:

1. The presence of a flame

c) The permittee shall record the following parameters from the operational inspection of the vapor recovery unit when in operation:

1. Scrubber gas flow rate

2. Liquid pressure and flow rate

3. Scrubbing liquid pH

4. Pressure drop across the scrubber

5. Outlet gas temperature

**SECTION D. Source Level Requirements**

d) The permittee shall maintain records of the following:

1. Hourly throughput (Gallons)
2. Monthly throughput (Barrels)

**# 014 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.10]**

**Subpart A--General Provisions**

**Recordkeeping and reporting requirements.**

a) See Section C, Site Level Requirements, Additional Requirements.

b) See Section C, Site Level Requirements, Additional Requirements.

c) See Section C, Site Level Requirements, Additional Requirements.

d) See Section C, Site Level Requirements, Additional Requirements.

e) Additional reporting requirements for sources with continuous monitoring systems--

(1) Not applicable

(2) Not applicable

(3) Excess emissions and continuous monitoring system performance report and summary report.

(i) Excess emissions and parameter monitoring exceedances are defined in relevant standards. The owner or operator of an affected source required to install a CMS by a relevant standard shall submit an excess emissions and continuous monitoring system performance report and/or a summary report to the Administrator semiannually, except when--

(A) More frequent reporting is specifically required by a relevant standard;

(B) The Administrator determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source; or

(C) The CMS data are to be used directly for compliance determination and the source experienced excess emissions, in which case quarterly reports shall be submitted. Once a source reports excess emissions, the source shall follow a quarterly reporting format until a request to reduce reporting frequency under paragraph (e)(3)(ii) of this section is approved.

(ii) Request to reduce frequency of excess emissions and continuous monitoring system performance reports. Notwithstanding the frequency of reporting requirements specified in paragraph (e)(3)(i) of this section, an owner or operator who is required by a relevant standard to submit excess emissions and continuous monitoring system performance (and summary) reports on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(A) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected source's excess emissions and continuous monitoring system performance reports continually demonstrate that the source is in compliance with the relevant standard;

(B) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the relevant standard; and

(C) The Administrator does not object to a reduced frequency of reporting for the affected source, as provided in paragraph (e)(3)(iii) of this section.

(iii) The frequency of reporting of excess emissions and continuous monitoring system performance (and summary) reports required to comply with a relevant standard may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended



**SECTION D. Source Level Requirements**

change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the 5-year recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(iv) As soon as CMS data indicate that the source is not in compliance with any emission limitation or operating parameter specified in the relevant standard, the frequency of reporting shall revert to the frequency specified in the relevant standard, and the owner or operator shall submit an excess emissions and continuous monitoring system performance (and summary) report for the noncomplying emission points at the next appropriate reporting period following the noncomplying event. After demonstrating ongoing compliance with the relevant standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard, as provided for in paragraphs (e)(3)(ii) and (e)(3)(iii) of this section.

(v) Content and submittal dates for excess emissions and monitoring system performance reports. All excess emissions and monitoring system performance reports and all summary reports, if required, shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate. Written reports of excess emissions or exceedances of process or control system parameters shall include all the information required in paragraphs (c)(5) through (c)(13) of this section, in 40 CFR 63.8(c)(7) and 40 CFR 63.8(c)(8), and in the relevant standard, and they shall contain the name, title, and signature of the responsible official who is certifying the accuracy of the report. When no excess emissions or exceedances of a parameter have occurred, or a CMS has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.

(vi) Summary report. As required under paragraphs (e)(3)(vii) and (e)(3)(viii) of this section, one summary report shall be submitted for the hazardous air pollutants monitored at each affected source (unless the relevant standard specifies that more than one summary report is required, e.g., one summary report for each hazardous air pollutant monitored). The summary report shall be entitled "Summary Report--Gaseous and Opacity Excess Emission and Continuous Monitoring System Performance" and shall contain the following information:

- (A) The company name and address of the affected source;
- (B) An identification of each hazardous air pollutant monitored at the affected source;
- (C) The beginning and ending dates of the reporting period;
- (D) A brief description of the process units;
- (E) The emission and operating parameter limitations specified in the relevant standard(s);
- (F) The monitoring equipment manufacturer(s) and model number(s);
- (G) The date of the latest CMS certification or audit;
- (H) The total operating time of the affected source during the reporting period;
- (I) An emission data summary (or similar summary if the owner or operator monitors control system parameters), including the total duration of excess emissions during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control equipment problems, process problems, other known causes, and other unknown causes;
- (J) A CMS performance summary (or similar summary if the owner or operator monitors control system parameters),

**SECTION D. Source Level Requirements**

including the total CMS downtime during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of CMS downtime expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total CMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes;

(K) A description of any changes in CMS, processes, or controls since the last reporting period;

(L) The name, title, and signature of the responsible official who is certifying the accuracy of the report; and

(M) The date of the report.

(vii) If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report shall be submitted, and the full excess emissions and continuous monitoring system performance report need not be submitted unless required by the Administrator.

(viii) If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, both the summary report and the excess emissions and continuous monitoring system performance report shall be submitted.

(4) Not applicable

f) See Section C, Site Level Requirements, Additional Requirements.

[PA/OP 62-312-014A]

**V. REPORTING REQUIREMENTS.****# 015 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.107]****Subpart J - Standards of Performance for Petroleum Refineries  
Reporting and recordkeeping requirements.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.107(d) - (f)

[PA/OP 62-312-014A]

**# 016 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.4]****Subpart A - General Provisions  
Address.**

a) All requests, reports, applications, submittals, and other communications to the Administrator pursuant to this part shall be submitted in duplicate to the appropriate Regional Office of the U.S. Environmental Protection Agency to the attention of the Director of the Division indicated in the following list of EPA Regional Offices.

Region III (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia), Director, Air, Toxics and Radiation Division, U.S. Environmental Protection Agency, 1650 Arch Street, Philadelphia, PA 19103-2029.

b) Section 111(c) directs the Administrator to delegate to each State, when appropriate, the authority to implement and enforce standards of performance for new stationary sources located in such State. All information required to be submitted to EPA under paragraph (a) of this section, must also be submitted to the appropriate State Agency of any State to which this authority has been delegated (provided, that each specific delegation may except sources from a certain Federal or State reporting requirement).

**SECTION D. Source Level Requirements**

[PA/OP 62-312-014A]

**# 017 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.13]****Subpart A--General Provisions****Addresses of State air pollution control agencies and EPA Regional Offices.**

a) All requests, reports, applications, submittals, and other communications to the Administrator pursuant to this part shall be submitted to the appropriate Regional Office of the U.S. Environmental Protection Agency indicated in the following list of EPA Regional Offices.

EPA Region III (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia), Director, Air, Radiation and Toxics Division, 1650 Arch Street, Philadelphia, PA 19103-2029.

b) All information required to be submitted to the Administrator under this part also shall be submitted to the appropriate State agency of any State to which authority has been delegated under section 112(l) of the Act. The owner or operator of an affected source may contact the appropriate EPA Regional Office for the mailing addresses for those States whose delegation requests have been approved.

c) If any State requires a submittal that contains all the information required in an application, notification, request, report, statement, or other communication required in this part, an owner or operator may send the appropriate Regional Office of the EPA a copy of that submittal to satisfy the requirements of this part for that communication.

[PA/OP 62-312-014A]

**# 018 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.428]****Subpart R -- National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations) SOURCE: 59 FR 64318, Dec. 14, 1994, unless otherwise noted.****Reporting and recordkeeping.**

a) Not applicable

b) Each owner or operator of a bulk gasoline terminal subject to the provisions of this subpart shall keep records of the test results for each gasoline cargo tank loading at the facility as follows:

(1) Annual certification testing performed under 40 CFR 63.425(e): and

(2) Continuous performance testing performed at any time at that facility under 40 CFR 63.425 (f), (g), and (h).

(3) The documentation file shall be kept up-to-date for each gasoline cargo tank loading at the facility. The documentation for each test shall include, as a minimum, the following information:

(i) Name of test:

Annual Certification Test -- Method 27 (40 CFR 63.425(e)(1)),  
Annual Certification Test -- Internal Vapor Valve (40 CFR 63.425(e)(2)),  
Leak Detection Test (40 CFR 63.425(f)),  
Nitrogen Pressure Decay Field Test (40 CFR 63.425(g)),  
or Continuous Performance Pressure Decay Test (40 CFR 63.425(h)).

(ii) Cargo tank owner's name and address.

(iii) Cargo tank identification number.

(iv) Test location and date.

(v) Tester name and signature.

**SECTION D. Source Level Requirements**

(vi) Witnessing inspector, if any: Name, signature, and affiliation.

(vii) Vapor tightness repair: Nature of repair work and when performed in relation to vapor tightness testing.

(viii) Test results: Pressure or vacuum change, mm of water; time period of test; number of leaks found with instrument and leak definition.

c) Each owner or operator of a bulk gasoline terminal subject to the provisions of this subpart shall:

(1) Keep an up-to-date, readily accessible record of the continuous monitoring data required under 40 CFR 63.427(a). This record shall indicate the time intervals during which loadings of gasoline cargo tanks have occurred or, alternatively, shall record the operating parameter data only during such loadings. The date and time of day shall also be indicated at reasonable intervals on this record.

(2) Record and report simultaneously with the notification of compliance status required under 40 CFR 63.9(h):

(i) All data and calculations, engineering assessments, and manufacturer's recommendations used in determining the operating parameter value under 40 CFR 63.425(b); and

(ii) The following information when using a flare under provisions of 40 CFR 63.11(b) to comply with 40 CFR 63.422(b):

(A) Flare design (i.e., steam-assisted, air-assisted, or non-assisted); and

(B) All visible emissions readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required under 40 CFR 63.425(a).

(3) If an owner or operator requests approval to use a vapor processing system or monitor an operating parameter other than those specified in 40 CFR 63.427(a), the owner or operator shall submit a description of planned reporting and recordkeeping procedures. The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the permit application.

d) Not applicable

e) Not applicable

f) Not applicable

g) Each owner or operator of a bulk gasoline terminal or pipeline breakout station subject to the provisions of this subpart shall include in a semi-annual report to the Administrator the following information, as applicable:

(1) Each loading of a gasoline cargo tank for which vapor tightness documentation had not been previously obtained by the facility;

(2) Periodic reports required under paragraph (d) of this section; and

(3) The number of equipment leaks not repaired within 5 days after detection.

h) Each owner or operator of a bulk gasoline terminal or pipeline breakout station subject to the provisions of this subpart shall submit an excess emissions report to the Administrator in accordance with 63.10(e)(3), whether or not a CMS is installed at the facility. The following occurrences are excess emissions events under this subpart, and the following information shall be included in the excess emissions report, as applicable:

(1) Each exceedance or failure to maintain, as appropriate, the monitored operating parameter value determined under 63.425(b). The report shall include the monitoring data for the days on which exceedances or failures to maintain have occurred, and a description and timing of the steps taken to repair or perform maintenance on the vapor collection and processing systems or the CMS.

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- (2) Each instance of a nonvapor-tight gasoline cargo tank loading at the facility in which the owner or operator failed to take steps to assure that such cargo tank would not be reloaded at the facility before vapor tightness documentation for that cargo tank was obtained.
- (3) Each reloading of a nonvapor-tight gasoline cargo tank at the facility before vapor tightness documentation for that cargo tank is obtained by the facility in accordance with 63.422(c)(2).
- (4) For each occurrence of an equipment leak for which no repair attempt was made within 5 days or for which repair was not completed within 15 days after detection:
- (i) The date on which the leak was detected;
  - (ii) The date of each attempt to repair the leak,
  - (iii) The reasons for the delay of repair, and
  - (iv) The date of successful repair.
- i) Not applicable
- j) Not applicable
- [PA/OP 62-312-014A]

**# 019 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.655]**  
**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**  
**Reporting and recordkeeping requirements.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §63.655 (b), (d) - (i)

**VI. WORK PRACTICE REQUIREMENTS.**

**# 020 [25 Pa. Code §127.511]**  
**Monitoring and related recordkeeping and reporting requirements.**

- a) The permittee shall perform a daily operational inspection of the control device.
- b) The permittee shall operate the control device at all times that the source is in operation.
- c) The permittee shall maintain and operate the source and control device in accordance with the manufacturer's specifications and in accordance with good air pollution practices.

**# 021 [25 Pa. Code §129.60]**  
**Bulk gasoline plants**

- a) A person may not cause or permit the loading of gasoline into a vehicular receiving tank from a bulk gasoline plant unless the loading is:
  - (1) Bottom filled with the inlet flush with the receiving vehicular tank bottom.
  - (2) Top-submerged filled with the fill pipe extended to within 6 inches of the bottom of the receiving vehicular tank during top-submerged filling operations.
- b) A person may not cause or permit the loading of gasoline into the stationary tanks of a bulk gasoline plant from a tank truck delivering gasoline to the bulk gasoline plant unless a vapor balancing technique is employed. The displaced vapors from the storage tank shall be transferred to the dispensing delivery tank during loading operations, and these vapors shall

**SECTION D. Source Level Requirements**

be processed for disposal in accordance with 25 PA Code 129.59 (relating to bulk gasoline terminals). This subsection is not applicable to storage tanks which conform to 25 PA Code 129.56(a)(1) or (2) (relating to storage tanks greater than 40,000 gallons capacity containing VOCs).

c) A person may not cause or permit the loading of gasoline from a bulk gasoline plant with a daily throughput since January 1, 1987 of greater than 4,000 gallons (15,200 liters) into a tank truck with a capacity greater than 250 gallons (950 liters) unless a vapor balance system is employed. The displaced vapors from the tank truck shall be transferred to the stationary tanks of the bulk gasoline plant during loading operations. A storage tank at a bulk gasoline plant which is controlled under 25 PA Code 129.56(a)(1) or (2) shall have a vapor recovery unit and process vapors from gasoline loading in accordance with 25 PA Code 129.59.

d) An owner or operator of a bulk gasoline plant shall maintain records of daily throughput. These records shall be retained for at least 2 years and shall be made available to the Department on request.

**# 022 [25 Pa. Code §129.62]****General standards for bulk gasoline terminals/plants, and small gasoline storage tanks**

a) Gasoline may not be spilled or discarded in sewers or stored in open containers or handled in a manner that would result in uncontrolled evaporation to the atmosphere.

b) An owner or operator of a bulk gasoline plant, bulk gasoline terminal, tank truck or trailer or stationary storage tank to which 25 PA Code 129.59, 129.60(b) or (c) or 129.61 (relating to bulk gasoline terminals; bulk gasoline plants; and small gasoline storage tank control (Stage 1 control)) apply may not permit the transfer of gasoline between the tank truck or trailer and a stationary storage tank unless the following conditions are met:

(1) The vapor balance system is in good working order and is designed and operated in a manner that prevents:

(i) Gauge pressure from exceeding 18 inches of HF<sub>2</sub>O (4500 pascals) and vacuum from exceeding 6 inches of water (1500 pascals) in the gasoline tank truck.

(ii) A reading equal to or greater than 100% of the lower explosive limit--LEL, measured as propane--at 1 inch from points on the perimeter of a potential leak source when measured by the method referenced in 25 PA Code 139.14 (relating to emissions of volatile organic compounds) during loading or unloading operations at small gasoline storage tanks, bulk plants and bulk terminals.

(iii) Avoidable liquid leaks during loading or unloading operations at small gasoline storage tanks, bulk plants and bulk terminals.

(2) A truck, vapor balance system or vapor disposal system, if applicable, that exceeds the limits in paragraph (1) is repaired and retested within 15 days.

(3) There are no visually- or audibly-detectable leaks in the tank truck's or trailer's pressure/vacuum relief valves and hatch covers, the truck tanks or storage tanks, or associated vapor and liquid lines during loading or unloading.

(4) The pressure and vacuum relief valves on storage vessels and tank trucks or trailers are set to release at no less than 0.7 psig (4.8 kilopascals) of pressure or 0.3 psig (2.1 kilopascals) of vacuum or the highest allowable pressure and vacuum as specified in State or local fire codes, the National Fire Prevention Association guidelines or other National consensus standards acceptable to the Department. Upon demonstration by the owner or operator of an underground small gasoline storage tank that the vapor balance system specified in paragraph (1) will achieve a 90% vapor recovery efficiency without a pressure and vacuum relief valve and that an interlock system, sufficient to ensure connection of the vapor recovery line prior to delivery of the gasoline, will be used--no pressure and vacuum relief valve is required. The vacuum setting on the pressure and vacuum relief valve on an underground storage tank may be set at the lowest vacuum setting which is sufficient to keep the vent closed at zero pressure and vacuum.

c) A person may not allow a gasoline tank truck subject to 25 PA Code 129.59, 129.60 or 129.61 to be filled or emptied in a geographic area specified in 25 PA Code 129.61(a) unless the gasoline tank truck:

**SECTION D. Source Level Requirements**

(1) Has been tested by the owner or operator within the immediately preceding 12 months in accordance with 25 PA Code 139.14.

(2) Sustains a pressure change of no more than 750 pascals (3 inches of H<sub>2</sub>O) in 5 minutes when pressurized to a gauge pressure of 18 inches of H<sub>2</sub>O (4,500 pascals) or evacuated to a gauge pressure of 6 inches of H<sub>2</sub>O (1,500 pascals) during the testing required in paragraph (1).

(3) Is repaired by the owner or operator and retested within 15 days of testing if it does not meet the criteria in paragraph (2).

(4) Displays a clear marking near the Department of Transportation Certification plate required by 49 CFR 178.340-10b (relating to certification), which shows the most recent date upon which the gasoline tank truck passed the test required in this subsection.

d) Reporting and recordkeeping shall be as follows:

(1) The owner or operator of a source of VOCs subject to subsection (c) shall maintain records of certification testing and repairs. The records shall identify the gasoline tank truck, vapor collection system or vapor control system; the date of the test or repair; and, if applicable, the type of repair and the date of retest. The records shall be maintained in a legible, readily-available condition for 1 year after the date the testing or repair was completed.

(2) The records of certification tests required by paragraph (1) shall contain:

(i) The gasoline tank truck tank serial number.

(ii) The initial test pressure and the time of the reading.

(iii) The final test pressure and the time of the reading.

(iv) The initial test vacuum and the time of the reading.

(v) The final test vacuum and the time of the reading.

(vi) At the top of each report page, the company name and the date and location of the tests on that page.

(vii) The name and title of the person conducting the test.

(3) Copies of records and reports under this subsection shall be made available to the Department upon verbal or written request at any reasonable time. A copy of the test results for each gasoline tank shall be kept with the truck.

e) Gasoline tank trucks with a rated capacity of less than 4,800 gallons are exempt from subsections (c) and (d).

[PA/OP 62-312-014A]

**# 023 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.592]  
Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries  
Standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 60.592(a) - (e)

**# 024 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.593]  
Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries  
Exceptions.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional

**SECTION D. Source Level Requirements**

Requirements for condition] as identified below:

40 CFR 60.593(a) - (e)

**# 025 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.11]**

**Subpart A--General Provisions**

**Control device requirements.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 63.11(b)

[PA/OP 62-312-014A]

**# 026 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.648]**

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**

**Equipment leak standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.648(a) - (i)

**# 027 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.649]**

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**

**Alternative means of emission limitation: Connectors in gas/vapor service and light liquid service.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.649(a) - (g)

**# 028 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.650]**

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**

**Gasoline loading rack provisions.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.650(a) - (c)

[PA/OP 62-312-014A]

**VII. ADDITIONAL REQUIREMENTS.**

**# 029 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.100]**

**Subpart J - Standards of Performance for Petroleum Refineries**

**Applicability, designation of affected facility, and reconstruction.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for the condition] as identified below:

40 CFR 60.100(a)

[PA/OP 62-312-014A]

**# 030 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.590]**

**Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries**

**Applicability and designation of affected facility.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional



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Requirements for condition] as identified below:

40 CFR 60.590(a) - (d)

**# 031 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.640]**

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries**

**Applicability and designation of affected source.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.640(a) - (r)

**\*\*\* Permit Shield in Effect. \*\*\***

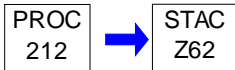
**SECTION D. Source Level Requirements**

Source ID: 212

Source Name: STORAGE TANK 240

Source Capacity/Throughput: 223,000.000 BBL/HR GASOLINE

Conditions for this source occur in the following groups: 1 - STORAGE TANKS > 40,000 GALLONS  
 3 - GROUP 1 (MACT) TANKS  
 PA 62-017G THROUGHPUT

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

**# 001 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.113a]  
 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  
 Testing and procedures.**

a) Except as provided in 40 CFR 60.8(b) compliance with the standard prescribed in 40 CFR 60.112a shall be determined as follows or in accordance with an equivalent procedure as provided in 40 CFR 60.114a.

(1) The owner or operator of each storage vessel to which this subpart applies which has an external floating roof shall meet the following requirements:

(i) Determine the gap areas and maximum gap widths between the primary seal and the tank wall and between the secondary seal and the tank wall according to the following frequency:

(A) For primary seals, gap measurements shall be performed within 60 days of the initial fill with petroleum liquid and at least once every five years thereafter. All primary seal inspections or gap measurements which require the removal or dislodging of the secondary seal shall be accomplished as rapidly as possible and the secondary seal shall be replaced as soon as possible.

(B) For secondary seals, gap measurements shall be performed within 60 days of the initial fill with petroleum liquid and at least once every year thereafter.

(C) If any storage vessel is out of service for a period of one year or more, subsequent refilling with petroleum liquid shall be considered initial fill for the purposes of paragraphs (a)(1)(i)(A) and (a)(1)(i)(B) of this section.

(D) Keep records of each gap measurement at the plant for a period of at least 2 years following the date of measurement. Each record shall identify the vessel on which the measurement was performed and shall contain the date of the seal gap measurement, the raw data obtained in the measurement process required by paragraph (a)(1)(ii) of this section and the calculation required by paragraph (a)(1)(iii) of this section.

(E) If either the seal gap calculated in accord with paragraph (a)(1)(iii) of this section or the measured maximum seal gap exceeds the limitations specified by 40 CFR 60.112a of this subpart, a report shall be furnished to the Administrator within 60 days of the date of measurements. The report shall identify the vessel and list each reason why the vessel did not meet the specifications of 40 CFR 60.112a. The report shall also describe the actions necessary to bring the storage vessel into compliance with the specifications of 40 CFR 60.112a.

(ii) Determine gap widths in the primary and secondary seals individually by the following procedures:

(A) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.

**SECTION D. Source Level Requirements**

(B) Measure seal gaps around the entire circumference of the tank in each place where a 1/8" diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the tank wall and measure the circumferential distance of each such location.

(C) The total surface area of each gap described in paragraph (a)(1)(ii)(B) of this section shall be determined by using probes of various widths to accurately measure the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(iii) Add the gap surface area of each gap location for the primary seal and the secondary seal individually. Divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the appropriate ratio in the standard in 40 CFR 60.112a(a)(1)(i) and 40 CFR 60.112a(a)(1)(ii).

(iv) Provide the Administrator 30 days prior notice of the gap measurement to afford the Administrator the opportunity to have an observer present.

(2) The owner or operator of each storage vessel to which this subpart applies which has a vapor recovery and return or disposal system shall provide the following information to the Administrator on or before the date on which construction of the storage vessel commences:

(i) Emission data, if available, for a similar vapor recovery and return or disposal system used on the same type of storage vessel, which can be used to determine the efficiency of the system. A complete description of the emission measurement method used must be included.

(ii) The manufacturer's design specifications and estimated emission reduction capability of the system.

(iii) The operation and maintenance plan for the system.

(iv) Any other information which will be useful to the Administrator in evaluating the effectiveness of the system in reducing VOC emissions.

**III. MONITORING REQUIREMENTS.****# 002 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.115a]****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****Monitoring of operations.**

a) Except as provided in paragraph (d) of this section, the owner or operator subject to this subpart shall maintain a record of the petroleum liquid stored, the period of storage, and the maximum true vapor pressure of that liquid during the respective storage period.

b) Available data on the typical Reid vapor pressure and the maximum expected storage temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517, unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

c) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa (2.0 psia) or whose physical properties preclude determination by the recommended method is to be determined from available data and recorded if the estimated true vapor pressure is greater than 6.9 kPa (1.0 psia).

d) The following are exempt from the requirements of this section:

(1) Each owner or operator of each storage vessel storing a petroleum liquid with a Reid vapor pressure of less than 6.9 kPa (1.0 psia) provided the maximum true vapor pressure does not exceed 6.9 kPa (1.0 psia).

(2) Each owner or operator of each storage vessel equipped with a vapor recovery and return or disposal system in accordance with the requirements of 40 CFR 60.112a (a)(3) and (b).

**SECTION D. Source Level Requirements****IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

**# 003 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.112a]  
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  
Standard for volatile organic compounds (VOC).**

a) The owner or operator of each storage vessel to which this subpart applies which contains a petroleum liquid which, as stored, has a true vapor pressure equal to or greater than 10.3 kPa (1.5 psia) but not greater than 76.6 kPa (11.1 psia) shall equip the storage vessel with one of the following:

(1) An external floating roof, consisting of a pontoon-type or double-deck-type cover that rests on the surface of the liquid contents and is equipped with a closure device between the tank wall and the roof edge. Except as provided in paragraph (a)(1)(ii)(D) of this section, the closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal and the upper seal is referred to as the secondary seal. The roof is to be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill and when the tank is completely emptied and subsequently refilled. The process of emptying and refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

(i) The primary seal is to be either a metallic shoe seal, a liquid-mounted seal, or a vapor-mounted seal. Each seal is to meet the following requirements:

(A) The accumulated area of gaps between the tank wall and the metallic shoe seal or the liquid-mounted seal shall not exceed 212 cm<sup>2</sup> per meter of tank diameter (10.0 in<sup>2</sup> per ft of tank diameter) and the width of any portion of any gap shall not exceed 3.81 cm (1 in).

(B) The accumulated area of gaps between the tank wall and the vapor-mounted seal shall not exceed 21.2 cm<sup>2</sup> per meter of tank diameter (1.0 in<sup>2</sup> per ft of tank diameter) and the width of any portion of any gap shall not exceed 1.27 cm ( in).

(C) One end of the metallic shoe is to extend into the stored liquid and the other end is to extend a minimum vertical distance of 61 cm (24 in) above the stored liquid surface.

(D) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(ii) The secondary seal is to meet the following requirements:

(A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (a)(1)(ii)(B) of this section.

(B) The accumulated area of gaps between the tank wall and the secondary seal used in combination with a metallic shoe or liquid-mounted primary seal shall not exceed 21.2 cm<sup>2</sup> per meter of tank diameter (1.0 in<sup>2</sup> per ft. of tank diameter) and the width of any portion of any gap shall not exceed 1.27 cm ( in.). There shall be no gaps between the tank wall and the secondary seal used in combination with a vapor-mounted primary seal.

(C) There are to be no holes, tears or other openings in the seal or seal fabric.

(D) The owner or operator is exempted from the requirements for secondary seals and the secondary seal gap criteria

**SECTION D. Source Level Requirements**

when performing gap measurements or inspections of the primary seal.

(iii) Each opening in the roof except for automatic bleeder vents and rim space vents is to provide a projection below the liquid surface. Each opening in the roof except for automatic bleeder vents, rim space vents and leg sleeves is to be equipped with a cover, seal 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 or as described in paragraph (a)(1)(iv) of this section. 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 legs supports or at the manufacturer's recommended setting.

(iv) 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.

(2) A fixed roof with an internal floating type cover equipped with a continuous closure device between the tank wall and the cover edge. The cover is to be floating at all times, (i.e., off the leg supports) except during initial fill and when the tank is completely emptied and subsequently refilled. The process of emptying and refilling when the cover is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible. Each opening in the cover except for automatic bleeder vents and the rim space vents is to provide a projection below the liquid surface. Each opening in the cover except for automatic bleeder vents, rim space vents, stub drains and leg sleeves is to be equipped with a cover, seal, 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. Automatic bleeder vents are to be closed at all times when the cover is floating except when the cover is being floated off or is being landed on the leg supports. Rim vents are to be set to open only when the cover is being floated off the leg supports or at the manufacturer's recommended setting.

(3) A vapor recovery system which collects all VOC vapors and gases discharged from the storage vessel, and a vapor return or disposal system which is designed to process such VOC vapors and gases so as to reduce their emission to the atmosphere by at least 95 percent by weight.

(4) A system equivalent to those described in paragraphs (a)(1), (a)(2), or (a)(3) of this section as provided in 40 CFR 60.114a.

b) The owner or operator of each storage vessel to which this subpart applies which contains a petroleum liquid which, as stored, has a true vapor pressure greater than 76.6 kPa (11.1 psia), shall equip the storage vessel with a vapor recovery system which collects all VOC vapors and gases discharged from the storage vessel, and a vapor return or disposal system which is designed to process such VOC vapors and gases so as to reduce their emission to the atmosphere by at least 95 percent by weight.

**# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.114a]**

**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**

**Alternative means of emission limitation.**

a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in emissions at least equivalent to the reduction in emissions achieved by any requirement in 40 CFR 60.112a, the Administrator will publish in the Federal Register a notice permitting the use of the alternative means for purposes of compliance with that requirement.

b) Any notice under paragraph (a) of this section will be published only after notice and an opportunity for a hearing.

c) Any person seeking permission under this section shall submit to the Administrator a written application including:

(1) An actual emissions test that uses a full-sized or scale-model storage vessel that accurately collects and measures all VOC emissions from a given control device and that accurately simulates wind and accounts for other emission variables such as temperature and barometric pressure.

(2) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

**SECTION D. Source Level Requirements**

d) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as specified in 40 CFR 60.112a.

e) The primary vapor-mounted seal in the "Volume-Maximizing Seal" manufactured by R.F.I. Services Corporation is approved as equivalent to the vapor-mounted seal required by 40 CFR 60.112a(a)(1)(i) and must meet the gap criteria specified in 40 CFR 60.112a(a)(1)(i)(B). There shall be no gaps between the tank wall and any secondary seal used in conjunction with the primary seal in the "Volume-Maximizing Seal".

**VII. ADDITIONAL REQUIREMENTS.**

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.110a]  
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  
Applicability and designation of affected facility.**

a) Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel for petroleum liquids which has a storage capacity greater than 151,416 liters (40,000 gallons) and for which construction is commenced after May 18, 1978.

b) Each petroleum liquid storage vessel with a capacity of less than 1,589,873 liters (420,000 gallons) used for petroleum or condensate stored, processed, or treated prior to custody transfer is not an affected facility and, therefore, is exempt from the requirements of this subpart.

**\*\*\* Permit Shield in Effect. \*\*\***

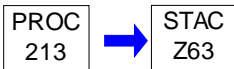
**SECTION D. Source Level Requirements**

Source ID: 213

Source Name: GASOLINE STORAGE TANK 244

Source Capacity/Throughput: 60,000.000 BBL/HR GASOLINE

Conditions for this source occur in the following groups: 1 - STORAGE TANKS > 40,000 GALLONS  
 3 - GROUP 1 (MACT) TANKS  
 4 - SUBPART K(B) TANKS  
 EPA AMP  
 PA 62-017G THROUGHPUT

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The maximum VOC emissions shall not exceed 5.5 tpy based on a consecutive 12-month period.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: PA: 62-312-034 condition 6]

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.****# 002 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

a) The permittee shall record the temperature of the tank's outlet stream daily. The vapor pressure shall be obtained, weekly, using the recorded daily temperature and the Reid Vapor Pressure (RVP) determined from the sample to ensure the true vapor pressure is less than 11.0 psia. The monitoring record shall be maintained for each day the source is operated. The records shall be maintained for a minimum of 5 years.

b) The permittee shall calculate and record, monthly, the VOC emissions using the latest Final version of EPA's "TANKS" software.

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**SECTION D. Source Level Requirements****VI. WORK PRACTICE REQUIREMENTS.****# 003 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall not use this tank to store volatile organic compounds with a vapor pressure equal to or greater than 11.0 psia at actual storage conditions.

[PA 62-312-034]

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***



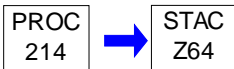
**SECTION D. Source Level Requirements**

Source ID: 214

Source Name: STORAGE TANK 245

Source Capacity/Throughput: 40,000.000 BBL/HR GASOLINE

Conditions for this source occur in the following groups: 1 - STORAGE TANKS > 40,000 GALLONS  
 3 - GROUP 1 (MACT) TANKS  
 4 - SUBPART K(B) TANKS  
 EPA AMP  
 PA 62-017G THROUGHPUT

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The maximum VOC emissions shall not exceed 3.5 tpy based on a consecutive 12-month period.

[Compliance with the requirement specified in this streamlined permit condition assures compliance with the provisions in: PA: 62-312-034 condition 6]

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.****# 002 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

a) The permittee shall record the temperature of the tank's outlet stream daily. The vapor pressure shall be obtained, weekly, using the recorded daily temperature and the Reid Vapor Pressure (RVP) determined from the sample to ensure the true vapor pressure is less than 11.0 psia. The monitoring record shall be maintained for each day the source is operated. The records shall be maintained for a minimum of 5 years.

b) The permittee shall calculate and record, monthly, the VOC emissions using the latest Final version of EPA's "TANKS" software.

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**SECTION D. Source Level Requirements****VI. WORK PRACTICE REQUIREMENTS.****# 003 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall not use this tank to store volatile organic compounds with a vapor pressure equal to or greater than 11.0 psia at actual storage conditions.

[PA 62-312-034]

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

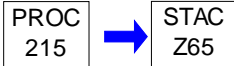
**SECTION D. Source Level Requirements**

Source ID: 215

Source Name: SOUR WATER/OIL TANK 434

Source Capacity/Throughput: 10,000.000 BBL/HR SOUR WATER/OIL

Conditions for this source occur in the following groups: 1 - STORAGE TANKS > 40,000 GALLONS  
 4 - SUBPART K(B) TANKS  
 EPA AMP  
 PA 62-017G THROUGHPUT

**I. RESTRICTIONS.****Emission Restriction(s).**

# 001 [25 Pa. Code §127.441]

**Operating permit terms and conditions.**

The VOC emissions from Tank 434 shall not exceed 5.3 TPY based on a 12-month consecutive period.

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

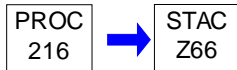
Source ID: 216

Source Name: MISCELLANEOUS STORAGE TANKS

Source Capacity/Throughput: 192,700.000 BBL/HR VOC

Conditions for this source occur in the following groups:

- 1A - STORAGE TANKS
- 2 - GENERAL PERMIT TANKS
- 3 - GROUP 1 (MACT) TANKS
- 3A - GROUP 2 (MACT) TANKS
- EPA AMP
- PA 62-017G THROUGHPUT

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

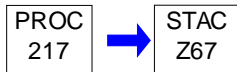
**SECTION D. Source Level Requirements**

Source ID: 217

Source Name: MISCELLANEOUS STORAGE TANKS

Source Capacity/Throughput:

Conditions for this source occur in the following groups: 1A - STORAGE TANKS  
3A - GROUP 2 (MACT) TANKS

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

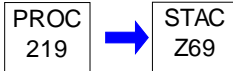
**SECTION D. Source Level Requirements**

Source ID: 219

Source Name: WASTEWATER SEPARATORS

Source Capacity/Throughput:

Conditions for this source occur in the following groups: 5 - WASTEWATER  
CASE-BY-CASE RACT 2  
PA 62-017G THROUGHPUT

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

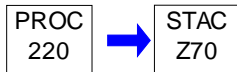
**SECTION D. Source Level Requirements**

Source ID: 220

Source Name: WASTEWATER SYSTEMS

Source Capacity/Throughput:

Conditions for this source occur in the following groups: 5 - WASTEWATER  
PA 62-017G THROUGHPUT

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The fugitive VOC and HAP emissions from the Combo Catch shall not exceed 1.9 tpy and 1.0 tpy respectively based on a consecutive 12-month period.

[PA: PA-62-017A]

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.****# 002 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall calculate and record, monthly, the fugitive VOC and HAP emissions from the Combo Catch.

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.****# 003 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

a) The inspection ports and penetrations of the floating roof shall be gasketed. The inspection ports and penetrations of the fixed roofs shall also be gasketed. The gaskets and seals shall be checked periodically to verify that an adequate seal is maintained. Repairs shall be made at the earliest opportunity.

b) The fixed roofs over the outlet sump and injection sump of the Combo Catch shall be completely installed. The floating roofs with primary and secondary seals over the North and South Cells of the Combo Catch shall be completely installed.

[PA: PA-62-017A]

**SECTION D. Source Level Requirements****VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***



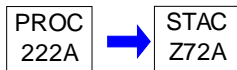
**SECTION D. Source Level Requirements**

Source ID: 222A

Source Name: STORAGE TANK 401A

Source Capacity/Throughput:

Conditions for this source occur in the following groups: 2 - GENERAL PERMIT TANKS  
 3A - GROUP 2 (MACT) TANKS  
 4 - SUBPART K(B) TANKS  
 EPA AMP

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

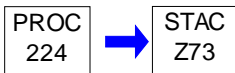
**SECTION D. Source Level Requirements**

Source ID: 224

Source Name: TANK 326

Source Capacity/Throughput:

Conditions for this source occur in the following groups: 1 - STORAGE TANKS > 40,000 GALLONS  
 3A - GROUP 2 (MACT) TANKS  
 4 - SUBPART K(B) TANKS  
 EPA AMP  
 PA 62-017G THROUGHPUT

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.****# 001 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall record the temperature of the tank's outlet stream daily. The vapor pressure shall be obtained, weekly, using the recorded daily temperature and the Reid Vapor Pressure (RVP) determined from the sample to ensure the true vapor pressure is less than 11.0 psia. The monitoring record shall be maintained for each day the source is operated. The records shall be maintained for a minimum of 5 years.

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.****# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The permittee shall store volatile organic compounds having a vapor pressure of less than 11.0 psia under actual storage conditions.

[PA 62-312-028]

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).



**SECTION D. Source Level Requirements**

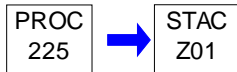
**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

Source ID: 225

Source Name: LOADING RACK FUGITIVES

Source Capacity/Throughput:

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

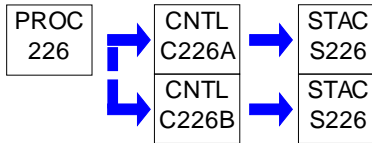
**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

Source ID: 226

Source Name: API SEPARATOR

Source Capacity/Throughput:

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

- The fugitive VOC emissions from the API Separator shall not exceed 10.6 tpy based on a consecutive 12-month period.
- The emissions of VOC from the carbon canister shall not exceed 500 ppm or 2.4 pounds per hour.
- This source is subject to 25 PA Code 123.31 pertaining to odor emissions.

[PA: 62-312-036A conditions 5, 8, &amp; 10]

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.****# 002 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

- The covers on the API Separator shall not be removed while the separator is in service. The facility shall maintain records of each day the separator is in service, any episodes which involve venting the vapors to the atmosphere, the length of any such episode, and the actions taken to correct the problem.
- All openings in the roof covering the API Separator for pipes and the observation hatches shall be gasketed. A pressure gauge shall be permanently installed and maintained at a conveniently readable location to indicate if the roof is not venting (pressure less than 2 inches) or if the roof is venting to the carbon canister (pressure exceeds 2 inches of water but less than 3 inches of water) or if emergency ventilation occurs (pressure exceeds 3 inches of water).

**SECTION D. Source Level Requirements**

c) The owner or operator shall monitor the emissions of VOC from the outlet of the carbon canister at least once per week (at a minimum) for breakthrough. If breakthrough occurs, the canister shall be taken off-line and the second canister shall be placed on-line. This monitoring schedule shall continue until sufficient operating experience is gained, and the regular schedule for carbon canister change-out is determined. After the change-out schedule is determined, the owner or operator shall notify the Department of the schedule.

[PA: 62-312-036A conditions 6, 7, & 9]

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

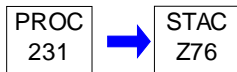
**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION D. Source Level Requirements**

Source ID: 231

Source Name: TANK 246

Source Capacity/Throughput: 75,564.000 Gal/HR LIGHT NAPHTHA

Conditions for this source occur in the following groups: 2 - GENERAL PERMIT TANKS  
EPA AMP**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

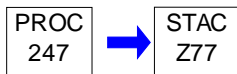
**SECTION D. Source Level Requirements**

Source ID: 247

Source Name: TANK 247

Source Capacity/Throughput:

Conditions for this source occur in the following groups: 2 - GENERAL PERMIT TANKS  
EPA AMP

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***



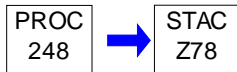
**SECTION D. Source Level Requirements**

Source ID: 248

Source Name: TANK 248

Source Capacity/Throughput:

Conditions for this source occur in the following groups: 2 - GENERAL PERMIT TANKS  
EPA AMP

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

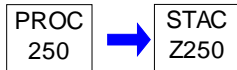
**SECTION D. Source Level Requirements**

Source ID: 250

Source Name: COOLING WATER TOWERS (2 SYTEMS) (3 TOWERS)

Source Capacity/Throughput:

Conditions for this source occur in the following groups: CASE-BY-CASE RACT 2

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

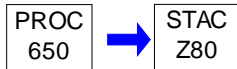
**SECTION D. Source Level Requirements**

Source ID: 650

Source Name: TANK 650

Source Capacity/Throughput: 29,000.000 BBL/HR CRUDE OIL

Conditions for this source occur in the following groups: 2 - GENERAL PERMIT TANKS  
 3A - GROUP 2 (MACT) TANKS  
 4 - SUBPART K(B) TANKS  
 EPA AMP

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

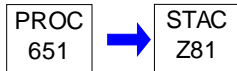
**SECTION D. Source Level Requirements**

Source ID: 651

Source Name: TANK 651

Source Capacity/Throughput: 29,000.000 BBL/HR CRUDE OIL

Conditions for this source occur in the following groups: 2 - GENERAL PERMIT TANKS  
 3A - GROUP 2 (MACT) TANKS  
 4 - SUBPART K(B) TANKS  
 EPA AMP

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION E. Source Group Restrictions.**

Group Name: 1 - STORAGE TANKS &gt; 40,000 GALLONS

Group Description: Storage Tanks

Sources included in this group

ID	Name
201	FUEL STORAGE TANK 409
202	FUEL STORAGE TANK 410
203	FUEL STORAGE TANK 430
204	FUEL STORAGE TANK 431
205	FUEL STORAGE TANK 234
206	FUEL STORAGE TANK 236
209	FUEL STORAGE TANK 432
212	STORAGE TANK 240
213	GASOLINE STORAGE TANK 244
214	STORAGE TANK 245
215	SOUR WATER/OIL TANK 434
224	TANK 326

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.****# 001 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

**# 002 [25 Pa. Code §129.56]****Storage tanks greater than 40,000 gallons capacity containing VOCs**

a) No person may permit the placing, storing, or holding in a stationary tank, reservoir, or other container with a capacity greater than 40,000 gallons of any volatile organic compounds with a vapor pressure greater than 1.5 psia (10.5 kilopascals) under actual storage conditions unless such tank, reservoir or other container is a pressure tank capable of maintaining working pressures sufficient at all times to prevent vapor or gas loss to the atmosphere or is designed and equipped with one of the following vapor loss control devices:

(1) An external or an internal floating roof. This control equipment shall not be permitted if the volatile organic

**SECTION E. Source Group Restrictions.**

compounds have a vapor pressure of 11 psia (76 kilopascals) or greater under actual storage conditions.

(2) Vapor recovery system. A vapor recovery system consisting of a vapor gathering system capable of collecting the volatile organic compound vapors and gases discharged and a vapor disposal system capable of processing such volatile organic vapors and gases so as to prevent their emission to the atmosphere. Tank gauging and sampling devices shall be gas tight except when gauging or sampling is taking place. The vapor recovery system shall be maintained in good working order and recover at least 80% of the vapors emitted by such tank.

b) An external floating roof must be fitted with a primary seal and a continuous secondary seal extending from the floating roof to the tank wall (rim-mounted secondary seal). The external floating roof shall meet the following equipment requirements:

(1) Seal closure devices must meet the following requirements:

(i) There are no visible holes, tears, or other openings in the seals or seal fabric.

(ii) The seals are intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall.

(iii) For tanks with vapor-mounted primary seals, the accumulated area of gaps exceeding 1/8 inch in width between the secondary seal and the tank wall shall not exceed 1 square inch per foot of tank diameter. Compliance with this subsection shall be determined by physically measuring the length and width of all gaps around the entire circumference of the secondary seal in each place where a 1/8 inch uniform diameter probe passes freely (without forcing or binding against the seal) between the seal and tank wall and by summing the area of the individual gaps.

(2) Openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves, are as follows:

(i) Equipped with covers, seals, or lids in the closed position except when the openings are in actual use.

(ii) Equipped with projections into the tank which remain below the liquid surface at all times.

(3) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports.

(4) Rim vents are set to open when the roof is being floated off the leg supports or at the recommended setting of the manufacturer.

(5) Emergency roof drains are provided with slotted membrane fabric covers or equivalent covers which cover at least 90% of the area of the opening.

c) An internal floating roof must be fitted with a primary seal and must comply with the following equipment requirements:

(1) A closure seal, or seals, to close the space between the roof edge and tank wall is used.

(2) There are no holes, tears, or other openings in the seal or any seal fabric or materials.

(3) Openings except stub drains are equipped with covers, lids or seals such that:

(i) The cover, lid or seal is in the closed position at all times except when in actual use;

(ii) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports.

(iii) Rim vents, if provided are set to open when the roof is being floated off the roof leg supports or at the recommended setting of the manufacturer.

d) This section shall not apply to petroleum liquid storage vessels which:

**SECTION E. Source Group Restrictions.**

(1) Are used to store waxy, heavy pour crude oil.

(2) Have capacities less than 420,000 gallons and are used to store produced crude oil and condensate prior to lease custody transfer.

e) For the purposes of this section, the petroleum liquid storage vessels listed below comply with the equipment requirements of this section. These tanks shall comply with the maintenance, inspection, and reporting requirements of this section. These petroleum liquid storage vessels are those:

(1) Which contain a petroleum liquid with a true vapor pressure less than 4 psia (27.6 kilopascals) and which are of welded construction and which presently possess a metallic-type shoe seal, a liquid-mounted foam seal, a liquid-mounted liquid filled type seal, or other closure device of demonstrated equivalence approved by the Department.

(2) Which are of welded construction, equipped with a metallic-type shoe primary seal and has a secondary seal from the top of the shoe seal to the tank wall (shoe-mounted secondary seal).

f) The owner or operator of a petroleum liquid storage vessel with a floating roof subject to this regulation shall:

(1) Perform routine inspections annually in order to insure compliance with subsection (b) or subsection (c). The inspection shall include a visual inspection of the secondary seal gap when inspecting external floating roof tanks.

(2) For external floating roof tanks, measure the secondary seal gap annually in accordance with subsection (b)(1)(iii) when the floating roof is equipped with a vapor mounted primary seal.

(3) Maintain records of the types of volatile petroleum liquids stored, the maximum true vapor pressure of the liquid as stored, and the results of the inspections performed in subsection (f)(1) and (2). Copies of the records shall be retained by the owner or operator for a period of 2 years after the date on which the record was made and shall be made available to the Department upon written or verbal request at a reasonable time.

g) For volatile organic compounds whose storage temperature is governed by ambient weather conditions, the vapor pressure under actual storage conditions shall be determined using a temperature which is representative of the average storage temperature for the hottest month of the year in which such storage takes place.

**# 003 [25 Pa. Code §129.61]****Small gasoline storage tank control (Stage 1 control)**

a) This section applies Statewide.

b) The following tanks and facilities are exempted:

(1) Stationary storage tanks with a capacity of less than 2,000 gallons (7,600 liters) that were installed before January 1, 1979.

(2) Stationary storage tanks with a capacity of less than 250 gallons (950 liters) that were installed after January 1, 1979.

(3) Stationary storage tanks used for agricultural purposes with a capacity of less than 550 gallons (2100 liters). These tanks shall be equipped with a submerged fill pipe.

c) A person may not transfer gasoline from a delivery vessel into a stationary storage tank unless the displaced vapors from the storage tank are transferred to the dispensing delivery tank through a vapor tight return line and unless the receiving tank is equipped with a submerged fill pipe which extends from the filling orifice to within 6 inches of the bottom of the tank. The vapors collected in the dispensing tank shall be disposed of in accordance with 25 PA Code 129.59 or 25 PA Code 129.60(c) (relating to bulk gasoline terminals; and bulk gasoline plants).

d) The dispensing delivery tank shall remain vapor tight at all times. The delivery tank may be opened after the vapors are disposed of in accordance with 25 PA Code 129.59 or 25 PA Code 129.60(c).

**SECTION E. Source Group Restrictions.****VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***



**SECTION E. Source Group Restrictions.**

Group Name: 10- MACT SUBPART UUU

Group Description: MACT requirements for Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery

Sources included in this group

ID	Name
049	EAST REFORMER HEATER
052	WEST REFORMER HEATER
101A	FCC UNIT
108	CLAUS SULFUR PLANT 2

**I. RESTRICTIONS.****Emission Restriction(s).**

# 001 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1564]

**Subpart UUU-National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units****What are my requirements for metal HAP emissions from catalytic cracking units?**

(a) What emission limitations and work practice standards must I meet? You must:

(1) Except as provided in paragraph (a)(5) of this section, meet each emission limitation in table 1 of this subpart that applies to you. If your catalytic cracking unit is subject to the NSPS for PM in §60.102 of this chapter or is subject to §60.102a(b)(1) of this chapter, you must meet the emission limitations for NSPS units. If your catalytic cracking unit is not subject to the NSPS for PM, you can choose from the six options in paragraphs (a)(1)(i) through (vi) of this section:

(i) You can elect to comply with the NSPS for PM in §60.102 of this chapter (Option 1a);

(ii) You can elect to comply with the NSPS for PM coke burn-off emission limit in §60.102a(b)(1) of this chapter (Option 1b);

(iii) You can elect to comply with the NSPS for PM concentration limit in §60.102a(b)(1) of this chapter (Option 1c);

(iv) You can elect to comply with the PM per coke burn-off emission limit (Option 2);

(v) You can elect to comply with the Nickel (Ni) lb/hr emission limit (Option 3); or

(vi) You can elect to comply with the Ni per coke burn-off emission limit (Option 4).

(2) Comply with each operating limit in Table 2 of this subpart that applies to you. When a specific control device may be monitored using more than one continuous parameter monitoring system, you may select the parameter with which you will comply. You must provide notice to the Administrator (or other designated authority) if you elect to change the monitoring option.

(3) 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.

(4) The emission limitations and operating limits for metal HAP emissions from catalytic cracking units required in paragraphs (a)(1) and (2) of this section do not apply during periods of planned maintenance preapproved by the applicable permitting authority according to the requirements in §63.1575(j).

(5) On or before the date specified in §63.1563(d), you must comply with one of the two options in paragraphs (a)(5)(i) and (ii) of this section during periods of startup, shutdown and hot standby:

(i) You can elect to comply with the requirements in paragraphs (a)(1) and (2) of this section, except catalytic cracking units controlled using a wet scrubber must maintain only the liquid to gas ratio operating limit (the pressure drop operating limit does not apply); or

(ii) You can elect to maintain the inlet velocity to the primary internal cyclones of the catalytic cracking unit catalyst regenerator at or above 20 feet per second.

**SECTION E. Source Group Restrictions.**

(b) How do I demonstrate initial compliance with the emission limitations and work practice standard? You must:

(1) Install, operate, and maintain a continuous monitoring system(s) according to the requirements in §63.1572 and Table 3 of this subpart.

(2) Conduct a performance test for each catalytic cracking unit according to the requirements in §63.1571 and under the conditions specified in Table 4 of this subpart.

(3) Establish each site-specific operating limit in Table 2 of this subpart that applies to you according to the procedures in Table 4 of this subpart.

(4) Use the procedures in paragraphs (b)(4)(i) through (iv) of this section to determine initial compliance with the emission limitations.

(i) If you elect Option 1b or Option 2 in paragraph (a)(1)(ii) or (iv) of this section, compute the PM emission rate (lb/1,000 lb of coke burn-off) for each run using Equations 1, 2, and 3 (if applicable) of this section and the site-specific opacity limit, if applicable, using Equation 4 of this section as follows:

Where:

Rc = Coke burn-off rate, kg/hr (lb/hr);

Qr = Volumetric flow rate of exhaust gas from catalyst regenerator before adding air or gas streams. Example: You may measure upstream or downstream of an electrostatic precipitator, but you must measure upstream of a carbon monoxide boiler, dscm/min (dscf/min). You may use the alternative in either §63.1573(a)(1) or (2), as applicable, to calculate Qr;

Qa = 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<sub>2</sub> = Carbon dioxide concentration in regenerator exhaust, percent by volume (dry basis);

%CO = Carbon monoxide concentration in regenerator exhaust, percent by volume (dry basis);

%O<sub>2</sub> = Oxygen concentration in regenerator exhaust, percent by volume (dry basis);

K1 = Material balance and conversion factor, 0.2982 (kg-min)/(hr-dscm-%) (0.0186 (lb-min)/(hr-dscf-%));

K2 = Material balance and conversion factor, 2.088 (kg-min)/(hr-dscm) (0.1303 (lb-min)/(hr-dscf));

K3 = Material balance and conversion factor, 0.0994 (kg-min)/(hr-dscm-%) (0.0062 (lb-min)/(hr-dscf-%));

Qoxy = 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

%Oxy = Oxygen concentration in oxygen-enriched air stream, percent by volume (dry basis).

[Equation 2 - See CFR]

Where:

E = Emission rate of PM, kg/1,000 kg (lb/1,000 lb) of coke burn-off;

Cs = Concentration of PM, g/dscm (lb/dscf);

Qsd = Volumetric flow rate of the catalytic cracking unit catalyst regenerator flue gas as measured by Method 2 in appendix A-1 to part 60 of this chapter, dscm/hr (dscf/hr);

**SECTION E. Source Group Restrictions.**

$R_c$  = Coke burn-off rate, kg coke/hr (1,000 lb coke/hr); and

$K$  = Conversion factor, 1.0 (kg<sup>2</sup>/g)/(1,000 kg) (1,000 lb/(1,000 lb)).

[Equation 3 - See CFR]

Where:

$E_s$  = Emission rate of PM allowed, kg/1,000 kg (1b/1,000 lb) of coke burn-off in catalyst regenerator;

1.0 = Emission limitation, kg coke/1,000 kg (lb coke/1,000 lb);

$A$  = Allowable incremental rate of PM emissions. Before August 1, 2017,  $A = 0.18$  g/million cal (0.10 lb/million Btu). On or after August 1, 2017,  $A = 0$  g/million cal (0 lb/million Btu);

$H$  = Heat input rate from solid or liquid fossil fuel, million cal/hr (million Btu/hr). Make sure your permitting authority approves procedures for determining the heat input rate;

$R_c$  = Coke burn-off rate, kg coke/hr (1,000 lb coke/hr) determined using Equation 1 of this section; and

$K'$  = Conversion factor to units to standard, 1.0 (kg<sup>2</sup>/g)/(1,000 kg) (103 lb/(1,000 lb)).

[Equation 4 - See CFR]

Where:

Opacity Limit = Maximum permissible hourly average opacity, percent, or 10 percent, whichever is greater;

Opacity<sub>st</sub> = Hourly average opacity measured during the source test, percent; and

PMEmR<sub>st</sub> = PM emission rate measured during the source test, lb/1,000 lb coke burn.

(ii) If you elect Option 1c in paragraph (a)(1)(iii) of this section, the PM concentration emission limit, determine the average PM concentration from the initial performance test used to certify your PM CEMS.

(iii) If you elect Option 3 in paragraph (a)(1)(iii) of this section, the Ni lb/hr emission limit, compute your Ni emission rate using Equation 5 of this section and your site-specific Ni operating limit (if you use a continuous opacity monitoring system) using Equations 6 and 7 of this section as follows:

[Equation 5 - See CFR]

Where:

ENi1 = Mass emission rate of Ni, mg/hr (lb/hr); and

CNi = Ni concentration in the catalytic cracking unit catalyst regenerator flue gas as measured by Method 29 in appendix A to part 60 of this chapter, mg/dscm (lbs/dscf).

[Equation 6 - See CFR]

Where:

Opacity<sub>l</sub> = Opacity value for use in Equation 7 of this section, percent, or 10 percent, whichever is greater; and

NiEmR1<sub>st</sub> = Average Ni emission rate calculated as the arithmetic average Ni emission rate using Equation 5 of this section for each of the performance test runs, g Ni/hr.

[Equation 7 - See CFR]

Where:

**SECTION E. Source Group Restrictions.**

Ni operating limit<sub>1</sub> = Maximum permissible hourly average Ni operating limit, percent-acfm-ppmw, i.e., your site-specific Ni operating limit;

Q<sub>mon,st</sub> = Hourly average actual gas flow rate as measured by the continuous parameter monitoring system during the performance test or using the alternative procedure in §63.1573, acfm; and

E-Cat<sub>st</sub> = Ni concentration on equilibrium catalyst measured during source test, ppmw.

(iv) If you elect Option 4 in paragraph (a)(1)(vi) of this section, the Ni per coke burn-off emission limit, compute your Ni emission rate using Equations 1 and 8 of this section and your site-specific Ni operating limit (if you use a continuous opacity monitoring system) using Equations 9 and 10 of this section as follows:

[Equation 8 - See CFR]

Where:

ENi<sub>2</sub> = Normalized mass emission rate of Ni, mg/kg coke (lb/1,000 lb coke).

[Equation 9 - See CFR]

Where:

Opacity<sub>2</sub> = Opacity value for use in Equation 10 of this section, percent, or 10 percent, whichever is greater; and

NiEmR<sub>2st</sub> = Average Ni emission rate calculated as the arithmetic average Ni emission rate using Equation 8 of this section for each of the performance test runs, mg/kg coke.

[Equation 10 - See CFR]

Where:

Ni Operating Limit<sub>2</sub> = Maximum permissible hourly average Ni operating limit, percent-ppmw-acfm-hr/kg coke, i.e., your site-specific Ni operating limit; and

R<sub>c,st</sub> = Coke burn rate from Equation 1 of this section, as measured during the initial performance test, kg coke/hr.

(5) Demonstrate initial compliance with each emission limitation that applies to you according to Table 5 of this subpart.

(6) Demonstrate initial compliance with the work practice standard in paragraph (a)(3) of this section by submitting your operation, maintenance, and monitoring plan to your permitting authority as part of your Notification of Compliance Status.

(7) Submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.1574.

(c) How do I demonstrate continuous compliance with the emission limitations and work practice standards? You must:

(1) Demonstrate continuous compliance with each emission limitation in Tables 1 and 2 of this subpart that applies to you according to the methods specified in Tables 6 and 7 of this subpart.

(2) Demonstrate continuous compliance with the work practice standard in paragraph (a)(3) of this section by maintaining records to document conformance with the procedures in your operation, maintenance, and monitoring plan.

(3) If you use a continuous opacity monitoring system and elect to comply with Option 3 in paragraph (a)(1)(iii) of this section, determine continuous compliance with your site-specific Ni operating limit by using Equation 11 of this section as follows:

[Equation 11 - See CFR]

Where:

Ni operating value<sub>1</sub> = Maximum permissible hourly average Ni standard operating value, %-acfm-ppmw;

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Opacity = Hourly average opacity, percent;

Q<sub>mon</sub> = Hourly average actual gas flow rate as measured by continuous parameter monitoring system or calculated by alternative procedure in §63.1573, acfm; and

E-Cat = Ni concentration on equilibrium catalyst from weekly or more recent measurement, ppmw.

(4) If you use a continuous opacity monitoring system and elect to comply with Option 4 in paragraph (a)(1)(iv) of this section, determine continuous compliance with your site-specific Ni operating limit by using Equation 12 of this section as follows:

[Equation 12 - See CFR]

Where:

Ni operating value<sub>2</sub> = Maximum permissible hourly average Ni standard operating value, percent-acfm-ppmw-hr/kg coke.

(5) If you elect to comply with the alternative limit in paragraph (a)(5)(ii) of this section during periods of startup, shutdown and hot standby, demonstrate continuous compliance on or before the date specified in §63.1563(d) by:

(i) Collecting the volumetric flow rate from the catalyst regenerator (in acfm) and determining the average flow rate for each hour. For events lasting less than one hour, determine the average flow rate during the event.

(ii) Determining the cumulative cross-sectional area of the primary internal cyclone inlets in square feet (ft<sup>2</sup>) using design drawings of the primary (first-stage) internal cyclones to determine the inlet cross-sectional area of each primary internal cyclone and summing the cross-sectional areas for all primary internal cyclones in the catalyst regenerator or, if primary cyclones. If all primary internal cyclones are identical, you may alternatively determine the inlet cross-sectional area of one primary internal cyclone using design drawings and multiply that area by the total number of primary internal cyclones in the catalyst regenerator.

(iii) Calculating the inlet velocity to the primary internal cyclones in square feet per second (ft<sup>2</sup>/sec) by dividing the average volumetric flow rate (acfm) by the cumulative cross-sectional area of the primary internal cyclone inlets (ft<sup>2</sup>) and by 60 seconds/minute (for unit conversion).

(iv) Maintaining the inlet velocity to the primary internal cyclones at or above 20 feet per second for each hour during the startup, shutdown, or hot standby event or, for events lasting less than 1 hour, for the duration of the event.

[67 FR 17773, Apr. 11, 2002, as amended at 70 FR 6938, Feb. 9, 2005; 80 FR 75273, Dec. 1, 2015; 81 FR 45243, July 13, 2016]

**II. TESTING REQUIREMENTS.****# 002 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1571]****Subpart UUU-National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units****How and when do I conduct a performance test or other initial compliance demonstration?**

(a) When must I conduct a performance test? You must conduct performance tests and report the results by no later than 150 days after the compliance date specified for your source in §63.1563 and according to the provisions in §63.7(a)(2). If you are required to do a performance evaluation or test for a semi-regenerative catalytic reforming unit catalyst regenerator vent, you may do them at the first regeneration cycle after your compliance date and report the results in a followup Notification of Compliance Status report due no later than 150 days after the test.

(1) For each emission limitation or work practice standard where initial compliance is not demonstrated using a performance test, opacity observation, or visible emission observation, you must conduct the initial compliance demonstration within 30 calendar days after the compliance date that is specified for your source in §63.1563.

(2) For each emission limitation where the averaging period is 30 days, the 30-day period for demonstrating initial compliance begins at 12:00 a.m. on the compliance date that is specified for your source in §63.1563 and ends at 11:59

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p.m., 30 calendar days after the compliance date that is specified for your source in §63.1563.

(3) If you commenced construction or reconstruction between September 11, 1998 and April 11, 2002, you must demonstrate initial compliance with either the proposed emission limitation or the promulgated emission limitation no later than October 8, 2002 or within 180 calendar days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(4) If you commenced construction or reconstruction between September 11, 1998 and April 11, 2002, and you chose to comply with the proposed emission limitation when demonstrating initial compliance, you must conduct a second compliance demonstration for the promulgated emission limitation by October 10, 2005, or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(5) Periodic performance testing for PM or Ni. Except as provided in paragraphs (a)(5)(i) and (ii) of this section, conduct a periodic performance test for PM or Ni for each catalytic cracking unit at least once every 5 years according to the requirements in Table 4 of this subpart. You must conduct the first periodic performance test no later than August 1, 2017.

(i) Catalytic cracking units monitoring PM concentration with a PM CEMS are not required to conduct a periodic PM performance test.

(ii) Conduct a performance test annually if you comply with the emission limits in Item 1 (NSPS subpart J) or Item 4 (Option 1a) in Table 1 of this subpart and the PM emissions measured during the most recent performance source test are greater than 0.80 g/kg coke burn-off.

(6) One-time performance testing for HCN. Conduct a performance test for HCN from each catalytic cracking unit no later than August 1, 2017 according to the applicable requirements in paragraphs (a)(6)(i) and (ii) of this section.

(i) If you conducted a performance test for HCN for a specific catalytic cracking unit between March 31, 2011 and February 1, 2016, you may submit a request to the Administrator to use the previously conducted performance test results to fulfill the one-time performance test requirement for HCN for each of the catalytic cracking units tested according to the requirements in paragraphs (a)(6)(i)(A) through (D) of this section.

(A) The request must include a copy of the complete source test report, the date(s) of the performance test and the test methods used. If available, you must also indicate whether the catalytic cracking unit catalyst regenerator was operated in partial or complete combustion mode during the test, the control device configuration, including whether platinum or palladium combustion promoters were used during the test, and the CO concentration (measured using CO CEMS or manual test method) for each test run.

(B) You must submit a separate request for each catalytic cracking unit tested and you must submit each request to the Administrator no later than March 30, 2016.

(C) The Administrator will evaluate each request with respect to the completeness of the request, the completeness of the submitted test report and the appropriateness of the test methods used. The Administrator will notify the facility within 60 days of receipt of the request if it is approved or denied. If the Administrator fails to respond to the facility within 60 days of receipt of the request, the request will be automatically approved.

(D) If the request is approved, you do not need to conduct an additional HCN performance test. If the request is denied, you must conduct an additional HCN performance test following the requirements in (a)(6)(ii) of this section.

(ii) Unless you receive approval to use a previously conducted performance test to fulfill the one-time performance test requirement for HCN for your catalytic cracking unit as provided in paragraph (a)(6)(i) of this section, conduct a performance test for HCN for each catalytic cracking unit no later than August 1, 2017 according to following requirements:

(A) Select sampling port location, determine volumetric flow rate, conduct gas molecular weight analysis and measure moisture content as specified in either Item 1 of Table 4 of this subpart or Item 1 of Table 11 of this subpart.

(B) Measure HCN concentration using Method 320 of appendix A of this part. The method ASTM D6348-03 (Reapproved 2010) including Annexes A1 through A8 (incorporated by reference—see §63.14) is an acceptable alternative to EPA Method 320 of appendix A of this part. The method ASTM D6348-12e1 (incorporated by reference—see §63.14) is an acceptable

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alternative to EPA Method 320 of appendix A of this part with the following two caveats:

(1) The test plan preparation and implementation in the Annexes to ASTM D6348-03 (Reapproved 2010), Sections A1 through A8 are mandatory; and

(2) In ASTM D6348-03 (Reapproved 2010) Annex A5 (Analyte Spiking Technique), the percent (%) R must be determined for each target analyte (Equation A5.5). In order for the test data to be acceptable for a compound, %R must be greater than or equal to 70% and less than or equal to 130%. If the %R value does not meet this criterion for a target compound, the test data is not acceptable for that compound and the test must be repeated for that analyte (i.e., the sampling and/or analytical procedure should be adjusted before a retest). The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound by using the following equation:

Reported Result = (Measured Concentration in the Stack  $\times$  100  $\div$  % R).

(C) Measure CO concentration as specified in either Item 2 or 3a of Table 11 of this subpart.

(D) Record and include in the test report an indication of whether the catalytic cracking unit catalyst regenerator was operated in partial or complete combustion mode and the control device configuration, including whether platinum or palladium combustion promoters were used during the test.

(b) What are the general requirements for performance test and performance evaluations? You must:

(1) Performance tests shall be conducted according to the provisions of §63.7(e) except that performance tests shall be conducted at maximum representative operating capacity for the process. During the performance test, you must operate the control device at either maximum or minimum representative operating conditions for monitored control device parameters, whichever results in lower emission reduction. You must not conduct a performance test during startup, shutdown, periods when the control device is bypassed or periods when the process, monitoring equipment or control device is not operating properly. You may not conduct performance tests during periods of malfunction. You must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that the test was conducted at maximum representative operating capacity. Upon request, you must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(2) Except for opacity and visible emission observations, conduct three separate test runs for each performance test as specified in §63.7(e)(3). Each test run must last at least 1 hour.

(3) Conduct each performance evaluation according to the requirements in §63.8(e).

(4) Calculate the average emission rate for the performance test by calculating the emission rate for each individual test run in the units of the applicable emission limitation using Equation 2, 5, or 8 of §63.1564, and determining the arithmetic average of the calculated emission rates.

(c) What procedures must I use for an engineering assessment? You may choose to use an engineering assessment to calculate the process vent flow rate, net heating value, TOC emission rate, and total organic HAP emission rate expected to yield the highest daily emission rate when determining the emission reduction or outlet concentration for the organic HAP standard for catalytic reforming units. If you use an engineering assessment, you must document all data, assumptions, and procedures to the satisfaction of the applicable permitting authority. An engineering assessment may include the approaches listed in paragraphs (c)(1) through (c)(4) of this section. Other engineering assessments may be used but are subject to review and approval by the applicable permitting authority.

(1) You may use previous test results provided the tests are representative of current operating practices at the process unit, and provided EPA methods or approved alternatives were used;

(2) You may use bench-scale or pilot-scale test data representative of the process under representative operating conditions;

(3) You may use maximum flow rate, TOC emission rate, organic HAP emission rate, or organic HAP or TOC concentration specified or implied within a permit limit applicable to the process vent; or

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(4) You may use design analysis based on engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to:

(i) Use of material balances based on process stoichiometry to estimate maximum TOC concentrations;

(ii) Calculation of hourly average maximum flow rate based on physical equipment design such as pump or blower capacities; and

(iii) Calculation of TOC concentrations based on saturation conditions.

(d) Can I adjust the process or control device measured values when establishing an operating limit? If you do a performance test to demonstrate compliance, you must base the process or control device operating limits for continuous parameter monitoring systems on the results measured during the performance test. You may adjust the values measured during the performance test according to the criteria in paragraphs (d)(1) through (3) of this section.

(1) If you must meet the HAP metal emission limitations in §63.1564, you elect the option in paragraph (a)(1)(iii) in §63.1564 (Ni lb/hr), and you use continuous parameter monitoring systems, you must establish an operating limit for the equilibrium catalyst Ni concentration based on the laboratory analysis of the equilibrium catalyst Ni concentration from the initial performance test. Section 63.1564(b)(2) allows you to adjust the laboratory measurements of the equilibrium catalyst Ni concentration to the maximum level. You must make this adjustment using Equation 1 of this section as follows:

[Equation 1 - See CFR]

Where:

Ecat-Limit = Operating limit for equilibrium catalyst Ni concentration, mg/kg;

NiEmR1st = Average Ni emission rate calculated as the arithmetic average Ni emission rate using Equation 5 of this section for each performance test run, g Ni/hr; and

Ecatst = Average equilibrium Ni concentration from laboratory test results, mg/kg.

(2) If you must meet the HAP metal emission limitations in §63.1564, you elect the option in paragraph (a)(1)(iv) in §63.1564 (Ni per coke burn-off), and you use continuous parameter monitoring systems, you must establish an operating limit for the equilibrium catalyst Ni concentration based on the laboratory analysis of the equilibrium catalyst Ni concentration from the initial performance test. Section 63.1564(b)(2) allows you to adjust the laboratory measurements of the equilibrium catalyst Ni concentration to the maximum level. You must make this adjustment using Equation 2 of this section as follows:

[Equation 2 - See CFR]

Where:

NiEmR2st = Average Ni emission rate calculated as the arithmetic average Ni emission rate using Equation 8 of §63.1564 for each performance test run, mg/kg coke burn-off.

(3) If you choose to adjust the equilibrium catalyst Ni concentration to the maximum level, you can't adjust any other monitored operating parameter (i.e., gas flow rate, voltage, pressure drop, liquid-to-gas ratio).

(4) Except as specified in paragraph (d)(3) of this section, if you use continuous parameter monitoring systems, you may adjust one of your monitored operating parameters (flow rate, total power and secondary current, pressure drop, liquid-to-gas ratio) from the average of measured values during the performance test to the maximum value (or minimum value, if applicable) representative of worst-case operating conditions, if necessary. This adjustment of measured values may be done using control device design specifications, manufacturer recommendations, or other applicable information. You must provide supporting documentation and rationale in your Notification of Compliance Status, demonstrating to the satisfaction of your permitting authority, that your affected source complies with the applicable emission limit at the operating limit based on adjusted values.

(e) Can I change my operating limit? You may change the established operating limit by meeting the requirements in paragraphs (e)(1) through (3) of this section.



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(1) You may change your established operating limit for a continuous parameter monitoring system by doing an additional performance test, a performance test in conjunction with an engineering assessment, or an engineering assessment to verify that, at the new operating limit, you are in compliance with the applicable emission limitation.

(2) You must establish a revised operating limit for your continuous parameter monitoring system if you make any change in process or operating conditions that could affect control system performance or you change designated conditions after the last performance or compliance tests were done. You can establish the revised operating limit as described in paragraph (e)(1) of this section.

(3) You may change your site-specific opacity operating limit or Ni operating limit only by doing a new performance test.

[67 FR 17773, Apr. 11, 2002, as amended at 80 FR 75276, Dec. 1, 2015]

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.****# 003 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1576]****Subpart UUU-National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units****What records must I keep, in what form, and for how long?**

(a) You must keep the records specified in paragraphs (a)(1) through (3) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any initial notification or Notification of Compliance Status that you submitted, according to the requirements in §63.10(b)(2)(xiv).

(2) The records specified in paragraphs (a)(2)(i) through (iv) of this section.

(i) Record the date, time, and duration of each startup and/or shutdown period, recording the periods when the affected source was subject to the standard applicable to startup and shutdown.

(ii) In the event that an affected unit fails to meet an applicable standard, record the number of failures. For each failure record the date, time and duration of each failure.

(iii) For each failure to meet an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the volume of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.

(iv) Record actions taken to minimize emissions in accordance with §63.1570(c) and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

(3) Records of performance tests, performance evaluations, and opacity and visible emission observations as required in §63.10(b)(2)(viii).

(b) For each continuous emission monitoring system and continuous opacity monitoring system, you must keep the records required in paragraphs (b)(1) through (5) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Monitoring data for continuous opacity monitoring systems during a performance evaluation as required in §63.6(h)(7)(i) and (ii).

(3) The performance evaluation plan as described in §63.8(d)(2) 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

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the performance evaluation plan is revised, you must 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. The program of corrective action should be included in the plan required under §63.8(d)(2).

(4) Requests for alternatives to the relative accuracy test for continuous emission monitoring systems as required in §63.8(f)(6)(i).

(5) Records of the date and time that each deviation started and stopped.

(c) You must keep the records in §63.6(h) for visible emission observations.

(d) You must keep records required by Tables 6, 7, 13, and 14 of this subpart (for catalytic cracking units); Tables 20, 21, 27 and 28 of this subpart (for catalytic reforming units); Tables 34 and 35 of this subpart (for sulfur recovery units); and Table 39 of this subpart (for bypass lines) to show continuous compliance with each emission limitation that applies to you.

(e) You must keep a current copy of your operation, maintenance, and monitoring plan onsite and available for inspection. You also must keep records to show continuous compliance with the procedures in your operation, maintenance, and monitoring plan.

(f) You also must keep the records of any changes that affect emission control system performance including, but not limited to, the location at which the vent stream is introduced into the flame zone for a boiler or process heater.

(g) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(h) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(i) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records offsite for the remaining 3 years.

[67 FR 17773, Apr. 11, 2002, as amended at 70 FR 6942, Feb. 9, 2005; 80 FR 75279, Dec. 1, 2015]

**V. REPORTING REQUIREMENTS.****# 004 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1574]****Subpart UUU-National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units****What notifications must I submit and when?**

(a) Except as allowed in paragraphs (a)(1) through (3) of this section, you must submit all of the notifications in §§63.6(h), 63.7(b) and (c), 63.8(e), 63.8(f)(4), 63.8(f)(6), and 63.9(b) through (h) that apply to you by the dates specified.

(1) You must submit the notification of your intention to construct or reconstruct according to §63.9(b)(5) unless construction or reconstruction had commenced and initial startup had not occurred before April 11, 2002. In this case, you must submit the notification as soon as practicable before startup but no later than July 10, 2002. This deadline also applies to the application for approval of construction or reconstruction and approval of construction or reconstruction based on State preconstruction review required in §§63.5(d)(1)(i) and 63.5(f)(2).

(2) You must submit the notification of intent to conduct a performance test required in §63.7(b) at least 30 calendar days before the performance test is scheduled to begin (instead of 60 days).

(3) If you are required to conduct an initial performance test, performance evaluation, design evaluation, opacity observation, visible emission observation, or other initial compliance demonstration, you must submit a notification of compliance status according to §63.9(h)(2)(ii). You can submit this information in an operating permit application, in an amendment to an operating permit application, in a separate submission, or in any combination. In a State with an approved operating permit program where delegation of authority under section 112(l) of the CAA has not been requested or approved, you must provide a duplicate notification to the applicable Regional Administrator. If the required information has been submitted previously, you do not have to provide a separate notification of compliance status. Just refer to the earlier submissions instead of duplicating and resubmitting the previously submitted information.

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- (i) For each initial compliance demonstration that does not include a performance test, you must submit the Notification of Compliance Status no later than 30 calendar days following completion of the initial compliance demonstration.
- (ii) For each initial compliance demonstration that includes a performance test, you must submit the notification of compliance status, including the performance test results, no later than 150 calendar days after the compliance date specified for your affected source in §63.1563.
- (b) As specified in §63.9(b)(2), if you startup your new affected source before April 11, 2002, you must submit the initial notification no later than August 9, 2002.
- (c) If you startup your new or reconstructed affected source on or after April 11, 2002, you must submit the initial notification no later than 120 days after you become subject to this subpart.
- (d) You also must include the information in Table 42 of 40 CFR 63 Subpart UUU in your notification of compliance status.
- (e) If you request an extension of compliance for an existing catalytic cracking unit as allowed in §63.1563(c), you must submit a notification to your permitting authority containing the required information by October 13, 2003.
- (f) As required by this subpart, you must prepare and implement an operation, maintenance, and monitoring plan for each control system and continuous monitoring system for each affected source. The purpose of this plan is to detail the operation, maintenance, and monitoring procedures you will follow.
- (1) You must submit the plan to your permitting authority for review and approval along with your notification of compliance status. While you do not have to include the entire plan in your permit under part 70 or 71 of this chapter, you must include the duty to prepare and implement the plan as an applicable requirement in your part 70 or 71 operating permit. You must submit any changes to your permitting authority for review and approval and comply with the plan as submitted until the change is approved.
- (2) Each plan must include, at a minimum, the information specified in paragraphs (f)(2)(i) through (xii) of this section.
- (i) Process and control device parameters to be monitored for each affected source, along with established operating limits.
- (ii) Procedures for monitoring emissions and process and control device operating parameters for each affected source.
- (iii) Procedures that you will use to determine the coke burn-rate, the volumetric flow rate (if you use process data rather than direct measurement), and the rate of combustion of liquid or solid fossil fuels if you use an incinerator-waste heat boiler to burn the exhaust gases from a catalyst regenerator.
- (iv) Procedures and analytical methods you will use to determine the equilibrium catalyst Ni concentration, the equilibrium catalyst Ni concentration monthly rolling average, and the hourly or hourly average Ni operating value.
- (v) Procedures you will use to determine the pH of the water (or scrubbing liquid) exiting a wet scrubber if you use pH strips.
- (vi) Procedures you will use to determine the HCl concentration of gases from a catalytic reforming unit when you use a colorimetric tube sampling system, including procedures for correcting for pressure (if applicable to the sampling equipment) and the sampling locations that will be used for compliance monitoring purposes.
- (vii) Procedures you will use to determine the gas flow rate for a catalytic cracking unit if you use the alternative procedure based on air flow rate and temperature.
- (viii) Monitoring schedule, including when you will monitor and when you will not monitor an affected source (e.g., during the coke burn-off, regeneration process).
- (ix) Quality control plan for each continuous opacity monitoring system and continuous emission monitoring system you use to meet an emission limit in this subpart. This plan must include procedures you will use for calibrations, accuracy

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audits, and adjustments to the system needed to meet applicable requirements for the system.

(x) Maintenance schedule for each monitoring system and control device for each affected source that is generally consistent with the manufacturer's instructions for routine and long-term maintenance.

(xi) If you use a fixed-bed gas-solid adsorption system to control emissions from a catalytic reforming unit, you must implement corrective action procedures if the HCl concentration measured at the selected compliance monitoring sampling location within the bed exceeds the operating limit. These procedures must require, at minimum, repeat measurement and recording of the HCl concentration in the adsorption system exhaust gases and at the selected compliance monitoring sampling location within the bed. If the HCl concentration at the selected compliance monitoring location within the bed is above the operating limit during the repeat measurement while the HCl concentration in the adsorption system exhaust gases remains below the operating limit, the adsorption bed must be replaced as soon as practicable. Your procedures must specify the sampling frequency that will be used to monitor the HCl concentration in the adsorption system exhaust gases subsequent to the repeat measurement and prior to replacement of the sorbent material (but not less frequent than once every 4 hours during coke burn-off). If the HCl concentration of the adsorption system exhaust gases is above the operating limit when measured at any time, the adsorption bed must be replaced within 24 hours or before the next regeneration cycle, whichever is longer.

(xii) Procedures that will be used for purging the catalyst if you do not use a control device to comply with the organic HAP emission limits for catalytic reforming units. These procedures will include, but are not limited to, specification of the minimum catalyst temperature and the minimum cumulative volume of gas per mass of catalyst used for purging prior to uncontrolled releases (i.e., during controlled purging events); the maximum purge gas temperature for uncontrolled purge events; and specification of the monitoring systems that will be used to monitor and record data during each purge event.

[67 FR 17773, Apr. 11, 2002, as amended at 70 FR 6941, Feb. 9, 2005; 80 FR 75278, Dec. 1, 2015]

**# 005 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1575]****Subpart UUU-National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units****What reports must I submit and when?**

- (a) You must submit each report in Table 43 of 40 CFR 63 Subpart UUU that applies to you.
- (b) Unless the Administrator has approved a different schedule, you must submit each report by the date in Table 43 of 40 CFR 63 Subpart UUU and according to the requirements in paragraphs (b)(1) through (5) of this section.
- (1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.1563 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your affected source in §63.1563.
- (2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.1563.
- (3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.
- (4) Each subsequent compliance report must be 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.
- (5) For each affected source that is subject to permitting regulations pursuant to part 70 or 71 of this chapter, and if the permitting authority has established dates for submitting semiannual reports pursuant to §70.6(a)(3)(iii)(A) or §71.6(a)(3)(iii)(A) of this chapter, you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.
- (c) The compliance report must contain the information required in paragraphs (c)(1) through (4) of this section.
- (1) Company name and address.

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(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If there are no deviations from any emission limitation that applies to you and there are no deviations from the requirements for work practice standards, a statement that there were no deviations from the emission limitations or work practice standards during the reporting period and that no continuous emission monitoring system or continuous opacity monitoring system was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted.

(d) For each deviation from an emission limitation and for each deviation from the requirements for work practice standards that occurs at an affected source where you are not using a continuous opacity monitoring system or a continuous emission monitoring system to comply with the emission limitation or work practice standard in this subpart, the semiannual compliance report must contain the information in paragraphs (c)(1) through (3) of this section and the information in paragraphs (d)(1) through (4) of this section.

(1) The total operating time of each affected source during the reporting period and identification of the sources for which there was a deviation.

(2) Information on the number, date, time, duration, and cause of deviations (including unknown cause, if applicable).

(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).

(4) The applicable operating limit or work practice standard from which you deviated and either the parameter monitor reading during the deviation or a description of how you deviated from the work practice standard.

(e) For each deviation from an emission limitation occurring at an affected source where you are using a continuous opacity monitoring system or a continuous emission monitoring system to comply with the emission limitation, you must include the information in paragraphs (c)(1) through (3) of this section, in paragraphs (d)(1) through (3) of this section, and in paragraphs (e)(2) through (13) of this section.

(1) [Reserved]

(2) The date and time that each continuous opacity monitoring system or continuous emission monitoring system was inoperative, except for zero (low-level) and high-level checks.

(3) The date and time that each continuous opacity monitoring system or continuous emission monitoring system was out-of-control, including the information in §63.8(c)(8).

(4) An estimate of the quantity of each regulated pollutant emitted over the emission limit during the deviation, and a description of the method used to estimate the emissions.

(5) A summary of the total duration of the deviation during the reporting period (recorded in minutes for opacity and hours for gases and in the averaging period specified in the regulation for other types of emission limitations), and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period and into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of downtime for the continuous opacity monitoring system or continuous emission monitoring system during the reporting period (recorded in minutes for opacity and hours for gases and in the averaging time specified in the regulation for other types of standards), and the total duration of downtime for the continuous opacity monitoring system or continuous emission monitoring system as a percent of the total source operating time during that reporting period.

(8) A breakdown of the total duration of downtime for the continuous opacity monitoring system or continuous emission

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monitoring system during the reporting period into periods that are due to monitoring equipment malfunctions, non-monitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes.

(9) An identification of each HAP that was monitored at the affected source.

(10) A brief description of the process units.

(11) The monitoring equipment manufacturer(s) and model number(s).

(12) The date of the latest certification or audit for the continuous opacity monitoring system or continuous emission monitoring system.

(13) A description of any change in the continuous emission monitoring system or continuous opacity monitoring system, processes, or controls since the last reporting period.

(f) You also must include the information required in paragraphs (f)(1) through (2) of this section in each compliance report, if applicable.

(1) You must include the information in paragraph (f)(1)(i) or (ii) of this section, if applicable.

(i) If you are complying with paragraph (k)(1) of this section, a summary of the results of any performance test done during the reporting period on any affected unit. Results of the performance test include the identification of the source tested, the date of the test, the percentage of emissions reduction or outlet pollutant concentration reduction (whichever is needed to determine compliance) for each run and for the average of all runs, and the values of the monitored operating parameters.

(ii) If you are not complying with paragraph (k)(1) of this section, a copy of any performance test done during the reporting period on any affected unit. The report may be included in the next semiannual compliance report. The copy must include a complete report for each test method used for a particular kind of emission point tested. For additional tests performed for a similar emission point using the same method, you must submit the results and any other information required, but a complete test report is not required. A complete test report contains a brief process description; a simplified flow diagram showing affected processes, control equipment, and sampling point locations; sampling site data; description of sampling and analysis procedures and any modifications to standard procedures; quality assurance procedures; record of operating conditions during the test; record of preparation of standards; record of calibrations; raw data sheets for field sampling; raw data sheets for field and laboratory analyses; documentation of calculations; and any other information required by the test method.

(2) Any requested change in the applicability of an emission standard (e.g., you want to change from the PM standard to the Ni standard for catalytic cracking units or from the HCl concentration standard to percent reduction for catalytic reforming units) in your compliance report. You must include all information and data necessary to demonstrate compliance with the new emission standard selected and any other associated requirements.

(g) You may submit reports required by other regulations in place of or as part of the compliance report if they contain the required information.

(h) [Reserved]

(i) If the applicable permitting authority has approved a period of planned maintenance for your catalytic cracking unit according to the requirements in paragraph (j) of this section, you must include the following information in your compliance report.

(1) In the compliance report due for the 6-month period before the routine planned maintenance is to begin, you must include a full copy of your written request to the applicable permitting authority and written approval received from the applicable permitting authority.

(2) In the compliance report due after the routine planned maintenance is complete, you must include a description of the planned routine maintenance that was performed for the control device during the previous 6-month period, and the total

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number of hours during those 6 months that the control device did not meet the emission limitations and monitoring requirements as a result of the approved routine planned maintenance.

(j) If you own or operate multiple catalytic cracking units that are served by a single wet scrubber emission control device (e.g., a Venturi scrubber), you may request the applicable permitting authority to approve a period of planned routine maintenance for the control device needed to meet requirements in your operation, maintenance, and monitoring plan. You must present data to the applicable permitting authority demonstrating that the period of planned maintenance results in overall emissions reductions. During this pre-approved time period, the emission control device may be taken out of service while maintenance is performed on the control device and/or one of the process units while the remaining process unit(s) continue to operate. During the period the emission control device is unable to operate, the emission limits, operating limits, and monitoring requirements applicable to the unit that is operating and the wet scrubber emission control device do not apply. The applicable permitting authority may require that you take specified actions to minimize emissions during the period of planned maintenance.

(1) You must submit a written request to the applicable permitting authority at least 6 months before the planned maintenance is scheduled to begin with a copy to the EPA Regional Administrator.

(2) Your written request must contain the information in paragraphs (j)(2)(i) through (v) of this section.

(i) A description of the planned routine maintenance to be performed during the next 6 months and why it is necessary.

(ii) The date the planned maintenance will begin and end.

(iii) A quantified estimate of the HAP and criteria pollutant emissions that will be emitted during the period of planned maintenance.

(iv) An analysis showing the emissions reductions resulting from the planned maintenance as opposed to delaying the maintenance until the next unit turnaround.

(v) Actions you will take to minimize emissions during the period of planned maintenance.

(k) Electronic submittal of performance test and CEMS performance evaluation data. For performance tests or CEMS performance evaluations conducted on and after February 1, 2016, if required to submit the results of a performance test or CEMS performance evaluation, you must submit the results according to the procedures in paragraphs (k)(1) and (2) of this section.

(1) Within 60 days after the date of completing each performance test as required by this subpart, you must submit the results of the performance tests following the procedure specified in either paragraph (k)(1)(i) or (ii) of this section.

(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (<http://www.epa.gov/ttn/chief/ert/index.html>) at the time of the test, you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>.) Performance test data must be submitted in a file format generated through use of the EPA's ERT or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive or other commonly used electronic storage media to the EPA. The electronic storage media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph (k)(1)(i).

(ii) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in §63.13.



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(2) Within 60 days after the date of completing each CEMS performance evaluation required by §63.1571(a) and (b), you must submit the results of the performance evaluation following the procedure specified in either paragraph (k)(2)(i) or (ii) of this section.

(i) For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the EPA via the CEDRI. (CEDRI is accessed through the EPA's CDX.) Performance evaluation data must be submitted in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT Web site. If you claim that some of the performance evaluation information being submitted is CBI, you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive or other commonly used electronic storage media to the EPA. The electronic storage media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph (k)(2)(i).

(ii) For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the Administrator at the appropriate address listed in §63.13.

[67 FR 17773, Apr. 11, 2002, as amended at 80 FR 75278, Dec. 1, 2015]

**VI. WORK PRACTICE REQUIREMENTS.****# 006 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1566]****Subpart UUU-National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units****What are my requirements for organic HAP emissions from catalytic reforming units?**

(a) What emission limitations and work practice standards must I meet? You must:

(1) Meet each emission limitation in Table 15 of this subpart that applies to you. You can choose from the two options in paragraphs (a)(1)(i) and (ii) of this section.

(i) You can elect to vent emissions of total organic compounds (TOC) to a flare (Option 1). On and after January 30, 2019, the flare must meet the requirements of §63.670. Prior to January 30, 2019, the flare must meet the control device requirements in §63.11(b) or the requirements of §63.670.

(ii) You can elect to meet a TOC or nonmethane TOC percent reduction standard or concentration limit, whichever is less stringent (Option 2).

(2) Comply with each site-specific operating limit in Table 16 of this subpart that applies to you.

(3) Except as provided in paragraph (a)(4) of this section, the emission limitations in Tables 15 and 16 of this subpart apply to emissions from catalytic reforming unit process vents associated with initial catalyst depressuring and catalyst purging operations that occur prior to the coke burn-off cycle. The emission limitations in Tables 15 and 16 of this subpart do not apply to the coke burn-off, catalyst rejuvenation, reduction or activation vents, or to the control systems used for these vents.

(4) The emission limitations in tables 15 and 16 of this subpart do not apply to emissions from process vents during passive depressuring when the reactor vent pressure is 5 pounds per square inch gauge (psig) or less or during active depressuring or purging prior to January 30, 2019, when the reactor vent pressure is 5 psig or less. On and after January 30, 2019, the emission limitations in tables 15 and 16 of this subpart do apply to emissions from process vents during active purging operations (when nitrogen or other purge gas is actively introduced to the reactor vessel) or active depressuring (using a vacuum pump, ejector system, or similar device) regardless of the reactor vent pressure.

(5) 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.

(b) How do I demonstrate initial compliance with the emission limitations and work practice standard? You must:



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- (1) Install, operate, and maintain a continuous monitoring system(s) according to the requirements in §63.1572 and Table 17 of this subpart.
- (2) Conduct each performance test for a catalytic reforming unit according to the requirements in §63.1571 and under the conditions specified in Table 18 of this subpart.
- (3) Establish each site-specific operating limit in Table 16 of this subpart that applies to you according to the procedures in Table 18 of this subpart.
- (4) Use the procedures in paragraph (b)(4)(i) or (ii) of this section to determine initial compliance with the emission limitations.

(i) If you elect the percent reduction standard under Option 2, calculate the emission rate of nonmethane TOC using Equation 1 of this section (if you use Method 25) or Equation 2 of this section (if you use Method 25A or Methods 25A and 18), then calculate the mass emission reduction using Equation 3 of this section as follows:

$$E = K4McQs \text{ [Equation 1]}$$

Where:

E = Emission rate of nonmethane TOC in the vent stream, kilograms-C per hour;

K4 = Constant,  $6.0 \times 10^{-5}$  (kilograms per milligram)(minutes per hour);

Mc = Mass concentration of total gaseous nonmethane organic (as carbon) as measured and calculated using Method 25 in appendix A to part 60 of this chapter, mg/dscm; and

Qs = Vent stream flow rate, dscm/min, at a temperature of 20 degrees Celsius (C).

$$E = K5(CTOC - 1/6 C_{\text{methane}})Qs \text{ [Equation 2]}$$

Where:

K5 = Constant,  $1.8 \times 10^{-4}$  (parts per million)<sup>-1</sup> (gram-mole per standard cubic meter) (gram-C per gram-mole-hexane) (kilogram per gram) (minutes per hour), where the standard temperature (standard cubic meter) is at 20 degrees C (uses 72g-C/g.mole hexane);

CTOC = Concentration of TOC on a dry basis in ppmv as hexane as measured by Method 25A in appendix A to part 60 of this chapter;

C<sub>methane</sub> = Concentration of methane on a dry basis in ppmv as measured by Method 18 in appendix A to part 60 of this chapter. If the concentration of methane is not determined, assume C<sub>methane</sub> equals zero; and

Qs = Vent stream flow rate, dry standard cubic meters per minute, at a temperature of 20 degrees C.

$$\% \text{reduction} = (E_i - E_o) / E_i \times 100\% \text{ (Equation 3)}$$

Where:

E<sub>i</sub> = Mass emission rate of TOC at control device inlet, kg/hr; and

E<sub>o</sub> = Mass emission rate of TOC at control device outlet, kg/hr.

(ii) If you elect the 20 parts per million by volume (ppmv) concentration limit, correct the measured TOC concentration for oxygen (O<sub>2</sub>) content in the gas stream using Equation 4 of this section as follows:

$$CNMTOC, 3\%O_2 = (CTOC - 1/6 C_{\text{methane}}) (17.9\% / (20.9\% - \%O_2))$$

Where:

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CNMTOC, 3%O<sub>2</sub> = Concentration of nonmethane TOC on a dry basis in ppmv as hexane corrected to 3 percent oxygen.

(5) You are not required to do a TOC performance test if:

- (i) You elect to vent emissions to a flare as provided in paragraph (a)(1)(i) of this section (Option 1); or
- (ii) You elect the TOC percent reduction or concentration limit in paragraph (a)(1)(ii) of this section (Option 2), and you use a boiler or process heater with a design heat input capacity of 44 MW or greater or a boiler or process heater in which all vent streams are introduced into the flame zone.

(6) Demonstrate initial compliance with each emission limitation that applies to you according to Table 19 of this subpart.

(7) Demonstrate initial compliance with the work practice standard in paragraph (a)(5) of this section by submitting the operation, maintenance, and monitoring plan to your permitting authority as part of your Notification of Compliance Status.

(8) Submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.1574.

(c) How do I demonstrate continuous compliance with the emission limitations and work practice standards? You must:

(1) Demonstrate continuous compliance with each emission limitation in Tables 15 and 16 of this subpart that applies to you according to the methods specified in Tables 20 and 21 of this subpart.

(2) Demonstrate continuous compliance with the work practice standards in paragraph (a)(3) of this section by complying with the procedures in your operation, maintenance, and monitoring plan.

[67 FR 17773, Apr. 11, 2002, as amended at 70 FR 6938, Feb. 9, 2005; 80 FR 75275, Dec. 1, 2015; 81 FR 45243, July 13, 2016]

**# 007 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1567]****Subpart UUU-National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units****What are my requirements for inorganic HAP emissions from catalytic reforming units?**

(a) What emission limitations and work practice standards must I meet? You must:

(1) Meet each emission limitation in Table 22 of 40 CFR 63 Subpart UUU that applies to you. If you operate a catalytic reforming unit in which different reactors in the catalytic reforming unit are regenerated in separate regeneration systems, then these emission limitations apply to each separate regeneration system. These emission limitations apply to emissions from catalytic reforming unit process vents associated with the coke burn-off and catalyst rejuvenation operations during coke burn-off and catalyst regeneration. You can choose from the two options in paragraphs (a)(1)(i) through (ii) of this section:

(i) You can elect to meet a percent reduction standard for hydrogen chloride (HCl) emissions (Option 1); or

(ii) You can elect to meet an HCl concentration limit (Option 2).

(2) Meet each site-specific operating limit in Table 23 of 40 CFR 63 Subpart UUU that applies to you. These operating limits apply during coke burn-off and catalyst rejuvenation.

(3) 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.

(b) How do I demonstrate initial compliance with the emission limitations and work practice standard? You must:

(1) Install, operate, and maintain a continuous monitoring system(s) according to the requirements in §63.1572 and Table 24 of 40 CFR 63 Subpart UUU.

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- (2) Conduct each performance test for a catalytic reforming unit according to the requirements in §63.1571 and the conditions specified in Table 25 of 40 CFR 63 Subpart UUU.
- (3) Establish each site-specific operating limit in Table 23 of 40 CFR 63 Subpart UUU that applies to you according to the procedures in Table 25 of 40 CFR 63 Subpart UUU.
- (4) Use the equations in paragraphs (b)(4)(i) through (iv) of this section to determine initial compliance with the emission limitations.
- (i) Correct the measured HCl concentration for oxygen (O<sub>2</sub>) content in the gas stream using Equation 1 of this section.
- (ii) If you elect the percent reduction standard, calculate the emission rate of HCl using Equation 2 of this section; then calculate the mass emission reduction from the mass emission rates using Equation 3 of this section.
- (iii) If you are required to use a colorimetric tube sampling system to demonstrate continuous compliance with the HCl concentration operating limit, calculate the HCl operating limit using Equation 4 of this section.
- (iv) If you are required to use a colorimetric tube sampling system to demonstrate continuous compliance with the percent reduction operating limit, calculate the HCl operating limit using Equation 5 of this section.
- (5) Demonstrate initial compliance with each emission limitation that applies to you according to Table 26 of 40 CFR 63 Subpart UUU.
- (6) Demonstrate initial compliance with the work practice standard in paragraph (a)(3) of this section by submitting the operation, maintenance, and monitoring plan to your permitting authority as part of your Notification of Compliance Status.
- (7) Submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.1574.
- (c) How do I demonstrate continuous compliance with the emission limitations and work practice standard? You must:
- (1) Demonstrate continuous compliance with each emission limitation in Tables 22 and 23 of 40 CFR 63 Subpart UUU that applies to you according to the methods specified in Tables 27 and 28 of 40 CFR 63 Subpart UUU.
- (2) Demonstrate continuous compliance with the work practice standard in paragraph (a)(3) of this section by maintaining records to document conformance with the procedures in your operation, maintenance and monitoring plan.
- # 008 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1568]**  
**Subpart UUU-National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units**  
**What are my requirements for HAP emissions from sulfur recovery units?**
- (a) What emission limitations and work practice standard must I meet? You must:
- (1) Meet each emission limitation in Table 29 of this subpart that applies to you. If your sulfur recovery unit is subject to the NSPS for sulfur oxides in §60.104 or §60.102a(f)(1) of this chapter, you must meet the emission limitations for NSPS units. If your sulfur recovery unit is not subject to one of these NSPS for sulfur oxides, you can choose from the options in paragraphs (a)(1)(i) through (ii) of this section:
- (i) You can elect to meet the NSPS requirements in §60.104(a)(2) or §60.102a(f)(1) of this chapter (Option 1); or
- (ii) You can elect to meet the total reduced sulfur (TRS) emission limitation (Option 2).
- (2) Meet each operating limit in Table 30 of this subpart that applies to you.
- (3) 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.

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(4) On or before the date specified in §63.1563(d), you must comply with one of the three options in paragraphs (a)(4)(i) through (iii) of this section during periods of startup and shutdown.

(i) You can elect to comply with the requirements in paragraphs (a)(1) and (2) of this section.

(ii) You can elect to send any startup or shutdown purge gases to a flare. On and after January 30, 2019, the flare must meet the requirements of §63.670. Prior to January 30, 2019, the flare must meet the design and operating requirements in §63.11(b) or the requirements of §63.670.

(iii) You can elect to send any startup or shutdown purge gases to a thermal oxidizer or incinerator operated at a minimum hourly average temperature of 1,200 degrees Fahrenheit in the firebox and a minimum hourly average outlet oxygen (O<sub>2</sub>) concentration of 2 volume percent (dry basis).

(b) How do I demonstrate initial compliance with the emission limitations and work practice standards? You must:

(1) Install, operate, and maintain a continuous monitoring system according to the requirements in §63.1572 and Table 31 of 40 CFR 63 Subpart UUU.

(2) Conduct each performance test for a sulfur recovery unit not subject to the NSPS for sulfur oxides according to the requirements in §63.1571 and under the conditions specified in Table 32 of this subpart.

(3) Establish each site-specific operating limit in Table 30 of this subpart that applies to you according to the procedures in Table 32 of this subpart.

(4) Correct the reduced sulfur samples to zero percent excess air using Equation 1 of this section.

(5) Demonstrate initial compliance with each emission limitation that applies to you according to Table 33 of 40 CFR 63 Subpart UUU.

(6) Demonstrate initial compliance with the work practice standard in paragraph (a)(3) of this section by submitting the operation, maintenance, and monitoring plan to your permitting authority as part of your notification of compliance status.

(7) Submit the notification of compliance status containing the results of the initial compliance demonstration according to the requirements in §63.1574.

(c) How do I demonstrate continuous compliance with the emission limitations and work practice standards? You must:

(1) Demonstrate continuous compliance with each emission limitation in Tables 29 and 30 of this subpart that applies to you according to the methods specified in Tables 34 and 35 of this subpart.

(2) Demonstrate continuous compliance with the work practice standard in paragraph (a)(3) of this section by complying with the procedures in your operation, maintenance, and monitoring plan.

[67 FR 17773, Apr. 11, 2002, as amended at 80 FR 75275, Dec. 1, 2015; 81 FR 45244, July 13, 2016]

**# 009 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1569]****Subpart UUU-National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units****What are my requirements for HAP emissions from bypass lines?**

(a) What work practice standards must I meet?

(1) You must meet each work practice standard in Table 36 of 40 CFR 63 Subpart UUU that applies to you. You can choose from the four options in paragraphs (a)(1)(i) through (iv) of this section:

(i) You can elect to install an automated system (Option 1);

(ii) You can elect to use a manual lock system (Option 2);

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(iii) You can elect to seal the line (Option 3); or

(iv) You can elect to vent to a control device (Option 4).

(2) As provided in §63.6(g), we, the EPA, may choose to grant you permission to use an alternative to the work practice standard in paragraph (a)(1) of this section.

(3) You must 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.

(b) How do I demonstrate initial compliance with the work practice standards? You must:

(1) If you elect the option in paragraph (a)(1)(i) of this section, conduct each performance test for a bypass line according to the requirements in §63.1571 and under the conditions specified in Table 37 of 40 CFR 63 Subpart UUU.

(2) Demonstrate initial compliance with each work practice standard in Table 36 of 40 CFR 63 Subpart UUU that applies to you according to Table 38 of 40 CFR 63 Subpart UUU.

(3) Demonstrate initial compliance with the work practice standard in paragraph (a)(3) of this section by submitting the operation, maintenance, and monitoring plan to your permitting authority as part of your notification of compliance status.

(4) Submit the notification of compliance status containing the results of the initial compliance demonstration according to the requirements in §63.1574.

(c) How do I demonstrate continuous compliance with the work practice standards? You must:

(1) Demonstrate continuous compliance with each work practice standard in Table 36 of 40 CFR 63 Subpart UUU that applies to you according to the requirements in Table 39 of 40 CFR 63 Subpart UUU.

(2) Demonstrate continuous compliance with the work practice standard in paragraph (a)(2) of this section by complying with the procedures in your operation, maintenance, and monitoring plan.

**VII. ADDITIONAL REQUIREMENTS.****# 010 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1563]****Subpart UUU-National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units****When do I have to comply with this subpart?**

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to the requirements in paragraphs (a)(1) and (2) of this section.

(1) If you startup your affected source before April 11, 2002, then you must comply with the emission limitations and work practice standards for new and reconstructed sources in this subpart no later than April 11, 2002 except as provided in paragraph (d) of this section.

(2) If you startup your affected source after April 11, 2002, you must comply with the emission limitations and work practice standards for new and reconstructed sources in this subpart upon startup of your affected source except as provided in paragraph (d) of this section.

(b) If you have an existing affected source, you must comply with the emission limitations and work practice standards for existing affected sources in this subpart by no later than April 11, 2005 except as specified in paragraphs (c) and (d) of this section.

(c) We will grant an extension of compliance for an existing catalytic cracking unit allowing additional time to meet the emission limitations and work practice standards for catalytic cracking units in §§63.1564 and 63.1565 if you commit to hydrotreating the catalytic cracking unit feedstock and to meeting the emission limitations of this subpart on the same date that your facility meets the final Tier 2 gasoline sulfur control standard (40 CFR part 80, subpart J). To obtain an extension, you must submit a written notification to your permitting authority according to the requirements in §63.1574(e). Your

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notification must include the information in paragraphs (c)(1) and (2) of this section.

(1) Identification of the affected source with a brief description of the controls to be installed (if needed) to comply with the emission limitations for catalytic cracking units in this subpart.

(2) A compliance schedule, including the information in paragraphs (c)(2)(i) through (iv) of this section.

(i) The date by which onsite construction or the process change is to be initiated.

(ii) The date by which onsite construction or the process change is to be completed.

(iii) The date by which your facility will achieve final compliance with both the final Tier 2 gasoline sulfur control standard as specified in §80.195, and the emission limitations and work practice standards for catalytic cracking units in this subpart. In no case will your permitting authority grant an extension beyond the date you are required to meet the Tier 2 gasoline sulfur control standard or December 31, 2009, whichever comes first. If you don't comply with the emission limitations and work practice standards for existing catalytic cracking units by the specified date, you will be out-of-compliance with the requirements for catalytic cracking units beginning April 11, 2005.

(iv) A brief description of interim emission control measures that will be taken to ensure proper operation and maintenance of the process equipment during the period of the compliance extension.

(d) You must comply with the applicable requirements in §§63.1564(a)(5), 63.1565(a)(5) and 63.1568(a)(4) as specified in paragraph (d)(1) or (2) of this section, as applicable.

(1) For sources which commenced construction or reconstruction before June 30, 2014, you must comply with the applicable requirements in §§63.1564(a)(5), 63.1565(a)(5) and 63.1568(a)(4) on or before August 1, 2017 unless an extension is requested and approved in accordance with the provisions in §63.6(i). After February 1, 2016 and prior to the date of compliance with the provisions in §§63.1564(a)(5), 63.1565(a)(5) and 63.1568(a)(4), you must comply with the requirements in §63.1570(c) and (d).

(2) For sources which commenced construction or reconstruction on or after June 30, 2014, you must comply with the applicable requirements in §§63.1564(a)(5), 63.1565(a)(5) and 63.1568(a)(4) on or before February 1, 2016 or upon startup, whichever is later.

(e) If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the requirements in paragraphs (e)(1) and (2) of this section apply.

(1) Any portion of the existing facility that is a new affected source or a new reconstructed source must be in compliance with the requirements of this subpart upon startup.

(2) All other parts of the source must be in compliance with the requirements of this subpart by no later than 3 years after it becomes a major source or, if applicable, the extended compliance date granted according to the requirements in paragraph (c) of this section.

(f) You must meet the notification requirements in §63.1574 according to the schedule in §63.1574 and in 40 CFR part 63, subpart A. Some of the notifications must be submitted before the date you are required to comply with the emission limitations and work practice standards in this subpart.

[67 FR 17773, Apr. 11, 2002, as amended at 81 FR 45243, July 13, 2016]

**# 011 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1565]**

**Subpart UUU-National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units**

**What are my requirements for organic HAP emissions from catalytic cracking units?**

(a) What emission limitations and work practice standards must I meet? You must:

(1) Except as provided in paragraph (a)(5) of this section, meet each emission limitation in Table 8 of this subpart that

**SECTION E. Source Group Restrictions.**

applies to you. If your catalytic cracking unit is subject to the NSPS for carbon monoxide (CO) in §60.103 of this chapter or is subject to §60.102a(b)(4) of this chapter, you must meet the emission limitations for NSPS units. If your catalytic cracking unit is not subject to the NSPS for CO, you can choose from the two options in paragraphs (a)(1)(i) through (ii) of this section:

(i) You can elect to comply with the NSPS requirements (Option 1); or

(ii) You can elect to comply with the CO emission limit (Option 2).

(2) Comply with each site-specific operating limit in Table 9 of this subpart that applies to you.

(3) 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.

(4) The emission limitations and operating limits for organic HAP emissions from catalytic cracking units required in paragraphs (a)(1) and (2) of this section do not apply during periods of planned maintenance preapproved by the applicable permitting authority according to the requirements in §63.1575(j).

(5) On or before the date specified in §63.1563(d), you must comply with one of the two options in paragraphs (a)(5)(i) and (ii) of this section during periods of startup, shutdown and hot standby:

(i) You can elect to comply with the requirements in paragraphs (a)(1) and (2) of this section; or

(ii) You can elect to maintain the oxygen (O<sub>2</sub>) concentration in the exhaust gas from your catalyst regenerator at or above 1 volume percent (dry basis).

(b) How do I demonstrate initial compliance with the emission limitations and work practice standards? You must:

(1) Install, operate, and maintain a continuous monitoring system according to the requirements in §63.1572 and Table 10 of this subpart. Except:

(i) Whether or not your catalytic cracking unit is subject to the NSPS for CO in §60.103 of this chapter, you don't have to install and operate a continuous emission monitoring system if you show that CO emissions from your vent average less than 50 parts per million (ppm), dry basis. You must get an exemption from your permitting authority, based on your written request. To show that the emissions average is less than 50 ppm (dry basis), you must continuously monitor CO emissions for 30 days using a CO continuous emission monitoring system that meets the requirements in §63.1572.

(ii) If your catalytic cracking unit isn't subject to the NSPS for CO, you don't have to install and operate a continuous emission monitoring system or a continuous parameter monitoring system if you vent emissions to a boiler (including a "CO boiler") or process heater that has a design heat input capacity of at least 44 megawatts (MW).

(iii) If your catalytic cracking unit isn't subject to the NSPS for CO, you don't have to install and operate a continuous emission monitoring system or a continuous parameter monitoring system if you vent emissions to a boiler or process heater in which all vent streams are introduced into the flame zone.

(2) Conduct each performance test for a catalytic cracking unit not subject to the NSPS for CO according to the requirements in §63.1571 and under the conditions specified in Table 11 of this subpart.

(3) Establish each site-specific operating limit in Table 9 of this subpart that applies to you according to the procedures in Table 11 of this subpart.

(4) Demonstrate initial compliance with each emission limitation that applies to you according to Table 12 of this subpart.

(5) Demonstrate initial compliance with the work practice standard in paragraph (a)(3) of this section by submitting the operation, maintenance, and monitoring plan to your permitting authority as part of your Notification of Compliance Status according to §63.1574.

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(6) Submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.1574.

(c) How do I demonstrate continuous compliance with the emission limitations and work practice standards? You must:

(1) Demonstrate continuous compliance with each emission limitation in Tables 8 and 9 of this subpart that applies to you according to the methods specified in Tables 13 and 14 of this subpart.

(2) Demonstrate continuous compliance with the work practice standard in paragraph (a)(3) of this section by complying with the procedures in your operation, maintenance, and monitoring plan.

[67 FR 17773, Apr. 11, 2002, as amended at 80 FR 75275, Dec. 1, 2015; 81 FR 45243, July 13, 2016]

**# 012 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1570]****Subpart UUU-National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units****What are my general requirements for complying with this subpart?**

(a) You must be in compliance with all of the non-opacity standards in this subpart at all times.

(b) You must be in compliance with the opacity and visible emission limits in this subpart at all times.

(c) At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements 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, review of operation and maintenance records, and inspection of the source.

(d) During the period between the compliance date specified for your affected source and the date upon which continuous monitoring systems have been installed and validated and any applicable operating limits have been set, you must maintain a log that documents the procedures used to minimize emissions from process and emissions control equipment according to the general duty in paragraph (c) of this section.

(e) [Reserved]

(f) You must report each instance in which you did not meet each emission limitation and each operating limit in this subpart that applies to you. This includes periods of startup, shutdown, and malfunction. You also must report each instance in which you did not meet the work practice standards in this subpart that apply to you. These instances are deviations from the emission limitations and work practice standards in this subpart. These deviations must be reported according to the requirements in §63.1575.

[67 FR 17773, Apr. 11, 2002, as amended at 71 FR 20462, Apr. 20, 2006; 80 FR 75276, Dec. 1, 2015]

**# 013 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.1572]****Subpart UUU-National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units****What are my monitoring installation, operation, and maintenance requirements?**

(a) You must install, operate, and maintain each continuous emission monitoring system according to the requirements in paragraphs (a)(1) through (4) of this section.

(1) You must install, operate, and maintain each continuous emission monitoring system according to the requirements in Table 40 of 40 CFR 63 Subpart UUU.

(2) If you use a continuous emission monitoring system to meet the NSPS CO or SO<sub>2</sub> limit, you must conduct a performance evaluation of each continuous emission monitoring system according to the requirements in §63.8 and Table 40 of 40 CFR 63 Subpart UUU. This requirement does not apply to an affected source subject to the NSPS that has already demonstrated initial compliance with the applicable performance specification.



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- (3) As specified in §63.8(c)(4)(ii), each continuous emission monitoring system must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
- (4) Data must be reduced as specified in §63.8(g)(2).
- (b) You must install, operate, and maintain each continuous opacity monitoring system according to the requirements in paragraphs (b)(1) through (3) of this section.
- (1) Each continuous opacity monitoring system must be installed, operated, and maintained according to the requirements in Table 40 of 40 CFR 63 Subpart UUU.
- (2) If you use a continuous opacity monitoring system to meet the NSPS opacity limit, you must conduct a performance evaluation of each continuous opacity monitoring system according to the requirements in §63.8 and Table 40 of 40 CFR 63 Subpart UUU. This requirement does not apply to an affected source subject to the NSPS that has already demonstrated initial compliance with the applicable performance specification.
- (3) As specified in §63.8(c)(4)(i), each continuous opacity monitoring system must 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.
- (c) Except for flare monitoring systems, you must install, operate, and maintain each continuous parameter monitoring system according to the requirements in paragraphs (c)(1) through (5) of this section. For flares, on and after January 30, 2019, you must install, operate, calibrate, and maintain monitoring systems as specified in §§63.670 and 63.671. Prior to January 30, 2019, you must either meet the monitoring system requirements in paragraphs (c)(1) through (5) of this section or meet the requirements in §§63.670 and 63.671.
- (1) You must install, operate, and maintain each continuous parameter monitoring system according to the requirements in Table 41 of this subpart. You must also meet the equipment specifications in Table 41 of this subpart if pH strips or colorimetric tube sampling systems are used. You must install, operate, and maintain each continuous parameter monitoring system according to the requirements in Table 41 of this subpart. You must meet the requirements in Table 41 of this subpart for BLD systems. Alternatively, before August 1, 2017, you may install, operate, and maintain each continuous parameter monitoring system in a manner consistent with the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment will monitor accurately.
- (2) The continuous parameter monitoring system must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four successive cycles of operation to have a valid hour of data (or at least two if a calibration check is performed during that hour or if the continuous parameter monitoring system is out-of-control).
- (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, except for BLD systems.
- (4) Each continuous parameter monitoring system must determine and record the hourly average of all recorded readings and if applicable, the daily average of all recorded readings for each operating day, except for BLD systems. The daily average must cover a 24-hour period if operation is continuous or the number of hours of operation per day if operation is not continuous, except for BLD systems.
- (5) Each continuous parameter monitoring system must record the results of each inspection, calibration, and validation check.
- (d) You must monitor and collect data according to the requirements in paragraphs (d)(1) and (2) of this section.
- (1) You must conduct all monitoring in continuous operation (or collect data at all required intervals) at all times the affected source is operating.
- (2) You may not use data recorded during required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments) for purposes of this regulation, including data averages and

**SECTION E. Source Group Restrictions.**

calculations, for fulfilling a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

[67 FR 17773, Apr. 11, 2002, as amended at 70 FR 6940, Feb. 9, 2005; 80 FR 75277, Dec. 1, 2015]

\*\*\* **Permit Shield in Effect.** \*\*\*

**SECTION E. Source Group Restrictions.**

Group Name: 11- METHOD OF COMPLIANCE

Group Description: Recordkeeping to demonstrate compliance with boiler &amp; process heater emission limits.

**Sources included in this group**

ID	Name
031	BOILER 1
032	BOILER 2
033	BOILER 3
042	FCC HEATER (NEW UNIT)
044	D.H.T. HEATER 1
049	EAST REFORMER HEATER
050	CRUDE HEATER - NORTH
050A	CRUDE HEATER - SOUTH
051	PRETREATER HEATER
052	WEST REFORMER HEATER
053	SAT GAS PLANT (DEBUT) REBOILER
054	VACUUM PROCESS HEATER
055	D.H.T. HEATER 2
056	PREFACTIONATOR REBOILER 2
057	VOLCANIC HEATER (T-241)
101A	FCC UNIT
102	BLOWDOWN SYSTEM
105	MIDDLE FCC KVG COMPRESSOR
106	EAST FCC KVG COMPRESSOR
107	SAT GAS KVG COMPRESSOR
108	CLAUS SULFUR PLANT 2
108A	SULFUR PLANT 2 HOT OIL HEATER
211	LOADING RACK BOTTOM LOADING

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

a) The permittee shall monitor and maintain records of the :

- i. Quantity and heat content of each type of fuel type used on a daily basis for each affected source.
- ii. Hours of operation and emissions for each month and on a 12-month rolling basis.
- iii. Results of a gas chromatograph analysis of the refinery fuel gas to be conducted twice each week to determine the specific heat content for refinery fuel gas.

**SECTION E. Source Group Restrictions.**

b) Using the data collected in (a), and emission rates in lb/mmbtu from the most recent emission test (or AP-42 emission factor where a stack test has not been completed) the permittee shall calculate the monthly and annual emissions of each pollutant.

c) Monthly emissions for each applicable pollutant shall be used to calculate 12-month rolling summation of emissions, in tons per year (tpy). The records shall be maintained on a monthly and 12-month rolling basis and kept by the facility for a minimum of five years and be made available to the Department upon request.

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION E. Source Group Restrictions.**

Group Name: 1A - STORAGE TANKS

Group Description: Storage Tanks

Sources included in this group

ID	Name
216	MISCELLANEOUS STORAGE TANKS
217	MISCELLANEOUS STORAGE TANKS

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.****# 001 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The source shall be maintained and operated in accordance with the manufacturer's specifications and in accordance with good air pollution control practices.

**# 002 [25 Pa. Code §129.56]****Storage tanks greater than 40,000 gallons capacity containing VOCs**

a) No person may permit the placing, storing, or holding in a stationary tank, reservoir, or other container with a capacity greater than 40,000 gallons of any volatile organic compounds with a vapor pressure greater than 1.5 psia (10.5 kilopascals) under actual storage conditions unless such tank, reservoir or other container is a pressure tank capable of maintaining working pressures sufficient at all times to prevent vapor or gas loss to the atmosphere or is designed and equipped with one of the following vapor loss control devices:

(1) An external or an internal floating roof. This control equipment shall not be permitted if the volatile organic compounds have a vapor pressure of 11 psia (76 kilopascals) or greater under actual storage conditions.

(2) Vapor recovery system. A vapor recovery system consisting of a vapor gathering system capable of collecting the volatile organic compound vapors and gases discharged and a vapor disposal system capable of processing such volatile organic vapors and gases so as to prevent their emission to the atmosphere. Tank gauging and sampling devices shall be gas tight except when gauging or sampling is taking place. The vapor recovery system shall be maintained in good working order and recover at least 80% of the vapors emitted by such tank.

b) An external floating roof must be fitted with a primary seal and a continuous secondary seal extending from the floating roof to the tank wall (rim-mounted secondary seal). The external floating roof shall meet the following equipment requirements:

**SECTION E. Source Group Restrictions.**

(1) Seal closure devices must meet the following requirements:

(i) There are no visible holes, tears, or other openings in the seals or seal fabric.

(ii) The seals are intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall.

(iii) For tanks with vapor-mounted primary seals, the accumulated area of gaps exceeding 1/8 inch in width between the secondary seal and the tank wall shall not exceed 1 square inch per foot of tank diameter. Compliance with this subsection shall be determined by physically measuring the length and width of all gaps around the entire circumference of the secondary seal in each place where a 1/8 inch uniform diameter probe passes freely (without forcing or binding against the seal) between the seal and tank wall and by summing the area of the individual gaps.

(2) Openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves, are as follows:

(i) Equipped with covers, seals, or lids in the closed position except when the openings are in actual use.

(ii) Equipped with projections into the tank which remain below the liquid surface at all times.

(3) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports.

(4) Rim vents are set to open when the roof is being floated off the leg supports or at the recommended setting of the manufacturer.

(5) Emergency roof drains are provided with slotted membrane fabric covers or equivalent covers which cover at least 90% of the area of the opening.

c) An internal floating roof must be fitted with a primary seal and must comply with the following equipment requirements:

(1) A closure seal, or seals, to close the space between the roof edge and tank wall is used.

(2) There are no holes, tears, or other openings in the seal or any seal fabric or materials.

(3) Openings except stub drains are equipped with covers, lids or seals such that:

(i) The cover, lid or seal is in the closed position at all times except when in actual use;

(ii) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports.

(iii) Rim vents, if provided are set to open when the roof is being floated off the roof leg supports or at the recommended setting of the manufacturer.

d) This section shall not apply to petroleum liquid storage vessels which:

(1) Are used to store waxy, heavy pour crude oil.

(2) Have capacities less than 420,000 gallons and are used to store produced crude oil and condensate prior to lease custody transfer.

e) For the purposes of this section, the petroleum liquid storage vessels listed below comply with the equipment requirements of this section. These tanks shall comply with the maintenance, inspection, and reporting requirements of this section. These petroleum liquid storage vessels are those:

(1) Which contain a petroleum liquid with a true vapor pressure less than 4 psia (27.6 kilopascals) and which are of welded construction and which presently possess a metallic-type shoe seal, a liquid-mounted foam seal, a liquid-mounted

**SECTION E. Source Group Restrictions.**

liquid filled type seal, or other closure device of demonstrated equivalence approved by the Department.

(2) Which are of welded construction, equipped with a metallic-type shoe primary seal and has a secondary seal from the top of the shoe seal to the tank wall (shoe-mounted secondary seal).

f) The owner or operator of a petroleum liquid storage vessel with a floating roof subject to this regulation shall:

(1) Perform routine inspections annually in order to insure compliance with subsection (b) or subsection (c). The inspection shall include a visual inspection of the secondary seal gap when inspecting external floating roof tanks.

(2) For external floating roof tanks, measure the secondary seal gap annually in accordance with subsection (b)(1)(iii) when the floating roof is equipped with a vapor mounted primary seal.

(3) Maintain records of the types of volatile petroleum liquids stored, the maximum true vapor pressure of the liquid as stored, and the results of the inspections performed in subsection (f)(1) and (2). Copies of the records shall be retained by the owner or operator for a period of 2 years after the date on which the record was made and shall be made available to the Department upon written or verbal request at a reasonable time.

g) For volatile organic compounds whose storage temperature is governed by ambient weather conditions, the vapor pressure under actual storage conditions shall be determined using a temperature which is representative of the average storage temperature for the hottest month of the year in which such storage takes place.

**# 003 [25 Pa. Code §129.57]****Storage tanks less than or equal to 40,000 gallons capacity containing VOCs**

The provisions of this section shall apply to above ground stationary storage tanks with a capacity equal to or greater than 2,000 gallons which contain volatile organic compounds with vapor pressure greater than 1.5 psia (10.5 kilopascals) under actual storage conditions. Storage tanks covered under this section shall have pressure relief valves which are maintained in good operating condition and which are set to release at no less than 0.7 psig (4.8 kilopascals) of pressure or 0.3 psig (2.1 kilopascals) of vacuum or the highest possible pressure and vacuum in accordance with state or local fire codes or the National Fire Prevention Association guidelines or other national consensus standards acceptable to the Department. 25 PA Code Section 129.56(g) (relating to storage tanks greater than 40,000 gallons capacity containing volatile organic compounds) applies to this section. Petroleum liquid storage vessels which are used to store produced crude oil and condensate prior to lease custody transfer shall be exempt from the requirements of this section.

**# 004 [25 Pa. Code §129.61]****Small gasoline storage tank control (Stage 1 control)**

a) This section applies Statewide.

b) The following tanks and facilities are exempted:

(1) Stationary storage tanks with a capacity of less than 2,000 gallons (7,600 liters) that were installed before January 1, 1979.

(2) Stationary storage tanks with a capacity of less than 250 gallons (950 liters) that were installed after January 1, 1979.

(3) Stationary storage tanks used for agricultural purposes with a capacity of less than 550 gallons (2100 liters). These tanks shall be equipped with a submerged fill pipe.

c) A person may not transfer gasoline from a delivery vessel into a stationary storage tank unless the displaced vapors from the storage tank are transferred to the dispensing delivery tank through a vapor tight return line and unless the receiving tank is equipped with a submerged fill pipe which extends from the filling orifice to within 6 inches of the bottom of the tank. The vapors collected in the dispensing tank shall be disposed of in accordance with 25 PA Code 129.59 or 25 PA Code 129.60(c) (relating to bulk gasoline terminals; and bulk gasoline plants).

d) The dispensing delivery tank shall remain vapor tight at all times. The delivery tank may be opened after the vapors are disposed of in accordance with 25 PA Code 129.59 or 25 PA Code 129.60(c).

**SECTION E. Source Group Restrictions.****VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***



**SECTION E. Source Group Restrictions.**

Group Name: 2 - GENERAL PERMIT TANKS

Group Description: General Permit (Tanks)

Sources included in this group

ID	Name
207A	NAPHTHA STORAGE TANK 337A
210A	FUEL STORAGE TANK 652
216	MISCELLANEOUS STORAGE TANKS
222A	STORAGE TANK 401A
231	TANK 246
247	TANK 247
248	TANK 248
650	TANK 650
651	TANK 651

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

a) For any storage tank, constructed, reconstructed, or modified after May 18, 1978, which uses an external floating roof, the permittee shall conduct testing of the seals in accordance with 40 CFR 60.113a. Tests shall be conducted on the primary seals within 60 days of initial tank filling and every 5 years thereafter. Tests on the secondary seals shall be conducted annually. The Department and the EPA administrator shall be notified of the testing.

b) The Department shall be notified at least 30 days in advance of any testing requires under this General Permit. The EPA administrator shall be notified at least 30 days in advance of any tests for tanks regulated under 40 CFR 60 Subpart Ka.

[GP-2]

**III. MONITORING REQUIREMENTS.****# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

a) For all storage tanks with floating roofs, the permittee shall annually inspect the roof for compliance with the following:

1. There shall be no visible holes, tears or other openings in the seals or seal fabric.
2. All openings, except stub or emergency drains, shall be covered and sealed except when in use.
3. All automatic bleeder or rim vents shall remain closed except when the roof is floated onto or off its leg supports.
4. All emergency drains on external floating roofs shall be provided with a slotted membrane fabric which covers at least 90% of the area opening.
5. All external floating roofs shall be visually inspected annually for secondary seal gap.
6. The secondary seal gap of external floating roof tanks equipped with a vapor mounted primary seal shall be measured annually.

[GP-2]

**SECTION E. Source Group Restrictions.****IV. RECORDKEEPING REQUIREMENTS.****# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

a) For all storage tanks with floating roof, the permittee shall keep a record of the following:

1. The types of volatile organic liquids stored in the tank,
2. The maximum true vapor pressure of the liquids stored, and;
3. The results of all inspections required.

The permittee shall keep the records for a period of 5 years and shall make those records available to the Department upon request.

[GP-2]

**V. REPORTING REQUIREMENTS.****# 004 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

a) The permittee shall immediately notify the Department of any malfunction of any storage tank which results in, or may possibly be resulting in, the emission of air contaminants in excess of the limitations specified in, or established pursuant to, any applicable rule or regulation contained in 25 PA Code, Subchapter C, Article III (relating to air resources).

[GP-2]

**# 005 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

a) 40 CFR 60.4 requires submission of copies of all requests, reports, applications, submittals and other communications to both the EPA and the Department. The EPA submittals shall be forwarded to:

Director  
Air, Toxics and Radiation Division  
US EPA, Region III  
1650 Arch Street  
Philadelphia, PA 19107

b) Any notification required as a result of any condition contained in the General Permit should be directed to the regional office of the Department responsible for the county where the storage tank(s) is(are) located.

c) The permittee shall immediately notify the Department of any malfunction of the source or any associated air cleaning device(s) which result in, or may possibly be resulting in, the emission of air contaminants in excess of the limitations specified in, or established pursuant to, any applicable rule or regulation contained in Article III of the Rules and Regulations of the Department.

d) The permittee shall notify the Department and EPA, as appropriate, of changes in the products stored in a tank and describe how the changes affects applicable requirements and how those applicable requirements are being met. In accordance with 25 PA Code 127.14(c), this notice shall be provided 7 days prior to a change that involves no equipment changes or 15 days prior to a change that involves equipment changes.

[GP-2]

**VI. WORK PRACTICE REQUIREMENTS.****# 006 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

a) The storage tank and any associated cleaning device(s) shall be:

1. Operated in such a manner as not to cause air pollution.

**SECTION E. Source Group Restrictions.**

2. Operated and maintained in manner consistent with good operating and maintenance practices.
3. Operated and maintained in accordance with the manufacturer's specifications and the applicable terms and conditions of the Storage Tank General Permit.

[GP-2]

**VII. ADDITIONAL REQUIREMENTS.****# 007 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

This condition applies to any storage tank located in a facility regulated by 40 CFR 63 Subparts G and CC (relating to Maximum Achievable Control Technology standards for Petroleum Refineries).

a) Existing tanks, as described below, shall comply with the provisions of 40 CFR 63 Subparts CC and G by August 18, 2005:

1. Tanks with a capacity of 75 cubic meters (19,812 gallons) and less than 151 cubic meters (39,889 gallons) storing organic hazardous air pollutants with vapor pressures of less than 11.1 psia (76.6 kPa) and equal to or larger than 1.9 psia (13.1 kPa).
2. Tanks with a capacity of 151 cubic meters (39,889 gallons) or greater storing organic hazardous air pollutants with vapor pressures of less than 11.1 psia (76.6 kPa) and equal to or larger than 0.75 psia (5.2kPa).

b) New tanks or tanks modified after July 14, 1994, shall comply with the provisions of 40 CFR 63 Subparts F and G upon construction. Furthermore, new tanks, as described in the following are subject to 40 CFR 63 Subparts G and CC:

1. Tanks with a capacity of 38 cubic meters (10,038 gallons) and less than 151 cubic meters (39,889 gallons) storing organic hazardous air pollutants with vapor pressures of less than 11.1 psia (76.6 kPa) and equal to or larger than 1.9 psia (13.1 kPa).
2. Tanks with a capacity of 151 cubic meters (39,889 gallons) or greater storing organic hazardous air pollutants with vapor pressures of less than 11.1 psia (76.6 kPa) and equal to or larger than 0.1 psia (0.7 kPa).

c) Fixed roof tanks shall use an internal floating roof with a liquid seal, mechanical seal or a double set of seals in conformance with 40 CFR 63.119 and 63.646. If a vapor mounted seal is in place as of July 15, 1994, the tank shall be equipped with either a liquid seal, mechanical seal or a double set of seals the next time the tank is emptied or degasses but in no event later than August 18, 2005.

d) External floating roof tanks shall be equipped with a double set of seals in conformance with 40 CFR 63.119 and 63.646. The primary seal shall be either a mechanical seal or a liquid mounted seal. Any existing tank shall be equipped with the previously described seals the next time the tank is emptied or degassed but in no event later than August 18, 2005.

e) Any tank may use a closed vent with a control device which has received prior approval by the Department and is capable of reducing VOC emissions by 95% or more and conforms to the requirements of 40 CFR 63.119 and 63.446.

f) Inspection, reporting and recordkeeping shall be done in conformance with 40 CFR 63 Subpart CC.

[GP-2]

**# 008 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

This condition applies to any storage tank located in a facility regulated by 40 CFR 63 Subpart R (relating to Maximum Achievable Control Technology standards for Gasoline Distribution).

a) Existing tanks larger or equal to 75 cubic meters (19,812 gallons) as described below, shall comply with the provisions of 40 CFR 63 Subpart R by December 15, 1997:

**SECTION E. Source Group Restrictions.**

1. Fixed roof tanks with floating internal roof shall be fitted with either liquid filled seal, double seals, or a mechanical shoe seal.
  2. Tanks with external floating roof shall be fitted with primary (mechanical or liquid) and secondary seal.
  3. All tanks will be fitted with a closed vent system and control device to reduce inlet VOC emission by 95% or greater.
  4. Tanks may be allowed to be fitted with alternative means of emission limitation, if judged by the Administrator to achieve equivalent reduction as achieved by 1, 2, & 3, above.
  5. Tanks with noncontact external floating roofs shall cover and seal openings in accordance with the requirements in 40 CFR 60.112b(a)(2)(ii).
- b) New tanks larger or equal to 75 cubic meters (19,812 gallons) as described in (a), above, shall comply with the provisions of 40 CFR 63 Subpart R upon startup.

[GP-2]

**# 009 [25 Pa. Code §127.441]**

**Operating permit terms and conditions.**

a) Construction requirements for tanks with capacities equal to or less than 40,000 gallons and constructed, reconstructed or last modified prior to July 23, 1984:

1. Tanks which store volatile organic liquids as defined in 40 CFR 60.111b with a storage vapor pressure of 1.5 psia or greater shall be constructed with a relief valve set to discharge at no less than 0.7 psig of pressure or 0.3 psig of vacuum.

b) Construction requirements for tanks with capacities greater than 75 cubic meters (19,812 gallons) and equal to or less than 151 cubic meters (39,889 gallons) and constructed, reconstructed or last modified on or after July 23, 1984:

1. Tanks which store volatile organic liquids at vapor pressures greater than 4 psia and lower than 11.1 psia shall be constructed with one of the following control systems which meet the requirements of 40 CFR 60.112b:

a) A fixed roof with an internal floating roof with a liquid seal, mechanical seal or a double set of seals.

b) An external floating roof equipped with a double set of seals. The primary seal shall either be a mechanical seal or a liquid mounted seal.

c) A closed vent with a control device, which has received prior approval by the Department, capable of reducing volatile organic compound (VOC) emissions by 95% or more.

c) Construction requirements for tanks with capacities equal to or greater than 40,000 gallons and constructed, reconstructed or last modified prior to July 23, 1984:

1. Tanks which store volatile organic liquids at vapor pressures greater than 1.5 psia and lower than 11.1 psia, shall include one of the following control systems which meet the requirements of 25 PA Code 129.56:

a) A fixed roof with an internal floating roof equipped with a primary seal.

b) An external floating roof with a double set of seals.

c) A closed vent system with a control device, which has received prior approval by the Department, capable of reducing VOC emissions by 80% or more.

d) Construction requirements for tanks with capacities equal to or greater than 40,000 gallons storing petroleum liquids and constructed, reconstructed or last modified after May 18, 1978, and prior to July 23, 1984:

1. Tanks which store volatile organic liquids at vapor pressures greater than 1.5 psia and lower than 11.1 psia, shall include one of the following control systems which meet the requirements of 40 CFR 60.112a:

**SECTION E. Source Group Restrictions.**

- a) A fixed roof with an internal floating roof.
- b) An external floating roof.
- c) A closed vent system with a control device, which has received prior approval by the Department, capable of reducing VOC emissions by 95% or more.
- e) Construction requirements for tanks with capacities equal to or greater than 151 cubic meters (39,889 gallons) and constructed, reconstructed or last modified on or after July 23, 1984:
  1. Tanks which store volatile organic liquids at vapor pressures greater than 0.75 psia and lower than 11.1 psia, shall include one of the following control systems which meet the requirements of 40 CFR 60.112b:
    - a) A fixed roof with an internal floating roof equipped with a liquid seal, a mechanical seal or a double set of seals.
    - b) An external floating roof equipped with a double set of seals. The primary seal shall be either a mechanical seal or a liquid mounted seal.
    - c) A closed vent system with a control device, which has received prior approval by the Department, capable of reducing VOC emissions by 95% or more.
  - f) Operating requirements for tanks with capacities greater than 40 cubic meters (10,556 gallons) which were constructed, reconstructed or last modified on after July 23, 1984:
    1. The storage tank shall operate in accordance with the following conditions:
      - a) The storage tank is subject to the emission limitations of 40 CFR 60 Subpart Kb.
      - b) The storage tank shall be tested in conformance with the requirements of 40 CFR 60.113b.
      - c) The permittee shall keep records of tank usage, descriptions, certifications, tests, inspections, and repairs in accordance with 40 CFR 60.115b.
      - d) The permittee shall monitor storage tank operations in conformance with 40 CFR 60.116b.

[GP-2]

**# 010 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

- a) Any storage tank shall comply with the requirements of 25 PA Code 127.514 (relating to general operating permits at Title V facilities).
- b) Unless precluded by the Clean Air Act or regulations promulgated thereunder, the permit shield provision contained in 25 PA Code 127.516 (relating to permit shield) shall apply to storage tanks operating under this Storage Tank General Permit.
- c) Nothing in this Storage Tank General Permit relieves the permittee from its obligation to comply with all applicable Federal, state, and local laws and regulations. This Storage Tank General Permit does not prohibit changes in the products stored in a particular tank provided that the tank meets all applicable requirements for the storage of the alternate product and the change is reported in accordance with 25 PA Code 127.14(c).
- d) Whenever a conflict occurs between this General Permit and any of the regulations listed below, the permittee shall, in all cases, meet the more stringent requirement:

1. 25 PA Code 129.56 and 129.57

**SECTION E. Source Group Restrictions.**

2. 40 CFR 60 Subparts K, Ka, and Kb

3. 40 CFR 63 Subparts F, G, and CC

[GP-2]

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION E. Source Group Restrictions.**

Group Name: 3 - GROUP 1 (MACT) TANKS

Group Description:

Sources included in this group

ID	Name
203	FUEL STORAGE TANK 430
204	FUEL STORAGE TANK 431
205	FUEL STORAGE TANK 234
206	FUEL STORAGE TANK 236
209	FUEL STORAGE TANK 432
212	STORAGE TANK 240
213	GASOLINE STORAGE TANK 244
214	STORAGE TANK 245
216	MISCELLANEOUS STORAGE TANKS

**I. RESTRICTIONS.****Emission Restriction(s).**

# 001 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.642]

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
General standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.642(a) - (m)

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

# 002 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.655]

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Reporting and recordkeeping requirements.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §63.655(d) - (i)

**VI. WORK PRACTICE REQUIREMENTS.**

# 003 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.646]

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Storage vessel provisions.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

**SECTION E. Source Group Restrictions.**

40 CFR 63.646(a) - (l)

**# 004 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.648]**

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Equipment leak standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.648(a) - (i)

**# 005 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.649]**

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Alternative means of emission limitation: Connectors in gas/vapor service and light liquid service.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.649(a) - (g)

**VII. ADDITIONAL REQUIREMENTS.**

**# 006 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.640]**

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Applicability and designation of affected source.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.640(a) - (r)

**\*\*\* Permit Shield in Effect. \*\*\***



**SECTION E. Source Group Restrictions.**

Group Name: 3A - GROUP 2 (MACT) TANKS

Group Description:

Sources included in this group

ID	Name
201	FUEL STORAGE TANK 409
202	FUEL STORAGE TANK 410
207A	NAPHTHA STORAGE TANK 337A
210A	FUEL STORAGE TANK 652
216	MISCELLANEOUS STORAGE TANKS
217	MISCELLANEOUS STORAGE TANKS
222A	STORAGE TANK 401A
224	TANK 326
650	TANK 650
651	TANK 651

**I. RESTRICTIONS.****Emission Restriction(s).**

# 001 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.642]

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****General standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.642(a) - (m)

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

# 002 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.655]

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Reporting and recordkeeping requirements.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §63.655(d) - (i)

**VI. WORK PRACTICE REQUIREMENTS.**

# 003 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.646]

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****Storage vessel provisions.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional

**SECTION E. Source Group Restrictions.**

Requirements for condition] as identified below:

40 CFR 63.646(c), (d), (e), (g) - (l)

**# 004 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.648]**

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Equipment leak standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.648(a) - (i)

**# 005 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.649]**

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Alternative means of emission limitation: Connectors in gas/vapor service and light liquid service.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.649(a) - (g)

**VII. ADDITIONAL REQUIREMENTS.**

**# 006 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.640]**

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Applicability and designation of affected source.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.640(a) - (r)

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION E. Source Group Restrictions.**

Group Name: 4 - SUBPART K(B) TANKS

Group Description:

Sources included in this group

ID	Name
201	FUEL STORAGE TANK 409
202	FUEL STORAGE TANK 410
207A	NAPHTHA STORAGE TANK 337A
210A	FUEL STORAGE TANK 652
213	GASOLINE STORAGE TANK 244
214	STORAGE TANK 245
215	SOUR WATER/OIL TANK 434
222A	STORAGE TANK 401A
224	TANK 326
650	TANK 650
651	TANK 651

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.****# 001 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.113b]****Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984****Testing and procedures.**

The owner or operator of each storage vessel as specified in 40 CFR 60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of 40 CFR 60.112b.

a) After installing the control equipment required to meet 40 CFR 60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:

(1) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

(2) For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in 40 CFR 60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(3) For vessels equipped with a double-seal system as specified in 40 CFR 60.112b(a)(1)(ii)(B):

(i) Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or

(ii) Visually inspect the vessel as specified in paragraph (a)(2) of this section.

(4) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted

**SECTION E. Source Group Restrictions.**

membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal 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, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs (a)(2) and (a)(3)(ii) of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph (a)(3)(i) of this section.

(5) Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs (a)(1) and (a)(4) of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph (a)(4) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

b) After installing the control equipment required to meet 40 CFR 60.112b(a)(2) (external floating roof), the owner or operator shall:

(1) Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequency.

(i) Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.

(ii) Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.

(iii) If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(2) Determine gap widths and areas in the primary and secondary seals individually by the following procedures:

(i) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.

(ii) Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location.

(iii) The total surface area of each gap described in paragraph (b)(2)(ii) of this section 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.

(3) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph (b)(4) of this section.

(4) Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in (b)(4)(i) and (ii) of this section:

(i) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 Cm<sup>2</sup> per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.

(A) One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface.

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(B) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(ii) The secondary seal is to meet the following requirements:

(A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section.

(B) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm<sup>2</sup> per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

(C) There are to be no holes, tears, or other openings in the seal or seal fabric.

(iii) If a failure that is detected during inspections required in paragraph (b)(1) of 40 CFR 60.113b(b) cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in 40 CFR 60.115b(b)(4). Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(5) Notify the Administrator 30 days in advance of any gap measurements required by paragraph (b)(1) of this section to afford the Administrator the opportunity to have an observer present.

(6) Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

(i) If 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, 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 VOL.

(ii) For all the inspections required by paragraph (b)(6) of this section, the owner or operator shall notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph (b)(6) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

c) The owner or operator of each source that is equipped with a closed vent system and control device as required in 40 CFR 60.112b (a)(3) or (b)(2) (other than a flare) is exempt from 40 CFR 60.8 of the General Provisions and shall meet the following requirements.

(1) Submit for approval by the Administrator as an attachment to the notification required by 40 CFR 60.7(a)(1) or, if the facility is exempt from 40 CFR 60.7(a)(1), as an attachment to the notification required by 40 CFR 60.7(a)(2), an operating plan containing the information listed below.

(i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in

**SECTION E. Source Group Restrictions.**

conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.

d) The owner or operator of each source that is equipped with a closed vent system and a flare to meet the requirements in 40 CFR 60.112b (a)(3) or (b)(2) shall meet the requirements as specified in the general control device requirements, 40 CFR 60.18 (e) and (f).

**III. MONITORING REQUIREMENTS.**

**# 002 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.116b]  
Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984  
Monitoring of operations.**

a) The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source.

b) The owner or operator of each storage vessel as specified in 40 CFR 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. Each storage vessel with a design capacity less than 75 m<sup>3</sup> is subject to no provision of this subpart other than those required by this paragraph.

c) Except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall 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.

d) Except as provided in paragraph (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

e) Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.

(1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

(2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

(i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference--see 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

(ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

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- (3) For other liquids, the vapor pressure:
- (i) May be obtained from standard reference texts, or
  - (ii) Determined by ASTM Method D2879-83 (incorporated by reference--see 60.17); or
  - (iii) Measured by an appropriate method approved by the Administrator; or
  - (iv) Calculated by an appropriate method approved by the Administrator.
- f) The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.
- (1) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (e) of this section.
- (2) For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in 40 CFR 60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:
- (i) ASTM Method D2879-83 (incorporated by reference--see 60.17); or
  - (ii) ASTM Method D323-82 (incorporated by reference--see 60.17); or
  - (iii) As measured by an appropriate method as approved by the Administrator.
- g) The owner or operator of each vessel equipped with a closed vent system and control device meeting the specifications of 40 CFR 60.112b is exempt from the requirements of paragraphs (c) and (d) of this section.

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

**# 003 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.115b]  
Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984  
Reporting and recordkeeping requirements.**

The owner or operator of each storage vessel as specified in 40 CFR 60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of this section depending upon the control equipment installed to meet the requirements of 40 CFR 60.112b. The owner or operator shall keep copies of all reports and records required by this section, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment.

a) After installing control equipment in accordance with 40 CFR 60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of 40 CFR 60.112b(a)(1) and 40 CFR 60.113b(a)(1). This report shall be an attachment to the notification required by 40 CFR 60.7(a)(3).

(2) Keep a record of each inspection performed as required by 40 CFR 60.113b (a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

(3) If any of the conditions described in 40 CFR 60.113b(a)(2) are detected during the annual visual inspection required by

**SECTION E. Source Group Restrictions.**

40 CFR 60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

(4) After each inspection required by 40 CFR 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in 40 CFR 60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of 40 CFR 61.112b(a)(1) or 40 CFR 60.113b(a)(3) and list each repair made.

b) After installing control equipment in accordance with 40 CFR 61.112b(a)(2) (external floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of 40 CFR 60.112b(a)(2) and 40 CFR 60.113b(b)(2), (b)(3), and (b)(4) shall be an attachment to the notification required by 40 CFR 60.7(a)(3).

(2) Within 60 days of performing the seal gap measurements required by 40 CFR 60.113b(b)(1), furnish the Administrator with a report that contains:

- (i) The date of measurement.
- (ii) The raw data obtained in the measurement.
- (iii) The calculations described in 40 CFR 60.113b (b)(2) and (b)(3).

(3) Keep a record of each gap measurement performed as required by 40 CFR 60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain:

- (i) The date of measurement.
- (ii) The raw data obtained in the measurement.
- (iii) The calculations described in 40 CFR 60.113b (b)(2) and (b)(3).

(4) After each seal gap measurement that detects gaps exceeding the limitations specified by 40 CFR 60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in paragraph (b)(2) of this section and the date the vessel was emptied or the repairs made and date of repair.

c) After installing control equipment in accordance with 40 CFR 60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.

- (1) A copy of the operating plan.
- (2) A record of the measured values of the parameters monitored in accordance with 40 CFR 60.113b(c)(2).

d) After installing a closed vent system and flare to comply with 40 CFR 60.112b, the owner or operator shall meet the following requirements.

(1) A report containing the measurements required by 40 CFR 60.18(f) (1), (2), (3), (4), (5), and (6) shall be furnished to the Administrator as required by 40 CFR 60.8 of the General Provisions. This report shall be submitted within 6 months of the initial start-up date.

(2) Records shall be kept of all periods of operation during which the flare pilot flame is absent.

(3) Semiannual reports of all periods recorded under 40 CFR 60.115b(d)(2) in which the pilot flame was absent shall be furnished to the Administrator.



**SECTION E. Source Group Restrictions.****VI. WORK PRACTICE REQUIREMENTS.****# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.112b]****Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984  
Standard for volatile organic compounds (VOC).**

a) The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

(1) A fixed roof in combination with an internal floating roof meeting the following specifications:

(i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

(ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

(A) A foam-or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam-or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

(B) 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. The lower seal may be vapor-mounted, but both must be continuous.

(C) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

(iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(iv) 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.

(v) Automatic bleeder vents shall be equipped with a gasket and 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.

(vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.

(vii) 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.

(viii) 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.

(ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(2) An external floating roof. An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications:

**SECTION E. Source Group Restrictions.**

(i) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in 40 CFR 60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.

(B) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in 40 CFR 60.113b(b)(4).

(ii) Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. 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 legs 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.

(iii) 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.

(3) A closed vent system and control device meeting the following specifications:

(i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, 40 CFR 60.485(b).

(ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (40 CFR 60.18) of the General Provisions.

(4) A system equivalent to those described in paragraphs (a)(1), (a)(2), or (a)(3) of this section as provided in 40 CFR 60.114b of this subpart.

b) The owner or operator of each storage vessel with a design capacity greater than or equal to 75 m<sup>3</sup> which contains a VOL that, as stored, has a maximum true vapor pressure greater than or equal to 76.6 kPa shall equip each storage vessel with one of the following:

(1) A closed vent system and control device as specified in 40 CFR 60.112b(a)(3).

(2) A system equivalent to that described in paragraph (b)(1) as provided in 40 CFR 60.114b of this subpart.

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.114b]****Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984  
Alternative means of emission limitation.**

a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in emissions at least equivalent to the reduction in emissions achieved by any requirement in 40 CFR 60.112b, the Administrator will publish in the Federal Register a notice permitting the use of the alternative means for purposes of compliance with that requirement.

b) Any notice under paragraph (a) of this section will be published only after notice and an opportunity for a hearing.

c) Any person seeking permission under this section shall submit to the Administrator a written application including:

**SECTION E. Source Group Restrictions.**

- (1) An actual emissions test that uses a full-sized or scale-model storage vessel that accurately collects and measures all VOC emissions from a given control device and that accurately simulates wind and accounts for other emission variables such as temperature and barometric pressure.
- (2) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.
- d) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as specified in 40 CFR 60.112b.

**VII. ADDITIONAL REQUIREMENTS.****# 006 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.110b]  
Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984  
Applicability and designation of affected facility.**

- a) Except as provided in paragraphs (b), (c), and (d) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 40 cubic meters (m<sup>3</sup>) that is used to store volatile organic liquids (VOL's) for which construction, reconstruction, or modification is commenced after July 23, 1984.
- b) Except as specified in paragraphs (a) and (b) of 40 CFR 60.116b, storage vessels with design capacity less than 75 m<sup>3</sup> are exempt from the General Provisions (part 60, subpart A) and from the provisions of this subpart.
- c) Except as specified in paragraphs (a) and (b) of 40 CFR 60.116b, vessels either with a capacity greater than or equal to 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure less than 3.5 kPa or with a capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure less than 15.0 kPa are exempt from the General Provisions (part 60, subpart A) and from the provisions of this subpart.
- d) This subpart does not apply to the following:
  - (1) Vessels at coke oven by-product plants.
  - (2) Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere.
  - (3) Vessels permanently attached to mobile vehicles such as trucks, railcars, barges, or ships.
  - (4) Vessels with a design capacity less than or equal to 1,589.874 m<sup>3</sup> used for petroleum or condensate stored, processed, or treated prior to custody transfer.
  - (5) Vessels located at bulk gasoline plants.
  - (6) Storage vessels located at gasoline service stations.
  - (7) Vessels used to store beverage alcohol.

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION E. Source Group Restrictions.**

Group Name: 5 - WASTEWATER

Group Description: Wastewater

Sources included in this group

ID	Name
110	WASTEWATER FUGITIVE EMISSION
219	WASTEWATER SEPARATORS
220	WASTEWATER SYSTEMS

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.642]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries****General standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.642(a) - (m)

**II. TESTING REQUIREMENTS.****# 002 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.696]****Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems****Performance test methods and procedures and compliance provisions.**

a) Before using any equipment installed in compliance with the requirements of 40 CFR 60.692-2, 40 CFR 60.692-3, 40 CFR 60.692-4, 40 CFR 60.692-5, or 40 CFR 60.693, the owner or operator shall inspect such equipment for indications of potential emissions, defects, or other problems that may cause the requirements of this subpart not to be met. Points of inspection shall include, but are not limited to, seals, flanges, joints, gaskets, hatches, caps, and plugs.

b) The owner or operator of each source that is equipped with a closed vent system and control device as required in 40 CFR 60.692-5 (other than a flare) is exempt from 40 CFR 60.8 of the General Provisions and shall use Method 21 to measure the emission concentrations, using 500 ppm as the no detectable emission limit. The instrument shall be calibrated each day before using. The calibration gases shall be:

(1) Zero air (less than 10 ppm of hydrocarbon in air), and

(2) A mixture of either methane or n-hexane and air at a concentration of approximately, but less than, 2,500 ppm methane or n-hexane.

[revised from 10,000 ppm to 2,500 ppm by Plan Approval 62-017G]

c) The owner or operator shall conduct a performance test initially, and at other times as requested by the Administrator, using the test methods and procedures in 40 CFR 60.18(f) to determine compliance of flares.

d) After installing the control equipment required to meet 40 CFR 60.693-2(a) or whenever sources that have ceased to treat refinery wastewater for a period of 1 year or more are placed back into service, the owner or operator shall determine compliance with the standards in 40 CFR 60.693-2(a) as follows:

(1) The maximum gap widths and maximum gap areas between the primary seal and the separator wall and between the secondary seal and the separator wall shall be determined individually within 60 calendar days of the initial installation of the floating roof and introduction of refinery wastewater or 60 calendar days after the equipment is placed back into service using the following procedure when the separator is filled to the design operating level and when the roof is floating off the roof supports.

(i) Measure seal gaps around the entire perimeter of the separator in each place where a 0.32 cm (0.125 in.) diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the separator and measure the gap width and perimetrical distance of each such location.

**SECTION E. Source Group Restrictions.**

(ii) The total surface area of each gap described in (d)(1)(i) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the wall to the seal and multiplying each such width by its respective perimetrical distance.

(iii) Add the gap surface area of each gap location for the primary seal and the secondary seal individually, divide the sum for each seal by the nominal perimeter of the separator basin and compare each to the maximum gap area as specified in 40 CFR 60.693-2.

(2) The gap widths and total gap area shall be determined using the procedure in paragraph (d)(1) of this section according to the following frequency:

(i) For primary seals, once every 5 years.

(ii) For secondary seals, once every year.

**III. MONITORING REQUIREMENTS.****# 003 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.695]****Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems  
Monitoring of operations.**

a) Each owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment, unless alternative monitoring procedures or requirements are approved for that facility by the Administrator.

(1) Where a thermal incinerator is used for VOC emission reduction, a temperature monitoring device equipped with a continuous recorder shall be used to measure the temperature of the gas stream in the combustion zone of the incinerator. The temperature monitoring device shall have an accuracy of 1 percent of the temperature being measured in C or +/- 0.5C (+/- 1.0F), whichever is greater.

(2) Where a catalytic incinerator is used for VOC emission reduction, temperature monitoring devices, each equipped with a continuous recorder shall be used to measure the temperature in the gas stream immediately before and after the catalyst bed of the incinerator. The temperature monitoring devices shall have an accuracy of 1 percent of the temperature being measured in C or +/- 0.5C (+/- 1.0F), whichever is greater.

(3) Where a carbon adsorber is used for VOC emissions reduction, a monitoring device that continuously indicates and records the VOC concentration level or reading of organics in the exhaust gases of the control device outlet gas stream or inlet and outlet gas stream shall be used.

(4) Where a flare is used for VOC emission reduction, the owner or operator shall comply with the monitoring requirements of 40 CFR 60.18(f)(2).

b) Where a VOC recovery device other than a carbon adsorber is used to meet the requirements specified in 40 CFR 60.692-5(a), the owner or operator shall provide to the Administrator information describing the operation of the control device and the process parameter(s) that would indicate proper operation and maintenance of the device. The Administrator may request further information and will specify appropriate monitoring procedures or requirements.

c) An alternative operational or process parameter may be monitored if it can be demonstrated that another parameter will ensure that the control device is operated in conformance with these standards and the control device's design specifications.

**IV. RECORDKEEPING REQUIREMENTS.****# 004 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.697]****Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems  
Recordkeeping requirements.**

a) Each owner or operator of a facility subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section. All records shall be retained for a period of 2 years after being recorded unless otherwise noted.

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b)(1) For individual drain systems subject to 40 CFR 60.692-2, the location, date, and corrective action shall be recorded for each drain when the water seal is dry or otherwise breached, when a drain cap or plug is missing or improperly installed, or other problem is identified that could result in VOC emissions, as determined during the initial and periodic visual or physical inspection.

(2) For junction boxes subject to 40 CFR 60.692-2, the location, date, and corrective action shall be recorded for inspections required by 40 CFR 60.692-2(b) when a broken seal, gap, or other problem is identified that could result in VOC emissions.

(3) For sewer lines subject to 40 CFR 60.692-2 and 40 CFR 60.693-1(e), the location, date, and corrective action shall be recorded for inspections required by 40 CFR 60.692-2(c) and 40 CFR 60.693-1(e) when a problem is identified that could result in VOC emissions.

c) For oil-water separators subject to 40 CFR 60.692-3, the location, date, and corrective action shall be recorded for inspections required by 40 CFR 60.692-3(a) when a problem is identified that could result in VOC emissions.

d) For closed vent systems subject to 40 CFR 60.692-5 and completely closed drain systems subject to 40 CFR 60.693-1, the location, date, and corrective action shall be recorded for inspections required by 40 CFR 60.692-5(e) during which detectable emissions are measured or a problem is identified that could result in VOC emissions.

e)(1) If an emission point cannot be repaired or corrected without a process unit shutdown, the expected date of a successful repair shall be recorded.

(2) The reason for the delay as specified in 40 CFR 60.692-6 shall be recorded if an emission point or equipment problem is not repaired or corrected in the specified amount of time.

(3) The signature of the owner or operator (or designee) whose decision it was that repair could not be effected without refinery or process shutdown shall be recorded.

(4) The date of successful repair or corrective action shall be recorded.

f)(1) A copy of the design specifications for all equipment used to comply with the provisions of this subpart shall be kept for the life of the source in a readily accessible location.

(2) The following information pertaining to the design specifications shall be kept.

(i) Detailed schematics, and piping and instrumentation diagrams.

(ii) The dates and descriptions of any changes in the design specifications.

(3) The following information pertaining to the operation and maintenance of closed drain systems and closed vent systems shall be kept in a readily accessible location.

(i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions shall be kept for the life of the facility. This documentation is to include a general description of the gas streams that enter the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816C (1,500F) is used to meet the 95-percent requirement, documentation that those conditions exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the operating parameter (or parameters) to be monitored to ensure that the control device will be operated in conformance with these standards and the control device's design specifications and an explanation of the criteria used for selection of that parameter (or parameters) shall be kept for the life of the facility.

(iii) Periods when the closed vent systems and control devices required in 40 CFR 60.692 are not operated as designed, including periods when a flare pilot does not have a flame shall be recorded and kept for 2 years after the information is recorded.

**SECTION E. Source Group Restrictions.**

- (iv) Dates of startup and shutdown of the closed vent system and control devices required in 40 CFR 60.692 shall be recorded and kept for 2 years after the information is recorded.
- (v) The dates of each measurement of detectable emissions required in 40 CFR 60.692, 40 CFR 60.693, or 40 CFR 60.692-5 shall be recorded and kept for 2 years after the information is recorded.
- (vi) The background level measured during each detectable emissions measurement shall be recorded and kept for 2 years after the information is recorded.
- (vii) The maximum instrument reading measured during each detectable emission measurement shall be recorded and kept for 2 years after the information is recorded.
- (viii) Each owner or operator of an affected facility that uses a thermal incinerator shall maintain continuous records of the temperature of the gas stream in the combustion zone of the incinerator and records of all 3-hour periods of operation during which the average temperature of the gas stream in the combustion zone is more than 28C (50F) below the design combustion zone temperature, and shall keep such records for 2 years after the information is recorded.
- (ix) Each owner or operator of an affected facility that uses a catalytic incinerator shall maintain continuous records of the temperature of the gas stream both upstream and downstream of the catalyst bed of the incinerator, records of all 3-hour periods of operation during which the average temperature measured before the catalyst bed is more than 28C (50F) below the design gas stream temperature, and records of all 3-hour periods during which the average temperature difference across the catalyst bed is less than 80 percent of the design temperature difference, and shall keep such records for 2 years after the information is recorded.
- (x) Each owner or operator of an affected facility that uses a carbon adsorber shall maintain continuous records of the VOC concentration level or reading of organics of the control device outlet gas stream or inlet and outlet gas stream and records of all 3-hour periods of operation during which the average VOC concentration level or reading of organics in the exhaust gases, or inlet and outlet gas stream, is more than 20 percent greater than the design exhaust gas concentration level, and shall keep such records for 2 years after the information is recorded.
- g) If an owner or operator elects to install a tightly sealed cap or plug over a drain that is out of active service, the owner or operator shall keep for the life of a facility in a readily accessible location, plans or specifications which indicate the location of such drains.
- h) For stormwater sewer systems subject to the exclusion in 40 CFR 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.
- (i) For ancillary equipment subject to the exclusion in 40 CFR 60.692-1(d)(2), an owner or operator shall keep for the life of a facility in a readily accessible location, plans or specifications which demonstrate that the ancillary equipment does not come in contact with or store oily wastewater.
- j) For non-contact cooling water systems subject to the exclusion in 40 CFR 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.

**V. REPORTING REQUIREMENTS.**

**# 005 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.698]  
Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems  
Reporting requirements.**

- a) An owner or operator electing to comply with the provisions of 40 CFR 60.693 shall notify the Administrator of the alternative standard selected in the report required in 40 CFR 60.7.
- b)(1) Each owner or operator of a facility subject to this subpart shall submit to the Administrator within 60 days after initial startup a certification that the equipment necessary to comply with these standards has been installed and that the required initial inspections or tests of process drains, sewer lines, junction boxes, oil-water separators, and closed vent systems and control devices have been carried out in accordance with these standards. Thereafter, the owner or operator shall



**SECTION E. Source Group Restrictions.**

submit to the Administrator semiannually a certification that all of the required inspections have been carried out in accordance with these standards.

(2) Each owner or operator of an affected facility that uses a flare shall submit to the Administrator within 60 days after initial startup, as required under 40 CFR 60.8(a), a report of the results of the performance test required in 40 CFR 60.696(c).

c) A report that summarizes all inspections when a water seal was dry or otherwise breached, when a drain cap or plug was missing or improperly installed, or when cracks, gaps, or other problems were identified that could result in VOC emissions, including information about the repairs or corrective action taken, shall be submitted initially and semiannually thereafter to the Administrator.

d) As applicable, a report shall be submitted semiannually to the Administrator that indicates:

(1) Each 3-hour period of operation during which the average temperature of the gas stream in the combustion zone of a thermal incinerator, as measured by the temperature monitoring device, is more than 28C (50F) below the design combustion zone temperature,

(2) Each 3-hour period of operation during which the average temperature of the gas stream immediately before the catalyst bed of a catalytic incinerator, as measured by the temperature monitoring device, is more than 28C (50F) below the design gas stream temperature, and any 3-hour period during which the average temperature difference across the catalyst bed (i.e., the difference between the temperatures of the gas stream immediately before and after the catalyst bed), as measured by the temperature monitoring device, is less than 80 percent of the design temperature difference, or,

(3) Each 3-hour period of operation during which the average VOC concentration level or reading of organics in the exhaust gases from a carbon adsorber is more than 20 percent greater than the design exhaust gas concentration level or reading.

e) If compliance with the provisions of this subpart is delayed pursuant to 40 CFR 60.692-7, the notification required under 40 CFR 60.7(a)(4) shall include the estimated date of the next scheduled refinery or process unit shutdown after the date of notification and the reason why compliance with the standards is technically impossible without a refinery or process unit shutdown.

**# 006 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.655]**

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries Reporting and recordkeeping requirements.**

The permittee shall comply with the following requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 C.F.R §63.655(d) - (i)

**VI. WORK PRACTICE REQUIREMENTS.**

**# 007 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.692-1]**

**Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems Standards: General.**

a) Each owner or operator subject to the provisions of this subpart shall comply with the requirements of 40 CFR 60.692-1 to 40 CFR 60.692-5 and with 40 CFR 60.693-1 and 40 CFR 60.693-2, except during periods of startup, shutdown, or malfunction.

b) Compliance with 40 CFR 60.692-1 to 40 CFR 60.692-5 and with 40 CFR 60.693-1 and 40 CFR 60.693-2 will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in 40 CFR 60.696.

c) Permission to use alternative means of emission limitation to meet the requirements of 40 CFR 60.692-2 through 40 CFR 60.692-4 may be granted as provided in 40 CFR 60.694.

d)(1) Stormwater sewer systems are not subject to the requirements of this subpart.



**SECTION E. Source Group Restrictions.**

(2) Ancillary equipment, which is physically separate from the wastewater system and does not come in contact with or store oily wastewater, is not subject to the requirements of this subpart.

(3) Non-contact cooling water systems are not subject to the requirements of this subpart.

(4) An owner or operator shall demonstrate compliance with the exclusions in paragraphs (d)(1), (2), and (3) of this section as provided in 40 CFR 60.697(h), (i), and (j).

**# 008 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.692-2]  
Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems  
Standards: Individual drain systems.**

a)(1) Each drain shall be equipped with water seal controls.

(2) Each drain in active service shall be checked by visual or physical inspection initially and monthly thereafter for indications of low water levels or other conditions that would reduce the effectiveness of the water seal controls.

(3) Except as provided in paragraph (a)(4) of this section, each drain out of active service shall be checked by visual or physical inspection initially and weekly thereafter for indications of low water levels or other problems that could result in VOC emissions.

(4) As an alternative to the requirements in paragraph (a)(3) of this section, if an owner or operator elects to install a tightly sealed cap or plug over a drain that is out of service, inspections shall be conducted initially and semiannually to ensure caps or plugs are in place and properly installed.

(5) Whenever low water levels or missing or improperly installed caps or plugs are identified, water shall be added or first efforts at repair shall be made as soon as practicable, but not later than 24 hours after detection, except as provided in 40 CFR 60.692-6.

b)(1) Junction boxes shall be equipped with a cover and may have an open vent pipe. The vent pipe shall be at least 90 cm (3 ft) in length and shall not exceed 10.2 cm (4 in) in diameter.

(2) Junction box covers shall have a tight seal around the edge and shall be kept in place at all times, except during inspection and maintenance.

(3) Junction boxes shall be visually inspected initially and semiannually thereafter to ensure that the cover is in place and to ensure that the cover has a tight seal around the edge.

(4) If a broken seal or gap is identified, first effort at repair shall be made as soon as practicable, but not later than 15 calendar days after the broken seal or gap is identified, except as provided in 40 CFR 60.692-6.

c)(1) 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.

(2) The portion of each unburied sewer line shall be visually inspected initially and semiannually thereafter for indication of cracks, gaps, or other problems that could result in VOC emissions.

(3) 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, except as provided in 40 CFR 60.692-6.

d) Except as provided in paragraph (e) of this section, each modified or reconstructed individual drain system that has a catch basin in the existing configuration prior to May 4, 1987 shall be exempt from the provisions of this section.

e) Refinery wastewater routed through new process drains and a new first common downstream junction box, either as part of a new individual drain system or an existing individual drain system, shall not be routed through a downstream catch basin.

**SECTION E. Source Group Restrictions.****# 009 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.692-3]  
Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems  
Standards: Oil-water separators.**

a) Each oil-water separator tank, slop oil tank, storage vessel, or other auxiliary equipment subject to the requirements of this subpart shall be equipped and operated with a fixed roof, which meets the following specifications, except as provided in paragraph (d) of this section or in 40 CFR 60.693-2.

(1) The fixed roof shall be installed to completely cover the separator tank, slop oil tank, storage vessel, or other auxiliary equipment with no separation between the roof and the wall.

(2) The vapor space under a fixed roof shall not be purged unless the vapor is directed to a control device.

(3) If the roof has access doors or openings, such doors or openings shall be gasketed, latched, and kept closed at all times during operation of the separator system, except during inspection and maintenance.

(4) Roof seals, access doors, and other openings shall be checked by visual inspection initially and semiannually thereafter to ensure that no cracks or gaps occur between the roof and wall and that access doors and other openings are closed and gasketed properly.

(5) When 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 it is identified, except as provided in 40 CFR 60.692-6.

b) Each oil-water separator tank or auxiliary equipment with a design capacity to treat more than 16 liters per second (250 gpm) of refinery wastewater shall, in addition to the requirements in paragraph (a) of this section, be equipped and operated with a closed vent system and control device, which meet the requirements of 40 CFR 60.692-5, except as provided in paragraph (c) of this section or in 40 CFR 60.693-2.

c)(1) Each modified or reconstructed oil-water separator tank with a maximum design capacity to treat less than 38 liters per second (600 gpm) of refinery wastewater which was equipped and operated with a fixed roof covering the entire separator tank or a portion of the separator tank prior to May 4, 1987 shall be exempt from the requirements of paragraph (b) of this section, but shall meet the requirements of paragraph (a) of this section, or may elect to comply with paragraph (c)(2) of this section.

(2) The owner or operator may elect to comply with the requirements of paragraph (a) of this section for the existing fixed roof covering a portion of the separator tank and comply with the requirements for floating roofs in 40 CFR 60.693-2 for the remainder of the separator tank.

d) Storage vessels, including slop oil tanks and other auxiliary tanks that are subject to the requirements of 40 CFR subparts K, Ka, or Kb, are not subject to the requirements of this section.

e) Slop oil from an oil-water separator tank and oily wastewater from slop oil handling equipment shall be collected, stored, transported, recycled, reused, or disposed of in an enclosed system. Once slop oil is returned to the process unit or is disposed of, it is no longer within the scope of this subpart. Equipment used in handling slop oil shall be equipped with a fixed roof meeting the requirements of paragraph (a) of this section.

f) Each oil-water separator tank, slop oil tank, storage vessel, or other auxiliary equipment that is required to comply with paragraph (a) of this section, and not paragraph (b) of this section, may be equipped with a pressure control valve as necessary for proper system operation. The pressure control valve shall be set at the maximum pressure necessary for proper system operation, but such that the value will not vent continuously.

**# 010 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.692-4]  
Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems  
Standards: Aggregate facility.**

A new, modified, or reconstructed aggregate facility shall comply with the requirements of 40 CFR 60.692-2 and 40 CFR 60.692-3.

**SECTION E. Source Group Restrictions.****# 011 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.692-5]****Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems  
Standards: Closed vent systems and control devices.**

- a) Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816C (1,500F).
- b) Vapor recovery systems (for example, condensers and adsorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater.
- c) Flares used to comply with this subpart shall comply with the requirements of 40 CFR 60.18.
- d) Closed vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.
- e)(1) Closed vent systems shall be designed and operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined during the initial and semiannual inspections by the methods specified in 40 CFR 60.696.
- (2) Closed vent systems shall be purged to direct vapor to the control device.
- (3) A flow indicator shall be installed on a vent stream to a control device to ensure that the vapors are being routed to the device.
- (4) All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.
- (5) When emissions from a closed system are detected, first efforts at repair to eliminate the emissions shall be made as soon as practicable, but not later than 30 calendar days from the date the emissions are detected, except as provided in 40 CFR 60.692-6.

**# 012 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.692-6]****Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems  
Standards: Delay of repair.**

- a) Delay of repair of facilities that are subject to the provisions of this subpart will be allowed if the repair is technically impossible without a complete or partial refinery or process unit shutdown.
- b) Repair of such equipment shall occur before the end of the next refinery or process unit shutdown.

**# 013 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.692-7]****Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems  
Standards: Delay of compliance.**

- a) Delay of compliance of modified individual drain systems with ancillary downstream treatment components will be allowed if compliance with the provisions of this subpart cannot be achieved without a refinery or process unit shutdown.
- b) Installation of equipment necessary to comply with the provisions of this subpart shall occur no later than the next scheduled refinery or process unit shutdown.

**# 014 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.693-1]****Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems  
Alternative standards for individual drain systems.**

- a) An owner or operator may elect to construct and operate a completely closed drain system.
- b) Each completely closed drain system shall be equipped and operated with a closed vent system and control device complying with the requirements of 40 CFR 60.692-5.
- c) An owner or operator must notify the Administrator in the report required in 40 CFR 60.7 that the owner or operator has elected to construct and operate a completely closed drain system.

**SECTION E. Source Group Restrictions.**

d) If an owner or operator elects to comply with the provisions of this section, then the owner or operator does not need to comply with the provisions of 40 CFR 60.692-2 or 40 CFR 60.694.

e)(1) 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.

(2) The portion of each unburied sewer line shall be visually inspected initially and semiannually thereafter for indication of cracks, gaps, or other problems that could result in VOC emissions.

(3) 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, except as provided in 40 CFR 60.692-6.

**# 015 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.693-2]****Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems****Alternative standards for oil-water separators.**

a) An owner or operator may elect to construct and operate a floating roof on an oil-water separator tank, slop oil tank, storage vessel, or other auxiliary equipment subject to the requirements of this subpart which meets the following specifications.

(1) Each floating roof shall be equipped with a closure device between the wall of the separator and the roof edge. The closure device is to consist of a primary seal and a secondary seal.

(i) The primary seal shall be a liquid-mounted seal.

(A) A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the separator and the floating roof.

(B) The gap width between the primary seal and the separator wall shall not exceed 3.8 cm (1.5 in.) at any point.

(C) The total gap area between the primary seal and the separator wall shall not exceed 67 cm<sup>2</sup>/m (3.2 in.<sup>2</sup>/ft) of separator wall perimeter.

(ii) The secondary seal shall be above the primary seal and cover the annular space between the floating roof and the wall of the separator.

(A) The gap width between the secondary seal and the separator wall shall not exceed 1.3 cm (0.5 in.) at any point.

(B) The total gap area between the secondary seal and the separator wall shall not exceed 6.7 cm<sup>2</sup>/m (0.32 in.<sup>2</sup>/ft) of separator wall perimeter.

(iii) The maximum gap width and total gap area shall be determined by the methods and procedures specified in 40 CFR 60.696(d).

(A) Measurement of primary seal gaps shall be performed within 60 calendar days after initial installation of the floating roof and introduction of refinery wastewater and once every 5 years thereafter.

(B) Measurement of secondary seal gaps shall be performed within 60 calendar days of initial introduction of refinery wastewater and once every year thereafter.

(iv) The owner or operator shall make necessary repairs within 30 calendar days of identification of seals not meeting the requirements listed in paragraphs (a)(1) (i) and (ii) of this section.

(2) Except as provided in paragraph (a)(4) of this section, each opening in the roof shall be equipped with a gasketed cover, seal, or lid, which shall be maintained in a closed position at all times, except during inspection and maintenance.

(3) The roof shall be floating on the liquid (i.e., off the roof supports) at all times except during abnormal conditions (i.e., low flow rate).

**SECTION E. Source Group Restrictions.**

(4) The floating roof may be equipped with one or more emergency roof drains for removal of stormwater. Each emergency roof drain shall be fitted with a slotted membrane fabric cover that covers at least 90 percent of the drain opening area or a flexible fabric sleeve seal.

(5)(i) Access doors and other openings shall be visually inspected initially and semiannually thereafter to ensure that there is a tight fit around the edges and to identify other problems that could result in VOC emissions.

(ii) When a broken seal or gasket on an access door or other opening is identified, it shall be repaired as soon as practicable, but not later than 30 calendar days after it is identified, except as provided in 40 CFR 60.692-6.

b) An owner or operator must notify the Administrator in the report required by 40 CFR 60.7 that the owner or operator has elected to construct and operate a floating roof under paragraph (a) of this section.

c) For portions of the oil-water separator tank where it is infeasible to construct and operate a floating roof, such as the skimmer mechanism and weirs, a fixed roof meeting the requirements of 40 CFR 60.692-3(a) shall be installed.

d) Except as provided in paragraph (c) of this section, if an owner or operator elects to comply with the provisions of this section, then the owner or operator does not need to comply with the provisions of 40 CFR 60.692-3 or 40 CFR 60.694 applicable to the same facilities.

**# 016 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.647]**

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries Wastewater provisions.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.647(a) - (c)

**# 017 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.648]**

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries Equipment leak standards.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.648(a) - (i)

**# 018 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.649]**

**Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries Alternative means of emission limitation: Connectors in gas/vapor service and light liquid service.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.649(a) - (g)

**VII. ADDITIONAL REQUIREMENTS.**

**# 019 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.690]**

**Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems Applicability and designation of affected facility.**

a)(1) The provisions of this subpart apply to affected facilities located in petroleum refineries for which construction, modification, or reconstruction is commenced after May 4, 1987.

(2) An individual drain system is a separate affected facility.

(3) An oil-water separator is a separate affected facility.

(4) An aggregate facility is a separate affected facility.

b) Notwithstanding the provisions of 40 CFR 60.14(e)(2), the construction or installation of a new individual drain system

**SECTION E. Source Group Restrictions.**

shall constitute a modification to an affected facility described in 40 CFR 60.690(a)(4). For purposes of this paragraph, a new individual drain system shall be limited to all process drains and the first common junction box.

**# 020 [40 CFR Part 60 Standards of Performance for New Stationary Sources §40 CFR 60.694]****Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems  
Permission to use alternative means of emission limitation.**

a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved by the applicable requirement in 40 CFR 60.692, the Administrator will publish in the Federal Register a notice permitting the use of the alternative means for purposes of compliance with that requirement. The notice may condition the permission on requirements related to the operation and maintenance of the alternative means.

b) Any notice under paragraph (a) of this section shall be published only after notice and an opportunity for a hearing.

c) Any person seeking permission under this section shall collect, verify, and submit to the Administrator information showing that the alternative means achieves equivalent emission reductions.

**# 021 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.640]****Subpart CC -- National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries  
Applicability and designation of affected source.**

The permittee shall comply with the following applicable requirements [See Section C, Site Level Requirements, Additional Requirements for condition] as identified below:

40 CFR 63.640(a) - (r)

\*\*\* **Permit Shield in Effect.** \*\*\*

**SECTION E. Source Group Restrictions.**

Group Name: 6 - SO2 PERMIT MONITORING

Group Description:

Sources included in this group

ID	Name
031	BOILER 1
032	BOILER 2
033	BOILER 3
044	D.H.T. HEATER 1
051	PRETREATER HEATER
102	BLOWDOWN SYSTEM

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.****# 001 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

The sources shall monitor H<sub>2</sub>S concentration in the refinery fuel for the source. The H<sub>2</sub>S monitors for these sources shall be installed, calibrated, maintained, and operated by the owner or operator of the facility in compliance with the requirements of the Department Continuous Emission Monitor (CEM) Manual.

[SO<sub>2</sub> PA: 62-017E condition 5]

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION E. Source Group Restrictions.**

Group Name: 8 - REMEDIATION MATERIAL MANAGEMENT UNIT

Group Description: 40 CFR §63, SUBPART GGGGG (STANDARDS FOR HAZARDOUS AIR POLLUTANT)

Sources included in this group

ID	Name
111	REMEDIATION MATERIAL MANAGEMENT UNITS FUGITIVE

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.7881]****Subpart GGGGG - National Emission Standards for Hazardous Air Pollutants: Site Remediation****Am I subject to this subpart?**

(c) Your site remediation is not subject to this subpart, except for the recordkeeping requirements specified in this paragraph, if the site remediation meets the all of the conditions in paragraphs (c)(1) through (3) of this section.

(1) Before beginning the site remediation, you determine for the remediation material that you will excavate, extract, pump, or otherwise remove during your site remediation that the total quantity of the HAP listed in Table 1 of this subpart which is contained in the material is less than 1 megagram per year (Mg/yr).

(2) You prepare and maintain at your facility written documentation to support your determination of the total HAP quantity used to demonstrate compliance with paragraph (c)(1) of this section. This documentation must include a description of your methodology and data you used for determining the total HAP content of the material.

(3) This exemption may be applied to more than one site remediation at your facility provided that the total quantity of the HAP listed in Table 1 of this subpart for all of your site remediations exempted under this provision is less than 1 Mg/yr.

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***



**SECTION E. Source Group Restrictions.**

Group Name: BART

Group Description: Restrictions to avoid Best Available Retrofit Technology (BART) requirements

Sources included in this group

ID	Name
042	FCC HEATER (NEW UNIT)
049	EAST REFORMER HEATER
050	CRUDE HEATER - NORTH
050A	CRUDE HEATER - SOUTH
051	PRETREATER HEATER

**I. RESTRICTIONS.****Emission Restriction(s).**

# 001 [25 Pa. Code §127.441]

**Operating permit terms and conditions.**

The sources subject to this group shall not exceed the following TPY limits (based on a consecutive 12-month period) :

Source 042 - FCC Heater - 4.0 TPY SO<sub>2</sub>  
 Source 049 - East Reformer Heater - 40.0 TPY SO<sub>2</sub>  
 Source 050 - North Crude Heater - 80.0 TPY SO<sub>2</sub>  
 Source 050A - South Crude Heater - 80.0 TPY SO<sub>2</sub>  
 Source 051 - Pretreater Heater - 30.0 TPY SO<sub>2</sub>

[By complying with the above limits, the total TPY of SO<sub>2</sub> from the affected BART Sources is 234.0 TPY which is less than the 250 TPY potential that would require a Case-By-Case BART Determination. Based on existing limits identified in Section D of this permit, NO<sub>x</sub> and PM<sub>10</sub> emissions from these BART sources already have a PTE below 250 TPY.]

**Throughput Restriction(s).**

# 002 [25 Pa. Code §127.441]

**Operating permit terms and conditions.**

For the following sources, the maximum amount of burning oil when oil is at the maximum sulfur level of 0.5% shall not exceed the following (on a 12-month rolling basis):

Source 042 FCC Heater - 2548 Barrels per year  
 Source 049 East Reformer Heater - 25478 Barrels per year  
 Source 050 Crude Heater North - 50955 Barrels per year  
 Source 050A Crude Heater South - 50955 Barrels per year  
 Source 051 Pretreater Heater - 19108 Barrels per year

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**SECTION E. Source Group Restrictions.****V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION E. Source Group Restrictions.**

Group Name: BOILER / PROCESS HEATER MACT

Group Description: Requirements for 40 CFR 63 Subpart DDDDD NESHAPs for Boilers and Process Heaters

Sources included in this group

ID	Name
031	BOILER 1
032	BOILER 2
033	BOILER 3
036	BOILER 5B 80MMBTU/HR
042	FCC HEATER (NEW UNIT)
044	D.H.T. HEATER 1
049	EAST REFORMER HEATER
050	CRUDE HEATER - NORTH
050A	CRUDE HEATER - SOUTH
051	PRETREATER HEATER
052	WEST REFORMER HEATER
053	SAT GAS PLANT (DEBUT) REBOILER
054	VACUUM PROCESS HEATER
055	D.H.T. HEATER 2
056	PREFACTIONATOR REBOILER 2
057	VOLCANIC HEATER (T-241)
1010	SMR HYDROGEN PLANT (10 MMSCFD)(112.9 MMBTU/HR)
108A	SULFUR PLANT 2 HOT OIL HEATER

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.****# 001 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.7510]**

**Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters.**

**What are my initial compliance requirements and by what date must I conduct them?**

(a) - (d) Not applicable.

(e) [Non-applicable text omitted] You must complete an initial tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) no later than the compliance date specified in § 63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to this subpart no later than the compliance date specified in § 63.7495.

(f) - (j) Not Applicable.

(k) For affected sources, as defined in §63.7490, that switch subcategories consistent with §63.7545(h) after the initial compliance date, you must demonstrate compliance within 60 days of the effective date of the switch, unless you had previously conducted your compliance demonstration for this subcategory within the previous 12 months.

[78 FR 7164, Jan. 31, 2013, as amended at 80 FR 72808, Nov. 20, 2015]

**# 002 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.7515]**

**Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters.**

**When must I conduct subsequent performance tests or fuel analyses, or tune-ups?**

(a) - (c) Not applicable.

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(d) If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to § 63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in § 63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in § 63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in § 63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in § 63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after April 1, 2013 or the initial startup of the new or reconstructed affected source, whichever is later.

(e) - (f) Not applicable.

(g) For affected sources (as defined in § 63.7490) that have not operated since the previous compliance demonstration and more than one year has passed since the previous compliance demonstration, you must complete the subsequent compliance demonstration, if subject to the emission limits in Tables 1, 2, or 11 through 13 to this subpart, no later than 180 days after the re-start of the affected source and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart. You must complete a subsequent tune-up by following the procedures described in § 63.7540(a)(10)(i) through (vi) and the schedule described in § 63.7540(a)(13) for units that are not operating at the time of their scheduled tune-up.

(h) - (i) Not applicable.

[78 FR 7165, Jan. 31, 2013, as amended at 80 FR 72808, Nov. 20, 2015]

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.****# 003 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.7555]****Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters.****What records must I keep?**

(a) You must keep records according to paragraphs (a)(1) and (2) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in §63.10(b)(2)(xiv).

(2) - (3) Not applicable.

(b) - (g) Not applicable.

(h) If you operate a unit in the unit designed to burn gas 1 subcategory that is subject to this subpart, and you use an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under this part, other gas 1 fuel, or gaseous fuel subject to another subpart of this part or part 60, 61, or 65, you must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7185, Jan. 31, 2013; 80 FR 72816, Nov. 20, 2015]

**# 004 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.7560]****Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters.****In what form and how long must I keep my records?**

(a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).

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(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off site for the remaining 3 years.

**V. REPORTING REQUIREMENTS.****# 005 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.7545]****Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters.****What notifications must I submit and when?**

(a) You must submit to the Administrator all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.

(b) As specified in § 63.9(b)(2), if you startup your affected source before January 31, 2013, you must submit an Initial Notification not later than 120 days after January 31, 2013.

(c) As specified in § 63.9(b)(4) and (5), if you startup your new or reconstructed affected source on or after January 31, 2013, you must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source.

(d) Not applicable.

(e) If you are required to conduct an initial compliance demonstration as specified in §63.7530, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to §63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8) of this section, as applicable. If you are not required to conduct an initial compliance demonstration as specified in §63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8) of this section and must be submitted within 60 days of the compliance date specified at §63.7495(b).

(1) A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with this subpart, description of the fuel(s) burned, including whether the fuel(s) were a secondary material determined by you or the EPA through a petition process to be a non-waste under § 241.3 of this chapter, whether the fuel(s) were a secondary material processed from discarded non-hazardous secondary materials within the meaning of § 241.3 of this chapter, and justification for the selection of fuel(s) burned during the compliance demonstration.

(2) - (5) Not applicable.

(6) A signed certification that you have met all applicable emission limits and work practice standards.

(7) If you had a deviation from any emission limit, work practice standard, or operating limit, you must also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report.

(8) In addition to the information required in §63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) "This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR part 63 subpart DDDDD at this site according to the procedures in §63.7540(a)(10)(i) through (vi)."

(ii) "This facility has had an energy assessment performed according to §63.7530(e)."

(iii) Except for units that burn only natural gas, refinery gas, or other gas 1 fuel, or units that qualify for a statutory

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exemption as provided in section 129(g)(1) of the Clean Air Act, include the following: "No secondary materials that are solid waste were combusted in any affected unit."

(f) If you operate a unit designed to burn natural gas, refinery gas, or other gas 1 fuels that is subject to this subpart, and you intend to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of this part, part 60, 61, or 65, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in § 63.7575, you must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in § 63.7575. The notification must include the information specified in paragraphs (f)(1) through (5) of this section.

(1) Company name and address.

(2) Identification of the affected unit.

(3) Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began.

(4) Type of alternative fuel that you intend to use.

(5) Dates when the alternative fuel use is expected to begin and end.

(g) Not applicable

(h) If you have switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, you must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the switch/change. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in § 63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.

(2) The currently applicable subcategory under this subpart.

(3) The date upon which the fuel switch or physical change occurred.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7183, Jan. 31, 2013; 80 FR 72814, Nov. 20, 2015]

**# 006 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.7550]**

**Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters.**

**What reports must I submit and when?**

(a) You must submit each report in Table 9 to this subpart that applies to you.

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section. For units that are subject only to a requirement to conduct subsequent annual, biennial, or 5-year tune-up according to §63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or Table 4 operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.

(1) The first semi-annual compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in §63.7495. If submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for your source in §63.7495.

(2) The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31,

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whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in §63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent semi-annual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.

(4) Each subsequent semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.

(5) For each affected source that is subject to permitting regulations pursuant to part 70 or part 71 of this chapter, and if the permitting authority has established dates for submitting semiannual reports pursuant to 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established in the permit instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule.

(1) If the facility is subject to the requirements of a tune up you must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii) of this section, (xiv) and (xvii) of this section, and paragraph (c)(5)(iv) of this section for limited-use boiler or process heater.

(2) - (4) Not applicable.

(5)(i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

(iii) Date of report and beginning and ending dates of the reporting period.

(iv) The total operating time during the reporting period.

(v) - (x) Not applicable.

(xi) If there are no deviations from any emission limits or operating limits in this subpart that apply to you, a statement that there were no deviations from the emission limits or operating limits during the reporting period.

(xii) Not applicable.

(xiii) If a malfunction occurred during the reporting period, the report must 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. The report must also include a description of actions taken by you during a malfunction of a boiler, process heater, or associated air pollution control device or CMS to minimize emissions in accordance with § 63.7500(a)(3), including actions taken to correct the malfunction.

(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to § 63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.

(xv) - (xvi) Not applicable.

(xvii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

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(d) - (e) Not applicable.

(f)-(g) [Reserved]

(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.

(1) - (2) Not applicable.

(3) You must submit all reports required by Table 9 of this subpart electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in §63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.

[78 FR 7183, Jan. 31, 2013, as amended at 80 FR 72814, Nov. 20, 2015]

**# 007 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.7550]**

**Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters.**

**What reports must I submit and when?**

[40 CFR 63 Subpart DDDDD Table 9 Reporting Requirements]

1. You must submit a compliance report semiannually, annually, biennially or every 5 years according to the requirements of 63.7550(b). The report must contain the following:

a. Information required in 63.7550(c)(1) through (5); and,

b. If there are no deviations from any emission limitation (emission limit and operating limit) that applies to you and there are no deviations from the requirements for work practice standards for periods of startup and shutdown in Table 3 to this subpart that apply to you, a statement that there were no deviations from the emission limitations and work practice standards during the reporting period. If there were no periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in §63.8(c)(7), a statement that there were no periods during which the CMSs were out-of-control during the reporting period; and

c. - d. Not applicable.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7205, Jan. 31, 2013; 80 FR 72830, Nov. 20, 2015]

**VI. WORK PRACTICE REQUIREMENTS.**

**# 008 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.7500]**

**Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters.**

**What emission limits, work practice standards, and operating limits must I meet?**

[40 CFR 63 Subpart DDDDD Table 3 Work Practice Standards]

1. A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid, or a limited use boiler or process heater - Must conduct a tune-up of the boiler or process heater every 5 years as specified in § 63.7540.

2. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of less than 10 million Btu per hour in the unit designed to burn heavy liquid or unit designed to burn solid fuel subcategories; or a new or existing boiler or process heater with heat input capacity of less than 10 million Btu per hour, but greater than 5 million Btu per hour, in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other);



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or unit designed to burn light liquid - Must Conduct a tune-up of the boiler or process heater biennially as specified in § 63.7540.

3. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater - Must Conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions under this subpart. Units in all other subcategories will conduct this tune-up as a work practice for dioxins/furans.

4. An existing boiler or process heater located at a major source facility, not including limited use units - Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operated under an energy management program developed according to the ENERGY STAR guidelines for energy management or compatible with ISO 50001 for at least one year between January 1, 2008 and the compliance date specified in §63.7495 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in §63.7575:

- a. A visual inspection of the boiler or process heater system.
- b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints.
- c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator.
- d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage.
- e. A review of the facility's energy management program and provide recommendations for improvements consistent with the definition of energy management program, if identified.
- f. A list of cost-effective energy conservation measures that are within the facility's control.
- g. A list of the energy savings potential of the energy conservation measures identified.
- h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

5. - 6. Not applicable.

[78 FR 7198, Jan. 31, 2013, as amended at 80 FR 72823, Nov. 20, 2015]

**VII. ADDITIONAL REQUIREMENTS.**

**# 009 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.7495]**

**Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters.**

**When do I have to comply with this subpart?**

- (a) If you have a new or reconstructed boiler or process heater, you must comply with this subpart by April 1, 2013, or upon startup of your boiler or process heater, whichever is later.
- (b) If you have an existing boiler or process heater, you must comply with this subpart no later than January 31, 2016, except as provided in § 63.6(i).
- (c) Not applicable.
- (d) You must meet the notification requirements in §63.7545 according to the schedule in §63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.
- (e) - (g) Not applicable.
- (h) If you own or operate an existing industrial, commercial, or institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory after the

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compliance date of this subpart, you must be in compliance with the applicable existing source provisions of this subpart on the effective date of the fuel switch or physical change.

(i) If you own or operate a new industrial, commercial, or institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory, you must be in compliance with the applicable new source provisions of this subpart on the effective date of the fuel switch or physical change.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015]

**# 010 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.7500]****Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters.****What emission limits, work practice standards, and operating limits must I meet?**

(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b), through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.

(1) You must meet each emission limit and work practice standard in Tables 1 through 3, and 11 through 13 to this subpart that applies to your boiler or process heater, for each boiler or process heater at your source, except as provided under §63.7522. [Not applicable requirements omitted] (Only Table 3 is applicable)

(i)- (iii) Not applicable

(2) Not applicable.

(3) At all times, you must operate and maintain any affected source (as defined in § 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source

(b) - (d) Not applicable.

(e) Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity of less than or equal to 5 million Btu per hour must complete a tune-up every 5 years as specified in § 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 million Btu per hour and less than 10 million Btu per hour must complete a tune-up every 2 years as specified in § 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, or the operating limits in Table 4 to this subpart.

(f) These standards apply at all times the affected unit is operating, except during periods of startup and shutdown during which time you must comply only with items 5 and 6 of Table 3 to this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015]

**# 011 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.7505]****Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters.****What are my general requirements for complying with this subpart?**

(a) You must be in compliance with the emission limits, work practice standards, and operating limits in this subpart. These emission and operating limits apply to you at all times the affected unit is operating except for the periods noted in §63.7500(f).

(b) [Reserved]

(c) - (e) Not applicable.

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[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7164, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015]

**# 012 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.7530]****Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters.****How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?**

(a) - (c) Not applicable.

(d) [Reserved]

(e) You must include with the Notification of Compliance Status a signed certification that either the energy assessment was completed according to Table 3 to this subpart, and that the assessment is an accurate depiction of your facility at the time of the assessment, or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended.

(f) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.7545(e).

(g) - (i) Not applicable.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7174, Jan. 31, 2013; 80 FR 72811, Nov. 20, 2015]

**# 013 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.7540]****Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters.****How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?**

(a) You must demonstrate continuous compliance with [Non-applicable text omitted] the work practice standards in Table [Non-applicable text omitted] and paragraphs (a)(1) through (19) of this section.

(1) - (9) Not applicable.

(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. This frequency does not apply to limited-use boilers and process heaters, as defined in §63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOX requirement to which the unit is subject;

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(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

(vi) Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,

(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(B) A description of any corrective actions taken as a part of the tune-up; and

(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

(11) If your boiler or process heater has a heat input capacity of less than 10 million Btu per hour (except as specified in paragraph (a)(12) of this section), you must conduct a biennial tune-up of the boiler or process heater as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance.

(12) If your boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in §63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up.

(13) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

(14) - (19) Not applicable.

(b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 through 4 or 11 through 13 to this subpart that apply to you. These instances are deviations from the emission limits or operating limits, respectively, in this subpart. These deviations must be reported according to the requirements in § 63.7550. (Only Table 3 applies)

(c) - (d) Not applicable.

[78 FR 7179, Jan. 31, 2013, as amended at 80 FR 72813, Nov. 20, 2015]

**# 014 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.7565]**

**Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters.**

**What parts of the General Provisions apply to me?**

Table 10 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

**# 015 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.7575]**

**Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters.**

**What definitions apply to this subpart?**

Terms used in this subpart are defined in the Clean Air Act, in §63.2 (the General Provisions), and can be found in 40 CFR 63.7575.

\*\*\* **Permit Shield in Effect.** \*\*\*

**SECTION E. Source Group Restrictions.**

Group Name: CASE-BY-CASE RACT 2

Group Description: Requirements pertaining to Case-by-Case RACT 2

**Sources included in this group**

ID	Name
051	PRETREATER HEATER
053	SAT GAS PLANT (DEBUT) REBOILER
055	D.H.T. HEATER 2
056	PREFACTIONATOR REBOILER 2
101A	FCC UNIT
110	WASTEWATER FUGITIVE EMISSION
219	WASTEWATER SEPARATORS
250	COOLING WATER TOWERS (2 SYTEMS) (3 TOWERS)

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

NOx emissions shall not exceed the following limits for the respective Source:

Pretreater Heater - 0.11 lb/mmbtu and 21.4 TPY (12-month rolling)

Sat Gas Plant Reboiler - 0.1 lb/mmbtu and 8.2 TPY (12-month rolling)

DHT2 Heater - 0.12 lb/mmbtu and 19.3 TPY (12-month rolling)

Prefactionator Reboiler 2 - 0.1 lb/mmbtu and 19.4 TPY (12-month rolling)

FCC Unit - 11.5 lb/hr and 40.2 TPY (12-month rolling)

[Additional authority for this condition based on 129.99]

**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

(a) Total VOC emissions from the cooling water towers shall not exceed 7.5 TPY calculated as a 12-month rolling total.

(b) Combined VOC emissions from the Isom and Alky Pit(s) shall not exceed 3.6 TPY calculated as a 12-month rolling total.

[Additional authority for this condition based on 129.99]

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.****# 003 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The facility shall keep records of the NOx and VOC emissions for each month for the affected sources of this group (Sources 051, 053, 055, 056, 101A, 110, and 250) and shall keep records of the 12-month rolling totals to demonstrate compliance with the NOx and VOC limits for these sources.

[Additional authority for this condition based on 129.99]

**SECTION E. Source Group Restrictions.****# 004 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The facility shall keep records of each biennial tuneup including the following information:

- (i) The date of the tuning procedure.
- (ii) The name of the service company and technicians.
- (iii) The final operating rate or load.
- (iv) The final CO and NOx emission rates.
- (v) The final excess oxygen rate.
- (vi) Other information required by the applicable operating permit.

[Additional authority for this condition is based on 129.99]

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.****# 005 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

Sources 051, 053, 055, and 056 shall comply with the following work practices:

The sources shall be operated according to good operating practices to minimize emissions of NOx. This shall, at a minimum, consist of the following:

- (a) The permittee shall conduct a biennial tuneup of the heater which shall, at a minimum, consist of the following procedures:
  - (i) Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.
  - (ii) Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NOx, and to the extent practicable minimize emissions of CO.
  - (iii) Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.
- (b) The permittee shall operate the heater at or below 9% excess oxygen, at all times except within one (1) hour of startup and/or shutdown.
- (c) During any periods of process downtime (to exclude emergencies), permittee shall inspect the heater, burner(s), air register(s), and burner tip(s); and shall repair or replace necessary components as soon as practicable.
- (d) The permittee shall document all tuneups and inspections, and any corrective actions taken.

[Additional authorization for this condition based on 129.99]

**SECTION E. Source Group Restrictions.****# 006 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The cooling towers shall be operated according to good operating practices to minimize emissions of VOC. This shall, at a minimum, consist of the following:

The permittee shall comply with the monitoring and repair provisions of 40 CFR 63.654.[See Section C of this permit]

[Additional authorization for this condition is based on 129.99]

**# 007 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

The Isom and Alky Pit(s) shall be operated according to good operating practices to minimize emissions of VOC. This shall, at a minimum, consist of the following:

(a) The permittee shall minimize discharge of hydrocarbons to the Isom and Alky Pit(s), to the greatest extent practicable.

(b) The permittee shall conduct daily inspections of the Isom and Alky Pit(s) for odors which indicate elevated VOC concentrations; and shall take corrective actions as indicated by the results of these inspections.

[Additional authorization for this requirement is based on 129.99]

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION E. Source Group Restrictions.**

Group Name: CEM MONITORING

Group Description: Requirements for CEM and Opacity Monitors required by 40 CFR §60, Subpart J

Sources included in this group

ID	Name
042	FCC HEATER (NEW UNIT)
049	EAST REFORMER HEATER
050	CRUDE HEATER - NORTH
050A	CRUDE HEATER - SOUTH
052	WEST REFORMER HEATER
053	SAT GAS PLANT (DEBUT) REBOILER
054	VACUUM PROCESS HEATER
055	D.H.T. HEATER 2
056	PREFACTIONATOR REBOILER 2
057	VOLCANIC HEATER (T-241)
101A	FCC UNIT
105	MIDDLE FCC KVG COMPRESSOR
106	EAST FCC KVG COMPRESSOR
107	SAT GAS KVG COMPRESSOR
108	CLAUS SULFUR PLANT 2
108A	SULFUR PLANT 2 HOT OIL HEATER

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.****# 001 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

[When any of the Continuous Emission Monitors (or opacity monitor) are replaced, the permittee shall comply with the following certification and testing requirements]:

**A. Initial Application (Phase I)**

[A] Proposal[s] containing information as listed in the Phase I section of the Department's Continuous Source Monitoring Manual for the CEMS[s] must be submitted no later than at least 180 days prior to the planned initial source startup date.

**B. Performance Testing (Phase II)**

Testing as listed in the Phase II section of the Department's Continuous Source Monitoring Manual must be completed for the CEMS[s] no later than 180 days after initial source startup date and no later than 60 days after source achieves normal process capacity.

**C. Final Approval (Phase III)**

The final report of testing as listed in the Phase III section of the Department's Continuous Source Monitoring Manual must be submitted to the Bureau no later than 60 days after completion of testing.

D. The owner or operator of the source shall not be issued an operating permit until the CEMS has received Phase III approval, in writing from the Department, when installation of a CEMS is made a condition of the plan approval. Until Phase III Department approval is obtained, operation shall be covered solely under condition of a plan approval.

NOTE: For sources required to make monitoring data available via telemetry, conditional acceptance of the CEMS data telemetry system and of the results of all Phase II testing, with the exception of relative accuracy, must be obtained prior to initial operation (for this approval the Department will review submitted results only the full test report is to be submitted



**SECTION E. Source Group Restrictions.**

upon completion of relative accuracy testing).

**III. MONITORING REQUIREMENTS.****# 002 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

A) The following continuous emission monitoring system[s] (CEMS[s]) must be installed, approved by the Department, operated and maintained in accordance with the requirements of 25 Pa. Code Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources), and the "Submittal and Approval", "Record Keeping and Reporting", and "Quality Assurance" requirements of Revision No. 8 of the Department's Continuous Source Monitoring (CSM) Manual, 274-0300-001.

1) CEMS #1 (Crude Mix Tank Outlet) - H<sub>2</sub>S

- a) This CEM shall be used to monitor the fuel gas for the following sources: [044, 049, 051, 052, 053, 054, 055, 056, and C01]
- b) This CEM shall be used to report the H<sub>2</sub>S concentration in the fuel gas.
- c) The units of measurement for this CEM shall be reported in parts per million (PPM).
- d) The units of measurement for this CEM shall be reported based on a dry basis.
- e) The permittee shall use the standard DEP method from the CSM Manual for data substitution procedures.
- f) Periods of excess emissions pertaining to this CEM shall be determined as the arithmetic average of the applicable 1-hour averages, (e.g., the rolling 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages). Periods of excess emissions shall be determined and reported (all rolling 3-hour periods during which the average concentration of H<sub>2</sub>S as measured by the H<sub>2</sub>S continuous monitoring system exceeds 230 mg/dscm [0.10 gr/dscf]).
- g) The span value for this CEM is 425 mg/dscm H<sub>2</sub>S.
- h) The performance evaluation for this H<sub>2</sub>S monitor shall use Performance Specification 7.
- i) Method 11 shall be used for conducting the relative accuracy evaluations.

2) CEMS #2 (Vacuum Vent Line) - H<sub>2</sub>S

- a) This CEM shall be used to monitor the fuel gas for the following sources: [Vacuum Off gas that is combusted in the North & South Crude Heaters]
- b) This CEM shall be used to report the H<sub>2</sub>S concentration in the fuel gas.
- c) The units of measurement for this CEM shall be reported in parts per million (PPM).
- d) The units of measurement for this CEM shall be reported based on a dry basis.
- e) The permittee shall use the standard DEP method from the CSM Manual for data substitution procedures.
- f) Periods of excess emissions pertaining to this CEM shall be determined as the arithmetic average of the applicable 1-hour averages, (e.g., the rolling 3 hour average shall be determined as the arithmetic average of three contiguous 1-hour averages). Periods of excess emissions shall be determined and reported (all rolling 3-hour periods during which the average concentration of H<sub>2</sub>S as measured by the H<sub>2</sub>S continuous monitoring system exceeds 230 mg/dscm [0.10 gr/dscf]).
- g) The span value for this CEM is 425 mg/dscm H<sub>2</sub>S.
- h) The performance evaluation for this H<sub>2</sub>S monitor shall use Performance Specification 7.
- i) Method 11 shall be used for conducting the relative accuracy evaluations.

3) CEMS #3 (Boiler House) - H<sub>2</sub>S

- a) This CEM shall be used to monitor the fuel gas for the following sources: [ 031, 032, 033, 037, 057, 101A, 108A, C02, and C108] ]
- b) This CEM shall be used to report the H<sub>2</sub>S concentration in the fuel gas.
- c) The units of measurement for this CEM shall be reported in parts per million (PPM).
- d) The units of measurement for this CEM shall be reported based on a dry basis.
- e) The permittee shall use the standard DEP method from the CSM Manual for data substitution procedures.
- f) Periods of excess emissions pertaining to this CEM shall be determined as the arithmetic average of the applicable 1-hour averages, (e.g., the rolling 3 hour average shall be determined as the arithmetic average of three contiguous 1-hour averages). Periods of excess emissions shall be determined and reported (all rolling 3-hour periods during which the average concentration of H<sub>2</sub>S as measured by the H<sub>2</sub>S continuous monitoring system exceeds 230 mg/dscm [0.10 gr/dscf]).

**SECTION E. Source Group Restrictions.**

- g) The span value for this CEM is 425 mg/dscm H<sub>2</sub>S.
  - h) The performance evaluation for this H<sub>2</sub>S monitor shall use Performance Specification 7.
  - i) Method 11 shall be used for conducting the relative accuracy evaluations.
- 4) CEMS #4 (FCCU) - SO<sub>2</sub>
- a) This CEM shall be used to monitor the SO<sub>2</sub> emissions into the atmosphere from the FCCU (Source 101A).
  - b) The units of measurement for this CEM shall be reported in parts per million (PPM).
  - c) The units of measurement for this CEM shall be reported based on a dry basis.
  - d) The monitor shall include an oxygen monitor for correcting the data for excess air.
  - e) The permittee shall use the standard DEP method from the CSM Manual for data substitution procedures.
  - f) Periods of excess emissions pertaining to this CEM shall be determined as the arithmetic average of the applicable 1-hour averages, (e.g., the rolling 3 hour average shall be determined as the arithmetic average of three contiguous 1-hour averages). Periods of excess emissions shall be determined and reported (all rolling 3-hour periods during which the average concentration of SO<sub>2</sub> as measured by the SO<sub>2</sub> continuous monitoring system exceeds 20 ppm [dry basis, zero percent excess air]).
  - g) The span value for this CEM is 50 ppm SO<sub>2</sub> and 10 percent oxygen.
  - h) The performance evaluation for this H<sub>2</sub>S monitor shall use Performance Specification 2.
  - i) Methods 6 and 3 shall be used for conducting the relative accuracy evaluations. Method 6 samples shall be taken at a flow rate of approximately 2 liters/minute for at least 30 minutes. The relative accuracy limit shall be 20 percent or 4 ppm, whichever is greater, and the calibration drift limit shall be 5 percent of the established span value.

## 5) CEMS #5 (FCCU) - Opacity Monitor

- a) This CEM shall be used to monitor the opacity of emissions into the atmosphere from the FCCU catalyst regenerator.
- b) The units of measurement for this CEM shall be reported in percentage (%).
- c) The permittee shall use the standard DEP method from the CSM Manual for data substitution procedures.
- d) Periods of excess emissions pertaining to this CEM shall be determined as: Visible emissions equal to or greater than 20% for a period or periods aggregating more than three (3) minutes in any one hour; or, Equal to or greater than 60% at any time. [25 Pa. Code Section 123.41]
- e) The instrument shall be spanned at 60, 70, or 80 percent opacity.

## 6) CEMS #6 (SRU2 Incinerator)

- a) This CEM shall be used to monitor the SO<sub>2</sub> emissions into the atmosphere from the Sulfur Recovery Unit (Source 108A).
- b) The units of measurement for this CEM shall be reported in parts per million (PPM).
- c) The units of measurement for this CEM shall be reported based on a dry basis, zero percent excess air.
- d) The permittee shall use the standard DEP method from the CSM Manual for data substitution procedures.
- e) Periods of excess emissions pertaining to this CEM shall be determined as the arithmetic average of the applicable 1-hour averages, (e.g., the rolling 3 hour average shall be determined as the arithmetic average of three contiguous 1-hour averages). Periods of excess emissions shall be determined and reported (all 12-hour periods during which the average concentration of SO<sub>2</sub> as measured by the SO<sub>2</sub> continuous monitoring system exceeds 250 ppm [dry basis, zero percent excess air]).
- f) The span values for this CEM are 500 ppm SO<sub>2</sub> and 10 percent O<sub>2</sub>.
- g) The performance evaluation for this H<sub>2</sub>S monitor shall use Performance Specification 2.
- h) Method 6 and 3 shall be used for conducting the relative accuracy evaluations.

[Compliance with any subsequently issued revisions to the Continuous Source Monitoring Manual will constitute compliance with the regulations.]

**IV. RECORDKEEPING REQUIREMENTS.****# 003 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

[Additional authority for this permit condition is derived from 40 CFR Section 60.107, and 25 Pa. Code Sections 139.101(5), 139.101(12), and 139.103]

- A) The permittee shall comply with the recordkeeping requirements established in 25 Pa. Code Chapter 139, Subchapter C

**SECTION E. Source Group Restrictions.**

(relating to requirements for source monitoring for stationary sources), the "Record Keeping and Reporting" requirements in Revision No. 8 of the Department's Continuous Source Monitoring Manual, 274-0300-001, and the recordkeeping requirements established in 40 CFR Section 60.107.

B) Records shall be retained for at least 5 years and shall be made available to the Department upon request.

[Compliance with any subsequently issued revision to the Continuous Source Monitoring Manual will constitute compliance with this permit condition.]

**V. REPORTING REQUIREMENTS.****# 004 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

[Additional authority for this permit condition is derived from 40 CFR Section 60.107, and 25 Pa. Code Sections 139.101(1)(iv), 139.101(10), 139.101(12), and 139.103]

A) The permittee shall submit quarterly reports of continuous emission monitoring to the Department in accordance with the requirements established in 25 Pa. Code Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources), and, the "Record Keeping and Reporting" requirements as established in Revision No. 8 of the Department's Continuous Source Monitoring Manual, 274-0300-001, and the reporting requirements established in 40 CFR Section 60.107.

B) The permittee shall report emissions for all periods of unit operation, including startup, shutdown and malfunction.

C) Initial quarterly reports following system certification shall be submitted to the Department within 35 days following the date upon which the Department notifies the owner or operator, in writing, of the approval of the continuous source monitoring system for use in determining compliance with applicable emission standards.

D) Subsequent quarterly reports shall be submitted to the Department within 30 days after the end of each calendar quarter.

E) Failure to submit required reports of continuous emission monitoring within the time periods specified in this Condition, shall constitute violations of this Permit, unless approved in advance by the Department in writing.

[Compliance with any subsequently issued revision to the Continuous Source Monitoring Manual will constitute compliance with this permit condition.]

**VI. WORK PRACTICE REQUIREMENTS.****# 005 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

A) The permittee shall comply with the following minimum Data Availability Standards for the CEMS (except for the opacity monitor).

1) In accordance with 25 Pa. Code Section 139.101(12), required monitoring shall, at a minimum, meet one of the following data availability requirements unless otherwise stipulated in this permit, a plan approval, Title 25 or an order issued under Section 4 of the Air Pollution Control Act:

(i) In each calendar month, at least 90% of the time periods for which [an emission standard or an operational parameter] applies, shall be valid as set forth in the Quality Assurance section of Revision No. 8 of the Department's Continuous Source Monitoring Manual, 274-0300-001.

or,

(ii) In each calendar quarter, at least 95% of the hours shall be valid as set forth in the Quality Assurance section of Revision No. 8 of the Department's Continuous Source Monitoring Manual, 274-0300-001.

[Compliance with any subsequently issued revisions to the Continuous Source Monitoring Manual will constitute

**SECTION E. Source Group Restrictions.**

compliance with the regulations.]

**# 006 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

A) The permittee shall comply with the following minimum Data Availability Standards for the opacity monitor.

1) As required under 25 Pa. Code Section 139.103(2) opacity monitoring systems shall meet at least one of the following data availability requirements, unless otherwise stipulated in this permit, a plan approval, Title 25 or an order issued under Section 4 of the Air Pollution Control Act:

(i) At least 90% of the hours in each calendar month shall be valid hours as set forth in the Quality Assurance section of Revision No. 8 of the Department's Continuous Source Monitoring Manual, 274-0300-001

or

(ii) At least 95% of the hours in each calendar quarter shall be valid hours as set forth in the Quality Assurance section of Revision No. 8 of the Department's Continuous Source Monitoring Manual, 274-0300-001.

[Compliance with any subsequently issued revisions to the Continuous Source Monitoring Manual will constitute compliance with the regulations.]

**VII. ADDITIONAL REQUIREMENTS.****# 007 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

[The permittee shall comply with the following Quality Assurance Requirements for the CEMS (and opacity monitor)]

[Additional authority for this permit condition is derived from 40 CFR Section(s) 60.100-108, and 25 Pa. Code Sections 139.101(1)(v), 139.101(2), 139.101(3), 139.101(4), 139.101(6), 139.101(7), 139.101(8), 139.101(12), 139.101(14) and 139.101(15)].

A) Continuous Emission Monitoring Systems and components must be operated and maintained in accordance with the requirements established in 25 Pa. Code Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources) and the "Quality Assurance" requirements in Revision No. 8 of the Department's Continuous Source Monitoring Manual, 274-0300-001.

[Compliance with any subsequently issued revision to the Continuous Source Monitoring Manual will constitute compliance with this permit condition.]

**# 008 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

[The permittee shall comply with the following General Requirements for the CEMS (and opacity monitor).]

A) The permittee shall perform the emissions monitoring analysis procedures or test methods required under an applicable requirement including procedures and methods under Sections 114(a)(3) (42 U.S.C.A. §§ 7414 (a)(3)) or 504(b) (42 U.S.C.A. §§ 7661c(b)) of the Clean Air Act .

B) Unless otherwise required by this permit, the permittee shall comply with applicable monitoring, quality assurance, recordkeeping and reporting requirements of the Air Pollution Control Act, 25 Pa. Code Article III, (relating to air resources), including Chapter 139 (relating to sampling and testing). The permittee shall also comply with applicable requirements related to monitoring, quality assurance, reporting and recordkeeping required by the Clean Air Act and regulations thereunder including applicable monitoring requirements of 40 CFR Part 60, unless otherwise required by this permit.

\*\*\* **Permit Shield in Effect.** \*\*\*

**SECTION E. Source Group Restrictions.**

Group Name: CO&amp;A FOR 1-HR SO2 NAAQS

Group Description: Requirements from the CO&amp;A signed September 29, 2017 for the 1-hour SO2 NAAQS demonstr

[Sources included in this group](#)

ID	Name
031	BOILER 1
032	BOILER 2
033	BOILER 3
036	BOILER 5B 80MMBTU/HR
037	VICTORY ENERGY OPERATIONS, VOYAGER, BOILER 6
042	FCC HEATER (NEW UNIT)
044	D.H.T. HEATER 1
049	EAST REFORMER HEATER
050	CRUDE HEATER - NORTH
050A	CRUDE HEATER - SOUTH
051	PRETREATER HEATER
052	WEST REFORMER HEATER
053	SAT GAS PLANT (DEBUT) REBOILER
054	VACUUM PROCESS HEATER
055	D.H.T. HEATER 2
056	PREFACTIONATOR REBOILER 2
057	VOLCANIC HEATER (T-241)
1010	SMR HYDROGEN PLANT (10 MMSCFD)(112.9 MMBTU/HR)
101A	FCC UNIT
102	BLOWDOWN SYSTEM
105	MIDDLE FCC KVG COMPRESSOR
106	EAST FCC KVG COMPRESSOR
107	SAT GAS KVG COMPRESSOR
108	CLAUS SULFUR PLANT 2
108A	SULFUR PLANT 2 HOT OIL HEATER
211	LOADING RACK BOTTOM LOADING
C1010	ELEVATED PROCESS FLARE

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**SECTION E. Source Group Restrictions.****V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VII. ADDITIONAL REQUIREMENTS.****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

(a) United Refining shall comply with the following SO<sub>2</sub> emission restrictions for the SO<sub>2</sub>-emitting Sources:

Source ID	Permitted Fuel Types	Emission Limit (lb/hr)
031, 032, 033	RFO, NG, RFG, Commercial	27.42
034	RFO, NG, RFG, Commercial	7.21
036	NG	0.24
042	RFG, NG, Commercial	1.10
044	RFG, NG	0.10
049	RFO, NG, RFG, Commercial	22.42
050	RFO, NG, RFG, Commercial	27.78
050A	RFO, NG, RFG, Commercial	27.78
051	RFO, NG, RFG, Commercial	11.00
052	RFO, NG, RFG, Commercial	2.20
053	NG, RFG	0.40
054	RFO, NG, RFG, Commercial	0.80
055	RFO, NG, RFG, Commercial	6.36
056	RFO, NG, RFG, Commercial	5.37
057	NG, RFG	0.30
101A		131.50
102 Combo		0.40
102 FCC		0.10
105	NG, RFG	0.14
106	NG, RFG	0.14
107	NG, RFG	0.10
108		12.00
108A	NG, RFG	0.10
211	NG	0.81
037	NG, RFG	4.60
1010	NG, PSA offgas	0.099
C1010	NG, PSA offgas	0.47

[RFG = Refinery Fuel Gas; NG = Natural Gas; RFO = Refinery Fuel Oil, Commercial = Commercial Distillate Fuel Oil]

(b) For the SO<sub>2</sub>-emitting Sources that burn fuel oil ("Oil-Burning Sources"), United Refining shall burn only the following types of fuel oil:

- i. Refinery fuel oil that does not exceed 0.5 percent sulfur by weight or 5,000 parts per million; and
- ii. Commercial distillate fuel oil, also known as No. 2 and lighter oil, that does not exceed 0.05 percent sulfur by weight or 500 parts per million.

(c) United Refining shall monitor and maintain records of the following:

- i. Quantity and heat content of each type of fuel used on a daily basis for each SO<sub>2</sub>-emitting combustion source;

**SECTION E. Source Group Restrictions.**

- ii. Process Feed Rate and Production Rate for Non-Combustion Sources;
  - iii. Hours of operation and emissions for each month and on a 12-month rolling basis; and
  - iv. Results of a gas chromatograph analysis of the refinery fuel gas to be conducted twice each week to determine the specific heat content for refinery fuel gas.
- (d) Using the data collected in Paragraph (c), above, emissions shall be calculated using mass balance calculations (fuel flow \* sulfur percent by weight \* unit conversion) for combustion sources. For non-combustion sources (Source 101a, 108, and 211), SO<sub>2</sub> emissions will be calculated using a Department approved Continuous Emission Monitoring System ("CEMS") analyzer, stack test, or emission rate as found in the AP-42, or Emission Estimation Protocol for Petroleum Refineries, and feed or production rates (i.e. Ltons processed at SRU2 \* lb/Lton emission rate from most recent stack test).
- (e) United Refining's FCC SO<sub>2</sub> CEMS unit will be used to calculate SO<sub>2</sub> emission from the FCC stack.
- (f) United Refining shall calculate the monthly and annual emissions of SO<sub>2</sub> for all SO<sub>2</sub>-emitting Sources.
- (g) Any quarter with valid data less than 95% will require United Refining to submit a notification with its quarterly Continuous Emission Monitor Report, including an explanation of the data deficiency and any corrective measures implemented to correct the data deficiency.
- (h) United Refining shall conduct emission testing for each of the SO<sub>2</sub>-emitting Sources at least once every 5 years.
- (i) United Refining shall sample the fuel oil burned by the Oil-Burning Sources not less than three times per week if fuel oil is being combusted. If the percent sulfur by weight exceeds 0.5% or 5,000 ppm for refinery fuel oil, or 0.05% or 500 ppm for commercial distillate fuel oil during periods of fuel oil combustion, United Refining shall submit the results to the Department within five business days after obtaining the analytical results. United Refining shall keep the results for at least five years. This file shall be made available to Department upon request.
- (j) United Refining shall use De-SO<sub>x</sub> additive, or an equivalent additive, for Source 101A (FCC Unit) to maintain the SO<sub>2</sub> emissions at or below 131.50 lb/hr.
- (k) United Refining shall use their SO<sub>2</sub> CEMS to demonstrate compliance with the 131.50 lb/hr limit on a 1-hour average.
- (l) CONTINGENCY MEASURES.
- i. If the SO<sub>2</sub> emissions from the Source 101A (FCC Unit) exceed the validated pounds per hour (lb/hr) permitted emission limit listed in Paragraph (a), above, and as reported in accordance with "Continuous Source Monitoring Manual, Revision No. 8," Document Number: 274-0300-001, effective July 17, 2018, the Facility shall perform a system audit of the FCC Unit's SO<sub>2</sub> control additive system ("FCC Unit Systems Audit"). The FCC Unit Systems Audit will consist of applicable components necessary to inject the proper amount of De-SO<sub>x</sub> additive which may include the additive meter, PLC logic control system, the Delta V communication interface, the SO<sub>2</sub> CEMS analyzer and communications to the operators interface. Within 45 days after the date of the exceedance, United Refining shall submit to the Department a written report detailing the operating parameters of the FCC Unit and its emission control system.
  - ii. If the Department's Warren Overlook SO<sub>2</sub> ambient monitor, located within the Warren Nonattainment Area, measures a third daily max 1-hour SO<sub>2</sub> concentration "event" within a calendar year, after validation of the ambient station's data, the Department will notify United Refining in writing. An "event" is defined as a day where the maximum 1-hour SO<sub>2</sub> concentration for any hour is greater than 75 ppb. However, where back-to-back (2 days) event-days occur, these will be counted as only one event toward the triggering third high event. If there are 3 days in a row, that would count as 2 events. With respect to the criteria outlined in the four preceding sentences, a third daily max 1-hour SO<sub>2</sub> concentration event at the Department's Warren Overlook ambient SO<sub>2</sub> monitor in the Warren Nonattainment Area will be referred to herein as the "Ambient Action Level". Furthermore, the Department will make un-validated monitoring data, ambient SO<sub>2</sub> concentrations and ambient temperature, from the Warren Overlook site available to United Refining on a real-time basis with no more time lag than one hour, so as to provide an early indication of possible high ambient monitored values in order to enhance United Refining's ability to identify any concurrent unusual SO<sub>2</sub> events.

**SECTION E. Source Group Restrictions.**

iii. Within 90 calendar days after the date of the Department's written notice pursuant to Paragraph (I)(ii), above, United Refining shall submit to the Department an investigative report, herein referred to as "Ambient Action Level Report," which will identify:

a. If United Refining was in compliance with all of its permitted SO<sub>2</sub> emission limits during the time period of any daily maximum 1-hour events that make up the Ambient Action Level and, if not, whether returning to compliance levels likely resolved the Ambient Action Level. If operational problems are identified as the source of excess emissions which resulted in a monitored value above the Ambient Action Level, then further investigation under Paragraphs (I)(iii)(b), (I)(iii)(c), (I)(iii)(d), and (I)(iii)(e) is not required. However, a report must still be filed with the Department which identifies the emission units that were not in compliance, the reason for the non-compliance, and if additional measures have or will be implemented to reduce the possibility of future non-compliance by these emission units.

b. If no emission exceedances are determined by United Refining, then the company must conduct an analysis of the most likely origin of the emission sources that were the cause of the maximum daily 1-hour triggering events of the Ambient Action Level. If it is determined that some other party (or parties), is the likely source of any of the maximum daily 1-hour triggering events that caused triggering of the Ambient Action Level, United Refining must submit this analysis, which may include a meteorological trajectory analysis utilizing HYSPLIT, or equivalent; a meteorological modeling analysis utilizing BUFKIT or equivalent; an air dispersion modeling analysis utilizing AERMOD, SCIPUFF, or equivalent; a photochemical modeling analysis to assess long-range transport utilizing CMAQ, CAMx, or equivalent; or a culpability analysis utilizing the PMF source apportionment tool or equivalent, to the Department. If United Refining is identified as the source of the SO<sub>2</sub> emissions that lead to all of the maximum daily 1-hour monitored values above the SO<sub>2</sub> Ambient Action Level, then United Refining must complete requirements under Paragraphs (I)(iii)(c), (I)(iii)(d), and (I)(iii)(e).

c. If United Refining was in compliance with all SO<sub>2</sub> emission limits and no other parties are indicated as the source of the SO<sub>2</sub> emissions, then United Refining will perform an assessment to determine if changes in facility operations, if any, would be needed to avoid a violation of the SO<sub>2</sub> NAAQS.

d. The Ambient Action Level Report shall include an analysis utilizing the appropriate model(s) outlined in Paragraph (I)(iii)(b) on the date(s) of when the monitored value was greater than the Ambient Action Level. The analysis will include appropriate data from any of the following: United Refining's meteorological tower, the Department's Warren Overlook (AIRS ID 421230004) meteorological tower, Pittsburgh International Airport's radiosonde data, and/or prognostic meteorological data.

e. If the Ambient Action Level Report concludes that SO<sub>2</sub> emissions from one or more SO<sub>2</sub>-emitting Sources at the Facility caused the Ambient Action Level, the Ambient Action Level Report shall also include proposed changes in facility operations, if any, that would be needed in order to avoid a violation of the SO<sub>2</sub> NAAQS.

[The emission limits in paragraph (a) above streamline the total SO<sub>2</sub> #/hr (902.6) and TPY (3,951) limits that were previously included in the Site Level of the permit which were authorized by SO<sub>2</sub> PA: 62-017E condition 4]

**\*\*\* Permit Shield in Effect. \*\*\***



**SECTION E. Source Group Restrictions.**

Group Name: CRUDE &amp; ISOM UNITS

Group Description:

Sources included in this group

ID	Name
1002	ISOMERIZATION UNIT
1004	CRUDE UNIT

**I. RESTRICTIONS.****Emission Restriction(s).**

# 001 [25 Pa. Code §127.12b]

**Plan approval terms and conditions.**

[Plan Approval 62-017Z]

Combined fugitive VOC emissions from connectors in the Crude Unit and Isom Unit shall not exceed 6.0 tons per year, calculated as a 12-month rolling total.

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

# 002 [25 Pa. Code §127.12b]

**Plan approval terms and conditions.**

[Plan Approval 62-017Z]

The permittee shall maintain records of the fugitive emissions from these source(s). Emissions shall be calculated via LDAR monitoring data and AP-42 component leak emission factors, or alternate means as approved by the Department.

**V. REPORTING REQUIREMENTS.**

# 003 [25 Pa. Code §127.12b]

**Plan approval terms and conditions.**

[Plan Approval 62-017Z]

The permittee shall report fugitive emissions from these source(s) annually to the Department.

**VI. WORK PRACTICE REQUIREMENTS.**

# 004 [25 Pa. Code §127.12b]

**Plan approval terms and conditions.**

[Plan Approval 62-017Z]

The permittee shall develop a leak detection and repair (LDAR) program for all connectors and flanges associated with these source(s), with the exception of components classified as "Difficult To Monitor" (DTM). "Difficult to Monitor" shall be defined as connectors that cannot be monitored without elevating personnel 2 meters or more above a support surface.

Minimum requirements of the LDAR program shall be as follows.

- (a) Each subject component shall be given a unique identifying number.
- (b) Each component shall be affixed with an identification tag, or equivalent.

**SECTION E. Source Group Restrictions.**

- (c) Any component measuring 2500 ppm shall be considered a leaking component, and will be required to have a repair attempt made within 15 days.
- (d) Each leaking component will affix a weatherproof tag affixed to the component with the following items listed on the tag:
- i. Component ID
  - ii. Date the leak was measured
  - iii. The tag shall remain in place until the leaking refinery component is repaired.
- (e) Any connector found leaking shall be re-checked within 72 hours after repair.
- (f) After a successful repair is made, the component shall be monitored for two (2) consecutive months without being over the leak threshold before the leak tag is removed and the monitoring of the component returns to the annual cycle.
- (g) A repair attempt may consist of tightening bolts to allowable torque levels, changing gaskets if the component can be isolated or encapsulating connectors (plastic or coffin).
- (h) Components that cannot be repaired without the unit being taken offline will be listed as a Delay or Repair.
- (i) The LDAR technician will follow Method 21 listed in 40 CFR 60 for monitoring method and QA/QC components of the analyzer.
- (j) The existing calibration procedures listed in Method 21 will be followed (the proposed leak definition is the same for the entire facility such that the existing calibration values will meet this condition).
- (k) The LDAR technician will follow United's existing LDAR procedure.

**VII. ADDITIONAL REQUIREMENTS.****# 005 [25 Pa. Code §127.12b]****Plan approval terms and conditions.**

[Plan Approval 62-017Z]

If fugitive emission limits for these source(s) are exceeded, the permittee shall submit a revised PSD / Non-attainment NSR netting analysis to the Department.

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION E. Source Group Restrictions.**

Group Name: EPA AMP

Group Description: EPA Alternative Monitoring Plan for Internal Floating Roof Tanks

**Sources included in this group**

ID	Name
203	FUEL STORAGE TANK 430
204	FUEL STORAGE TANK 431
207A	NAPHTHA STORAGE TANK 337A
209	FUEL STORAGE TANK 432
210A	FUEL STORAGE TANK 652
213	GASOLINE STORAGE TANK 244
214	STORAGE TANK 245
215	SOUR WATER/OIL TANK 434
216	MISCELLANEOUS STORAGE TANKS
222A	STORAGE TANK 401A
224	TANK 326
231	TANK 246
247	TANK 247
248	TANK 248
650	TANK 650
651	TANK 651

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VII. ADDITIONAL REQUIREMENTS.****# 001 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

As an alternative to the required 10 year out of service requirement for Internal Floating Roof (IFR) tanks, the Alternative Monitoring Plan (AMP), approved by USEPA on November 28, 2016, allows for monitoring of the seals and gaskets while

**SECTION E. Source Group Restrictions.**

the tank is in service. The following requirements of the AMP have been incorporated into this permit.

Personnel shall enter the tank of the IFR and measure the seal gaps. An explosion proof torch light shall be used for checking seals and gasketed openings. An initial 360 degree visual scan shall occur looking for any product or seal cover displacement, standing liquid, or wet spots on the roof or around any fittings. Any liquid on the floating roof is considered a failure. Seal gap measurements shall be taken for the primary and secondary seals around the entire circumference of the tank. The total surface area of each gap location shall be determined and multiplied by its circumferential distance. Any gap more than 1/8 inch shall be recorded and all gap surface area shall be summed and divided by the nominal diameter and if over 212 square centimeters/meter of tank diameter shall be considered a failure. Secondary seal gap measurements shall be taken and if over 21.2 square centimeters/meter of tank diameter shall be considered a failure. There are to be no holes, tears, or other openings in the seal or seal fabric. The facility shall keep a record of the roof inspection including the seal gap calculations. Failures shall be repaired in accordance with 40 CFR 60 Subpart Kb and Subpart CC of Part 63. The facility shall comply with the reporting requirements of 40 CFR Section 60.115b(a)(3) if failures are detected and shall comply with 40 CFR Section 60.115b(a)(2) - (4) for seal gap measurements. The facility shall comply with the repair requirements of 40 CFR Sections 60.113b(a)(2) and 63.1063(d) and (e).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION E. Source Group Restrictions.**

Group Name: PA 62-017G &amp; SUBSEQUENT PA TESTING

Group Description: Requirements for additional emission testing required by 62-017G &amp; subsequent plan approval

**Sources included in this group**

ID	Name
031	BOILER 1
032	BOILER 2
033	BOILER 3
036	BOILER 5B 80MMBTU/HR
042	FCC HEATER (NEW UNIT)
044	D.H.T. HEATER 1
049	EAST REFORMER HEATER
050	CRUDE HEATER - NORTH
050A	CRUDE HEATER - SOUTH
051	PRETREATER HEATER
052	WEST REFORMER HEATER
053	SAT GAS PLANT (DEBUT) REBOILER
054	VACUUM PROCESS HEATER
055	D.H.T. HEATER 2
056	PREFACTIONATOR REBOILER 2
057	VOLCANIC HEATER (T-241)
1010	SMR HYDROGEN PLANT (10 MMSCFD)(112.9 MMBTU/HR)
101A	FCC UNIT
105	MIDDLE FCC KVG COMPRESSOR
106	EAST FCC KVG COMPRESSOR
107	SAT GAS KVG COMPRESSOR
108	CLAUS SULFUR PLANT 2
108A	SULFUR PLANT 2 HOT OIL HEATER
211	LOADING RACK BOTTOM LOADING

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

(a) [25 Pa. Code § 139.53(a)(3)]

At least 60 calendar days prior to commencing an emissions testing program, a test protocol shall be submitted to the Department's Division of Source Testing and Monitoring and the appropriate Regional Office for review and approval. The test protocol shall meet all applicable requirements specified in the most current version of the Department's Source Testing Manual.

(b) [25 Pa. Code § 139.53(a)(3)]

At least 15 calendar days prior to commencing an emission testing program, notification as to the date and time of testing shall be given to the appropriate Regional Office. Notification shall also be sent to the Division of Source Testing and Monitoring. Notification shall not be made without prior receipt of a protocol acceptance letter from the Department.

(c) [25 Pa. Code § 139.53(a)(3)]

Within 15 calendar days after completion of the on-site testing portion of an emission test program, if a complete test report

**SECTION E. Source Group Restrictions.**

has not yet been submitted, an electronic mail notification shall be sent to the Department's Division of Source Testing and Monitoring at RA-epstacktesting@state.pa.us and the appropriate Regional Office indicating the completion date of the on-site testing.

(d) [40 CFR Part 60.8(a), 40 CFR Part 61.13(f) and 40 CFR Part 63.7(g)]

A complete test report shall be submitted to the Department no later than 60 calendar days after completion of the on-site testing portion of an emission test program. For those tests being conducted pursuant to 40 CFR Part 61, a complete test report shall be submitted within 31 days after completion of the test

(e) [25 Pa. Code Section 139.53(b)]

A complete test report shall include a summary of the emission results on the first page of the report indicating if each pollutant measured is within permitted limits and a statement of compliance or non-compliance with all applicable permit conditions. The summary results will include, at a minimum, the following information:

1. A statement that the owner or operator has reviewed the report from the emissions testing body and agrees with the findings.
2. Permit number(s) and condition(s) which are the basis for the evaluation.
3. Summary of results with respect to each applicable permit condition.
4. Statement of compliance or non-compliance with each applicable permit condition.

(f) [25 Pa. Code § 139.3]

All submittals shall meet all applicable requirements specified in the most current version of the Department's Source Testing Manual.

(g) All testing shall be performed in accordance with the provisions of Chapter 139 of the Rules and Regulations of the Department of Environmental Protection.

(h) [25 Pa. Code Section 139.53(a)(1) and 139.53(a)(3)]

All submittals, besides notifications, shall be accomplished through PSIMS\*Online available through <https://www.depgreenport.state.pa.us/ecommm/Login.jsp> when it becomes available. If internet submittal can not be accomplished, one copy of the submittal shall be sent to the Pennsylvania Department of Environmental Protection, Bureau of Air Quality, Division of Source Testing and Monitoring, 400 Market Street, 12th Floor Rachael Carson State Office Building, Harrisburg, PA 17105-8468 with deadlines verified through document postmarks. In a like manner, one copy of the submittal shall be sent to the appropriate Regional Office.

(i) The permittee shall ensure all federal reporting requirements contained in the applicable subpart of 40 CFR are followed, including timelines more stringent than those contained herein. In the event of an inconsistency or any conflicting requirements between state and the federal, the most stringent provision, term, condition, method or rule shall be used by default.

(j) If the results of a stack test exceed the level specified in any condition of this approval, the Permittee shall take appropriate corrective actions. Within 30 days of the Permittee receiving the stack test results, a written description of the corrective actions shall be submitted to the Department. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. The Department shall notify the Permittee within 30 days, if the corrective actions taken are deficient. Within 30 days of receipt of the notice of deficiency, the Permittee shall submit a description of additional corrective actions to the Department. The Department reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(k) If the results of the required stack test exceed any limit defined in this approval, the test was not performed in accordance with the stack test protocol or the source and/or air cleaning device was not operated in accordance with the approval, then another stack test shall be performed to determine compliance. Within 120 days of the Permittee receiving the original stack test results, a retest shall be performed. The Department may extend the retesting deadline if the Permittee demonstrates, to the Department's satisfaction, that retesting within 120 days is not practicable. Failure of the second test to demonstrate

**SECTION E. Source Group Restrictions.**

compliance with the limits in the approval, not performing the test in accordance with the stack test protocol or not operating the source and/or air cleaning device in accordance with the approval may be grounds for immediate revocation of the approval to operate the affected source.

**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[PA 62-017G and subsequent plan approvals requiring stack testing]

The following source stack tests shall be performed in accordance with Chapter 139 of the Rules and Regulations of the Department, to demonstrate compliance with the emission limits in the Source Level of this Permit:

1. Source 031 (Boiler 1) - CO, SO<sub>2</sub>, and TSP conducted on or before 2/15/2020.
2. Source 032 (Boiler 2) - CO, SO<sub>2</sub>, and TSP conducted on or before 2/15/2020.
3. Source 033 (Boiler 3) - CO, SO<sub>2</sub>, and TSP conducted on or before 2/15/2020.
4. Source 036 (Boiler 5B) - NO<sub>x</sub>, and CO conducted on or before 03/10/2021.
5. Source 042 (FCC Heater) - CO and SO<sub>2</sub> conducted on or before 12/31/2020.
6. Source 044 (DHT1 Heater) - The Department reserves the right to require testing.
7. Source 049 (East Reformer) - NO<sub>x</sub>, CO, SO<sub>2</sub>, and TSP conducted on or before 12/31/2019.
8. Source 050 (N Crude Heater) - NO<sub>x</sub>, CO, SO<sub>2</sub>, and TSP conducted on or before 12/31/2018.
9. Source 050A (S Crude Heater) - NO<sub>x</sub>, CO, SO<sub>2</sub>, and TSP conducted on or before 12/31/2018.
10. Source 051 (Pretreater Heater) - NO<sub>x</sub>, CO, SO<sub>2</sub>, and TSP conducted on or before 12/31/2019.
11. Source 052 (W Reformer Heater) - PM, NO<sub>x</sub>, CO, and SO<sub>2</sub>, conducted on or before 12/31/2019.
12. Source 053 (Sat Gas Plt Reboiler) - NO<sub>x</sub> and CO conducted on or before 12/31/2021.
13. Source 054 (Vacuum Process Heater) - CO conducted on or before 12/31/2018.
14. Source 055 (DHT2 Heater) - NO<sub>x</sub>, CO, SO<sub>2</sub>, and TSP conducted on or before 12/31/2019.
15. Source 056 (Prefrac 2 Reboiler) - NO<sub>x</sub>, CO, SO<sub>2</sub>, and TSP conducted on or before 12/31/2018.
16. Source 057 (Volcanic Heater) - NO<sub>x</sub>, and CO conducted on or before 12/31/2019.
17. Source 101A (FCC Unit) - NO<sub>x</sub>, CO, PM, PM<sub>10</sub>, PM<sub>2.5</sub> (both filterable & condensable) conducted on or before 12/31/2018.
18. Source 105 (Middle FCC KVG) - The Department reserves the right to require testing.
19. Source 106 (East FCC KVG) - The Department reserves the right to require testing.
20. Source 107 (SAT Gas KVG) - NO<sub>x</sub>, CO, and VOC conducted on or before 12/31/2020.
21. Source 108 (Claus Sulfur Plt 2) - NO<sub>x</sub>, CO, and VOC conducted on or before 12/31/2021.
22. Source 108A (SRU2 Hot Oil Heater) - The Department reserves the right to require testing.
23. Source 211 (Bottom Loading Rack VCU) - NO<sub>x</sub>, CO, and VOC conducted on or before 12/31/2020.
24. Source 1010 (SMR Hydrogen Plant) - NO<sub>x</sub> and CO conducted on or before 11/8/2021.
25. Source 037 (Boiler 6) NO<sub>x</sub> and CO conducted on or before 12/20/2021.

The tests shall be repeated at least once every five years from the dates above. The testing above does not replace the NO<sub>x</sub> RACT testing mentioned in Section D for the respective sources. In addition to the above testing, the facility shall also continue to conduct annual RATA testing in accordance with applicable CEM requirements in this permit.

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**SECTION E. Source Group Restrictions.****VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***



**SECTION E. Source Group Restrictions.**

Group Name: PA 62-017G THROUGHPUT

Group Description: Requirements for records of throughput required by PA 62-017G

**Sources included in this group**

ID	Name
201	FUEL STORAGE TANK 409
202	FUEL STORAGE TANK 410
203	FUEL STORAGE TANK 430
204	FUEL STORAGE TANK 431
205	FUEL STORAGE TANK 234
206	FUEL STORAGE TANK 236
209	FUEL STORAGE TANK 432
212	STORAGE TANK 240
213	GASOLINE STORAGE TANK 244
214	STORAGE TANK 245
215	SOUR WATER/OIL TANK 434
216	MISCELLANEOUS STORAGE TANKS
219	WASTEWATER SEPARATORS
220	WASTEWATER SYSTEMS
224	TANK 326

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[PA 62-017G]

The facility shall maintain daily records of the tank throughput for the following tanks (based on a 12-month rolling total):

Tank 409, 410, 430, 431, 234, 236, 337, 315, 432, 647, 240, 244, 245, 434, 329, 401, 326, 224, 225, and 648.

The permittee shall maintain monthly records of the throughput based on a 12-month rolling basis. The records shall be kept by the facility for a minimum of five years and made available to the Department upon request.

**# 002 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

[PA 62-017G]

The permittee shall record the throughput of the waste water system. The permittee shall maintain monthly records of the throughput based on a 12-month rolling basis. The records shall be kept by the facility for a minimum of five years and made available to the Department upon request.

**SECTION E. Source Group Restrictions.****V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VII. ADDITIONAL REQUIREMENTS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION E. Source Group Restrictions.**

Group Name: PA 62-0170 REQUIREMENTS

Group Description: Requirements for sulfur recovery phase III required by PA 62-0170

**Sources included in this group**

ID	Name
049	EAST REFORMER HEATER
051	PRETREATER HEATER
052	WEST REFORMER HEATER
056	PREFRACTIONATOR REBOILER 2
108	CLAUS SULFUR PLANT 2
108A	SULFUR PLANT 2 HOT OIL HEATER

**I. RESTRICTIONS.****Emission Restriction(s).**

# 001 [25 Pa. Code §127.12b]

**Plan approval terms and conditions.**

The fugitive VOC emissions from the Pretreater Unit shall not exceed 12.3 TPY.

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VII. ADDITIONAL REQUIREMENTS.**

# 002 [25 Pa. Code §127.12b]

**Plan approval terms and conditions.**

- The emission limits established in Plan Approval 62-0170 for Sources 051 (Pretreater Heater) and 056 (Prefractionator Reboiler 2) have not been incorporated into the Operating Permit because the TPY limits were lower in the revised netting analysis for PA 62-017G. Therefore, the limits from 62-017G were incorporated into the Operating Permit.
- The recordkeeping requirements in Section E of PA 62-0170 Group - Fuel Requirements are the same requirements found in Group 11 - Method of Compliance and therefore, the Group was not repeated, rather, the source 049 was added to Group 11 in the Permit.
- The requirements in Section E of PA 62-0170 Group - MACT SUBPART UUU are already in Group 10 - MACT SUBPART UUU and therefore, the requirements were not repeated in the Permit.

**SECTION E. Source Group Restrictions.**

d) The initial testing requirements in Section E of PA 62-017O Group - TESTING REQUIREMENTS was completed during the term of the plan approval with testing conducted in April and June 2008 for the West Reformer Heater, Pretreater Heater, and SRU2, respectively that were demonstrated to be in compliance with the plan approval.

**\*\*\* Permit Shield in Effect. \*\*\***

**SECTION E. Source Group Restrictions.**

Group Name: PRESUMPTIVE RACT 2

Group Description: Requirements pertaining to Presumptive RACT for NOx &amp; VOC

Sources included in this group

ID	Name
031	BOILER 1
032	BOILER 2
033	BOILER 3
036	BOILER 5B 80MMBTU/HR
037	VICTORY ENERGY OPERATIONS, VOYAGER, BOILER 6
042	FCC HEATER (NEW UNIT)
044	D.H.T. HEATER 1
049	EAST REFORMER HEATER
050	CRUDE HEATER - NORTH
050A	CRUDE HEATER - SOUTH
052	WEST REFORMER HEATER
054	VACUUM PROCESS HEATER
057	VOLCANIC HEATER (T-241)
105	MIDDLE FCC KVG COMPRESSOR
106	EAST FCC KVG COMPRESSOR
107	SAT GAS KVG COMPRESSOR
108	CLAUS SULFUR PLANT 2
108A	SULFUR PLANT 2 HOT OIL HEATER
113	IC ENGINES EXEMPTED FROM PA 8-4-2008
114	(3) 322 HP IC ENGINES AT EAST COOLING TOWER
C01	COMBINATION UNIT FLARE
C02	FCC UNIT FLARE
C211	VAPOR COMBUSTION UNIT

**I. RESTRICTIONS.**

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**II. TESTING REQUIREMENTS.**

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**III. MONITORING REQUIREMENTS.**

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**IV. RECORDKEEPING REQUIREMENTS.**

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**SECTION E. Source Group Restrictions.****VI. WORK PRACTICE REQUIREMENTS.**

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**VII. ADDITIONAL REQUIREMENTS.****# 001 [25 Pa. Code §129.100]****Compliance demonstration and recordkeeping requirements.**

(a) Except as provided in subsection (c), the owner and operator of an air contamination source subject to a NO<sub>x</sub> requirement or RACT emission limitation or VOC requirement or RACT emission limitation, or both, listed in § 129.97 (relating to presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule) shall demonstrate compliance with the applicable RACT requirement or RACT emission limitation by performing the following monitoring or testing procedures:

(1) For an air contamination source with a CEMS, monitoring and testing in accordance with the requirements of Chapter 139, Subchapter C (relating to requirements for source monitoring for stationary sources) using a 30-day rolling average, except municipal waste combustors.

(i) A 30-day rolling average emission rate for an air contamination source that is a combustion unit shall be expressed in pounds per million Btu and calculated in accordance with the following procedure:

(A) Sum the total pounds of pollutant emitted from the combustion unit for the current operating day and the previous 29 operating days.

(B) Sum the total heat input to the combustion unit in million Btu for the current operating day and the previous 29 operating days.

(C) Divide the total number of pounds of pollutant emitted by the combustion unit for the 30 operating days by the total heat input to the combustion unit for the 30 operating days.

(ii) A 30-day rolling average emission rate for each applicable RACT emission limitation shall be calculated for an affected air contamination source for each consecutive operating day.

(iii) Each 30-day rolling average emission rate for an affected air contamination source must include the emissions that occur during the entire operating day, including emissions from start-ups, shutdowns and malfunctions.

(2) - (3) Not applicable.

(4) For an air contamination source without a CEMS, monitoring and testing in accordance with a Department-approved emissions source test that meets the requirements of Chapter 139, Subchapter A (relating to sampling and testing methods and procedures). The source test shall be conducted one time in each 5-year calendar period.

(b) Except as provided in § 129.97(k) and § 129.99(i) (relating to alternative RACT proposal and petition for alternative compliance schedule), the owner and operator of an air contamination source subject to subsection (a) shall demonstrate compliance with the applicable RACT requirement or RACT emission limitation in accordance with the procedures in subsection (a) not later than:

(1) January 1, 2017, for a source subject to § 129.96(a) (relating to applicability).

(2) Not applicable.

(c) An owner or operator of an air contamination source subject to this section, §§ 129.96 and 129.97 and § 129.98 (relating to facility-wide or system-wide NO<sub>x</sub> emissions averaging plan general requirements) may request a waiver from the requirement to demonstrate compliance with the applicable emission limitation listed in § 129.97 if the following requirements are met:

(1) The request for a waiver is submitted, in writing, to the Department not later than:

**SECTION E. Source Group Restrictions.**

(i) October 24, 2016, for a source subject to § 129.96(a).

(ii) Not applicable.

(2) The request for a waiver demonstrates that a Department-approved emissions source test was performed in accordance with the requirements of Chapter 139, Subchapter A, on or after:

(i) April 23, 2015, for a source subject to § 129.96(a).

(ii) Not applicable.

(3) The request for a waiver demonstrates to the satisfaction of the Department that the test results show that the source's rate of emissions is in compliance with the source's applicable NOx emission limitation or VOC emission limitation.

(4) The Department approves, in writing, the request for a waiver.

[United is hereby granted a waiver in accordance with paragraph (c) for the Sat Gas KVG (Source 107) which was tested after April 23, 2015 and the results were submitted on January 4, 2016. The results were 0.124 lb/hr, converted to g/hp-hr based on the rating of 660 hp produced a result of 0.085 g/hp-hr which is compliant with the presumptive limit of 1.0 gm/hp-hr as stated in 129.97(g)(3)(i)(B).]

(d) The owner and operator of an air contamination source subject to this section and §§ 129.96—129.99 shall keep records to demonstrate compliance with §§ 129.96—129.99 in the following manner:

(1) The records must include sufficient data and calculations to demonstrate that the requirements of §§ 129.96—129.99 are met.

(2) Data or information required to determine compliance shall be recorded and maintained in a time frame consistent with the averaging period of the requirement.

(e) Beginning with the compliance date specified in § 129.97(a), the owner or operator of an air contamination source claiming that the air contamination source is exempt from the applicable NOx emission rate threshold specified in § 129.99(b) and the requirements of § 129.97 based on the air contamination source's potential to emit shall maintain records that demonstrate to the Department or appropriate approved local air pollution control agency that the air contamination source is not subject to the specified emission rate threshold.

(f) Beginning with the compliance date specified in § 129.97(a), the owner or operator of an air contamination source claiming that the air contamination source is exempt from the applicable VOC emission rate threshold specified in § 129.99(c) and the requirements of § 129.97 based on the air contamination source's potential to emit shall maintain records that demonstrate to the Department or appropriate approved local air pollution control agency that the air contamination source is not subject to the specified emission rate threshold.

(g) - (h) Not applicable.

(i) The records shall be retained by the owner or operator for 5 years and made available to the Department or appropriate approved local air pollution control agency upon receipt of a written request from the Department or appropriate approved local air pollution control agency.

**# 002 [25 Pa. Code §129.96]**

**Applicability**

(a) The NOx requirements of this section and §§ 129.97—129.100 apply Statewide to the owner and operator of a major NOx emitting facility and the VOC requirements of this section and §§ 129.97—129.100 apply Statewide to the owner and operator of a major VOC emitting facility that were in existence on or before July 20, 2012, for which a requirement or emission limitation, or both, has not been established in §§ 129.51—129.52c, 129.54—129.69, 129.71—129.73, 129.75, 129.77, 129.101—129.107 and 129.301—129.310.

[Source 036, 037, and 1010 were installed after July 20, 2012 and are therefore exempt from RACT 2]

**SECTION E. Source Group Restrictions.**

(b) The NO<sub>x</sub> requirements of this section and § § 129.97—129.100 apply Statewide to the owner and operator of a NO<sub>x</sub> emitting facility and the VOC requirements of this section and § § 129.97—129.100 apply Statewide to the owner and operator of a VOC emitting facility when the installation of a new source or a modification or change in operation of an existing source after July 20, 2012, results in the source or facility meeting the definition of a major NO<sub>x</sub> emitting facility or a major VOC emitting facility and for which a requirement or an emission limitation, or both, has not been established in § § 129.51—129.52c, 129.54—129.69, 129.71—129.73, 129.75, 129.77, 129.101—129.107 and 129.301—129.310.

(c) This section and § § 129.97—129.100 do not apply to the owner and operator of a NO<sub>x</sub> air contamination source located at a major NO<sub>x</sub> emitting facility that has the potential to emit less than 1 TPY of NO<sub>x</sub> or a VOC air contamination source located at a major VOC emitting facility that has the potential to emit less than 1 TPY of VOC. [Sources 031, 032, 033, 044, 051, 053, 055, 056, 057, and 108A each have VOC PTE less than 1 TPY and are exempt from VOC RACT]

(d) This section and § § 129.97—129.100 do not apply to the owner and operator of a facility which is not a major NO<sub>x</sub> emitting facility or a major VOC emitting facility on or before January 1, 2017.

**# 003 [25 Pa. Code §129.97]****Presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule.**

(a) The owner and operator of a source listed in one or more of subsections (b)—(h) located at a major NO<sub>x</sub> emitting facility or major VOC emitting facility subject to § 129.96 (relating to applicability) shall comply with the applicable presumptive RACT requirement or RACT emission limitation, or both, beginning with the specified compliance date as follows, unless an alternative compliance schedule is submitted and approved under subsections (k)—(m) or § 129.99 (relating to alternative RACT proposal and petition for alternative compliance schedule):

(1) January 1, 2017, for a source subject to § 129.96(a).

(2) Not applicable.

(b) Not applicable

(c) The owner and operator of a source specified in this subsection, which is located at a major NO<sub>x</sub> emitting facility or major VOC emitting facility subject to § 129.96 shall install, maintain and operate the source in accordance with the manufacturer's specifications and with good operating practices:

(1) A NO<sub>x</sub> air contamination source that has the potential to emit less than 5 TPY of NO<sub>x</sub>. [This requirement applies to Sources 054, 105 & 106]

(2) A VOC air contamination source that has the potential to emit less than 2.7 TPY of VOC. [This requirement applies to Sources 042, 049, 050, 050A, 052, 054, 101A, 105, 106, and 113]

(3) A boiler or other combustion source with an individual rated gross heat input less than 20 million Btu/hour. [This requirement pertains to Sources 044, 057, and 108A]

(4) Not applicable

(5) A stationary internal combustion engine rated at less than 500 bhp (gross). [This requirement pertains to Sources 113 and 114]

(6) An incinerator, thermal oxidizer or catalytic oxidizer used primarily for air pollution control. [This requirement pertains to Source 108 and Controls C211, C01, and C02]

(7) Not applicable.

(8) An emergency standby engine operating less than 500 hours in a 12-month rolling period. [Applies to Sources 105 & 106]

(d) Except as specified under subsection (c), the owner and operator of a combustion unit or other combustion source located at a major VOC emitting facility subject to § 129.96 shall install, maintain and operate the source in accordance with the manufacturer's specifications and with good operating practices for the control of the VOC emissions from the



**SECTION E. Source Group Restrictions.**

combustion unit or other combustion source.

(e) - (f) Not applicable.

(g) Except as specified under subsection (c), the owner and operator of a NO<sub>x</sub> air contamination source specified in this subsection, which is located at a major NO<sub>x</sub> emitting facility or a VOC air contamination source specified in this subsection, which is located at a major VOC emitting facility subject to § 129.96 may not cause, allow or permit NO<sub>x</sub> or VOCs to be emitted from the air contamination source in excess of the applicable presumptive RACT emission limitation:

(1) A combustion unit or process heater: [Applies to Sources 031, 032, 033, 042, 049, 050, 050A, and 052]

(i) For a natural gas-fired combustion unit or process heater with a rated heat input equal to or greater than 50 million Btu/hour, 0.10 lb NO<sub>x</sub>/million Btu heat input.

(ii) For a distillate oil-fired combustion unit or process heater with a rated heat input equal to or greater than 50 million Btu/hour, 0.12 lb NO<sub>x</sub>/million Btu heat input.

(iii) For a residual oil-fired or other liquid fuel-fired combustion unit or process heater with a rated heat input equal to or greater than 50 million Btu/hour, 0.20 lb NO<sub>x</sub>/million Btu heat input.

(iv) For a refinery gas-fired combustion unit or process heater with a rated heat input equal to or greater than 50 million Btu/hour, 0.25 lb NO<sub>x</sub>/million Btu heat input.

(v)- (ix) Not applicable.

(2) Not applicable

(3) A stationary internal combustion engine: [Applies to Source 107]

(i) For a lean burn stationary internal combustion engine with a rating equal to or greater than 500 bhp fired with:

(A) Natural gas or a noncommercial gaseous fuel, 3.0 grams NO<sub>x</sub>/bhp-hr.

(B) Natural gas or a noncommercial gaseous fuel, liquid fuel or dual-fuel, 1.0 gram VOC/bhp-hr excluding formaldehyde.

(ii-iii) Not applicable

(4) Not applicable

(h) Not applicable.

(i) The requirements and emission limitations of this section supersede the requirements and emission limitations of a RACT permit issued to the owner or operator of an air contamination source subject to one or more of subsections (b)—(h) prior to April 23, 2016, under §§ 129.91—129.95 (relating to stationary sources of NO<sub>x</sub> and VOCs) to control, reduce or minimize NO<sub>x</sub> emissions or VOC emissions, or both, from the air contamination source unless the permit contains more stringent requirements or emission limitations, or both.

(j) - (m) Not applicable.

\*\*\* **Permit Shield in Effect.** \*\*\*

**SECTION E. Source Group Restrictions.**

Group Name: SUBPART ZZZZ FOR NON-EMERGENCY ENGINES

Group Description: Requirements of 40 CFR 63 Subpart ZZZZ that pertain to Non-emergency diesel fired engines

Sources included in this group

ID	Name
114	(3) 322 HP IC ENGINES AT EAST COOLING TOWER

**I. RESTRICTIONS.****Emission Restriction(s).**

**# 001 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6602]**

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**What emission limitations must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less**

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

[Excerpt from Table 2c]

4. Non-Emergency, non-black start CI stationary RICE (HP greater than 300HP and HP less than or equal to 500 HP)
  - a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O<sub>2</sub>; or
  - b. Reduce CO emissions by 70 percent or more.

**Fuel Restriction(s).**

**# 002 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6604]**

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**What fuel requirements must I meet if I own or operate an existing stationary CI RICE?**

If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

[Excerpt from 80.510(b)]

(b) Beginning June 1, 2010 . Except as otherwise specifically provided in this subpart, all Non road diesel fuel is subject to the following per-gallon standards:

(1) Sulfur content.

(i) 15 ppm maximum.

(2) Cetane index or aromatic content, as follows:

(i) A minimum cetane index of 40; or

(ii) A maximum aromatic content of 35 volume percent.

**II. TESTING REQUIREMENTS.**

**# 003 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6612]**

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate**

**SECTION E. Source Group Restrictions.****an existing stationary RICE with a site rating of less than or equal to 500 brake (please see below)**

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

**# 004 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6612]****Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines****By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake (please see below)**

[Table 4 Excerpt]

1. For each CI stationary RICE complying with the requirement to reduce CO emissions you must:

i. Measure the O<sub>2</sub> at the inlet and outlet of the control device using Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM D6522-00 (2005) (incorporated by reference, see §63.14). Measurements to determine O<sub>2</sub> must be made at the same time as the measurements for CO concentration. And;

ii. Measure the CO at the inlet and the outlet of the control device using ASTM D6522-00 (2005) (incorporated by reference, see §63.14) or Method 10 of 40 CFR Part 60, Appendix A. The CO concentration must be at 15 percent O<sub>2</sub>, dry basis.

3. For each stationary RICE complying with the requirement of limiting the concentration of CO in the stationary RICE exhaust you must:

i. Select the sampling port location and the number of traverse points using Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i) according to the following requirement (a) If using a control device, the sampling site must be located at the outlet of the control device. And;

ii. Determine the O<sub>2</sub> concentration of the stationary RICE exhaust at the sampling port location using Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (2005). Measurements to determine O<sub>2</sub> concentration must be made at the same time and location as the measurements for CO concentration. And;

iii. Measure moisture content of the stationary RICE exhaust at the sampling port location using Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03; Measurements to determine moisture concentration must be made at the same time and location as the measurements for CO concentration. And;

iv. Measure CO at the exhaust of the stationary RICE using Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00 (2005), Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03 according to the following requirements (a) CO Concentration must be at 15 percent O<sub>2</sub>, dry basis. Results of this test consist of the average of the three 1-hour or

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longer runs.

**# 005 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6612]**

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake (please see below)**

[Excerpt of Table 5]

11. For each Existing non-emergency stationary RICE with HP rating greater than or equal to 100HP and less than or equal to 500 HP located at a major source of HAP, complying with the requirement to reduce CO emissions, you have demonstrated initial compliance if the average reduction of emissions of CO determined from the initial performance test is equal to or greater than the required CO percent reduction.

12. For each Existing non-emergency stationary RICE with HP rating greater than or equal to 100HP and less than or equal to 500 HP located at a major source of HAP, complying with the requirement to limit the concentration of CO in the stationary RICE exhaust, you have demonstrated initial compliance if the average CO concentration, corrected to 15 percent O<sub>2</sub>, dry basis, from the three test runs is less than or equal to the CO emission limitation.

**# 006 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6620]**

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**What performance tests and other procedures must I use?**

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in this subpart.

(e) (1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$(C_i - C_o) / C_i \times 100 = R$$

Where:

C<sub>i</sub> = concentration of CO at the control device inlet,

C<sub>o</sub> = concentration of CO at the control device outlet, and

R = percent reduction of CO emissions.

(2) You must normalize the carbon monoxide (CO) concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO<sub>2</sub>). If pollutant concentrations are to be corrected to 15 percent oxygen and CO<sub>2</sub> concentration is measured in lieu of oxygen concentration measurement, a CO<sub>2</sub> correction factor is needed. Calculate the CO<sub>2</sub> correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific F<sub>o</sub> value for the fuel burned during the test using values obtained from Method 19, section 5.2, and the following equation:

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$$F_o = 0.209F_d / F_c$$

Where:

$F_o$  = Fuel factor based on the ratio of oxygen volume to the ultimate CO<sub>2</sub> volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

$F_d$  = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm<sup>3</sup> / J (dscf/106 Btu).

$F_c$  = Ratio of the volume of CO<sub>2</sub> produced to the gross calorific value of the fuel from Method 19, dsm<sup>3</sup> / J (dscf/106 Btu).

(ii) Calculate the CO<sub>2</sub> correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{co2} = 5.9/F_o$$

Where:

$X_{co2}$  = CO<sub>2</sub> correction factor, percent.

5.9 = 20.9 percent O<sub>2</sub> - 15 percent O<sub>2</sub>, the defined O<sub>2</sub> correction value, percent.

(iii) Calculate the CO gas concentration adjusted to 15 percent O<sub>2</sub> using CO<sub>2</sub> as follows:

$$C_{adj} = C_d(X_{CO2}) / \%CO_2$$

Where:

$C_{adj}$  = Calculated concentration of CO adjusted to 15 percent O<sub>2</sub>.

$C_d$  = Measured concentration of CO, uncorrected.

$X_{CO2}$  = CO<sub>2</sub> correction factor, percent.

$\%CO_2$  = Measured CO<sub>2</sub> concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

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- (4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and
- (5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.
- (h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.
- (1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally ( e.g., operator adjustment, automatic controller adjustment, etc.) or unintentionally ( e.g., wear and tear, error, etc.) on a routine basis or over time;
- (2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;
- (3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;
- (4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;
- (5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;
- (6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and
- (7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.
- (i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

**III. MONITORING REQUIREMENTS.**

**# 007 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6635]**

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**How do I monitor and collect data to demonstrate continuous compliance?**

- (a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.
- (b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
- (c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

**SECTION E. Source Group Restrictions.****IV. RECORDKEEPING REQUIREMENTS.****# 008 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6655]****Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines****What records must I keep?**

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation ( i.e., process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) - (f) Not applicable.

**# 009 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6660]****Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines****In what form and how long must I keep my records?**

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

**V. REPORTING REQUIREMENTS.****# 010 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6640]****Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines****How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?**

(a) Not applicable.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) Not applicable.

(d) Not applicable.

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. [non applicable text omitted]

**SECTION E. Source Group Restrictions.**

(f) Not applicable.

**# 011 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6645]**

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**What notifications must I submit and when?**

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) - (5) Not applicable

(b) - (c) Not applicable

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) - (f) Not applicable

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

(i) Not applicable.

**# 012 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6650]**

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**What reports must I submit and when?**

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be 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.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40



**SECTION E. Source Group Restrictions.**

CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must 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. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) Not applicable.

(d) - (e) Not applicable

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) - (h) Not applicable.

**VI. WORK PRACTICE REQUIREMENTS.**

**# 013 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6605]**

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

**What are my general requirements for complying with this subpart?**

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and

**SECTION E. Source Group Restrictions.**

monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this 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, review of operation and maintenance records, and inspection of the source.

**# 014 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6625]****Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines****What are my monitoring, installation, operation, and maintenance requirements?**

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (g)(2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements.

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

**VII. ADDITIONAL REQUIREMENTS.****# 015 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6590]****Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines****What parts of my plant does this subpart cover?**

This subpart applies to each affected source.

(a) Affected source. An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) Existing stationary RICE.

(i) Not applicable.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) Not Applicable

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) - (3) Not applicable.

(b) - (c) Not applicable.

**SECTION E. Source Group Restrictions.****# 016 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6595]****Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines****When do I have to comply with this subpart?**

(a)(1) If you have an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. [Non-applicable portions of regulation removed]

(2) - (7) Not applicable.

(b) Not applicable.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

**# 017 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6630]****Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines****How do I demonstrate initial compliance with the emission limitations and operating limitations?**

(a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.

(b) Not Applicable.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

**# 018 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6665]****Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines****What parts of the General Provisions apply to me?**

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. [Non applicable text omitted]

**# 019 [40 CFR Part 63 NESHAPS for Source Categories §40 CFR 63.6675]****Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines****What definitions apply to this subpart?**

The terms used in this subpart are defined in the Clear Air Act (CAA); in 40 CFR 63.2; the General Provisions of this part; and in this section. [See Code of Federal Regulations for the definitions]

\*\*\* **Permit Shield in Effect.** \*\*\*

**SECTION F. Alternative Operation Requirements.**

No Alternative Operations exist for this Title V facility.

**SECTION G. Emission Restriction Summary.**

Source Id	Source Descriptor		
031	BOILER 1		
<b>Emission Limit</b>		<b>Pollutant</b>	
15.000	Lbs/Hr	combined boilers 1,2 and 3	CO
21.600	Tons/Yr	consecutive 12-month period	CO
0.246	Lbs/MMBTU		NOX
21.400	Lbs/Hr	combined boilers 1,2,and 3	NOX
39.000	Tons/Yr	consecutive 12-month period	NOX
6.200	Lbs/Hr	combined boilers 1,2,and 3	PM10
20.000	Tons/Yr	consecutive 12-month period	PM10
27.420	Lbs/Hr	combined boilers 1,2,and 3	SOX
119.000	Tons/Yr	consecutive 12-month period	SOX
6.900	Lbs/Hr	combined boilers 1,2,and 3	TSP
22.700	Tons/Yr	consecutive 12-month period	TSP
1.000	Lbs/Hr	combined boilers 1,2, and 3	VOC
1.400	Tons/Yr	consecutive 12-month period	VOC
032	BOILER 2		
<b>Emission Limit</b>		<b>Pollutant</b>	
15.000	Lbs/Hr	combined boilers 1,2,and 3	CO
21.600	Tons/Yr	consecutive 12-month period	CO
0.246	Lbs/MMBTU		NOX
21.400	Lbs/Hr	combined boilers 1,2,and 3	NOX
39.000	Tons/Yr	consecutive 12-month period	NOX
6.200	Lbs/Yr	combined boilers 1,2,and 3	PM10
20.000	Tons/Yr	consecutive 12-month period	PM10
27.420	Lbs/Hr	combined boilers 1,2,and 3	SOX
119.000	Tons/Yr	consecutive 12-month period	SOX
6.900	Lbs/Yr	combined boilers 1,2,and 3	TSP
22.700	Tons/Yr	consecutive 12-month period	TSP
1.000	Lbs/Hr	combined boilers 1,2,and 3	VOC
1.400	Tons/Yr	consecutive 12-month period	VOC
033	BOILER 3		
<b>Emission Limit</b>		<b>Pollutant</b>	
15.000	Lbs/Hr	combined boilers 1,2,and 3	CO
21.600	Tons/Yr	consecutive 12-month period	CO
0.246	Lbs/MMBTU		NOX
21.400	Lbs/Hr	combined boilers 1,2,and 3	NOX
39.000	Tons/Yr	consecutive 12-month period	NOX
6.200	Lbs/Hr	combined boilers 1,2,and 3	PM10
20.000	Tons/Yr	consecutive 12-month period	PM10
27.420	Lbs/Hr	combined boilers 1,2,and 3	SOX
119.000	Tons/Yr	consecutive 12-month period	SOX
6.900	Lbs/Hr	combined boilers 1,2,and 3	TSP
22.700	Tons/Yr	consecutive 12-month period	TSP
1.000	Lbs/Hr	combined boilers 1,2,and 3	VOC

**SECTION G. Emission Restriction Summary.**

Source Id	Source Descriptor		
1.400	Tons/Yr	consecutive 12-month period	VOC
036	BOILER 5B 80MMBTU/HR		
<b>Emission Limit</b>		<b>Pollutant</b>	
0.038	Lbs/MMBTU		CO
13.140	Tons/Yr		CO
0.036	Lbs/MMBTU		NOX
12.610	Tons/Yr		NOX
0.240	Lbs/Hr		SOX
0.005	Lbs/MMBTU	Filterable and Condensable	TSP
1.750	Tons/Yr	Filterable and Condensable	TSP
0.004	Lbs/MMBTU		VOC
1.400	Tons/Yr		VOC
037	VICTORY ENERGY OPERATIONS, VOYAGER, BOILER 6		
<b>Emission Limit</b>		<b>Pollutant</b>	
0.040	Lbs/MMBTU		CO
32.000	Tons/Yr	Calculated as a 12-month rolling total	CO
0.036	Lbs/MMBTU		NOX
28.800	Tons/Yr	Calculated as a 12-month rolling total	NOX
0.010	Lbs/MMBTU		PM10
8.000	Tons/Yr	Calculated as a 12-month rolling total	PM10
0.010	Lbs/MMBTU		PM2.5
8.000	Tons/Yr	Calculated as a 12-month rolling total	PM2.5
0.002	Lbs/MMBTU	When combusting natural gas	SOX
0.030	Lbs/MMBTU	When combusting refinery gas	SOX
4.600	Lbs/Hr		SOX
7.300	Tons/Yr	Calculated as a 12-month rolling total	SOX
0.010	Lbs/MMBTU		TSP
8.000	Tons/Yr	Calculated as a 12-month rolling total	TSP
0.005	Lbs/MMBTU		VOC
4.000	Tons/Yr	Calculated as a 12-month rolling total	VOC
039	BOILER 7 (180 MMBTU/HR)		
<b>Emission Limit</b>		<b>Pollutant</b>	
0.045	Lbs/MMBTU		CO
42.600	Tons/Yr	12-month rolling total	CO
0.065	Lbs/MMBTU		NOX
34.000	Tons/Yr	12-month rolling total	NOX
0.011	Lbs/MMBTU		PM10
8.700	Tons/Yr	12-month rolling total	PM10
0.011	Lbs/MMBTU		PM2.5
8.700	Tons/Yr	12-month rolling total	PM2.5

**SECTION G. Emission Restriction Summary.**

Source Id	Source Descriptor		
0.008	Lbs/MMBTU		SOX
7.600	Tons/Yr	12-month rolling total	SOX
0.006	Lbs/MMBTU		VOC
1.100	Tons/Yr	12-month rolling total	VOC
042	FCC HEATER (NEW UNIT)		
<b>Emission Limit</b>		<b>Pollutant</b>	
3.800	Lbs/Hr		CO
15.400	Tons/Yr	based on a consecutive 12-month period	CO
1.900	Lbs/Hr		NOX
9.400	Tons/Yr	based on a consecutive 12-month period	NOX
0.340	Lbs/Hr		PM10
1.500	Tons/Yr	based on a consecutive 12-month period	PM10
1.100	Lbs/Hr		SOX
4.000	Tons/Yr	based on a consecutive 12-month period	SOX
0.340	Lbs/Hr		TSP
1.500	Tons/Yr	based on a consecutive 12-month period	TSP
0.300	Lbs/Hr		VOC
1.100	Tons/Yr	based on a consecutive 12-month period	VOC
044	D.H.T. HEATER 1		
<b>Emission Limit</b>		<b>Pollutant</b>	
0.800	Lbs/Hr		CO
3.200	Tons/Yr	calculated as a 12 month rolling total	CO
0.700	Lbs/Hr		NOX
2.800	Tons/Yr	calculated as a 12 month rolling total	NOX
0.100	Lbs/Hr		PM10
0.300	Tons/Yr	calculated as a 12 month rolling total	PM10
0.240	Lbs/Hr		SOX
0.500	Tons/Yr	calculated as a 12 month rolling total	SOX
0.100	Lbs/Hr		TSP
0.300	Tons/Yr	calculated as a 12 month rolling total	TSP
0.100	Lbs/Hr		VOC
0.200	Tons/Yr	calculated as a 12 month rolling total	VOC
049	EAST REFORMER HEATER		
<b>Emission Limit</b>		<b>Pollutant</b>	
6.600	Lbs/Hr		CO
24.100	Tons/Yr	based on a consecutive 12-month period	CO
17.100	Lbs/Hr		NOX
59.900	Tons/Yr	based on a consecutive 12-month period	NOX
3.400	Lbs/Hr		PM10
13.000	Tons/Yr	based on a consecutive 12-month period	PM10
22.420	Lbs/Hr		SOX

**SECTION G. Emission Restriction Summary.**

Source Id	Source Descriptor		
40.000	Tons/Yr	based on a consecutive 12-month period	SOX
3.820	Lbs/Hr		TSP
14.700	Tons/Yr	based on a consecutive 12-month period	TSP
0.420	Lbs/Hr		VOC
1.500	Tons/Yr	based on a consecutive 12-month period	VOC
12.400	Tons/Yr	fugitive VOCs from the reformer unit	VOC
050	CRUDE HEATER - NORTH		
<b>Emission Limit</b>		<b>Pollutant</b>	
8.300	Lbs/Hr		CO
18.800	Tons/Yr	based on a consecutive 12-month period	CO
0.226	Lbs/MMBTU		NOX
21.200	Lbs/Hr		NOX
52.000	Tons/Yr	based on a consecutive 12-month period	NOX
6.530	Lbs/Hr		PM10
27.900	Tons/Yr	based on a consecutive 12-month period	PM10
5.000	Lbs/Hr	sour water stripper off gas	SOX
21.900	Tons/Yr	sour water stripper off gas	SOX
27.780	Lbs/Hr		SOX
80.000	Tons/Yr	based on a consecutive 12-month period	SOX
7.410	Lbs/Hr		TSP
31.600	Tons/Yr	based on a consecutive 12-month period	TSP
0.550	Lbs/Hr		VOC
2.300	Tons/Yr	based on a consecutive 12-month period	VOC
050A	CRUDE HEATER - SOUTH		
<b>Emission Limit</b>		<b>Pollutant</b>	
8.300	Lbs/Hr		CO
18.800	Tons/Yr	based on a consecutive 12-month period	CO
0.226	Lbs/MMBTU		NOX
21.200	Lbs/Hr		NOX
64.200	Tons/Yr	based on a consecutive 12-month period	NOX
6.530	Lbs/Hr		PM10
27.900	Tons/Yr	based on a consecutive 12-month period	PM10
5.000	Lbs/Hr	sour water stripper off gas	SOX
21.900	Tons/Yr	sour water stripper off gas	SOX
27.780	Lbs/Hr		SOX
80.000	Tons/Yr	based on a consecutive 12-month period	SOX
7.410	Lbs/Hr		TSP
31.600	Tons/Yr	based on a consecutive 12-month period	TSP
0.550	Lbs/Hr		VOC
2.300	Tons/Yr	based on a consecutive 12-month period	VOC



**SECTION G. Emission Restriction Summary.**

Source Id	Source Descriptor		
051	PRETREATER HEATER		
<b>Emission Limit</b>			<b>Pollutant</b>
3.300	Lbs/Hr		CO
15.300	Tons/Yr	based on a consecutive 12-month period	CO
5.200	Lbs/Hr		NOX
21.400	Tons/Yr	based on a consecutive 12-month period	NOX
2.000	Lbs/Hr		PM10
5.700	Tons/Yr	based on a consecutive 12-month period	PM10
11.000	Lbs/Hr		SOX
30.000	Tons/Yr	based on a consecutive 12-month period	SOX
2.200	Lbs/Hr		TSP
6.400	Tons/Yr	based on a consecutive 12-month period	TSP
0.210	Lbs/Hr		VOC
0.900	Tons/Yr	based on a consecutive 12-month period	VOC
052	WEST REFORMER HEATER		
<b>Emission Limit</b>			<b>Pollutant</b>
8.600	Lbs/Hr		CO
22.300	Tons/Yr	based on a consecutive 12-month period	CO
15.100	Lbs/Hr		NOX
37.200	Tons/Yr	based on a consecutive 12-month period	NOX
0.880	Lbs/Hr		PM10
2.700	Tons/Yr	based on a consecutive 12-month period	PM10
2.200	Lbs/Hr		SOX
9.600	Tons/Yr	based on a consecutive 12-month period	SOX
2.700	Lbs/Hr		TSP
4.300	Tons/Yr	based on a consecutive 12-month period	TSP
0.600	Lbs/Hr		VOC
1.700	Tons/Yr	based on a consecutive 12-month period	VOC
053	SAT GAS PLANT (DEBUT) REBOILER		
<b>Emission Limit</b>			<b>Pollutant</b>
1.700	Lbs/Hr		CO
6.800	Tons/Yr	based on a consecutive 12-month period	CO
2.000	Lbs/Hr		NOX
8.200	Tons/Yr	based on a consecutive 12-month period	NOX
0.200	Lbs/Hr		PM10
0.600	Tons/Yr	based on a consecutive 12-month period	PM10
0.400	Lbs/Hr		SOX
1.800	Tons/Yr	based on a consecutive 12-month period	SOX
0.200	Lbs/Hr		TSP
0.600	Tons/Yr	based on a consecutive 12-month period	TSP
0.110	Lbs/Hr		VOC
0.400	Tons/Yr	based on a consecutive 12-month period	VOC

**SECTION G. Emission Restriction Summary.**

Source Id	Source Descriptor		
054	VACUUM PROCESS HEATER		
<b>Emission Limit</b>			<b>Pollutant</b>
4.400	Lbs/Hr		CO
16.500	Tons/Yr	based on a consecutive 12-month period	CO
1.300	Lbs/Hr		NOX
4.800	Tons/Yr	based on a consecutive 12-month period	NOX
0.400	Lbs/Hr		PM10
1.500	Tons/Yr	based on a consecutive 12-month period	PM10
0.800	Lbs/Hr		SOX
3.500	Tons/Yr	based on a consecutive 12-month period	SOX
0.400	Lbs/Hr		TSP
1.500	Tons/Yr	based on a consecutive 12-month period	TSP
0.300	Lbs/Hr		VOC
1.100	Tons/Yr	based on a consecutive 12-month period	VOC
055	D.H.T. HEATER 2		
<b>Emission Limit</b>			<b>Pollutant</b>
6.700	Lbs/Hr		CO
10.600	Tons/Yr	based on a consecutive 12-month period	CO
4.400	Lbs/Hr		NOX
19.300	Tons/Yr	based on a consecutive 12-month period	NOX
0.320	Lbs/Hr		PM10
1.400	Tons/Yr	based on a consecutive 12-month period	PM10
6.360	Lbs/Hr		SOX
27.500	Tons/Yr	based on a consecutive 12-month period	SOX
1.030	Lbs/Hr		TSP
5.800	Tons/Yr	based on a consecutive 12-month period	TSP
0.200	Lbs/Hr		VOC
0.700	Tons/Yr	based on a consecutive 12-month period	VOC
056	PREFACTIONATOR REBOILER 2		
<b>Emission Limit</b>			<b>Pollutant</b>
2.500	Lbs/Hr		CO
10.600	Tons/Yr	based on a consecutive 12-month period	CO
3.100	Lbs/Hr		NOX
19.400	Tons/Yr	based on a consecutive 12-month period	NOX
0.320	Lbs/Hr		PM10
1.400	Tons/Yr	based on a consecutive 12-month period	PM10
5.370	Lbs/Hr		SOX
27.500	Tons/Yr	based on a consecutive 12-month period	SOX
1.130	Lbs/Hr		TSP
5.800	Tons/Yr	based on a consecutive 12-month period	TSP
0.200	Lbs/Hr		VOC
0.700	Tons/Yr	based on a consecutive 12-month period	VOC
2.280	Lbs/Hr	equipment leaks	VOC
7.000	Tons/Yr	equipment leaks based on a consecutive 12-	VOC

**SECTION G. Emission Restriction Summary.**

Source Id	Source Descriptor		
	month period		
057	VOLCANIC HEATER (T-241)		
	<b>Emission Limit</b>		<b>Pollutant</b>
	12.200 Lbs/Hr		CO
	41.400 Tons/Yr	based on a consecutive 12-month period	CO
	1.300 Lbs/Hr		NOX
	5.600 Tons/Yr	based on a consecutive 12-month period	NOX
	0.100 Lbs/Hr		PM10
	0.400 Tons/Yr	based on a consecutive 12-month period	PM10
	0.300 Lbs/Hr		SOX
	1.300 Tons/Yr	based on a consecutive 12-month period	SOX
	0.100 Lbs/Hr		TSP
	0.400 Tons/Yr	based on a consecutive 12-month period	TSP
	0.100 Lbs/Hr		VOC
	0.300 Tons/Yr	based on a consecutive 12-month period	VOC
1002	ISOMERIZATION UNIT		
	<b>Emission Limit</b>		<b>Pollutant</b>
	6.000 Tons/Yr	Fugitive Connectors 12-month rolling total	VOC
1004	CRUDE UNIT		
	<b>Emission Limit</b>		<b>Pollutant</b>
	6.000 Tons/Yr	Fugitive Connectors 12-month rolling total	VOC
1010	SMR HYDROGEN PLANT (10 MMSCFD)(112.9 MMBTU/HR)		
	<b>Emission Limit</b>		<b>Pollutant</b>
	1.690 Lbs/Hr	30 day rolling.	CO
	7.420 Tons/Yr	12 month rolling.	CO
	0.000 Tons/Yr	12 month rolling	Lead
	4.070 Lbs/Hr	30 day rolling.	NOX
	17.810 Tons/Yr	12 month rolling.	NOX
	0.790 Lbs/Hr	30 day rolling.	PM10
	3.460 Tons/Yr	12 month rolling.	PM10
	0.099 Lbs/Hr	30 day rolling.	SOX
	0.430 Tons/Yr	12 month rolling.	SOX
	0.560 Lbs/Hr	30 day rolling source 1010 stack.	VOC
	2.470 Tons/Yr	12 month rolling source 1010 stack.	VOC
101A	FCC UNIT		
	<b>Emission Limit</b>		<b>Pollutant</b>
	13.500 Lbs/Hr		CO
	58.800 Tons/Yr	based on a consecutive 12-month period	CO

**SECTION G. Emission Restriction Summary.**

Source Id	Source Descriptor		
11.500	Lbs/Hr		NOX
40.200	Tons/Yr	based on a consecutive 12-month period	NOX
0.040	gr/DRY FT3		PM10
9.370	Lbs/Hr	filterable PM10	PM10
16.150	Lbs/Hr	condensable PM10	PM10
25.520	Lbs/Hr	filterable & condensable	PM10
39.400	Tons/Yr	based on a consecutive 12-month period	PM10
9.370	Lbs/Hr	filterable PM2.5	PM2.5
16.150	Lbs/Hr	condensable PM2.5	PM2.5
25.520	Lbs/Hr	filterable & condensable PM2.5	PM2.5
111.800	Tons/Yr	based on a 12-month rolling total	PM2.5
7.500	Lbs/Hr	from scrubbed fuel gas	SOX
131.500	Lbs/Hr		SOX
1,248.300	Tons/Yr	based on a consecutive 12-month period	SOX
9.370	Lbs/Hr	filterable PM	TSP
16.150	Lbs/Hr	condensable PM	TSP
25.520	Lbs/Hr	filterable & condensable	TSP
111.800	Tons/Yr	based on a consecutive 12-month period	TSP
102	BLOWDOWN SYSTEM		
Emission Limit			Pollutant
3.000	Lbs/Hr	from FCC flare	CO
3.000	Lbs/Hr	from combo flare	CO
5.800	Tons/Yr	from FCC flare based on a consecutive 12-month period	CO
5.800	Tons/Yr	from combo flare based on a consecutive 12-month period	CO
2.410	Lbs/Hr	from FCC flare	NOX
2.410	Lbs/Hr	from combo flare	NOX
10.600	Tons/Yr	from FCC flare based on a consecutive 12-month period	NOX
10.600	Tons/Yr	from combo flare based on a consecutive 12-month period	NOX
0.040	gr/DRY FT3		PM10
0.300	Lbs/Hr	from FCC flare	PM10
0.300	Lbs/Hr	from combo flare	PM10
0.500	Tons/Yr	from FCC flare based on a consecutive 12-month period	PM10
0.500	Tons/Yr	from combo flare based on a consecutive 12-month period	PM10
0.100	Lbs/Hr	from FCC flare	SOX
0.400	Lbs/Hr	from combo flare	SOX
0.400	Tons/Yr	from FCC flare based on a consecutive 12-month period	SOX
1.800	Tons/Yr	from combo flare based on a consecutive 12-month period	SOX
500.000	PPMV	dry basis	SOX

**SECTION G. Emission Restriction Summary.**

Source Id	Source Descriptor		
0.300	Lbs/Hr	from FCC flare	TSP
0.300	Lbs/Hr	from combo flare	TSP
0.500	Tons/Yr	from FCC flare based on a consecutive 12-month period	TSP
0.500	Tons/Yr	from combo flare based on a consecutive 12-month period	TSP
2.240	Lbs/Hr	from FCC flare	VOC
2.240	Lbs/Hr	from combo flare	VOC
9.800	Tons/Yr	from FCC flare based on a consecutive 12-month period	VOC
9.800	Tons/Yr	from combo flare based on a consecutive 12-month period	VOC
105	MIDDLE FCC KVG COMPRESSOR		
Emission Limit		Pollutant	
0.500	Lbs/Hr		CO
1.900	Tons/Yr	based on a consecutive 12-month period	CO
0.300	Lbs/Hr		NOX
1.300	Tons/Yr	based on a consecutive 12-month period	NOX
0.010	Lbs/Hr		PM10
0.020	Tons/Yr	based on a consecutive 12-month period	PM10
0.140	Lbs/Hr		SOX
0.600	Tons/Yr	based on a consecutive 12-month period	SOX
0.010	Lbs/Hr		TSP
0.020	Tons/Yr	based on a consecutive 12-month period	TSP
0.440	Lbs/Hr		VOC
1.900	Tons/Yr	based on a consecutive 12-month period	VOC
106	EAST FCC KVG COMPRESSOR		
Emission Limit		Pollutant	
0.500	Lbs/Hr		CO
1.900	Tons/Yr	based on a consecutive 12-month period	CO
0.300	Lbs/Hr		NOX
1.300	Tons/Yr	based on a consecutive 12-month period	NOX
0.010	Lbs/Hr		PM10
0.020	Tons/Yr	based on a consecutive 12-month period	PM10
0.140	Lbs/Hr		SOX
0.600	Tons/Yr	based on a consecutive 12-month period	SOX
0.010	Lbs/Hr		TSP
0.020	Tons/Yr	based on a consecutive 12-month period	TSP
0.440	Lbs/Hr		VOC
1.900	Tons/Yr	based on a consecutive 12-month period	VOC

**SECTION G. Emission Restriction Summary.**

Source Id	Source Descriptor		
107	SAT GAS KVG COMPRESSOR		
<b>Emission Limit</b>			<b>Pollutant</b>
2.700	Lbs/Hr		CO
11.600	Tons/Yr	based on a consecutive 12-month period	CO
2.200	Lbs/Hr		NOX
9.400	Tons/Yr	based on a consecutive 12-month period	NOX
0.010	Lbs/Hr		PM10
0.020	Tons/Yr	based on a consecutive 12-month period	PM10
0.040	gr/DRY FT3		PM10
0.100	Lbs/Hr		SOX
0.400	Tons/Yr	based on a consecutive 12-month period	SOX
500.000	PPMV	dry basis	SOX
0.010	Lbs/Hr		TSP
0.020	Tons/Yr	based on a consecutive 12-month period	TSP
1.500	Lbs/Hr		VOC
6.500	Tons/Yr	based on a consecutive 12-month period	VOC
108	CLAUS SULFUR PLANT 2		
<b>Emission Limit</b>			<b>Pollutant</b>
8.400	Lbs/Hr		CO
36.800	Tons/Yr	based on a consecutive 12-month period	CO
2.100	Lbs/Hr		NOX
9.200	Tons/Yr	based on a consecutive 12-month period	NOX
0.010	Lbs/Hr		PM10
0.040	Tons/Yr	based on a consecutive 12-month period	PM10
0.040	gr/DRY FT3		PM10
12.000	Lbs/Hr		SOX
52.600	Tons/Yr	based on a consecutive 12-month period	SOX
0.010	Lbs/Hr		TSP
0.040	Tons/Yr	based on a consecutive 12-month period	TSP
2.100	Lbs/Hr		VOC
9.200	Tons/Yr	based on a consecutive 12-month period	VOC
108A	SULFUR PLANT 2 HOT OIL HEATER		
<b>Emission Limit</b>			<b>Pollutant</b>
0.210	Lbs/Hr		CO
0.900	Tons/Yr	based on a consecutive 12-month period	CO
0.400	Lbs/Hr		NOX
1.700	Tons/Yr	based on a consecutive 12-month period	NOX
0.040	Lbs/Hr		PM10
0.200	Tons/Yr	based on a consecutive 12-month period	PM10
0.400	Lbs/MMBTU		PM10
0.100	Lbs/Hr		SOX
0.400	Tons/Yr	based on a consecutive 12-month period	SOX
4.000	Lbs/MMBTU	over any 1-hour period	SOX
0.040	Lbs/Hr		TSP

**SECTION G. Emission Restriction Summary.**

Source Id	Source Descriptor		
0.200	Tons/Yr	based on a consecutive 12-month period	TSP
0.030	Lbs/Hr		VOC
0.100	Tons/Yr	based on a consecutive 12-month period	VOC
201	FUEL STORAGE TANK 409		
<b>Emission Limit</b>		<b>Pollutant</b>	
0.300	Tons/Yr	based on a consecutive 12-month period	VOC
202	FUEL STORAGE TANK 410		
<b>Emission Limit</b>		<b>Pollutant</b>	
0.200	Tons/Yr	based on a consecutive 12-month period	VOC
211	LOADING RACK BOTTOM LOADING		
<b>Emission Limit</b>		<b>Pollutant</b>	
18.800	Lbs/Hr		CO
38.400	Tons/Yr	based on a consecutive 12-month period	CO
7.500	Lbs/Hr		NOX
15.400	Tons/Yr	based on a consecutive 12-month period	NOX
0.040	gr/DRY FT3		PM10
0.760	Tons/Yr	based on a consecutive 12-month period	SOX
0.810	Lbs/Hr		SOX
500.000	PPMV	dry basis	SOX
0.640	Lbs/Hr		TSP
2.800	Tons/Yr	based on a consecutive 12-month period	TSP
18.800	Lbs/Hr		VOC
38.400	Tons/Yr	based on a consecutive 12-month period	VOC
213	GASOLINE STORAGE TANK 244		
<b>Emission Limit</b>		<b>Pollutant</b>	
5.500	Tons/Yr	based on a consecutive 12-month period	VOC
214	STORAGE TANK 245		
<b>Emission Limit</b>		<b>Pollutant</b>	
3.500	Tons/Yr	based on a consecutive 12 month period	VOC
215	SOUR WATER/OIL TANK 434		
<b>Emission Limit</b>		<b>Pollutant</b>	
5.300	Tons/Yr	based on a consecutive 12-month period	VOC
220	WASTEWATER SYSTEMS		
<b>Emission Limit</b>		<b>Pollutant</b>	
1.000	Tons/Yr	(HAPs) based on a consecutive 12-month period	VOC

**SECTION G. Emission Restriction Summary.**

Source Id	Source Descriptor			
	1.900	Tons/Yr	(fugitive) based on a consecutive 12-month period	VOC
226	API SEPARATOR			
<b>Emission Limit</b>				<b>Pollutant</b>
	2.400	Lbs/Hr	from carbon canister	VOC
	10.600	Tons/Yr	fugitive based on a consecutive 12-month period	VOC
	500.000	PPMV	from carbon canister	VOC
C1010	ELEVATED PROCESS FLARE			
<b>Emission Limit</b>				<b>Pollutant</b>
	0.890	Tons/Yr	based on a twelve 912) month rolling total.	CO
	0.590	Tons/Yr	based on a twelve 912) month rolling total.	NOX
	0.120	Tons/Yr	based on a twelve 912) month rolling total.	PM10
	0.010	Tons/Yr	based on a twelve 912) month rolling total.	SOX
	0.090	Tons/Yr	based on a twelve 912) month rolling total.	VOC

**Site Emission Restriction Summary**

Emission Limit			Pollutant
24.570	Lbs/Hr	Facility-Wide Tank emissions	VOC
93.300	Lbs/Hr	Facility-Wide LDAR emissions	VOC
51.460	Lbs/Hr	Facility-Wide Wastewater Fugitive emissions	VOC
107.600	Tons/Yr	Facility-Wide Tank emissions based on a consecutive 12-month period	VOC
312.400	Tons/Yr	Facility-Wide LDAR emissions based on a consecutive 12-month period	VOC
225.400	Tons/Yr	Facility-Wide Wastewater Fugitive emissions based on a consecutive 12-month period	VOC



**SECTION H. Miscellaneous.**

(a) The Capacity/Hour numbers listed on Pages 5-8 and provided in Section D of this permit for individual sources are for informational purposes only and are not to be considered enforceable limits. Enforceable emission limits are listed in the Restriction section for each source. They are also summarized for informational purposes only in Section H.

- (b) Source ID: Department assigned ID number for the source  
Source Name: Department assigned name for the source  
Capacity: The maximum capacity for the source (not a limit)  
Fuel/Material: The fuel/material assigned to SCC for the source  
Schematics:  
FML: Fuel material location  
Comb: Combustion source  
Proc: Process  
CD: Control device  
EP: Emission point

(c) For the purpose of this permit (from Notification of Compliance Status Report):

1. Group 1 Storage Tanks have a design capacity greater than or equal to 47,000 gallons and store liquid with a maximum true vapor pressure greater than or equal to 1.5 psia and HAP liquid concentration greater than or equal to 4.0 percent by weight total organic HAP.

- a) Tank #224 (Source 216)
- b) Tank #225 (Source 216)
- c) Source 205
- d) Source 206
- e) Source 212
- f) Source 213
- g) Source 214
- h) Source 207
- i) Source 203
- j) Source 204
- k) Source 209

2. Group 2 Storage Tanks store liquid with a true vapor pressure less than 1.5 psia and HAP liquid concentration less than 4.0 percent by weight total organic HAP.

- a) Tank #400 (Source 216)
- b) Tank #648 (Source 216)
- c) Source 201
- d) Source 202
- e) Source 210
- f) Source 221
- g) Source 222
- h) Source 217
- i) Source 224

3. Group 1 Miscellaneous Process Vents have VOC concentration or total organic concentration (minus ethane and methane) greater than or equal to 20 ppmv and the total VOC emissions are greater than or equal to 72.6 lbs/day.

- a) Vacuum Vent Gas - vented to North Crude Furnace (Source 050) where it is introduced into the flame zone for destruction.
- b) Sour Water Stripper Vent Gas - vented to North Crude Furnace (Source 050) where it is introduced into the flame zone for destruction or to the SRU 2 for control or through the burner.

4. Group 2 Miscellaneous Process Vents have VOC concentration or total organic concentration (minus ethane and methane) less than 20 ppmv and the total VOC emissions are less than 72.6 lbs/day.

- a) Isom Feed Driers - vented to East Flare
- b) Isom Make-up Gas Driers - vented to East Flare

**SECTION H. Miscellaneous.**

5. Equipment Leak Standards - Comply with 40 CFR 60 Subpart VV.

Process Unit

- a) Crude
- b) Preflash
- c) Reformer
- d) Light Stabilizer
- e) Pretreater
- f) Saturate Gas Recovery
- g) FCC Unit
- h) FCC Gas Concentration
- i) FCC Treating
- j) Alkylation Unit
- k) Oil Movements
- l) Bottom Loading Rack

6. No Group 1 wastewater stream. The annual benzene quantity is greater than 1 MG/yr but less than 10 MG/yr.

7. Gasoline Loading Rack Provisions - Using a Vapor Combustion Unit to comply with 40 CFR 63.422(b). [PA 62-312-014A]

8. The Startup, Shutdown, and Malfunction Plan (SSMP) is maintained on site and is available upon request.

(d) For the purpose of this permit, Source 216 (Misc. Storage Tanks) consists of the following sub-sources:

1. Tank #224 (944,000 gallons - fixed roof with internal floating roof)
2. Tank #225 (1,532,328 gallon - fixed roof with internal floating roof)
3. Tank #400 (12,000 gallons - fixed roof)
4. Tank #648 (8,100,000 gallon - fixed roof with internal floating roof)

(e) For the purpose of this permit, Source 217 (Misc. Storage Tanks) consists of the following sub-sources with corresponding emission points:

1. Tank #195
2. Tank #196
3. Tank #197
4. Tank #318
5. Tank #320 \*
6. Tank #324 \*
7. Tank #334
8. Tank #335
9. Tank #336
10. Tank #338
11. Tank #339
12. Tank #340
13. Tank #341
14. Tank #342
15. Tank #343
16. Tank #351
17. Tank #364
18. Tank #367
19. Tank #379
20. Tank #380
21. Tank #381
22. Tank #389
23. Tank #412
24. Tank #422
25. Tank #440
26. Tank #449
27. Tank #456

**SECTION H. Miscellaneous.**

28. Tank #457
29. Tank #641
30. Tank #642
31. Tank #646
32. Tank #649

\* Tank capacity less than 47,000 gallons

(f) For the purpose of this permit, Source 225 (Loading Rack Fugitives) consists of the following:

1. Molton Sulfur Loading
2. 2-Asphalt Loading
3. Propane Loading

(g) For the purpose of this permit, the term "Permit Shield In Effect" at the end of Section E (Group Level Requirements) is for all the groups listed in Section E not just the last group in that section.

(h) The following sources have minor emissions and no applicable emission, testing, monitoring, recordkeeping or reporting requirements:

1. Diesel engines less than 500 bhp except as provided for in provisions of this permit.
2. Transfer of low vapor pressure material.
3. Storage tanks [low vapor pressure materials] (including Tank 315 previously identified as Source 208 which now only stores storm water).

(i) This Operating Permit No. 62-00017 was originally issued on December 26, 2000, and expires on November 30, 2005.

(i) Revision No. 1, effective on March 21, 2001, was a minor modification to include the conditions from PA: 62-312-014A for the installation of a Vapor Combustion Unit (VCU) for controlling VOC emissions from Source 211 (Loading Rack Bottom Loading).

(ii) Revision No. 2, effective on December 18, 2001, was for an administrative amendment to include the conditions from SO<sub>2</sub> PA: 62-017E for the facility SO<sub>x</sub> permit. This revision also includes minor modification revisions pursuant to 25 PA Code 127.462. These modifications involve lowering the VOC emission limits for sources 213, 214, & 056.

(iii) Revision No. 3, effective on January 15, 2002, was an administrative amendment to include the conditions from API Separator plan approval 62-312-036A, which were omitted from the original Title V permit for Source 226.

(iv) Revision No. 4, effective on November 30, 2004, was an administrative amendment to incorporate the newly applicable CO emission rate and recordkeeping requirements from Plan Approval No. 62017G into the permit for Source No. 057 - Volcanic Heater.

(j) The Operating permit was renewed on August 20, 2007. The conditions of Plan approvals 62-017J, 62-017K, and 62-017M, were administratively amended into the Operating Permit with this renewal.

(k) The following IC engines were exempted from plan approval on August 4, 2008. Except for IC 1, 4, 6 and 11, these engines make up Source (113):

- IC1 No 5 Boiler Electric Generator (MQ Power Corp) 150 HP installed 2002
- IC2 Instrument Air Compressor (Detroit Cummins) 325 HP installed 1958
- IC3 Ford/Onan (Propane) 75 HP installed 1978
- IC4 Ingersoll Rand (Reformer) 60 HP installed 2001
- IC5 Boiler Front Outside (Atlas Copco) 110 HP installed 1989
- IC6 Back Outside (Atlas Copco) 60 HP installed 2002
- IC 7&8 Alky Compressors (2) 197 HP installed 1980
- IC9&10 West Seneca Fire water pumps (2) 380 HP installed 1979
- IC11 Boiler House Fire water pump 436.8 HP installed 2003

(l) The Operating Permit was administratively amended on March 10, 2010 to include the administrative amendment (incorporation

**SECTION H. Miscellaneous.**

of PA 62-017G, PA62-017Q, GP-2 for tank 246, revisions to 40 CFR Part 60 Subparts A, J, CC, VV, GGG, and revision of 40 CFR Part 63, Subpart ZZZZ) as well as a minor modification to incorporate the RACT requirements from the IC engines in paragraph (l) above that were exempted from plan approval.

(m) This Operating Permit was renewed on December 14, 2012. Boiler #5 ( Source 035) was removed from operation, moved away from the foundation, and has been removed from the permit.

(n) Source 055A (Reactors and Associated Equipment) Exhausts to the Sulfur Recovery Plant (source 108) which exhausts to the Tail Gas Treating Unit (C08) which exhaust to the Sulfur Plant 2 Incinerator (C108) which exhausts through the Sulfur Plant 2 Stack (S30).

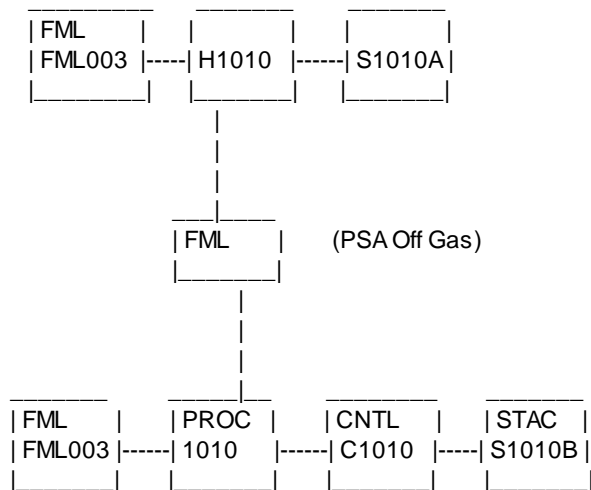
(o) This Permit was amended on April 4, 2013 to incorporate the plan approval conditions of PA 62-017T and to update the Boiler MACT to incorporate the amendments of 40 CFR 63, Subpart DDDDD effective April 1, 2013 and to update the RICE MACT amendment of 40 CFR 63 Subpart ZZZZ effective April 1, 2013.

(p) This Permit was amended on February 20, 2014 to incorporate the plan approval conditions of PA 62-017P.

(q) This Permit was amended on June 9, 2014 to incorporate the plan approval conditions of PA 62-017U.

(r) This Permit was amended on July 9, 2015 to incorporate the plan approval conditions of PA 62-017V.

(s) The following block diagram more closely reflects the operation of Source 1010 (SMR Hydrogen Plant):



This block diagram shows that all of the gas used in this process is not combusted. Natural gas is used to produce hydrogen.

(t) The permit was renewed on February, 13, 2019. The renewal permit included the incorporation of plan approvals 62-017W, and 62-017X.

(u) The permit was modified on February 6, 2020 to incorporate the Case-By-Case RACT 2 requirements for the SIP Revision.

(v) The permit was administratively amended on April 1, 2020 to incorporate the requirements of Plan Approval 62-017Y into the permit (Source 1003).

(w) The permit was administratively amended on February 15, 2022 to incorporate the requirements of Plan Approval 62-017Z into the permit and remove the rental boiler (Source 038) which is no longer on site.

(x) The permit was modified on October 27, 2022 to incorporate SO2 TPY limits for Sources 042, 049, 050, 050A, and 051. Emission limit restrictions below 250 TPY for each of the three pollutants (NOx, PM10, and SO2) satisfy the regional haze and BART requirements. The permit was also amended under this authorization by updating the responsible official and permit contact.



\*\*\*\*\* End of Report \*\*\*\*\*

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