

**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

MEMORANDUM

October 31, 2022

TO: Phillip Fielder, P.E., Chief Engineer

THROUGH: Rick Groshong, Compliance and Enforcement Group Manager

THROUGH: Eric L. Milligan, P.E., Manager, Engineering Section

THROUGH: Jian Yue, P.E., New Source Permits Section

FROM: David Schutz, P.E., New Source Permits Section

SUBJECT: Evaluation of Permit Application No. **2018-0594-C (M-7)**
HollyFrontier Tulsa Refining – Tulsa LLC (FAC ID 1477)
Tulsa Refinery West (SIC 2911 / NAICS 324110)
Heater H-102 Replacement
1700 South Union
Tulsa, Tulsa County, OK (36.13765° N, 96.01154° W)

SECTION I. INTRODUCTION

HollyFrontier Tulsa Refining (HFTR) operates under Part 70 Permit No. 2018-0594-TVR2 (M-6), issued November 25, 2020. In addition, Construction Permit No. 2010-599-C (M-8)(PSD) was issued April 28, 2019. The facility is a major source for Prevention of Significant Deterioration (PSD) and a major source of Hazardous Air Pollutants (HAPs).

HFTR proposes the following physical changes:

Heater H-102 in EUG-37 has reached the end of its lifespan and will be replaced. The existing heater is rated at 168.1 MMBTUH, while the replacement will be rated at 158.5 MMBTUH. The replacement H-102 will be placed in EUG-1A with another heater subject to NSPS Subpart Ja. The new H-102 heater is designed for substantially the same absorbed duty. Since the replacement heater is smaller than the replaced heater, no effect on upstream or downstream operations will occur. H-102 serves the Lube Extraction Unit (LEU). No effect on refinery operations is expected at any upstream units or the one downstream unit, the MEK Wax Extraction Unit.

The capacity of the existing H-102 has been erroneously stated in previous permits as “150” MMBTUH. This led to the conclusion that a larger heater was being installed, therefore, a “modification” was occurring. Since the heater is being replaced with a smaller heater, “construction” is occurring.

Since the facility emits more than 100 TPY of a regulated air pollutant, it is subject to Title V permitting requirements. Emission units (EUs) have been arranged into Emission Unit Groups (EUGs) in Section III.

SECTION II. PROCESS DESCRIPTION

HFTR's crude is received by pipeline and tanker truck. HFTR currently is operated primarily to produce high quality lubricating oils. The crude is a mixture of purchased crude oils from various sources, which, when blended, has the required properties to make the lubricating oil products. Refinery fuel gases, propane, butane, isobutane, normal butane, gasoline (multiple grades), kerosene, No. 2 fuel oil, paraffin wax, petroleum coke, and Lube Extracted Feedstock (LEF) are some of the current byproducts from making the lube oils. LEF is a mixture of unfinished streams that may also be transferred to third party purchasers.

The specific types of refining processes and support facilities in current use in the HFTR Refinery are discussed in the following paragraphs. All of the process units and associated support equipment at HFTR operate as a whole (one primary operating scenario). Individual units or pieces of equipment undergo periodic scheduled shutdowns for maintenance, but no one unit or piece of equipment has any permit restrictions on potential operating hours. Therefore, total potential operating hours per year for all equipment is 24 hours per day, seven days per week, for every day of the year.

A. Crude Distillation Unit (CDU)

The Crude Distillation Unit is the first process and is used to separate crude oil or mixtures of crude and other purchased crude fractions into specific boiling-range streams suitable either for further processing in downstream units or in some cases, for direct sale after mild treating or blending. The primary equipment associated with this operation is a main atmospheric pressure fractionator, a light ends fractionator called the "stabilizer tower," and two in-series vacuum distillation units. The atmospheric tower recovers streams that boil at approximately atmospheric pressure. The stabilizer tower feeds overhead gas to the crude tower and, at high pressure, effects a first separation of true gases (which go to the refinery fuel gas system) from crude gasoline. The vacuum towers recover high boiling point fractions that can be recovered only by lowering the pressure and operating at elevated temperatures. The energy for the distillation steps is provided by a main crude heater and two vacuum charge heaters, all gas fired. Other equipment important to crude and vacuum distillation is an extensive heat exchange system, a crude desalter system, a desalted water stripper, and a vacuum producing system.

B. Light Ends Recovery Unit (LERU)

The light gases from the Crude Unit Stabilizer are processed in a deethanizer tower and a depropanizer tower in the LERU. The deethanizer is a high-pressure fractionator that separates ethane and lighter fuel gases from propane and heavier hydrocarbons. The depropanizer tower is a pressurized tower that fractionates deethanizer bottoms into a liquid propane stream and a liquid mixed butane/pentane stream. The propane is treated with potassium hydroxide for sulfur removal, stored in tankage, and sold as commercial liquefied petroleum gas (LPG). The mixed butane/pentane from the depropanizer is stored in pressurized storage prior to further fractionation. Energy for the LERU process is provided by steam passing through reboilers (heat exchangers).

C. Isomerization Unit Towers

The isomerization reactors are shut down, but an associated fractionation system for separating manufactured and natural isobutane from normal butane remains in operation. Feed is the LERU butane/pentane stream and off test material from storage. The butane/pentane is brought from the LERU and storage and treated with potassium hydroxide for sulfur removal and fed to the deisobutanizer which first creates a propane/isobutane feed for a depropanizer that separates propane as an overhead stream from isobutane as a bottoms stream. The propane is stored and sold as LPG. The isobutane is stored in a pressurized tank and sold as isobutane. Deisobutanizer bottoms are normal-butane and go to sales or to gasoline blending.

D. Depentanizer

The Crude Unit Stabilizer tower bottoms charge the fractionation tower called the depentanizer. This depentanizer makes an overhead liquid stream called light straight run gasoline which goes to gasoline blending. Bottoms, called re-run bottoms, either go to the Unifiner or to the East plant for further processing. Energy for the depentanizer is supplied by a gas fired heater.

E. Unifiner

The Unifiner Unit has the purpose of treating naphtha from the Crude Unit or the depentanizer bottoms. The Unifiner includes a hydrogen-treating reactor that removes sulfur and other contaminants that would be detrimental to the downstream units. Other major equipment includes a hydrogen compressor, gas/liquid reactor effluent separator vessels, a stripper column to remove gases from the reactor product, and heat exchange systems. Two gas-fired heaters supply energy for the reactors and stripper column.

F. No. 2 Platformer – This unit has been removed from service.

G. Propane Deasphalter

The Propane Deasphalter Unit (PDA) processes heavy bottoms from the second stage vacuum tower at the Crude Unit. Two parallel solvent extraction towers mix feed and propane solvent and produce two streams, (1) Deasphalted Oil is suitable as feedstock for lube manufacture in the downstream Lube Extraction Unit, and (2) PDA Bottoms that is asphaltic that charges the Coker Unit or blends directly into asphalt sales. The Deasphalter Unit employs other towers, vessels, pumps, heat exchangers, etc., to recover propane solvent from the product streams. Propane is recycled to the front-end extraction towers. Steam from the refinery system provides energy for the extraction process and for solvent recovery operations.

H. Lube Oil Extraction and Hydrogenation

This unit is charged with vacuum gas oil fractions and deasphalted oil which flows into two parallel counter-current solvent extraction towers that utilize furfural as a solvent. As a result, two streams are produced, a waxy paraffinic stream suitable for lube oil manufacture and an aromatic stream that is either sold as extract product or blended into the Fluid Catalytic Cracking Unit (FCCU) feedstock. The waxy paraffinic stream is fed to a hydrogenation unit to improve its stability and remove impurities before going to a downstream dewaxing operation. The hydrotreater is a fixed bed catalytic unit that uses hydrogen from the Tulsa East Reformer Unit. The unit employs towers,

vessels, heat exchangers, pumps, etc., to remove and recycle the furfural solvent from the product streams. Three gas-fired heaters provide energy for the process.

I. Methyl Ethyl Ketone (MEK) Dewaxing Unit

This unit removes wax from the hydrotreated paraffins from the Lube Extraction Unit. The process employs two solvents in mixture, toluene and MEK. Fabric filters on rotating drums are used to physically separate wax from oil. A propane refrigeration system provides cooling to effect wax precipitation out of oil/wax solutions. Paraffin streams are fed in blocked out batches (the boiling range of the various batches having been set when recovered as separate streams at the Crude Unit vacuum towers). The dewaxed oil batches are stored and used for finished lube oil blending. The deoiled wax batches are stored and sold as various melting point products. The unit equipment includes oil/solvent contactors, rotating drum fabric filters, towers and vessels for solvent recovery and recycle, a propane refrigeration compressor system, a flue gas compressor system associated with the fabric filters, pumps, heat exchangers, etc. Two gas fired process heaters are employed, one for oil/solvent separation, and one for soft wax/solvent separation.

J. Coker Unit

HFTR's Coker Unit produces solid coke particles in a batch process. The Coker Unit equipment list includes two gas fired process heaters, two coke drums, a main fractionator, and other towers, vessels, pumps, heat exchangers, etc. The Coker Unit alternates the process between two vessels called drums. One drum is being charged for processing while the other is being emptied or processed. The process begins by charging one of the coke drums with the asphaltic stream from the Deasphalting Unit. The process thermally separates the heavy molecules into carbon (coke) and light hydrocarbons. The charge is heated to above 900°F using two gas-fired process heaters and then is allowed to have residence time while the coke and the light hydrocarbons separate. The light hydrocarbons flows/charges the product fractionation system (a part of the Coker Unit) for separation into gas for refinery fuel, and liquids which are further processed through other units in the refinery. After a drum is de-headed the coke is cut out with high pressure water in preparation for the next batch. Coke is stored in piles on-site, for bulk shipment by trucks. Air emissions from handling the finished coke are insignificant.

K. Lube/Wax Blending and Sales/Service Operations

This refinery's primary purpose is to produce finished paraffinic lubricating oils. Waxes are also an important by-product of lube oil manufacturing process. To provide the specialty products required by HFTR's diverse customers, there is a product blending and shipping operation at the site. The blending primarily occurs in cone roof tank areas. Shipment is by bulk in tank trucks and tank railcars.

L. Steam Generation

There are four gas-fired boilers that produce steam for general refinery use. The individual boiler units are numbered Nos. 7, 8, 9 and 10.

M. Wastewater Treatment

Facility wastewaters are conveyed in combined storm/process sewers, through oil/water separators and to a treatment area that employs storm surge capacity, clarification, dissolved air floatation, equalization, and aerobic waste digestion. Treated water is discharged to the Arkansas River.

Recovered sludges are deoiled at a centrifuge facility and the oil is fed to the Coker Unit or Crude Unit.

N. Cooling Towers

The refinery employs 6 non-contact cooling towers. These are systems that circulate captive waters that provide a heat sink for various process units or equipment. Water is circulated through heat exchangers to indirectly cool hydrocarbon or other streams. Hot water from these exchangers is collected by pipelines and sprayed over cooling tower fill material in counter current (and cross current) flow to atmospheric air. The evaporation of a portion of the hot (typically 100 to 120°F) circulated water provides cooling to about 85°F (summer) for recirculation back to the heat exchangers. The white plumes observed from these towers are the evaporated water that sometimes re-condenses cloud-like at certain atmospheric conditions. The cooling towers have not used chrome-based systems since before 1994 and are not subject to MACT Subpart Q.

O. Flare Stacks

The refinery employs three vertical, piloted flare stacks for the emergency containment and combustion of certain hydrocarbon releases. Various HFTR process equipment is fitted with pressure relief valves to protect against overpressure conditions. These pressure relief valve outlets discharge into a gas collection flare piping system. In order to minimize flaring, this gas collection header is drawn upon by the Flare Gas Recovery Unit (FGRU), which uses two liquid ring compressors to recover flare header emissions into the Refinery Fuel Gas (RFG) system. Each flare stack uses a continuous pilot that assures ignition of any gaseous discharges. Each flare also uses a steam system that supplies steam for mixing with the gas being flared (as needed) to reduce/prevent the combustion products from smoking.

P. Logistics and Storage

The HFTR logistics system involves feed and product receipt and shipment systems, as well as extensive internal movements. Crude feed material is primarily received by pipeline into large tanks. Product shipments are also made by pipeline, tank truck, and rail tank car. This refinery does not have a marine terminal. There is an extensive storage tank system that handles crude feeds, finished products, and process intermediates. Types of material are generally in common geographical areas, but there are many exceptions due to the long history of the site.

Q. Sulfur and Other Impurity Treatments

This refinery processes feeds that are low in sulfur content, and does not employ a fluid catalytic cracker or a large hydrotreater or hydrocracker. As required by CD 05-CV-02866, the refinery fuel gas loop meets the H₂S limit set forth in 40 CFR §60.104(a) and (b) at least 95% of the sulfur removed is recovered. This is accomplished by sweetening sour fuel gas produced in Tulsa West with the Amine Recovery System available in Tulsa East. Refined product sulfur impurities are addressed within specific process units by caustic or chemical treatment steps.

SECTION III. EQUIPMENT AND EMISSIONS

Section III includes all facility equipment and all significant emissions. Each emission point has two numbers, i.e., EU and EUG Point No.

HFTR is a Part 70 and PSD major facility for all criteria pollutants and HAPs. The facility is required to submit annual Emission Inventory reports to DEQ in which the primary pollutants and HAP pollutant sources are defined.

HFTR's emission sources may be grouped into three categories, as shown in the following list.

1. Combustion stack emissions from heaters and boilers (VOC, CO, PM, NO_x, SO₂). The refinery fires only gaseous fuels.
2. Fugitive emissions from valves, fittings, equipment seals, and other sources (VOC including Volatile Hazardous Air Pollutants (VHAP)).
3. Emissions from hydrocarbon service storage tanks (VOC including VHAP).

The facility has equipment on-site that is out of service or retired in place. This equipment will not be included in the Title V permit and has no regulatory requirements. Returning this equipment to service would require permit activity.

Combustion Sources

Combustion sources at the refinery are referred to either as "grandfathered" or "non-grandfathered." Since all boilers and heaters are subject to NESHAP Subpart DDDDD, these designations are for state regulatory and NSPS purposes. The grandfathered units are fueled by refinery fuel gas (RFG), which is composed of residual "off gases" from various refinery process units. The non-grandfathered units are limited to utilizing commercial grade natural gas, its equivalent, or RFG, these limits are incorporated in the specific conditions.

Fugitive VOC Leaks

The refinery fugitive equipment is controlled by the existing LDAR program. The basis for the emission calculations shown in HFTR's emission tables to follow in this section are shown individually on each table.

The following list groups all facility EUGs.

Grandfathered Fuel Burning Units

EUG 1, Existing Refinery Fuel Gas Burning Equipment

Non-Grandfathered Fuel Burning Units

EUG 1A, Modified / Reconstructed / New Refinery Fuel Gas Burning Equipment

EUG 2, Non-Grandfathered Boilers

EUG 2A, Boiler Subject to NSPS Subparts Db and Ja

EUG 3, #2 PLAT PH-5 Heater

EUG 3A, #2 PLAT PH-6 Heater

EUG 4, Coker H-3 Heater

EUG 5, Coker B-1 Heater

EUG 6, MEK H-101 Heater

EUG 37, CDU H-2, CDU H-3

Piping System Fugitives

EUGs 7, 8, and 9, Refinery Fugitive Groups

Tank Fugitives

EUG 18, §63.640 (Subpart CC) Existing Group 1 Internal Floating Roof Storage Vessels
EUG 19, §63.640 (Subpart CC) Existing Group 1 External Floating Roof Storage Vessels
EUG 20, §63.640 (Subpart CC) Group 2 Storage Vessels
EUG 21, NSPS §60.110b (Subpart Kb) Internal Floating Roof Storage Vessels Storing Volatile Organic Liquids (VOL) Above 0.75 psia Vapor Pressure
EUG 22, NSPS §60.110b (Subpart Kb) External Floating Roof Storage Vessel Storing VOL Above 0.75 psia Vapor Pressure
EUG 23, MACT CC Group 2 Storage Vessels Storing Volatile Organic Liquids below 0.507 psia Vapor Pressure
EUG 23A NSPS Subpart UU / MACT CC Group 2 Storage Vessel - Fixed Roof (FR)
EUG 24, NSPS §60.110a (Subpart Ka) Storage Vessels Storing Petroleum Liquids Below 1.0 psia Vapor Pressure
EUG 25, NSPS §60.110 (Subpart K) Storage Vessels Storing Petroleum Liquids Below 1.0 psia Vapor Pressure
EUG 27, External Floating Roof Storage Vessels Subject to OAC 252:100-39-41
EUG 28, Cone Roof Tanks
EUG 28A, Cone Roof Tanks (2019)
EUG 39, Cone Roof Tanks MACT CC Group 1 Storage Vessels

Others

EUG 11, Flares Subject to 40 CFR Part 60, Subpart GGG and J/Ja
EUG 11A, Platformer Flare Subject to 40 CFR Part 60, Subpart Ja, and MACT Subpart CC
EUG 12, Wastewater Processing System
EUG 13, Group 1 Process Vents Subject to 40 CFR Part 63, Subpart CC
EUG 14, Group 2 Process Vents Subject to 40 CFR Part 63, Subpart CC
EUG 16, Process Vent Subject to 40 CFR Part 63, Subpart UUU by April 11, 2005
EUG 17, Coker Enclosed Blowdown
EUG 29, Pressurized Spheres
EUG 30, Pressurized Bullet Tanks
EUG 31, Underground LPG Cavern
EUG 32, Non-Gasoline Loading Racks
EUG 33, LPG Loading Racks
EUG 34, Cooling Towers
EUG 35, Oil/Water Separators Subject to OAC 252:100-37-37 and 39-18
EUG 36, Spark Ignition Internal Combustion Engines Subject to 40 CFR Part 63 Subpart ZZZZ (PTE)
EUG 38, Compression Ignition Internal Combustion Engines Subject to 40 CFR Part 63 Subpart ZZZZ (PTE)
EUG 38A, Compression Ignition Internal Combustion Engines Subject to 40 CFR Part 60 Subpart IIII (PTE)

New Equipment Emissions

Emissions from the replacement heater H-102 are calculated following. NO_x, CO, VOCs, and PM emissions are based on manufacturer data plus a 20% safety factor, SO₂ emissions are based on NSPS Subpart Ja limits (160 ppm short-term and 60 ppm annually). GHG emissions are based on 40 CFR Part 98, Table C-1 and C-2. These factors are quite conservative since refinery fuel gas contains significant concentrations of hydrogen gas which does not create CO, VOC, PM, or GHG when combusted.

Heat Input MMBTUH	Pollutant	Emission Factor lb/MMBTU	Emissions	
			lb/hr	TPY
158.5	NO _x	0.030	4.76	20.83
	CO	0.0408	6.47	28.32
	VOC	0.0034	0.54	2.63*
	PM ₁₀ / PM _{2.5}	0.0037	0.60	2.57
	SO ₂	0.03 hourly 0.01 annual	4.24	6.89
	GHG	130.1	20,616.3	90,299.5

BAE for the years 2014 – 2015 are listed following:

Pollutant	2014 TPY	2015 TPY	BAE TPY
NO _x	42.21	31.39	36.80
CO	38.63	28.68	33.65
VOC	2.53	1.88	2.20
PM ₁₀ / PM _{2.5}	3.50	2.59	3.04
SO ₂	26.05	26.21	26.13
GHG	36,127	36,916	36,522

Overall emissions changes are compared to PSD levels of significance:

Pollutant	PTE TPY	BAE TPY	CHANGES TPY	PSD Levels of Significance TPY
NO _x	20.83	36.80	-15.97	40
CO	28.32	33.65	-5.33	100
VOC	2.63	2.53	0.10	40
PM ₁₀ / PM _{2.5}	2.57	3.04	-0.48	15 / 10
SO ₂	6.89	26.13	-19.24	40
GHG	90,299.5	36,522	53,777.5	75,000

All emissions changes are below PSD levels of significance.

Facility Emissions

Criteria pollutant emissions for EUG 1 are based on rated heat inputs, continuous operation, and Tables 1.4-1 and 2 of AP-42 (7/98) for all pollutants except SO₂, which is based on 162 ppmv sulfur and 1,020 BTU/SCF in the refinery fuel gas (RFG). The facility monitors the RFG system.

EUG 1: Existing Refinery Fuel Gas Burning Equipment & Potential-to-Emit (PTE)

CD	MFR, BTUH, MM	EU	Point ID	NOx		CO		PM ₁₀		SO ₂		VOC	
				lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1961	404	201N	CDU H-1, N#7/ S#8	75.3	330	33.3	146	3.01	13.2	10.65	46.7	2.18	9.54
1957	36.7	206	Unifiner H-2	3.70	16.20	3.20	14.00	0.28	1.22	1.10	4.82	0.20	0.90
1957	59.5	207	Unifiner H-3	6.00	26.30	5.10	22.30	0.45	1.98	1.79	7.82	0.33	1.50
1957	36.3	210	#2 Plat PH-3	3.60	15.80	3.10	13.60	0.28	1.22	1.09	4.77	0.20	0.90
1963	22.4	242	LEU H101	2.20	9.60	1.92	8.30	0.17	0.75	0.67	2.94	0.12	0.53
1963	22.4	244	LEU H-201	2.20	9.60	1.90	8.30	0.17	0.75	0.67	2.94	0.12	0.53
1960	49.0	246	MEK H-2	4.9	21.5	4.20	18.4	0.37	1.63	1.47	6.44	0.27	1.20
Totals				97.9	429	52.72	230.9	4.73	20.75	17.44	76.43	3.42	15.1

CDU H-1 has two stacks, H-1 North and H-1 South.
 CDU H-1 has two stacks, H-1 North and H-1 South.

Emissions for EUG 1A, 2, 2A, 3, 3A, and 4 are based on continuous operation at rated heat input, using manufacturer's suggested emission factor for NO_x, VOC, and CO, NSPS Subpart Ja compliant fuel, and PM₁₀ from Table 1.4-2 of AP-42 (7/98).

EUG 1A: Modified / Reconstructed / New Refinery Fuel Gas Burning Equipment & PTE

CD	MFR, BTUH, MM	EU	Point ID	NOx		CO		PM ₁₀		SO ₂		VOC	
				lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1957	44.8	211	#2 Plat PH-4	4.48	19.62	3.76	16.48	0.34	1.49	1.16	1.92	0.25	1.08
2022	158.5	243	H-102	4.76	20.83	6.47	28.32	0.59	2.57	4.24	6.89	0.54	2.36
Totals				9.24	40.45	10.23	44.80	0.93	4.06	5.40	8.81	0.79	3.44

EUG 2: Non-Grandfathered Boilers & PTE

CD	EU	Point ID	NOx		CO		PM ₁₀		SO ₂		VOC	
			lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1975	109	#7 Boiler*, 150 MMBTUH	30.00	131.4	12.6	55.2	1.12	4.90	3.90	17.08	0.83	3.62
1976	110	#8 Boiler*, 150 MMBTUH	30.00	131.4	12.6	55.2	1.12	4.90	3.90	17.08	0.83	3.62
1976	111	#9 Boiler*, 150 MMBTUH	30.00	131.4	12.6	55.2	1.12	4.90	3.90	17.08	0.83	3.62
Totals			90.0	394.2	37.8	165.6	3.36	14.7	11.70	51.24	2.49	10.86

* Subject to NSPS Subpart J.

EUG 2A: Boiler Subject to NSPS Subparts Db and Ja

CD	EU	Point ID	CO		NOx		PM ₁₀		SO ₂		VOC	
			lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
2013	---	#10 Boiler, 215 MMBTUH	18.06	79.10	12.88	39.00	1.63	7.16	5.59	9.23	1.18	5.18

EUG 3: #2 PLAT PH-5 HEATER NSPS J (AUTHORIZED EMISSIONS IN TPY)

CD	EU	Point ID	CO	NOx	PM ₁₀	SOx	VOC
1990	212	#2 Plat PH-5 65.3 MMBTUH	23.55	28.04	2.13	7.43	1.54

EUG 3A: #2 PLAT PH-6 HEATER STATE (AUTHORIZED EMISSIONS IN TPY)

CD	EU	Point ID	CO	NOx	PM ₁₀	SOx	VOC
1957	213	#2 Plat PH-6 34.8 MMBTUH	12.55	14.94	1.14	3.96	0.82

EUG 4: Coker H-3 Heater & PTE

CD	EU	Point ID	CO		NOx		PM ₁₀		SO ₂		VOC	
			lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1995	224	Coker H-3, 32.2MMBTUH	2.70	11.85	3.22	14.10	0.25	1.07	0.84	1.38	0.18	0.78

Emissions for EUG 5 and 6 are based on continuous operation at rated heat input, using 162 ppmv sulfur based on NSPS Subpart J for SO₂, and all other factors from Tables 1.4-1 and 2 of AP-42 (7/98).

EUG 5: Coker B-1 Heater & PTE

CD	EU	Point ID	CO		NOx		PM ₁₀		SO ₂		VOC	
			lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1992	225	Coker B-1, 60 MMBTUH	5.04	22.08	6.00	26.28	0.46	2.00	5.85	25.63	0.33	1.45

EUG 6: MEK H-101 Heater & PTE

CD	EU	Point ID	CO		NOx		PM ₁₀		SO ₂		VOC	
			lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1977	245	MEK H-101, 81 MMBTUH	6.80	29.8	12.2	53.2	0.62	2.70	2.11	9.24	0.45	1.95

EUGs 7, 8, and 9: Refinery Fugitive Groups & PTE

Emission factors are from EIIP Volume II (11/29/96) Table 4.4-4, and are related to the type of service for each component. The following estimates are from the facility's 2016 annual emission inventory, as submitted to DEQ. Because the refinery is a dynamic operation, components are shifted in use, added or deleted, or replaced continuously. Thus, the following listing reflects estimates of components in place, and is not an actual count.

EUG 7 (NSPS)	EU	Equipment Point ID	Estimated Number of Components		VOC	
					lb/hr	TPY
	13557	LEU Pseudo Raffinate Stripper	Valves/HL	1715	0.87	3.81
			Flange/Connector/HL	3204	1.77	7.74
			Relief valves/HL	11	0.26	1.16
			Pump seals/HL	31	1.43	6.29
			Valves/Gas	664	0.43	1.89
			Relief valves/Gas	11	0.00	0.00
			Flange/Connector/Gas	1383	0.76	3.34
			Compressor seals/Gas	1	0.00	0.00
			Totals		5.52	24.23
	13557	Perc Filter	Valves/LL	306	0.33	1.46
			Flange/Connector/LL	598	0.33	1.44
			Agitator/LL	7	0.00	0.00
			Pump seals/LL	5	1.28	5.40
			Pump seals/HL	36	1.67	7.30
			Relief valves/LL	2	0.05	0.21
			Valves/HL	572	0.29	1.27
			Relief valves/Gas	10	0.00	0.00
			Flange/Connector/Gas	13	0.00	0.03
			Valves/Gas	4	0.24	1.03
			Totals		4.19	18.14

EUG 8 (NSPS)	EU	Equipment Point ID	Estimated Number of Components		VOC	
					lb/hr	TPY
	13557	Coker	Valves/LL	224	0.18	0.80
			Flange/ Connector/LL	134	0.07	0.32
			Pump seals/LL	7	0.00	0.00
			Relief valves/LL	2	0.05	0.21
			Valves/HL	2	0.00	0.00
			Valves/Gas	348	0.57	2.48
			Relief valves/Gas	4	0.00	0.00
			Flange/Connector/Gas	288	0.19	0.82
			Compressor seals/Gas	2	0.00	0.00
			Totals		1.06	4.63
	13557	CDU	Valves/LL	1186	0.94	4.11
			Valves/HL	39	0.00	0.00
			Flange/Connector/LL	860	0.00	0.00
			Pump seals/LL	36	0.00	0.00
			Relief valves/LL	10	0.00	0.00
			Valves/Gas	821	1.78	7.81
			Relief valves/Gas	16	0.00	0.00
			Flange/Connector/Gas	404	0.22	0.97
Compressor seals/Gas	2	0.24	1.06			
			Totals		3.18	13.95

EUG 8 (NSPS)	EU	Equipment Point ID	Estimated Number of Components		VOC	
					lb/hr	TPY
	13557	MEK Unit	Valves/LL	5560	5.37	23.42
			Flanges/Connectors/LL	8276	0.60	2.63
			Pump seals/LL	61	0.18	0.76
			Agitators/L	2	0.00	0.00
			Relief valves/LL	77	0.14	0.60
			Valves/Gas	1040	2.24	9.79
			Relief valves/Gas	11	0.00	0.00
			Flange/Connector/Gas	827	0.03	0.13
			Compressor seals/Gas	2	0.00	0.00
			Totals		8.55	37.44
	13557	Truck Loading Dock	Valves/LL	387	0.39	1.71
			Flange/Connector/LL	508	0.28	1.23
			Relief valves/LL	1	0.00	0.00
			Pump seals/LL	5	0.00	0.00
			Valves/Gas	16	0.00	0.00
			Relief valves/Gas	2	0.00	0.00
			Flange/Connectors/Gas	2	0.00	0.00
			Totals		0.67	2.94
	13557	Tank Farm	Valves/LL	2564	4.73	20.72
			Agitator/LL	17	0.00	0.00
			Relief valves/LL	32	0.77	3.37
			Flange/Connectors/LL	2753	1.52	6.65
			Pump seals/LL	43	0.08	0.33
			Valves/Gas	460	0.42	1.83
			Relief valves/Gas	52	0.00	0.00
			Flange/Connectors/Gas	353	0.19	0.85
			Compressor seals/Gas	1	0.00	0.00
			Totals		7.71	33.75
	13557	Unifiner	Valves/LL	84	0.15	0.66
			Flanges/Connector/LL	533	0.29	1.29
			Pump seals/LL	1	0.00	0.00
			Valves/Gas	547	1.67	7.32
			Relief valves/Gas	2	0.00	0.00
			Flange/Connector/Gas	338	0.19	0.82
			Totals		2.30	10.09
	13557	#5 Boilerhouse	Valves/Gas	131	0.61	2.69
			Flange/Connector/Gas	66	0.04	0.16
			Totals		0.65	2.85

EUG 8 (NSPS)	EU	Equipment Point ID	Estimated Number of Components		VOC	
					lb/hr	TPY
	13557	Butane Splitter Unit	Valves/LL	360	3.05	13.34
			Flange/Connector/LL	288	0.16	0.70
			Pump seals/LL	11	0.00	0.00
			Relief valves/LL	6	0.00	0.00
			Valves/Gas	157	0.75	3.27
			Relief valves/Gas	8	0.00	0.00
			Flange/Connector/Gas	114	0.06	0.28
			Totals		4.02	17.59
	13557	LERU	Valves/LL	220	1.02	4.48
			Flange/Connector/LL	153	0.08	0.37
			Pump seals/LL	4	0.00	0.00
			Valves/Gas	191	0.60	2.66
			Relief valves/Gas	3	1.06	4.63
			Flange/Connector/Gas	114	0.06	0.27
			Totals		2.82	12.41

EUG 9 (State)	EU	Equipment Point ID	Estimated Number of Components		VOC	
					lb/hr	TPY
	13557	PDA Unit	Valves/LL	496	0.71	3.13
			Relief valves/LL	7	0.17	0.74
			Flange/Connector/LL	435	0.24	1.05
			Pump seals/LL	6	0.00	0.00
			Process Drains/LL	2	0.50	2.20
			Valves/Gas	452	0.67	2.92
			Relief valves/Gas	19	0.00	0.00
			Flange/Connector/Gas	909	0.50	2.19
			Compressor seals/Gas	4	0.00	0.00
			Totals		2.79	12.23
	13557	MEROX Unit	Valves/HL	69	0.04	0.15
			Flange/Connector/LL	208	0.12	0.50
			Pump seals/HL	1	0.05	0.20
			Valves/Gas	35	2.07	9.06
			Flange/Connector/Gas	104	0.06	0.25
			Totals		2.34	10.16
Totals of EUGs 7, 8, 9					45.63	200.4

EUG 11: Flares Subject to 40 CFR Part 63, Subpart CC

Emissions for EUG 11 are based on continuous operation, using emission factors from Table 13.5-1 of AP 42 (9/91) and evaluating only the pilot. This is a minimal estimate, not full PTE.

CD	EU	Point ID	Equipment	VOC		CO		NOx		SO ₂	
				lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1976	269	LEU Flare	John Zink EEF-QS-SA-18 smokeless flare tip	0.04	0.19	0.12	0.51	0.04	0.19	0.12	0.51
1970	268	Coker Flare	John Zink EEF-QS-30 smokeless flare tip	0.13	0.55	0.33	1.5	0.06	0.27	0.12	0.5
Totals				0.17	0.74	0.45	2.01	0.10	0.46	0.24	1.01

NOTES:

- Group 1 vents go to this flare only under emergency conditions.
- Performance testing required by NSPS Subpart GGG also meets requirements of NESHAP Subpart CC (allowed Group 1 vents to flare or FGRU).

EUG 11A: Platformer Flare Subject to MACT CC

Emissions for EUG 11a are based on continuous operation, using emission factors from Table 13.5-1 of AP 42 (9/91) and evaluating actual emissions.

CD	EU	Point ID	Equipment	VOC		CO		NOx		SO ₂	
				PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY
1960	267	Plat Flare	John Zink EEF-QS-30 smokeless flare tip	8.5	37.3	3.7	16.4	0.7	3.02	1.74	7.66

EUG 12: Wastewater Processing System & PTE

VOC emissions for EUG 12 are based on EPA's software WATER9. Input data combine model defaults and calendar year 2016 emission inventory.

EU	Point ID	Equipment	VOC	
			lb/hr	TPY
15943	WPU-1	Wastewater Processing Unit and Open Sewers	25.12	110.33

EUG 13: Group 1 Process Vents Subject to 40 CFR Part 63, Subpart CC

EU	Equipment Point ID	Control Device
N/A	CDU Vacuum Tower Vent	CDU H-2
N/A	LEU T-201 Hydrostripper Tower Vent	LEU H-102
N/A	Coker Enclosed Blowdown Vent	Platformer Flare, Coker Flare

EUG 14: Group 2 Process Vents Subject to 40 CFR Part 63, Subpart CC

EU	Equipment/ Point ID
N/A	MEK T-7 Vent
N/A	LEU T-101 Vent
N/A	LEU D-101 Vent
N/A	MEK Flue Gas Oxygen Vent
N/A	MEK Knockout Drum O-52

EUG 15, Group 2 Process Vents Subject to 40 CFR Part 63, Subpart CC, and EUG 16, Process Vent Subject to 40 CFR Part 63, Subpart UUU by April 11, 2005

These EUGs are vented to the facility flares. Their emissions are shown at the flares.

EUG 18: §63.640 (Subpart CC), Existing Group 1 Internal Floating Roof Storage Vessels
 Emissions are calculated using AP-42 and the “current service” information, capacity, and throughput for calendar year 2016. Tanks may be used in any manner consistent with the requirements for this EUG, and are not bound by the listed current contents.

Const Date	Tank Nos.	EU	Point ID	Size (bbl)	Current Service	VOC TPY
1916	13	6333	Tk13	55,000	Crude Oil	0.44
1940	31	6340	Tk31	35,411	Gasoline	2.18
1917	153	6346	Tk153	47,858	Platformate	3.11
1922	186	6348	Tk186	55,000	Crude Oil	0.59
1922	187	6349	Tk187	55,000	Crude Oil	0.57
1922	188	13592	Tk188	55,000	Crude Oil	0.73
1917	242	6359	Tk242	---	Out of Service	---
1917	244	6360	Tk244	55,000	LEF	0.54
1965	502	1359	Tk502	7,000	Naphtha	1.73
1948	742	6392	Tk742	---	Out of Service	---
Total						9.89

EUG 19: §63.640 (Subpart CC), Existing Group 1 External Floating Roof Storage Vessels
 Emissions are calculated using AP-42 and the “current service” information, capacity, and throughput for calendar year 2016 shown. Tanks may be used in any manner consistent with the requirements for this EUG, and are not bound by the listed current contents.

Const Date	Tank #	EU	Point ID	Size (bbl)	Current Service	VOC TPY
1973	199	6353	Tk199	72,288	Out of Service	---
1946	307	6367	Tk307	10,000	Out of Service	---
1972	750	6396	Tk750	---	Out of Service	---
1950	755	6399	Tk755	10,000	Naphtha	0.32
1953	779	6401	Tk779	---	Out of Service	---
1965	874	6405	Tk874	121,275	Crude Oil	1.67
Total						1.99

EUG 20: §63.640 (Subpart CC) Group 2 Storage Vessels
 Emissions are calculated using AP-42 and the “current service” information, capacity, and throughput for calendar year 2016. Tanks may be used in any manner consistent with the requirements for this EUG, and are not bound by the listed current contents. All tanks were constructed before 1970.

Tank #	EU	Point ID	Size (bbl)	Current Service	VOC TPY
6	20128	Tk6	1,890	Kerosene	0.04
30	13559	Tk30	30,000	Kerosene	0.18
41	1356	Tk41	---	Out of Service	---

Tank #	EU	Point ID	Size (bbl)	Current Service	VOC
					TPY
50	13561	Tk50	1,890	Naphtha wash	0.17
51	13562	Tk51	---	Out of Service	---
155	13563	Tk155	54,132	Out of Service	---
181	20129	Tk181	1,000	Jet fuel	0.02
281	13574	Tk281	7,000	Slop Oil	0.01
283	13576	Tk283	---	Out of Service	---
312	6368	Tk312	7,000	Out of Service	---
315	6370	Tk315	7,000	Out of Service	---
401	6375	Tk401	55,000	Kerosene	0.18
582	13596	Tk582	4,061	Slop Oil	0.01
696	NA	Tk696	1,700	Slop Oil	0.00
747	6393	Tk747	---	Out of Service	---
751	5397	Tk751	---	Out of Service	---
Total					0.61

EUG 21: NSPS §60.110b (Subpart Kb) Internal Floating Roof Storage Vessels Storing Volatile Organic Liquids (VOL) Above 0.75 psia Vapor Pressure (Authorized Emissions in TPY)

Emissions are calculated using AP-42 and the “current service” information, capacity, and throughput. Tanks may be used in any manner consistent with the requirements for this EUG, and are not bound by the listed current contents.

Const Date	Tank #	EU	Point ID	Size (bbl)	Current Service	VOC	
						lb/hr	TPY
1995	1061	13594	Tk1061	80,000	Naphtha	0.30	1.33
2000	1070	20126	Tk1070	5,377	Slop Oil	0.89	3.89
2004	1080	NA	Tk1080	3,200	Slop Oil	0.66	2.90
1998	782	6402	Tk782	15,000	Naphtha	0.80	3.49
2014	226	NA	TK226	80,000	Naphtha/ Gasoline	0.70	3.04
2019	22A	6337	TK-22A	74,500	Naphtha	0.94	4.11
Totals						4.29	18.76

EUG 22: NSPS §60.110b (Subpart Kb) External Floating Roof Storage Vessel Storing VOL Above 0.75 psia Vapor Pressure (Authorized Emissions in TPY)

Emissions are calculated using AP-42 and the “current service” information, capacity, and throughput for calendar year 2016. Tanks may be used in any manner consistent with the requirements for this EUG, and are not bound by the listed current contents.

Const Date	Tank #	EU	Point ID	Service	VOC	
					lb/hr	TPY
1994	583	13591	Tk583	Out of Service	--	--
2014	279	6364	TK279	Naphtha	0.31	1.36
2014	280	6365	Tk280	Naphtha	0.31	1.36
Totals					0.62	2.72

EUG 23: MACT CC Group 2 Storage Vessels Storing Volatile Organic Liquids Below 0.507 psia Vapor Pressure (Authorized Emissions in TPY)

VOC emissions are calculated using the current version of AP-42 for tanks constructed prior to 2010. Emissions for tanks constructed after 2010 are calculated using AP-42 equations. Due to the overlap provisions of MACT CC (§63.640(n)), these vessels are regulated under NSPS Subparts K or Ka but are not required to meet the K/Ka control standards, but must meet the MACT CC requirements per §63.640(n)(7). Storage vessels required to meet control requirements under NSPS Subparts K and Ka are required to comply only with those subparts, per §63.640(n)(6), and are not included in this list. Tanks may be used in any manner consistent with the requirements for this EUG, and are not bound by the listed current contents.

Const Date	Tank #	EU	Point ID	Current Service	VOC
					TPY
1917	84	N/A	Tk84	Out of Service	0.00
1917	85	N/A	Tk85	Out of Service	0.00
2012	189	6350	Tk189	Out of Service	1.05
2009	405	6377	TK405	Diesel	0.24
2009	406	13578	TK406	Diesel	1.33
2014	998	13589	Tk998	Slop Oil	0.01
1987	1002	6406	Tk1002	Lube Oil	----
1989	1005	N/A	Tk1005	Out of Service	0.00
1990	1012	15950	Tk1012	Furfural/ Water	0.00
2012	1038	N/A	Tk1038	Sewer Storm water	0.05
1993	1039	16561	Tk1039	Sewer Storm water	0.07
2013	157	14307	Tk157	Lube Oil	0.66
2015	156	13564	Tk156	Lube Oil	0.01
2016	25A	N/A	Tk25A	Resid	0.00
2016	23A	N/A	Tk23A	Resid	0.08
2016	277	N/A	Tk277	Resid	0.00
Totals					3.50

EUG 23A: NSPS Subpart UU / MACT CC Group 2 Storage Vessel - Fixed Roof (FR) (Authorized Emissions in TPY)

These storage vessels are regulated under 40 CFR Part 60, Subpart UU and 40 CFR Part 63 Subpart CC (MACT CC) Group 2 Storage Vessels. In the overlap provisions of MACT CC (§63.640(n)), it requires compliance with NSPS Subpart Kb but Subpart Kb is not applicable due to the low vapor pressure of the liquids stored.

Const Date	Tank #	EU	Point ID	Current Service	VOC	
					lb/hr	TPY
2010	27	13588	Tk27	Residual Oils	-	0.10
2018	193	15945	Tk193	Coker Charge	-	-

EUG 24: NSPS §60.110a (Subpart Ka) Storage Vessels Storing Petroleum Liquids Below 1.0 psia Vapor Pressure

Emissions are calculated using AP-42 and the “current service” information, capacity, and throughput for calendar year 2016. Tanks may be used in any manner consistent with the requirements for this EUG, and are not bound by the listed current contents.

Const Date	Tank #	EU	Point ID	Current Service	VOC
					TPY
1980	224	13569	Tk224	Gas Oil	0.07
1979	881	NA	Tk881	Slop Wax	0.03
1983	890	NA	Tk890	Out of Service	----
1982	992	NA	Tk992	Resid	----
1982	993	NA	Tk993	Resid	0.002
Total					0.10

EUG 25: NSPS §60.110 (Subpart K) Storage Vessels Storing Petroleum Liquids below 1.0 psia Vapor Pressure

Emissions are calculated using AP-42 and the “current service” information, capacity, and throughput for calendar year 2016. Tanks may be used in any manner consistent with the requirements for this EUG, and are not bound by the listed current contents.

Const Date	Tank #	EU	Point ID	Size (bbl)	Current Service	VOC
						TPY
1974	152	6324	Tk152	---	Out of Service	---
1973	158	13565	Tk158	63,709	Gas Oil	0.20
	470	NA	Tk470	170	Gas Oil	0.00
1978	472	NA	Tk472	3,080	Lube Oil	0.00
1976	983	NA	Tk983	15,000	Lube Oil	0.01
1976	984	NA	Tk984	15,000	Out of Service	0.01
1976	986	NA	Tk986	6,000	Wax	0.02
1976	987	NA	Tk987	6,000	Wax	0.01
Total						6.64

EUG 27: External Floating Roof Storage Vessels Subject to OAC 252:100-39-41

Emissions are calculated using AP-42 and the “current service” information, capacity, and throughput for calendar year 2016. Tanks may be used in any manner consistent with the requirements for this EUG, and are not bound by the listed current contents.

CD	Tank #	EU	Point ID	Size (bbl)	Current Service	VOC
						TPY
1957	314	6369	Tk314	7,000	Out of service	---

EUG 28: Cone Roof Tanks

Emissions are calculated using AP-42 and the “current service” information, capacity, and throughput for calendar year 2016. Tanks may be used in any manner consistent with the requirements for this EUG, and are not bound by the listed current contents. All tanks were constructed before 1970.

EU	Point ID	Current Service	Capacity (bbls)	VOC TPY
20127	Tk1	Out of Service	1,698	----
Tk9	Tk9	Extract	7,000	0.00
Tk10	Tk10	Out of Service	7,000	0.00
Tk11	Tk11	Out of Service	7,000	0.00
6334	Tk15	Lube Oil	7,000	0.00
6335	Tk16	Lube Oil	7,000	0.01
Tk26	Tk26	Lube Oil	55,000	0.00
20130	Tk28	Coker Chg	38,000	0.02
6339	Tk29	Out of Service	55,000	0.04
Tk33	Tk33	Lube Oil	55,000	0.01
Tk34	Tk34	Out of Service	55,000	----
6342	Tk35	Out of Service	55,000	0.00
6343	Tk36	Gasoil	55,000	0.00
Tk38	Tk38	Gasoil	1,890	0.00
Tk45	Tk45	Wax	4,200	0.00
Tk46	Tk46	Wax	4,200	0.01
Tk52	Tk52	Out of Service	1,890	0.00
Tk53	Tk53	Wax	1,890	0.00
Tk54	Tk54	Out of Service	1,890	0.00
Tk62	Tk62	Wax	4,200	0.00
Tk65	Tk65	Out of Service	1,890	0.00
Tk66	Tk66	Out of Service	1,890	0.00
Tk68	Tk68	Wax	1,890	0.00
Tk69	Tk69	Out of Service	1,890	0.00
Tk71	Tk71	Lube Oil	5,680	0.01
Tk72	Tk72	Lube Oil	5,680	0.05
Tk73	Tk73	Lube Oil	5,680	0.02
Tk74	Tk74	Lube Oil	5,680	0.00
Tk75	Tk75	Out of Service	1,890	----
Tk76	Tk76	Lube Oil	1,890	----
Tk79	Tk79	Out of Service	1,890	----
Tk80	Tk80	Extract	1,890	----
Tk81	Tk81	Out of Service	1,890	----
Tk83	Tk83	Extract	1,890	----
Tk132	Tk132	Extract	1,800	0.00
Tk133	Tk133	Extract	1,800	0.00
Tk134	Tk134	Extract	7,000	0.00

EU	Point ID	Current Service	Capacity (bbls)	VOC TPY
6344	Tk151	Out of Service	7,000	----
13567	Tk194	Lube Oil	53,100	0.00
Tk195	Tk195	Lube Oil	55,000	0.03
Tk196	Tk196	Lube Oil	55,000	0.08
6355	Tk215	Out of Service	50,914	----
15946	Tk217	Diesel	7,000	---
13568	Tk218	Out of Service	7,000	----
Tk223	Tk223	Extract	7,000	0.00
Tk227	Tk227	Extract	7,000	0.01
Tk228	Tk228	Wax	1,890	0.00
Tk229	Tk229	Out of Service	1,890	----
Tk232	Tk232	Wax	1,890	0.00
Tk233	Tk233	Wax	1,890	0.00
Tk234	Tk234	Wax	1,890	0.01
Tk235	Tk235	Wax	1,890	0.00
Tk236	Tk236	Lube Oil	1,890	----
Tk237	Tk237	Wax	1,890	0.00
Tk240	Tk240	Out of Service	1,500	----
Tk252	Tk252	Lube Oil	7,000	0.00
Tk264	Tk264	Out of Service	1,890	----
Tk265	Tk265	Out of Service	1,890	0.00
Tk266	Tk266	Extract	1,890	0.00
Tk267	Tk267	Out of Service	1,890	----
Tk271	Tk271	Out of Service	1,890	----
6363	Tk272	Out of Service	1,890	----
Tk273	Tk273	Lube Oil	7,000	0.03
Tk274	Tk274	Lube Oil	7,000	0.02
Tk275	Tk275	Lube Oil	7,000	0.02
Tk276	Tk276	Gasoil	7,000	0.00
6366	Tk284	Out of Service	7,000	----
Tk305	Tk305	Lube Oil	7,000	0.00
Tk318	Tk318	Lube Oil	7,000	0.04
Tk319	Tk319	Out of Service	1,890	----
Tk320	Tk320	Out of Service	1,890	----
Tk321	Tk321	Lube Oil	1,890	----
Tk322	Tk322	Out of Service	1,890	----
6371	Tk323	Out of Service	7,000	0.00
Tk327	Tk327	Out of Service	1,890	----
Tk328	Tk328	Lube Oil	1,890	----
Tk329	Tk329	Lube Oil	1,890	----
Tk331	Tk331	Lube Oil	7,000	0.01
Tk332	Tk332	Lube Oil	7,000	0.02
Tk335	Tk335	Out of Service	1,890	----

EU	Point ID	Current Service	Capacity (bbls)	VOC TPY
Tk390	Tk390	Extract	7,000	0.02
Tk391	Tk391	Extract	5,000	----
Tk392	Tk392	Extract	5,000	0.04
Tk393	Tk393	Out of Service	1,000	----
Tk394	Tk394	Out of Service	1,120	----
Tk396	Tk396	Out of Service	5,940	0.00
Tk397	Tk397	Out of Service	5,940	0.00
6373	Tk398	Out of Service	2,600	0.00
6374	Tk399	Out of Service	2,600	0.00
Tk471	Tk471	Wax	3,780	0.00
Tk509	Tk509	Out of Service	4,000	----
6389	Tk510	Out of Service	1,890	----
6390	Tk511	Out of Service	1,890	----
6391	Tk519	Out of Service	4,000	----
Tk645	Tk645	Extract	1,500	0.00
Tk646	Tk646	Lube Oil	1,500	0.00
Tk649	Tk649	Out of Service	1,008	----
Tk650	Tk650	Extract	10,000	0.02
Tk675	Tk675	Out of Service	1,500	0.00
Tk691	Tk691	Extract	2,400	----
Tk692	Tk692	Lube Oil	2,400	----
Tk693	Tk693	Lube Oil	2,400	----
Tk694	Tk694	Lube Oil	2,400	----
Tk700	Tk700	Raffinate	15,000	0.04
13585	Tk701	Lube Oil	15,000	0.00
13584	Tk702	Wax	7,000	0.00
6403	Tk799	Out of Service	1,890	----
Tk800	Tk800	Wax	7,000	0.01
15958	Tk801	Lube Oil	15,000	0.13
13586	Tk802	Lube Oil	15,000	0.01
15949	Tk803	Out of Service	15,000	----
Tk807	Tk807	Wax	4,200	0.00
Tk828	Tk828	Lube Oil	30,000	0.00
Tk829	Tk829	Lube Oil	30,000	0.00
Tk830	Tk830	Lube Oil	30,000	0.00
Tk831	Tk831	Lube Oil	30,000	0.01
Tk835	Tk835	Out of Service	2,000	----
6404	Tk838	Out of Service	2,000	----
Tk847	Tk847	Wax	2,032	0.00
Tk848	Tk848	Wax	2,032	0.00
Tk851	Tk851	Out of Service	2,088	----
Tk852	Tk852	Out of Service	4,025	----
Tk853	Tk853	Out of Service	4,025	0.00

EU	Point ID	Current Service	Capacity (bbls)	VOC TPY
Tk854	Tk854	Resid	4,025	0.08
Tk855	Tk855	Out of Service	4,025	0.00
Tk856	Tk856	Resid	4,025	0.24
Tk857	Tk857	Out of Service	2,011	0.00
Tk861	Tk861	Out of Service	1,000	0.00
Tk865	Tk865	Out of Service	1,890	----
Tk867	Tk867	Lube Oil	1,675	0.00
13587	Tk870	Furfural	5,300	0.00
Tk875	Tk875	Wax	2,090	0.00
Tk876	Tk876	Out of Service	3,000	0.00
Tk877	Tk877	Wax	2,090	0.01
Tk878	Tk878	Slop Oil	2,090	----
Tk879	Tk879	Out of Service	2,090	----
Tk880	Tk880	Slop Oil	3,000	0.00
Tk882	Tk882	Lube Oil	20,000	0.00
Tk883	Tk883	Lube Oil	1,000	----
Tk884	Tk884	Lube Oil	1,000	0.00
Tk885	Tk885	Lube Oil	1,000	----
Tk886	Tk886	Lube Oil	10,492	0.00
Tk887	Tk887	Lube Oil	19,500	0.00
Tk888	Tk888	Lube Oil	10,492	0.00
Tk891	Tk891	Out of Service	1,000	0.00
Tk893	Tk893	Wax	10,500	0.00
Tk898	Tk898	Out of Service	2,455	0.00
Tk913	Tk913	Lube Oil	2,090	0.00
Tk914	Tk914	Lube Oil	2,090	0.00
Tk916	Tk916	Lube Oil	2,090	0.00
Tk918	Tk918	Extract	30,000	0.03
Tk921	Tk921	Lube Oil	2,094	0.00
Tk922	Tk922	Lube Oil	3,058	0.00
Tk923	Tk923	Lube Oil	2,084	0.00
Tk924	Tk924	Lube Oil	4,455	0.00
Tk925	Tk925	Lube Oil	4,455	0.00
Tk926	Tk926	Lube Oil	1,313	0.00
Tk927	Tk927	Extract	1,313	0.00
Tk928	Tk928	Lube Oil	4,455	0.00
Tk929	Tk929	Lube Oil	4,455	0.01
Tk930	Tk930	Lube Oil	1,313	0.00
Tk931	Tk931	Lube Oil	1,313	0.00
Tk932	Tk932	Lube Oil	3,058	0.00
Tk933	Tk933	Lube Oil	1,000	0.00
Tk934	Tk934	Out of Service	1,000	0.00
Tk935	Tk935	Out of Service	1,000	0.00

EU	Point ID	Current Service	Capacity (bbls)	VOC TPY
Tk936	Tk936	Out of Service	1,000	0.00
Tk937	Tk937	Out of Service	1,000	0.00
Tk938	Tk938	Out of Service	1,000	0.00
Tk939	Tk939	Out of Service	1,000	0.00
Tk940	Tk940	Out of Service	1,000	0.00
Tk941	Tk941	Out of Service	1,000	0.00
Tk942	Tk942	Out of Service	1,000	0.00
Tk943	Tk943	Out of Service	1,000	0.00
Tk944	Tk944	Out of Service	1,000	0.00
Tk955	Tk955	Out of Service	1,000	0.00
TkAGT1	TkAGT1	Slop Diesel	2,000	0.00
TkAGT2	TkAGT2	Slop Diesel	1,000	0.00
TkAGT3	TkAGT3	Slop Diesel	1,000	0.00
TkAGT4	TkAGT4	Slop Diesel	2,000	----
Total				1.08

EUG 28A: Cone Roof Tanks (2019 & 2020)

Emissions are calculated using AP-42 and the projected service information, capacity, and throughput.

EU	Point ID	Capacity (bbls)	Liquid Stored*	Vapor Pressure (psia)	Annual Throughput (bbl.)	VOC TPY
15944	TK-159A	80,000	No. 2 distillate	0.016	200,000	1.22
6351	TK-190A	73,000	No. 2 distillate	0.016	3,000,000	1.94
TK192	TK-192A	80,000	No. 2 distillate	0.016	3,000,000	3.92
TK1215	TK-1215	10,000	Wax	0.001	1,000,000	0.47
TK317A	TK-317A	9,400	Lube oil	0.003	8,760,000	0.53
Total						8.08

*Worst-case liquid with highest vapor pressure.

EUG 29: Pressurized Spheres

There are no emissions from these pressurized vessels. Fugitive emissions from associated piping are included in the calculations for EUG 8.

Tank #	Point ID	Nominal Capacity (bbls)	Const Date
Tk 585	Tk585	19,744	1947
Tk 586	Tk586	19,744	1947
Tk 587	Tk587	19,744	1947
Tk 588	Tk588	19,744	1949
Tk 589	Tk589	19,744	1949
Tk 788	Tk788	19,744	1955
Tk 789	Tk789	19,744	1955

Tank #	Point ID	Nominal Capacity (bbls)	Const Date
Tk 797	Tk797	19,744	1956
Tk 798	Tk798	19,744	1956
Tk 804	Tk804	5,117	1957
Tk 805	Tk805	5,117	1957
Tk 806	Tk806	5,117	1957

EUG 30: Pressurized Bullet Tanks

There are no emissions from these pressurized vessels. Fugitive emissions from associated piping are included in the calculations for EUG 8.

Tank #	Point ID	Nominal Capacity (bbls)	Const Date
Tk 791	Tk791	720	1955
Tk 792	Tk792	720	1955
Tk 793	Tk793	720	1955
Tk 794	Tk794	720	1955
Tk 795	Tk795	720	1955
Tk 1007	Tk1007	1,430	1990
Tk 1008	Tk1008	1,430	1990

EUG 31: Underground LPG Cavern

There are no vents or normal emissions from this unit that was constructed in 1961. Fugitive emissions from associated piping are included in the calculations for EUG 8. This “vessel” predates federal and state rules and regulations. Since it is pressurized, it satisfies the requirements of OAC 252:100-39-41. Pressurized vessels do not meet the definition of storage vessels in MACT CC, per 40 CFR § 63.641.

CD	Tank #	EU	Point ID
1961	Tk 900	NA	Tk900

EUG 32: Non-Gasoline Loading Racks

Emission estimates are based on engineering estimates and calculations provided by the facility, using throughput information from calendar year 2016.

CD	EU	Equipment	VOC
			TPY
1937	N/A	Black Oil Rail Loading Rack	<1.0
1993	N/A	Extract Truck Loading Rack	<1.0
1930	N/A	Extract Rail Loading Rack	<1.0
1979	N/A	Wax Truck Loading Rack	<1.0
1917	N/A	Wax Rail Loading Rack	<1.0
1967	N/A	LOB Rail Loading Rack	<1.0
1978	N/A	LOB Truck Loading Rack	<1.0
1962	N/A	Resid Truck Loading Rack	<1.0

CD	EU	Equipment	VOC
			TPY
1986	N/A	Diesel Rail Loading Rack	<1.0
	N/A	560 Rail Loading Rack	<1.0
	N/A	Brightstock Rail Rack	<1.0
	N/A	Heavy Oil Loading Rack	<1.0
	N/A	702tk Truck Loading	<1.0
	N/A	Sundex Truck Loading Rack	<1.0
	N/A	Sundex Railcar Loading Rack	<1.0
	N/A	PDA Bottoms Loading Rack	<1.0
2020	N/A	Raffinate Loading	0.07
		VOC Totals	10.07

CD	EU	Equipment	PM ₁₀	
			lb/hr	TPY
1991	18371	Coke Truck Loading Area	--	0.90

EUG 33: Liquid Petroleum Gas (LPG) Loading Racks

These are high pressure LPGs with no emissions from piping, etc. Emissions from residual material in the tubing after uncoupling have not been estimated.

CD	EU	Equipment/Point ID
1956	N/A	LPG Truck Loading Rack
1917	N/A	LPG Rail Loading Rack

EUG 34: Cooling Towers

Emissions were estimated using Table 5.1-2 of AP-42 (1/95), for VOCs and Fire 6.25 based on Table 13.4-1 of AP-42 (1/95). These towers are subject to 40 CFR Part 63, Subpart CC.

EU	Point ID	Equipment	PM ₁₀ TPY	VOC TPY
15942	CT2	LEU/MEK Cooling Tower	0.17	3.0
15942	CT3	Removed from Service		
15942	CT4	LEU/MEK Cooling Tower		
15942	CT6	PDA/# 5 BH Cooling Tower		
15942	CT7	Coker Cooling Tower		
15942	CT8	CDU Cooling Tower		
15942	CT9	BSU Cooling Tower		
15942	3A	Removed from Service		
15942	3B	Removed from Service		

EUG 35: Oil/Water Separators Subject to OAC 252:100-37-37 and 39-18

Emissions are calculated using WATER9 and wastewater throughput data for calendar year 2016.

EU	Point ID	Equipment	VOC	
			lb/hr	TPY
N/A	D-40	Separator at Lube Packaging	0.03	0.12
N/A	D-41	Separator at Lube Blending and Tankage	0.03	0.12
N/A	D-42	Separator from MEK/Lube Unit	0.03	0.12
N/A	S1-51	Separator at Belt Press (sealed)	0.03	0.12
N/A	Primary Clarifier	Primary Clarifier at WPU	EUG 12 (1)	
6332	Tk 532	Separator at T&S (sealed)	0.01	0.05
6331	Tk 533	Separator at T&S (sealed)	0.01	0.05
Totals			0.14	0.58

(1) Reported in EUG 12 previously.

EUG 36: Spark Ignition Internal Combustion Engines Subject to 40 CFR Part 63 Subpart ZZZZ (PTE)

These engines are subject to 40 CFR Part 63 Subpart ZZZZ. Engines 254, 255 and 258 are existing natural gas-fired RICE engines. PTE is based on listed rated engine horsepower and a maximum 500 hours per year for each of the emergency units, using emission factors from Table 3.2-1 of AP-42 (7/00). The three emergency use engines are only subject to work practice standards. In addition, no initial notification is necessary for the emergency engines.

Engine Number	Point ID	Horsepower
EG-6349	Emergency	45
EG-5879	Emergency	69
EG-6235	Emergency	175
Total horsepower		289

Pollutant	Emission factor lb/MMBTU	Emission factor lb/hp-hr	Emissions	
			lb/hr	TPY
CO	3.72	2.60×10^{-2}	7.53	1.88
NO _x	2.21	1.55×10^{-2}	4.47	1.12
PM ₁₀	1.94×10^{-2}	1.36×10^{-4}	3.93×10^{-2}	9.82×10^{-3}
SO ₂	5.88×10^{-4}	4.12×10^{-6}	1.19×10^{-3}	2.97×10^{-4}
VOC	2.96×10^{-2}	2.07×10^{-4}	5.99×10^{-2}	1.50×10^{-2}

EUG 37: CDU H-2, CDU H-3, and LEU H-102 Heaters (Being Replaced) PTE

These units have been subject to several permit actions concerning aspects of the combustion process, but no specific emissions have been authorized. The CDU units have NO_x estimated at 0.1 lb/MMBTU, while the LEU NO_x factor is estimated at 0.15 lb/MMBTU. The CDU SO₂ factor is estimated at 0.03 lb/MMBTU. Factors identified as “estimates” and maximum heat input ratings are taken from permit applications submitted by the facility. RFG to the CDU is estimated to have 900 BTU/CF. All other factors used in calculating PTE are taken from the appropriate portions of Tables 1.4-1 and 2 of AP-42 (7/98). PTE calculations in the second table following use continuous operation of each unit, combined with the appropriate factors as described above. Note that none

of the permit actions changed the status of these units as “existing” sources under Subchapter 31 or NSPS Subpart J.

EU	Point ID	Original Const. Date	Permit Date	Max Heat Input (MMBTUH)
202	CDU H-2	1961	August 11, 1989	80
203	CDU H-3	1961	August 11, 1989	43.2

EU	CO		NO _x		PM ₁₀		SO ₂		VOC	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
202	6.59	28.9	8.0	35.0	0.60	2.63	2.11	9.2	0.44	1.89
203	4.27	18.7	4.32	18.9	0.39	1.71	1.30	5.68	0.28	1.22
Totals	10.86	47.60	12.32	53.90	0.99	4.34	3.41	14.88	0.72	3.11

EUG 38: Compression Ignition Internal Combustion Engines Subject to 40 CFR Part 63 Subpart ZZZZ (PTE)

The engines are in emergency service, and no initial notification is necessary for the emergency engines. The engines are existing emergency use CI RICE and are subject to work practice standards under Subpart ZZZZ by the compliance date of May 3, 2013. Emission estimates for the engines are calculated using factors for Table 3.3-1 of AP-42 (10/96) for engines smaller than 600 HP and Table 3.4.1 of AP-42 (10/96) for engines larger than 600 HP, listed rated engine horsepower, and the 500-hour criterion associated with this activity. These are emission estimates only as there are no emission limitations for existing emergency CI RICE except for 15 ppm sulfur in fuel.

Engine Number	HP	USE	Fuel
EG-6192	603	Emergency (portable)	Diesel
EG 6217	603	Emergency	Diesel
EG 6218	603	Emergency	Diesel
EG 6312	603	Emergency	Diesel
EG 6289	603	Emergency	Diesel
EG 6290	603	Emergency	Diesel
EG 6472	170	Emergency	Diesel
EG 5886	363	Emergency	Diesel
EG 6031	340	Emergency	Diesel
EG 6522	330	Emergency	Diesel

EU	CO		NO _x		PM ₁₀		SO ₂		VOC	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
6192	3.32	0.83	14.5	3.62	0.42	0.11	2.44	0.61	0.39	0.10
6217	3.32	0.83	14.5	3.62	0.42	0.11	2.44	0.61	0.39	0.10
6218	3.32	0.83	14.5	3.62	0.42	0.11	2.44	0.61	0.39	0.10
6312	3.32	0.83	14.5	3.62	0.42	0.11	2.44	0.61	0.39	0.10
6289	3.32	0.83	14.5	3.62	0.42	0.11	2.44	0.61	0.39	0.10
6290	3.32	0.83	14.5	3.62	0.42	0.11	2.44	0.61	0.39	0.10

EU	CO		NO _x		PM ₁₀		SO ₂		VOC	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
6472	1.14	0.28	5.27	1.34	0.37	0.09	0.35	0.09	3.74	0.93
5886	2.43	0.61	11.26	2.86	0.80	0.20	0.74	0.19	7.99	1.99
6031	1.94	0.49	8.99	2.28	0.64	0.16	0.59	0.15	6.38	1.59
6522	2.20	0.55	10.24	2.60	0.73	0.18	0.68	0.17	7.26	1.81
Totals	27.63	6.91	122.76	30.8	5.06	1.29	17	4.26	27.71	6.92

EUG 38A: Compression Ignition Internal Combustion Engines Subject to 40 CFR Part 60 Subpart III (Authorized Emissions in TPY)

Emission estimates for the engines are calculated using limits of NSPS Subpart III for NO_x, CO, and PM. SO₂ emissions use the limit of Subpart III of 15 ppm sulfur, but §60.4207 allows older fuel to be used until depleted. VOC factors are taken from Table 3.3-1 of AP-42 (10/96). All annual calculations assume 8,760 hours per year except for engines GE-COKE and GE-BBOHO.

EU	CO		NO _x		PM ₁₀		SO ₂		VOC	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
RE-1	0.94	4.10	0.93	4.06	0.07	0.30	0.29	1.26	0.35	1.52
RE-2	0.94	4.10	0.93	4.06	0.07	0.30	0.29	1.26	0.35	1.52
RE-3	1.03	4.51	1.02	4.46	0.07	0.33	0.32	1.48	0.38	1.67
RE-4	1.03	4.51	1.02	4.46	0.07	0.33	0.32	1.48	0.38	1.67
GE-COKER	0.11	0.03	2.00	0.50	0.11	0.03	0.01	0.01	0.11	0.03
GE-BOHO	0.11	0.03	2.00	0.50	0.11	0.03	0.01	0.01	0.11	0.03
RE-5	0.49	2.16	0.44	1.93	0.04	0.17	0.01	0.01	0.02	0.10
Totals	4.65	19.44	8.34	19.97	0.54	1.49	1.25	5.51	1.70	6.54

EUG 39: Cone Roof Tanks MACT CC Group 1 Storage Vessels

For TKD-14 and TKD-15, uncontrolled VOC emissions were determined by gas sampling on February 8, 2018. Both tanks were constructed before 1970. The tanks are currently required to implement controls by the year 2026, or upon next emptying and degassing, whichever comes first.

For TK-473 and TK-474, uncontrolled VOC emissions were calculated using EPA’s TANKS 4.0.9d software. Controlled VOC emissions use 95% recovery by the SRS.

EU	Point ID	Current Service	Capacity (bbls)	Uncontrolled VOC TPY	Controlled VOC TPY
TKD-14	162212	Toluene	2,715	179.1	8.96
TKD-15		Mixed Solvent	2,715		
TK-473		MEK	1,500	2.71	0.14
TK-474		MEK	1,500	2.71	0.14

* Although Tank 474 was constructed in 1979 and is subject to NSPS Subpart Ka, the Group 1 MACT requirements supersede those requirements per the overlap provisions of 40 CFR § 63.640(n)(5).

FACILITY-WIDE PTE ESTIMATE TOTALS

EMISSION UNITS	CO		NOx		PM ₁₀		SOx		VOC	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG 1	53.12	233.4	111.90	490.4	4.70	20.21	18.56	81.30	3.40	15.06
EUG1A	10.23	44.80	9.24	40.45	0.93	4.06	5.40	8.81	0.79	3.44
EUG 2	37.80	165.6	90.00	394.20	3.36	14.70	11.70	51.24	2.49	10.86
EUG 2A	18.10	79.10	12.88	39.00	1.63	7.16	5.59	9.23	1.18	5.18
EUG 3	8.24	23.55	9.81	28.04	0.75	2.13	1.70	7.43	0.54	1.54
EUG 3A	2.87	12.55	3.41	14.94	0.26	1.14	0.90	3.96	0.19	0.82
EUG 4	2.71	11.85	3.22	14.10	0.25	1.07	0.84	1.38	0.18	0.78
EUG 5	5.04	22.08	6.00	26.28	0.46	2.00	5.85	25.63	0.33	1.45
EUG 6	6.80	29.80	8.10	35.50	0.62	2.70	2.11	9.24	0.45	1.95
EUG 7, 8, 9	0	0	0	0	0	0	0	0	50.44	200.41
EUG 11	0.45	2.01	0.10	0.46	0	0	0.24	1.01	0.17	0.74
EUG-11A	3.70	16.40	0.70	3.02	0	0	1.74	7.66	8.50	37.30
EUG 12	0	0	0	0	0	0	0	0	25.12	110.33
EUG 14 (1)	0	0	0	0	0	0	0	0	0	0
EUG 18	0	0	0	0	0	0	0	0	--	9.89
EUG 19	0	0	0	0	0	0	0	0	--	1.99
EUG 20	0	0	0	0	0	0	0	0	--	0.61
EUG 21	0	0	0	0	0	0	0	0	4.29	18.76
EUG 22 (2)	0	0	0	0	0	0	0	0	0	0
EUG 23	0	0	0	0	0	0	0	0	0.97	10.25
EUG 23A	0	0	0	0	0	0	0	0	--	0.10
EUG 24	0	0	0	0	0	0	0	0	--	0.10
EUG 25	0	0	0	0	0	0	0	0	1.52	6.64
EUG 27 (3)	0	0	0	0	0	0	0	0	0	0
EUG 28	0	0	0	0	0	0	0	0	--	1.08
EUG 28A	0	0	0	0	0	0	0	0	1.85	8.08
EUG 29-31	0	0	0	0	0	0	0	0	0	0
EUG 32	0	0	0	0	0.20	0.90	0	0	--	10.07
EUG 33, 34	0	0	0	0	0.04	0.17	0	0	0.70	3.00
EUG 35	0	0	0	0	0	0	0	0	0.14	0.58
EUG 36	7.53	1.88	4.47	1.12	0.04	0.01	0.01	0.01	0.06	0.02
EUG 37	4.27	47.60	12.32	53.90	0.99	4.34	3.41	14.88	0.72	3.11
EUG 38	27.63	6.91	122.8	30.8	5.06	1.29	17.00	4.26	27.71	6.92
EUG 38A	4.65	19.44	8.34	19.97	0.54	1.49	1.25	5.51	1.70	6.54
EUG 39	0	0	0	0	0	0	0	0	40.90	179.4
Totals	193.14	716.97	403.29	1192.18	119.83	63.37	76.30	231.55	174.34	657.00
Existing	208.14	754.05	412.23	1,231.45	20.58	66.66	76.47	244.00	174.77	658.91
Changes	15.00	-37.08	-8.94	-39.27	-0.75	-3.29	-0.17	-12.45	-0.43	-1.91

- (1) EUG 14 is reported in heater and flare emissions.
- (2) Unit currently out of service.
- (3) Pressure vessels with only fugitive VOC emissions.

The facility is a major source of greenhouse gas (GHG) emissions with emissions greater than 100,000 TPY. The facility is also a major source of Hazardous Air Pollutants (HAPs).

SECTION IV. TRIVIAL ACTIVITIES

ODEQ has established a list of activities in OAC 252:100 Appendix J that are considered inconsequential with regards to air emissions. Unless the activity is subject to an applicable State or Federal requirement, these activities are not specifically identified in the permit. However, the standard conditions of the permit specify that the facility is allowed to operate these activities without special conditions.

SECTION V. INSIGNIFICANT ACTIVITIES

The insignificant activities identified in the application and listed in OAC 252:100-8, Appendix I, are listed below. Activities at the refinery considered insignificant may change from time to time. Thus, the following list of activities may expand to include other activities considered insignificant in Appendix I of the OAC rules. Recordkeeping is required for those activities preceded by an asterisk (*) and such are listed in the Specific Conditions. Any activity to which a state or federal applicable requirement applies is not insignificant.

1. Space heaters, boilers, process heaters, and emergency flares less than or equal to 5 MMBTU/hr heat input (commercial natural gas).
2. Cold degreasing operations utilizing solvents that are denser than air.
3. Torch cutting and welding of less than 200,000 tons of steel fabricated per year. All work of this nature is for maintenance and is a Trivial Activity.
4. *Non-commercial water washing operations (less than 2,250 barrels/year) and drum crushing operations of empty barrels less than or equal to 55 gallons with less than three percent by volume of residual material.
5. Hazardous waste and hazardous materials drum staging areas.
6. Hydrocarbon contaminated soil aeration pads utilized for soils excavated at the facility only.
7. Exhaust systems for chemical, paint, and/or solvent storage rooms or cabinets, including hazardous waste satellite (accumulation) areas.
8. Hand wiping and spraying of solvents from containers with less than 1 liter capacity used for spot cleaning and/or degreasing in ozone attainment areas.
9. Additions or upgrades of instrumentation or control systems that result in emissions increases less than the pollutant quantities specified in 252:100-8-3(e)(1).
10. *Emissions from fuel storage/dispensing equipment operated solely for facility owned vehicles if fuel throughput is not more than 2,175 gallons/day, averaged over a 30-day period.
11. Emissions from the operation of groundwater remediation wells including but not limited to emissions from venting, pumping, and collecting activities subject to *de minimis* limits for air toxics (252:100-41-43) and HAPS (§112(b) of CAAA90).
12. *Emissions from storage tanks constructed with a capacity less than 39,894 gallons which store VOC with a vapor pressure less than 1.5 psia at maximum storage temperature.

13. * Activities having the potential to emit no more than 5 TPY (actual) of any criteria pollutant. This last category includes several of the operations at the refinery, including cooling towers, the wastewater centrifuge, and soil-vapor extraction unit.

SECTION VI. OKLAHOMA AIR POLLUTION CONTROL RULES

OAC 252:100-1 (General Provisions) [Applicable]
Subchapter 1 includes definitions but there are no regulatory requirements.

OAC 252:100-2 (Incorporation by Reference) [Applicable]
This subchapter incorporates by reference applicable provisions of Title 40 of the Code of Federal Regulations. These requirements are addressed in the “Federal Regulations” section.

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]
Subchapter 3 enumerates the primary and secondary ambient air quality standards and the significant deterioration increments. At this time, all of Oklahoma is in “attainment” of these standards.

OAC 252:100-5 (Registration, Emissions Inventory and Annual Operating Fees) [Applicable]
Subchapter 5 requires sources of air contaminants to register with Air Quality, file emission inventories annually, and pay annual operating fees based upon total annual emissions of regulated pollutants. Emission inventories were submitted and fees paid for previous years as required.

OAC 252:100-8 (Permits for Part 70 Sources) [Applicable]
This subchapter sets forth permit application fees and the substantive requirements for operating permits required by 40 CFR Part 70 sources. Part 5 includes the general administrative requirements for Part 70 permits. Any planned changes in the operation of the facility that result in emissions not authorized in the permit and that exceed the “Insignificant Activities” or “Trivial Activities” thresholds require prior notification to AQD and may require a permit modification. Insignificant activities refer to those individual emission units either listed in Appendix I or whose actual calendar year emissions do not exceed the following limits.

- 5 TPY of any one criteria pollutant
- 2 TPY of any one hazardous air pollutant (HAP) or 5 TPY of multiple HAPs or 20% of any threshold less than 10 TPY for a HAP that the EPA may establish by rule

Emission limitations and operational requirements necessary to assure compliance with all applicable requirements for all sources are taken from the operating permit applications, or developed from the applicable requirement.

OAC 252:100-9 (Excess Emissions Reporting Requirements) [Applicable]
Except as provided in OAC 252:100-9-7(a)(1), the owner or operator of a source of excess emissions shall notify the Director as soon as possible but no later than 4:30 p.m. the following working day of the first occurrence of excess emissions in each excess emission event. No later than thirty (30) calendar days after the start of any excess emission event, the owner or operator of an air contaminant source from which excess emissions have occurred shall submit a report for each excess emission event describing the extent of the event and the actions taken by the owner

or operator of the facility in response to this event. Request for mitigation, as described in OAC 252:100-9-8, shall be included in the excess emissions event report. Additional reporting may be required in the case of ongoing emission events and in the case of excess emissions reporting required by 40 CFR Parts 60, 61, or 63.

OAC 252:100-13 (Open Burning) [Applicable]
Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in this subchapter.

OAC 252:100-19 (Particulate Matter (PM)) [Applicable]
Section 19-4 regulates emissions of PM from new and existing fuel-burning equipment, with emission limits based on maximum design heat input rating. Appendix C specifies a PM emission limitation of 0.60 lbs/MMBTU for all equipment at this facility with a heat input rating of 10 million BTU per hour (MMBTUH) or less and sets a most restrictive rating of 0.10 lb/MMBTU for the largest equipment. Fuel-burning equipment is defined in OAC 252:100-1 as “combustion devices used to convert fuel or wastes to usable heat or power.” Thus, the fuel-burning equipment listed in EUGs 1, 2, 3, 4, 5, 6, 36, 37, 38, and 38A is subject to the requirements of this subchapter. Gas-fired fuel-burning equipment at the facility burns either RFG or commercial grade natural gas (or its equal). RFG is a mixture of various process unit light gases that contain hydrogen (non-particle emitting) and methane through butane light hydrocarbons. RFG is a dry gas, free of liquid particles due to liquid knockout collection drums prior to final fuel end use. Dry gas is recognized by EPA to be at least as clean burning, as to particulates, as commercial grade natural gas. Since AP-42 has no distinct factor for dry gas mixtures the following demonstrations are based on the natural gas (methane) factors. Table 1.4-2 of AP-42 lists the total PM emission factor for equipment burning natural gas to be 7.6 lbs/10⁶ft³. If we make the conservatively high assumption that PM emissions are related only to volume and that heat content has no effect, then the gas with the highest PM emission in units of pounds per MMBTU will be the gas with the lowest heating value. The lowest heating value found is 584 BTU/DSCF, implying emissions of 0.013 lbs PM/MMBTU. This conservative result is still a factor of 10 below the 0.10 lb/MMBTU most restrictive allowance identified in the introductory paragraph for any equipment at the facility.

The highest emission factor suggested in Table 3.3-1 and Table 3.4-1 of AP-42 for either gas-fired or diesel-fired reciprocating engines is 0.31 lbs/MMBTU. The largest engine in EUG 36, EUG 38, or EUG 38A has a heat rating less than 5 MMBTUH. All engines are thus subject to the least restrictive standard of 0.6 lbs/MMBTU. The worst-case PM emission factor for gas-fired reciprocating engines is 0.013 lbs/MMBTU and for diesel-fired reciprocating engines is 0.31 lbs/MMBTU which are both less than the standard of 0.6 lbs/MMBTU.

OAC 252:100-25 (Visible Emissions and Particulates) [Applicable]
No discharge of greater than 20% opacity is allowed except for short-term occurrences that consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours and according to the other exceptions defined in this subchapter. In no case shall the average of any six-minute period exceed 60% opacity. When burning natural gas there is very little possibility of exceeding these standards and compliance with the standard is presumed. For units that qualify as ‘potentially very low or nonexistent visible emissions’, the facility will conduct qualitative opacity assessments in lieu of Reference Method

9 testing. Compliance with opacity limitations is confirmed by plant observations according to the opacity monitoring schedule.

OAC 252:100-29 (Fugitive Dust) [Applicable]

No person shall cause or permit the discharge of any visible fugitive dust emissions beyond the property line on which the emissions originated in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or to interfere with the maintenance of air quality standards. Under normal operating conditions, this facility has negligible potential to violate this requirement; therefore, it is not necessary to require specific precautions to be taken.

OAC 252:100-31 (Sulfur Compounds) (Applicable)

Part 2 limits the ambient air impact of hydrogen sulfide (H₂S) emissions from any new or existing source to 0.2 ppm for a 24-hour average (equivalent to 280 µg/m³). Complete air modeling was submitted for Permit No. 2018-0594-TVR2 showing H₂S impacts of 150 ug/m³, 24-hour average Part 5 limits sulfur dioxide emissions from new equipment (constructed after July 1, 1972).

Paragraph 31-25(1)(A) specifies an SO₂ emission limitation of 0.20 lb/MMBTU for gaseous fuel. The equipment listed below is presumed in compliance because this equipment burns only commercial pipeline quality natural gas or gas that is equal or better.

1. #7 Boiler
2. #8 Boiler
3. #9 Boiler
4. #2 Plat PH-5 heater
5. Coker B-1 heater
6. MEK H-101 heater

The following pieces of fuel-burning equipment are not subject to OAC 252:100-31-25(a)(1) because the units were constructed prior to, and have not been modified since, the applicability date of July 1, 1972.

EU	Point ID	Const. Date
201N	CDU H-1,N,#7	1961
201S	CDU H-1,S,#8	1961
206	Unifiner H-2	1957
207	Unifiner H-3	1957
209	#2 Plat PH-1/2	1957
210	#2 Plat PH-3	1957
214	#2 Plat PH-7	1971
238	PDA B-30	1956

EU	Point ID	Const. Date
240	PDA B-40	1962
242	LEU H101	1963
244	LEU H-201	1963
246	MEK H-2	1959
202	CDU H-2	1961
203	CDU H-3	1961
213	#2 Plat PH-6	1957

It is not clear whether all of the fuel-burning equipment in EUG 36 and EUG 38 is new or existing, but the calculations supporting the emission estimates for these EUGs clearly demonstrate that the SO₂ emissions satisfy the standard of 0.2 lbs/MMBTU set by §25(a).

Section 31-26 (Petroleum and natural gas processes)

As defined in §31-2, “petroleum and natural gas processes includes equipment used in processing crude and/or natural gas into refined products and includes catalytic cracking units, catalytic reforming units, and many others. There is no “new” affected equipment item at the facility.

OAC 252:100-33 (Nitrogen Oxides) [Applicable]

This subchapter limits new fuel-burning equipment with rated heat input greater than or equal to 50 MMBTUH to emissions of 0.20 lbs of NO_x per MMBTU, three-hour average for gas-fired equipment, 0.30 lbs/MMBTU for liquid-fired equipment, and 0.70 lbs/MMBTU for solid fuel-fired equipment. Most of the fuel-burning equipment at this facility is either too small or was constructed, rebuilt, or altered before the effective date of February 14, 1972 for “new” equipment. The following table indicates the compliance status of affected units.

Equipment	MMBTUH	Emission factor and source
#7 Boiler	150	0.20 lb/MMBTU, stack test of identical boiler #9
#8 Boiler	150	0.20 lb/MMBTU, stack test of identical boiler #9
#9 Boiler	150	0.20 lb/MMBTU, stack test
#10 Boiler	214.6	0.06 lb/MMBTU, stack tests plus safety factor
#2 Plat PH-5	52	0.092 lb/MMBTU, stack test.
Coker B-1	60	0.09 lb/MMBTU, manufacturer’s data, 0.06 lb/MMBTU per 7/22/92 stack test.
MEK H-101	81	0.15 lb/MMBTU, manufacturer’s data.
LEU H-102	158.5	0.03 lb/MMBTU, manufacturer’s data.

OAC 252:100-35 (Carbon Monoxide) [Not Applicable]

Affected processes under this subchapter include gray iron cupola, blast furnace, basic oxygen furnace, petroleum catalytic cracking unit, or petroleum catalytic reforming unit. Standards are based on whether the source is new or existing, where any source constructed or modified after July 1, 1972 is considered to be “new.” The facility operates an existing petroleum catalytic reforming unit. Standards are set for existing units located in nonattainment or former nonattainment areas. Since Tulsa County has never been non-attainment for CO, the facility is not affected by this subchapter.

OAC 252:100-37 (Volatile Organic Materials) [Applicable]

37-4(a) Exempts VOCs with vapor pressure less than 1.5 psia from Sections 15, 16, 35, 36, 37, and 38. EUGs 20, 23, 23A, 24, 25, and 28/28A qualify for this exemption.

37-15(a) Each VOC storage vessel with a capacity of more than 40,000 gallons shall be a pressure vessel capable of maintaining working pressures that prevent the loss of VOC or shall be equipped with one of three specified vapor control devices. Storage vessels subject to equipment standards in 40 CFR Part 60 (NSPS) Subparts K, Ka, or Kb are exempt from §§37-15(a) and (b) per §37-15(c). All storage vessels listed in EUGs 18, 19, 26, and 27 meet the requirements of 37-15(a). All other storage vessels that exceed 40,000 gallons contain VOCs less than 1.5 psia or are subject to NSPS Subparts K, Ka, or Kb.

37-15(b) Each VOC storage tank with a capacity of 400 gallons or more and storing a VOC with a vapor pressure greater than 1.5 psia must be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. All HFTR tanks that are affected sources have bottom fill

lines (EUGs 18, 19, and 27). All other storage vessels that exceed 40,000 gallons contain VOCs less than 1.5 psia or are subject to NSPS Subparts K, Ka, or Kb.

The following list shows those vessels exempt under the 1.5 psia standard identified above.

EU	Point ID	BBL
20128	Tk6	1,890
13559	Tk30	30,000
1356	Tk41	4,200
13561	Tk50	1,890
13562	Tk51	1,890
13563	Tk155	54,132
20129	Tk181	1,000
13573	Tk277	7,000
13574	Tk281	7,000
13576	Tk283	7,000
6368	Tk312	7,000
6370	Tk315	7,000
6375	Tk401	55,000
13596	Tk582	4,061
NA	Tk696	1,700
6393	Tk747	10,000
5397	Tk751	10,000
13588	Tk27	55,000
NA	Tk84	963
NA	Tk85	963
6377	Tk405	72,443
13578	Tk406	71,526
13589	Tk998	2,015
6406	Tk1002	55,000
NA	Tk1005	4,800
15950	Tk1012	5,000
16561	Tk1039	120,000
13569	Tk224	55,000
NA	Tk881	2,090
NA	Tk890	1,200
NA	Tk992	1,815
NA	Tk993	1,815
6324	Tk152	7,000
13565	Tk158	63,709
NA	Tk472	3,080
NA	Tk983	15,000
NA	Tk984	15,000
NA	Tk986	6,000
NA	Tk987	6,000

EU	Point ID	BBL
20127	Tk1	1,698
Tk9	Tk9	7,000
Tk10	Tk10	7,000
Tk11	Tk11	7,000
6334	Tk15	7,000
6335	Tk16	7,000
Tk23	Tk23A	55,000
Tk26	Tk26	55,000
20130	Tk28	38,000
6339	Tk29	55,000
Tk33	Tk33	55,000
Tk34	Tk34	55,000
6342	Tk35	55,000
Tk38	Tk38	1,890
Tk45	Tk45	4,200
Tk46	Tk46	4,200
Tk52	Tk52	1,890
Tk53	Tk53	1,890
Tk54	Tk54	1,890
Tk62	Tk62	4,200
Tk65	Tk65	1,890
Tk66	Tk66	1,890
Tk68	Tk68	1,890
Tk69	Tk69	1,890
Tk71	Tk71	5,680
Tk72	Tk72	5,680
Tk73	Tk73	5,680
Tk74	Tk74	5,680
Tk75	Tk75	1,890
Tk76	Tk76	1,890
Tk79	Tk79	1,890
Tk80	Tk80	1,890
Tk81	Tk81	1,890
Tk83	Tk83	1,890
Tk132	Tk132	1,800
Tk133	Tk133	1,800
Tk134	Tk134	7,000
6344	Tk151	7,000
13567	Tk194	53,100
Tk195	Tk195	55,000
Tk196	Tk196	55,000
6355	Tk215	50,914
15946	Tk217	7,000
13568	Tk218	7,000

EU	Point ID	BBL
Tk223	Tk223	7,000
Tk227	Tk227	7,000
Tk228	Tk228	1,890
Tk229	Tk229	1,890
Tk232	Tk232	1,890
Tk233	Tk233	1,890
Tk234	Tk234	1,890
Tk235	Tk235	1,890
Tk236	Tk236	1,890
Tk237	Tk237	1,890
Tk240	Tk240	1,500
Tk252	Tk252	7,000
Tk264	Tk264	1,890
Tk265	Tk265	1,890
Tk266	Tk266	1,890
Tk267	Tk267	1,890
Tk271	Tk271	1,890
6363	Tk272	1,890
Tk273	Tk273	7,000
Tk274	Tk274	7,000
Tk275	Tk275	7,000
Tk276	Tk276	7,000
6366	Tk284	7,000
Tk305	Tk305	7,000
Tk317A	Tk317A	9,400
Tk318	Tk318	7,000
Tk319	Tk319	1,890
Tk320	Tk320	1,890
Tk321	Tk321	1,890
Tk322	Tk322	1,890
6371	Tk323	7,000
Tk327	Tk327	1,890
Tk328	Tk328	1,890
Tk329	Tk329	1,890
Tk331	Tk331	7,000
Tk332	Tk332	7,000
Tk335	Tk335	1,890
Tk390	Tk390	7,000
Tk391	Tk391	5,000
Tk392	Tk392	5,000
Tk393	Tk393	1,000
Tk394	Tk394	1,120
Tk396	Tk396	5,940
Tk397	Tk397	5,940

EU	Point ID	BBL
6373	Tk398	2,600
6374	Tk399	2,600
6377	Tk404	72,273
6379	Tk407	71,526
6380	Tk412	51,773
6386	Tk445	74,098
Tk471	Tk471	3,780
Tk509	Tk509	4,000
6389	Tk510	1,890
6390	Tk511	1,890
6391	Tk519	4,000
Tk645	Tk645	1,500
Tk646	Tk646	1,500
Tk649	Tk649	1,008
Tk650	Tk650	10,000
Tk675	Tk675	1,500
Tk691	Tk691	2,400
Tk692	Tk692	2,400
Tk693	Tk693	2,400
Tk694	Tk694	2,400
Tk700	Tk700	15,000
13585	Tk701	15,000
13584	Tk702	7,000
6403	Tk799	1,890
Tk800	Tk800	7,000
15958	Tk801	15,000
13586	Tk802	15,000
15949	Tk803	15,000
Tk807	Tk807	4,200
Tk828	Tk828	30,000
Tk829	Tk829	30,000
Tk830	Tk830	30,000
Tk831	Tk831	30,000
Tk835	Tk835	2,000
6404	Tk838	2,000
Tk847	Tk847	2,032
Tk848	Tk848	2,032
Tk851	Tk851	2,088
Tk852	Tk852	4,025
Tk853	Tk853	4,025
Tk854	Tk854	4,025
Tk855	Tk855	4,025
Tk856	Tk856	4,025
Tk857	Tk857	2,011

EU	Point ID	BBL
Tk861	Tk861	1,000
Tk865	Tk865	1,890
Tk867	Tk867	1,675
13587	Tk870	5,300
Tk875	Tk875	2,090
Tk876	Tk876	3,000
Tk877	Tk877	2,090
Tk878	Tk878	2,090
Tk879	Tk879	2,090
Tk880	Tk880	3,000
Tk882	Tk882	20,000
Tk883	Tk883	1,000
Tk884	Tk884	1,000
Tk885	Tk885	1,000
Tk886	Tk886	10,492
Tk887	Tk887	19,500
Tk888	Tk888	10,492
Tk891	Tk891	1,000
Tk893	Tk893	10,500
Tk898	Tk898	2,455
Tk913	Tk913	2,090
Tk914	Tk914	2,090
Tk916	Tk916	2,090
Tk918	Tk918	30,000
Tk921	Tk921	2,094
Tk922	Tk922	3,058
Tk923	Tk923	2,084
Tk924	Tk924	4,455
Tk925	Tk925	4,455
Tk926	Tk926	1,313
Tk927	Tk927	1,313
Tk928	Tk928	4,455
Tk929	Tk929	4,455
Tk930	Tk930	1,313
Tk931	Tk931	1,313
Tk932	Tk932	3,058
Tk933	Tk933	1,000
Tk934	Tk934	1,000
Tk935	Tk935	1,000
Tk936	Tk936	1,000
Tk937	Tk937	1,000
Tk938	Tk938	1,000
Tk943	Tk943	1,000
Tk944	Tk944	1,000

EU	Point ID	BBL
Tk955	Tk955	1,000
TkAGT1	TkAGT1	2,000
TkAGT2	TkAGT2	1,000
TkAGT3	TkAGT3	1,000
TkAGT4	TkAGT4	2,000
Tk939	Tk939	1,000
Tk940	Tk940	1,000
Tk941	Tk941	1,000
Tk942	Tk942	1,000
Tk277	Tk277	20,000
6343	Tk36	55,000

The following list shows those vessels exempt under the NSPS standard identified above.

EU	Point ID	Nominal Capacity (BBLs)
6338	Tk25A	11,300
13594	Tk1061	80,000
20126	Tk1070	5,377
NA	Tk1080	3,200
6402	Tk782	15,000
13591	Tk583	4,800
6350	Tk189	55,000
--	Tk1038	95,000

37-16(a) Loading facilities with throughput greater than 40,000 gallons/day, and 37-16(b) Loading facilities with throughput equal to or less than 40,000 gallons/day. The following loading racks are not subject to OAC 252:100-37-16 because the units do not load VOC containing material, per §37-4(a).

EU	Equipment Point ID	Installed Date
NA	Black Oil Loading Rack	1937
NA	Extract Truck Loading Rack	1993
NA	Extract Rail Loading Rack	1930
NA	Wax Truck Loading Rack	1979
NA	Wax Rail Loading Rack	1917
NA	LOB Rail Loading Rack	1967
NA	LOB Truck Loading Rack	1978
NA	Resid Truck Loading Rack	1962
NA	Diesel Rail Loading Rack	1986
NA	Coke Truck Loading Area	1991
NA	Heavy Oil Railcar Loading	2018
N/A	702tk Truck Loading	--
N/A	Sundex Truck Loading Rack	--

EU	Equipment Point ID	Installed Date
N/A	Sundex Railcar Loading Rack	--
N/A	PDA Bottoms Loading Rack	--
N/A	Raffinate Loading	2020

Section 37-36 requires fuel-burning equipment to be cleaned, operated, and maintained so as to minimize VOC emissions. Based on manufacturer's data and good engineering practice, the equipment must not be overloaded and temperature and available air must be sufficient to provide essentially complete combustion. Refinery fuel combustion devices are designed to provide essentially complete combustion of organic materials.

Section 37-37 regulates water separators that receive water containing more than 200 gallons per day (gpd) of VOC. All oil/water separators listed in EUG 35 receiving VOC material with vapor pressure greater than 1.5 psia are sealed per 37-37(1). Separators built since 7/1/72 are either sealed irrespective of the 200-gpd trigger or do not process 200 gpd organics per records on file.

OAC 252:100-39 (VOC in Non-Attainment and Former Nonattainment Areas) [Applicable]
Section 39-15 (Petroleum Refinery Equipment Leaks) EPA test Method 21 is specified for detecting equipment leaks. VOC with vapor pressure less than 0.0435 is exempt. Components covered by this section include, but are not limited to, pumping seals, compressor seals, seal oil degassing vents, pipeline valves, flanges and other connections, pressure relief devices, process drains, and open-ended pipes. All such components are tested in a monitoring program per 15(f); actions and repairs are conducted per 15(c); records are kept per 15(g); quarterly reports are made per 15(h); and monitoring logs are retained on-site for least two years.

Section 39-16 (Petroleum refinery process unit turnaround) Vented organic material must either be controlled per 39-16(b)(1) & (2) or exempted per 39-16(b)(4). Requirements for contents of the 15-day notification are listed in 39-16(b)(3). HFTR has provided the appropriate notices for past turnarounds and is in compliance based on standard unit turnaround practices that meet requirements.

Section 39-17 (Petroleum refinery vacuum producing system) The vacuum system at the CDU vacuum towers, T-2 and T-3, employs steam ejectors, surface condensers, and a mechanical vacuum pump to deliver vacuum gases to the CDU H-2 heater. If the vacuum pump fails, the third stage jet system is used to deliver gases to H-2.

The vacuum system at the LEU T-201 vacuum tower employs ejectors and surface condensers. The surface condenser gases are in turn ejected with natural gas into dedicated burners in the LEU H-102 heater. Both vacuum gas streams are disposed by direct combustion into the firebox of a large heater. Flowing this material to the unit heater obviates a requirement that the pilot flame be monitored. Maintenance records on the systems are being kept.

Section 39-18 (Petroleum refinery effluent water separators) Separators listed in EUG 35 receiving VOC material are sealed and are in compliance by separator design.

Section 39-30 (Petroleum liquid storage in vessels with external floating roofs) Storage tank 874 listed in EUG 19 is subject to 39-30(c). Storage vessels listed in EUG 19 are exempt per 39-30(b)(4) because they are subject to 40 CFR Part 63 Subpart CC. Storage vessels listed in EUG 22 are exempt per 39-30(b)(3) because they are subject to 40 CFR Part 60 Subpart Kb. Storage vessels listed in EUG 20, 23, 23A, 24, 25, and 28/28A are exempt per 39-30(b)(2)(C) because they contain liquids with true vapor pressure less than 1.5 psia.

Section 39-40 (Cutback asphalt (paving)) Cutback liquefied asphalt cannot be applied or prepared in the facility without prior written consent of the Division Director.

Section 39-41 (Storage, loading and transport/delivery of VOCs) HFTR stores and loads gasoline delivery trucks, but does not deliver gasoline. HFTR is subject to the storage and loading part of this section of the subchapter.

Subsection 39-41(a) Storage of VOCs in vessels with storage capacities greater than 40,000 gallons. Each vessel with a capacity greater than 40,000 gallons storing VOC with a true vapor pressure that exceeds 1.50 psia must have either a floating internal or external roof that meets the requirement of this section. Tank inspections are documented electronically on the Refinery Tanks Database. Electronic documentation records the date of the inspection, any defects noted, and the initials of the inspector. Storage tanks in EUG 18, 19, 21, 22, and 27 are subject. Storage tanks in EUG 20, 23, 24, and 25 are exempt because the VOC vapor pressure is less than 1.5 psia.

Subsection 39-41(b)(1) Each gasoline or other VOC storage vessel with a nominal capacity greater than 400 gal (1.5 m³) and less than 40,000 gal (151 m³) shall be equipped with a submerged fill pipe or be bottom filled.

Subsection 39-41(b)(2) The displaced vapors from each storage vessel with an average daily throughput of 30,000 gal (113,562 l) or greater which stores gasoline or other VOCs shall be processed by a system that has a total collection efficiency no less than 90 percent by weight of total VOCs in the vapors.

Subsection 39-41(c) Loading of VOCs. The truck terminal previously of EUG 13 has been closed.

Subsection 39-41(d) Transport/delivery. No delivery vessel incapable of accepting displaced vapors and designated as vapor tight is allowed to load at the facility's loading terminal.

Subsection 39-41(e) Additional requirements for Tulsa County. Only Paragraphs 3 and 4 apply.

§39-41(e)(3) (Loading of VOCs) requires that the stationary loading facility be checked annually using EPA Method 21. The truck terminal previously of EUG 13 has been closed.

§39-41(e)(4) (Transport/delivery vessel requirement) requires that transport vessels be maintained vapor tight and must be capable of receiving and storing vapors for ultimate delivery to a vapor recovery/disposal system. Any defect that impairs vapor tightness must be repaired within five days. Certification of vapor tightness and of repairs must be provided and no vessel shall be loaded without demonstrating the proper certification. DEQ may perform spot checks of vapor tightness and may require owner/operators to make necessary repairs. The loading operations have been moved to the Holly Energy Partners permit.

Section 39-42 (Metal cleaning) contains requirements for cold cleaning, vapor degreasing, and conveyORIZED degreasing. The facility has no vapor or conveyORIZED units, so only §39-42(a) applies. All equipment shall have a cover or door that can be easily operated with one hand, shall provide an internal drain board that will allow lid closure if practical or provide an external drainage facility, shall have an attached permanent, conspicuous label summarizing the operating requirements of OAC 252:100-39-42(a)(2). Control requirements are identified in §39-42(a)(3) for those solvents with vapor pressure greater than 0.6 psi.

OAC 252:100-42 (Toxic Air Contaminants (TAC))

[Applicable]

Part 5 of OAC 252:100-41 was superseded by this subchapter. Any work practice, material substitution, or control equipment required by the Department prior to June 11, 2004, to control a TAC, shall be retained unless a modification is approved by the Director. Since no Area of Concern (AOC) has been designated anywhere in the state, there are no specific requirements for this facility at this time.

OAC 252:100-43 (Testing, Monitoring, and Recordkeeping) [Applicable]
 This subchapter provides general requirements for testing, monitoring and recordkeeping and applies to any testing, monitoring or recordkeeping activity conducted at any stationary source. To determine compliance with emissions limitations or standards, the Air Quality Director may require the owner or operator of any source in the state of Oklahoma to install, maintain and operate monitoring equipment or to conduct tests, including stack tests, of the air contaminant source. All required testing must be conducted by methods approved by the Air Quality Director and under the direction of qualified personnel. A notice-of-intent to test and a testing protocol shall be submitted to Air Quality at least 30 days prior to any EPA Reference Method stack tests. Emissions and other data required to demonstrate compliance with any federal or state emission limit or standard, or any requirement set forth in a valid permit shall be recorded, maintained, and submitted as required by this subchapter, an applicable rule, or permit requirement. Data from any required testing or monitoring not conducted in accordance with the provisions of this subchapter shall be considered invalid. Nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. The only non-grandfathered units whose emissions exceed 100 TPY are the boilers in EUG-2; those boilers are required to test NOx at least every 5 years.

The following Oklahoma Air Pollution Control Rules are not applicable to this facility:

OAC 252:100-11	Alternative Emissions Reduction	not requested
OAC 252:100-17	Incinerators	not type of emission unit
OAC 252:100-23	Cotton Gins	not in source category
OAC 252:100-24	Grain Elevators	not in source category
OAC 252:100-35	Control of CO	not in source category
OAC 252:100-39-43	Graphic Arts	not in source category
OAC 252:100-39-44	Tire Mfg.	not in source category
OAC 252:100-39-45	Dry Cleaning	not in source category
OAC 252:100-39-46	Parts Coating	not in source category
OAC 252:100-39-47	Aerospace Coating	not in source category
OAC 252:100-39-49	Fiberglass Mfg.	not in source category
OAC 252:100-47	MSW Landfills	not in source category

SECTION VII. FEDERAL REGULATIONS

PSD, 40 CFR Part 52 [Not Applicable at this Time]
 HFTR is a major PSD source since it is on the list of 26 source categories and has emissions of at least one criteria pollutant that exceeds 100 TPY. Added emissions are below the PSD level of significance. Future projects will be evaluated in comparison to PSD levels of significance: 40 TPY NOx, 100 TPY CO, 40 TPY VOC, 40 TPY SO₂, 10 TPY PM_{2.5}, and 75,000 TPY CO_{2e}.

NSPS, 40 CFR Part 60 [Subparts Db, J, Ja, K, Ka, Kb, UU, GGG, and GGGa Applicable]
 The following paragraphs are general in nature, with some reference to specific facilities. The Specific Conditions contain specific requirements under NSPS for all affected facilities.

Subpart A specifies general control device requirements for control devices used to comply with applicable subparts. As of January 30, 2019, flares which are subject to NESHAP Subpart CC must comply only with Subpart CC.

Subpart D (Fossil-Fuel-Fired Steam Generators for Which Construction Is Commenced After August 17, 1971) This is not applicable because there are no fossil-fuel-fired steam generators with a heat input greater than 250 MMBTUH.

Subpart Da (Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978) This is not an applicable requirement because there are no electric utility steam generating units.

Subpart Db (Industrial-Commercial-Institutional Steam Generating Units for Which Construction Is Commenced After June 19, 1984). The following units was constructed or modified after the effective date of the standard.

EU	Point ID	Construction Date
--	#10 Boiler	2013

The following units were constructed or modified prior to the effective date of the standard.

EU	Point ID	Construction Date
109	#7 Boiler	1975
110	#8 Boiler	1976
111	#9 Boiler	1976

Boiler #10 is subject to NSPS Subpart Db. Since Boiler #10 does not burn coal or No. 2 fuel oil, it is only subject to Sections §§ 60.44b, 60.46b, 60.48b, and 60.49b of this subpart (standards of Subpart Db for SO₂ and PM do not apply to gas-fueled boilers). Requirements include:

1. Compliance testing for particulate matter and nitrogen oxides (§ 60.46b). The emission standard for oxides of nitrogen is 0.2 lb/MMBTU per § 60.44b(a), including periods of start-up, shutdown and malfunction (§ 60.44b(h)). Compliance with the NO_x standard is to be demonstrated on a rolling 30-day basis, except that the initial performance test shall demonstrate compliance on a 24-hour basis and any subsequent performance tests shall demonstrate compliance on a 3-hour basis (§ 60.44b(i, j)).
2. Emissions monitoring for nitrogen oxides (§ 60.48b). The applicant installed a continuous emission monitor (CEM) to monitor NO_x on boiler #10.
3. Reporting and recordkeeping (§ 60.49b). HFTR will record natural gas and refinery gas usage and CEMs data.

Subpart Dc (Small Industrial-Commercial-Institutional Steam Generating Units for Which Construction Is Commenced After June 9, 1989) There are currently no applicable units constructed or modified after the effective date of the standard.

Subpart J (Petroleum Refineries) The following units are not subject to NSPS Subpart J because they were constructed prior to the applicability date of June 11, 1973, and not modified between June 11, 1973, and May 14, 2007.

EU	Point ID	Construction Date
201N	CDU H-1,N,#7	1961
201S	CDU H-1,S,#8	1961
202	CDU H-2	1961 ⁽¹⁾
203	CDU H-3	1961 ⁽¹⁾
206	Unifiner H-2	1957
207	Unifiner H-3	1957
209	#2 Plat PH-1/2	1957
210	#2 Plat PH-3	1957
213	#2 Plat PH-6	1957
214	#2 Plat PH-7	1971
238	PDA B-30	1956
240	PDA B-40	1962
242	LEU H101	1963
244	LEU H-201	1963
246	MEK H-2	1959

(1) Low NO_x burners were installed in units CDU H-2 and H-3 in 1989. As stated in the construction permit (T89-37; August 11, 1989), this installation did not qualify as a modification for SO₂ or reconstruction, and thus, the units remain exempted from this rule.

The following units were constructed or modified after the applicability date and prior to May 14, 2007, and will only burn natural gas or refinery fuel gas complying with NSPS Subpart J fuel gas sulfur content standards.

EU	Point ID	Construction Date
109	#7 Boiler	1975
110	#8 Boiler	1976
111	#9 Boiler	1976
212	#2 Plat PH-5	1990
225	Coker B-1	1992 (Permit T91-110)
245	MEK H-101	1977 (Permit 77-006-0)

The LEU and Coker flare, EU-269 and EU-268 (EUG-11) were subject to NSPS Subpart J due to the Refinery Wide Global Consent Decree Settlement. These flares were modified after June 24, 2008, and are therefore subject to the more stringent requirements of Subpart Ja. They are protected by water seal from combusting routinely generated refinery gases.

Subpart Ja (Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007) 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, flares, fuel gas combustion devices, including process heaters, and sulfur recovery plants. Only those affected facilities that begin construction, modification, or reconstruction after May 14, 2007, are subject to this subpart. Fuel gas combustion device means any equipment, such as process heaters, boilers used to combust fuel gas, except facilities in which gases are combusted to produce sulfur or sulfuric acid. All of the flares (LEU, Coker, Platformer) have been reconstructed or modified after June 24, 2008. Boiler 10 is new equipment, subject to Subpart Ja. The change to RFG made Heaters PH-4 and Plat H-3 subject to Subpart Ja for SO₂ only since no increase in NO_x occurred. The reconstructed H-102 is subject to the NO_x and SO₂ standards of Subpart Ja for refinery fuel gas burning equipment.

A fuel gas H₂S limit of 162 ppmv (3-hour rolling average) and 60 ppmv (365-day rolling average). For any natural draft process heater greater than 40 MMBTUH, NO_x emissions are limited to 0.040 lb/MMBTU (30-day rolling average).

Subpart K (Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced after June 11, 1973, and Prior To May 19, 1978) applies to volatile organic liquids storage vessels for which construction, reconstruction, or modification commenced after June 11, 1973, or before May 19, 1978, which have a capacity of 40,000 gallons or more, and which do not contain organic materials specifically exempted. Those materials specifically exempted include diesel, jet fuel, kerosene, and residual fuel oils. Per § 60.112, controls are required if storing material above a true vapor pressure (TVP) of 1.5 psia. Records of stored material stated in § 60.113(a) are not required if the stored material is below a Reid vapor pressure (RVP) of 1.0 psia, but are required regardless of RVP if TVP is greater than 1.0 psia, per § 60.113(d)(1). Tanks listed in EUG 25 are exempt from recordkeeping because material stored is below 1.0 psia RVP and TVP. For the tanks in this permit, TK-473 and TK-700 were both constructed prior to NSPS, while TK-474 was constructed during the time frame when Subpart Ka was in effect.

Subpart Ka (Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced after May 18, 1978, and Prior To July 23, 1984) applies to volatile organic liquids storage vessels for which construction, reconstruction, or modification commenced after May 18, 1978, but before July 23, 1984, which have a capacity of 40,000 gallons or more, and which do not contain organic materials specifically exempted. Those materials specifically exempted include diesel, kerosene, and residual fuel oils. Per § 60.112(a) controls are not required if stored material is below 1.5 RVP. Records of stored material per § 60.115(a) are required if RVP is above 1.0, but not if below 1.0 per § 60.115(d)(1). Tanks in EUG 24 are exempt from recordkeeping. For the tanks in this permit, TK-473 and TK-700 were both constructed prior to NSPS; under the overlap provisions of NESHAP Subpart CC, tanks subject initially to NSPS Subpart Ka but not to control standards are now subject only to NESHAP Subpart CC.

Subpart Kb (VOL Storage Vessels for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984) applies to volatile organic liquids storage vessels for which construction, reconstruction, or modification commenced after July 23, 1984, and which have a capacity of 75 cubic meters (m³) or more. Tanks with capacity greater than or equal to 151 m³ and

storing VOL with TVP less than 3.5 kPa (\approx 0.5 psia) are exempt from Kb, as are tanks with capacity greater than or equal to 75 m³ and less than 151 m³ that store VOL with TVP less than 15.0 kPa (\approx 2.2 psia). Tanks with capacity greater than or equal to 151 m³ and storing VOL with TVP equal to or greater than 5.2 kPa (\approx 0.75 psia) but less than 76.6 kPa (\approx 11.1 psia) are required to have the controls described in § 60.112b(a). Tanks with capacity greater than or equal to 75 m³ and less than 151 m³ and storing VOL with TVP equal to or greater than 27.6 kPa (\approx 4.0 psia) but less than 76.6 kPa are also required to have the controls described in § 60.112b(a). Tanks with TVP greater than 76.6 kPa must install the closed systems described in § 60.112b(b). Tanks subject to the controls of § 60.112b are subject to the testing and inspection requirements of § 60.113b and the reporting and recordkeeping requirements of § 60.115b. All tanks, regardless of controls, are subject to the monitoring requirements of §60.116b. Compliance is per monitoring specified at § 60.113(b), and records and reporting as specified at §§ 60.115(b) and 60.116(b). Tanks in EUGs 21 and 22 are affected facilities under Subpart Kb. Tank inspections are documented electronically on the Refinery Tanks Database. Electronic documentation records the date of the inspection, any defects noted, and the initials of the inspector.

The following petroleum/volatile organic liquid storage tanks are not subject to NSPS Subparts K, Ka, or Kb because the tanks were constructed or modified prior to the applicability dates. Other tanks may be exempt based on the vapor pressure of the VOL stored, but those tanks are not listed here.

EU	Tank #	Nominal BBL	Year
6336	21	33,178	1916
6340	31	35,411	1940
6346	153	47,858	1917
6359	242	48,654	1917
6360	244	55,000	1917
6382	423	51,163	1923
1591	432	74,529	1953
6383	433	50,910	1923
6385	435	74,132	1953
1359	502	7,000	1965
6392	742	10,000	1948
6393	747	10,000	1948
5397	751	10,000	1949
6367	307	10,000	1946
6398	752	10,000	1949
6396	750	10,000	1972
6399	755	10,000	1950
6401	779	10,000	1953
6369	314	7,000	1922
20128	6	1890	1916
6333	13	55,000	1916
13559	30	30,000	1917
1356	41	4200	1929

EU	Tank #	Nominal BBL	Year
13561	50	1890	1917
13562	51	1890	1917
13563	155	54132	1917
20129	181	1000	1928
6347	185	55,000	1922
6348	186	55,000	1922
6349	187	55,000	1922
13592	188	55,000	1922
13570	258	1,890	1917
13571	259	1,890	1917
13574	281	7,000	1969
13575	282	7,000	1917
13576	283	7,000	1917
6368	312	7,000	1922
6370	315	7,000	1917
6375	401	55,000	1922
13594	546	1,700	1943
13596	582	4,061	1936
NA	696	1700	1948
6405	874	121,275	1965
6333	13	55,000	1917
8347	185	55,000	1922
6348	186	55,000	1922
6349	187	55,000	1922
13592	188	55,000	1922
6405	874	121,275	1965
20127	1	1,698	1916
Tk9	9	7,000	1968
Tk10	10	7,000	1916
Tk11	11	7,000	1916
6334	15	7,000	1916
6335	16	7,000	1916
Tk26	26	55,000	1916
20130	28	38,000	1964
6339	29	55,000	1964
Tk33	33	55,000	1917
Tk34	34	55,000	1917
6342	35	55,000	1917
6343	36	55,000	1917
Tk38	38	1,890	1928
Tk45	45	4,200	1917
Tk46	46	4,200	1917
Tk52	52	1,890	1917
Tk53	53	1,890	1917

EU	Tank #	Nominal BBL	Year
Tk54	54	1,890	1917
Tk62	62	4,200	1917
Tk65	65	1,890	1917
Tk66	66	1,890	1917
Tk68	68	1,890	1917
Tk69	69	1,890	1917
Tk71	71	5,680	1917
Tk72	72	5,680	1917
Tk73	73	5,680	1917
Tk74	74	5,680	1917
Tk75	75	1,890	1917
Tk76	76	1,890	1917
Tk79	79	1,890	1917
Tk80	80	1,890	1917
Tk81	81	1,890	1917
Tk83	83	1,890	1917
Tk132	132	1,800	1922
Tk133	133	1,800	1922
Tk134	134	7,000	1922
6344	151	7,000	1917
6352	191	55,000	1922
13567	194	53,100	1966
Tk195	195	55,000	1917
Tk196	196	55,000	1916
6355	215	50,914	1917
15946	217	7,000	1917
13568	218	7,000	1968
Tk223	223	7,000	1917
Tk227	227	7,000	1917
Tk228	228	1,890	1917
Tk229	229	1,890	1917
Tk232	232	1,890	1917
Tk233	233	1,890	1917
Tk234	234	1,890	1917
Tk235	235	1,890	1917
Tk236	236	1,890	1917
Tk237	237	1,890	1917
Tk240	240	1,500	1917
Tk252	252	7,000	1966
Tk264	264	1,890	1917
Tk265	265	1,890	1917
Tk266	266	1,890	1917
Tk267	267	1,890	1917
Tk271	271	1,890	1917

EU	Tank #	Nominal BBL	Year
6363	272	1,890	1917
Tk273	273	7,000	1917
Tk274	274	7,000	1929
Tk275	275	7,000	1963
Tk276	276	7,000	1917
6366	284	7,000	1966
Tk305	305	7,000	1929
Tk317A	317A	9,400	2019
Tk318	318	7,000	1917
Tk319	319	1,890	1917
Tk320	320	1,890	1917
Tk321	321	1,890	1917
Tk322	322	1,890	1917
6371	323	7,000	1917
Tk327	327	1,890	1917
Tk328	328	1,890	1917
Tk329	329	1,890	1917
Tk331	331	7,000	1917
Tk332	332	7,000	1917
Tk335	335	1,890	1967
Tk390	390	7,000	1929
Tk391	391	5,000	1929
Tk392	392	5,000	1929
Tk393	393	1,000	1930
Tk394	394	1,120	1930
Tk396	396	5,940	1963
Tk397	397	5,940	1963
6373	398	2,600	1928
6374	399	2,600	1928
Tk471	471	3,780	1917
Tk509	509	4,000	1969
6389	510	1,890	1966
6390	511	1,890	1966
6391	519	4,000	1932
Tk645	645	1,500	1938
Tk646	646	1,500	1936
Tk649	649	1,008	1937
Tk650	650	10,000	1940
Tk675	675	1,500	1942
Tk691	691	2,400	1942
Tk692	692	2,400	1942
Tk693	693	2,400	1942
Tk694	694	2,400	1942
Tk700	700	15,000	1942

EU	Tank #	Nominal BBL	Year
13585	701	15,000	1942
13584	702	7,000	1942
6400	775	55,000	1916
6403	799	1,890	1956
Tk800	800	7,000	1956
15958	801	15,000	1956
13586	802	15,000	1956
15949	803	15,000	1956
Tk807	807	4,200	1958
Tk828	828	30,000	1960
Tk829	829	30,000	1960
Tk830	830	30,000	1960
Tk831	831	30,000	1960
Tk835	835	2,000	1960
6404	838	2,000	1960
Tk847	847	2,032	1961
Tk848	848	2,032	1961
Tk851	851	2,088	1961
Tk852	852	4,025	1962
Tk853	853	4,025	1962
Tk854	854	4,025	1962
Tk855	855	4,025	1962
Tk856	856	4,025	1962
Tk857	857	2,011	1962
Tk861	861	1,000	1968
Tk865	865	1,890	1963
Tk867	867	1,675	1964
13587	870	5,300	1963
Tk875	875	2,090	1966
Tk876	876	3,000	1966
Tk877	877	2,090	1966
Tk878	878	2,090	1966
Tk879	879	2,090	1966
Tk880	880	3,000	1966
Tk882	882	20,000	1967
Tk883	883	1,000	1967
Tk884	884	1,000	1967
Tk885	885	1,000	1967
Tk886	886	10,492	1967
Tk887	887	19,500	1967
Tk888	888	10,492	1967
Tk891	891	1,000	1968
Tk893	893	10,500	1972
Tk898	898	2,455	1917

EU	Tank #	Nominal BBL	Year
Tk913	913	2,090	1917
Tk914	914	2,090	1917
Tk916	916	2,090	1917
Tk918	918	30,000	1972
Tk921	921	2,094	1966
Tk922	922	3,058	1966
Tk923	923	2,084	1966
Tk924	924	4,455	1966
Tk925	925	4,455	1966
Tk926	926	1,313	1966
Tk927	927	1,313	1966
Tk928	928	4,455	1966
Tk929	929	4,455	1966
Tk930	930	1,313	1966
Tk931	931	1,313	1966
Tk932	932	3,058	1966
Tk933	933	1,000	1966
Tk934	934	1,000	1966
Tk935	935	1,000	1966
Tk936	936	1,000	1966
Tk937	937	1,000	1966
Tk938	938	1,000	1966
Tk939	939	1,000	1966
Tk940	940	1,000	1966
Tk941	941	1,000	1966
Tk942	942	1,000	1966
Tk943	943	1,000	1966
Tk944	944	1,000	1966
Tk955	955	1,000	1966
TkAGT1	AGT1	2,000	1922
TkAGT2	AGT2	1,000	1922
TkAGT3	AGT3	1,000	1922
TkAGT4	AGT4	2,000	1922

Subpart GG (Stationary Gas Turbines)

There are no stationary gas turbines on-site.

Subpart UU (Asphalt Processing and Asphalt Roofing) Per 40 CFR § 60.470, affected facilities include asphalt storage tanks and blowing stills at refineries, for which construction or modification commenced after May 26, 1981. Tank 27 and Tank 193 in EUG-23A are subject to Subpart UU. Subpart UU limits the opacity of asphalt storage tanks to 0% opacity except for one 15-minute period in any 24-hour period.

Subpart VV (Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry (SOMCI) For Which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and On Or Before November 7, 2006) Although the refinery is not an affected facility, the refinery MACT (40 CFR Part 63 Subpart CC) makes extensive reference to this NSPS subpart.

Subpart VVa, (Equipment Leaks of VOC in the SOMCI For Which Construction, Reconstruction, or Modification Commenced After November 7, 2006) This subpart affects equipment constructed, reconstructed or modified after November 7, 2006. NSPS, Subpart GGGa requires equipment constructed, reconstructed or modified after November 7, 2006 in VOC service to comply with §§ 60.482-1a through 60.482-10a, 60.484a, 60.485a, 60.486a, and 60.487a except as provided in § 60.593a. Most of the equipment at the refinery was constructed prior to November 7, 2006, and is covered under NSPS, Subpart GGG or NESHAP Subpart CC. The new equipment in the Coker, the blowdown system, is a relief system modification that is subject to NSPS, Subpart GGGa. Additionally, a Flare Gas Recovery Unit was installed as a new process unit and is also subject to Subpart GGGa.

Subpart XX (Bulk Gasoline Terminals) Per 40 CFR § 60.500, affected facilities include all loading racks at a bulk gasoline terminal, for which construction or modification commenced after December 17, 1980. Further, any replacement of components commenced before August 18, 1983, in order to comply with emission standards adopted by the Oklahoma State Department of Health or the Tulsa City/County Health Department are not to be considered a reconstruction under 40 CFR § 60.15. The gasoline loading racks have been shut down.

Subpart GGG (Equipment Leaks of VOC in Petroleum Refineries Which Commenced Construction, Reconstruction, or Modification After January 4, 1983, and On Or Before November 7, 2006) This subpart affects each valve, pump, pressure relief device, sampling connection system, open-ended valve or line, and flange or other connector in VOC service which commenced construction or modification after January 4, 1984, and prior to November 7, 2006, and which is located within a process unit in a petroleum refinery. Subpart GGG requires the leak detection, repair, and documentation procedures of NSPS Subpart VV. Compressors in hydrogen service (defined as serving streams more than 50% by volume hydrogen) are exempt from all requirements other than demonstrating that a stream can never be reasonably expected to contain less than 50% by volume hydrogen. Those pressure-relief devices vented to a control device (flare) are exempted from periodic monitoring requirements. Equipment in EUG 7 is subject to this subpart and compliance records are maintained on-site in an electronic database. Equipment in EUG 8 is subject to NESHAP MACT Subpart CC, and equipment in EUG 9 is subject to OAC 252:100-39-15. All Leak Detection and Repair (LDAR) reporting required by 40 CFR Part 60, Subpart GGG (semi-annual), and 40 CFR Part 63, Subpart CC (semi-annual) has been consolidated to simplify overlapping requirements, based on discretion granted to the state authorities by EPA. All LDAR reporting is included in the MACT Semi-annual report covering all monitoring required from January 1st through June 30th and July 1st through December 31st. Reports are due 60 days after the end of each six-month period per 40 CFR § 63.654(g).

The loading arm to be installed for raffinate is not part of a “process unit” as defined by Subpart GGG; therefore, it is not subject to LDAR under Subpart GGG or GGGa.

Subpart GGGa (Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006) This subpart affects each valve, pump, pressure relief device, sampling connection system, open-ended valve or line, and flange or other connector in VOC service at a process unit, which commenced construction or modification after November 7, 2006, and which is located at a petroleum refinery. This subpart defines “process unit” as “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.” Subpart GGGa requires the leak detection, repair, and documentation procedures of NSPS, Subpart VVa. All affected equipment which commenced construction or modification after November 7, 2006, in VOC service and not in HAP service is subject to this subpart. In accordance with NESHAP Subpart CC, § 63.640(p)(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. The group of all the equipment (defined in §60.591a) within a process unit is an affected facility. Small numbers of components of process units are being installed but no new process units are being installed. Therefore, this subpart is currently applicable only to the Coker Blowdown. As units constructed or modified under the PSD permit come on line, they will be subject to Subpart GGGa as well.

Subpart QQQ (VOC Emissions from Petroleum Refinery Wastewater Systems) applies to individual drain systems, oil-water separators, and aggregate facilities located in petroleum refineries and for which construction, reconstruction, or modification commenced after May 4, 1987. All wastewater systems were constructed or modified prior to the effective date of the standard.

NESHAP, 40 CFR Part 61

[Subparts M and FF Applicable]

Subpart J (Equipment Leaks {Fugitive Emission Sources} of Benzene)

Affected sources are equipment items in “benzene service,” which is defined to mean that they contact a stream with at least 10% benzene content by weight. The facility has no items in benzene service.

Subpart M (Asbestos) Molded or wet-applied friable asbestos insulation installation or reinstallation is prohibited per 61.148. The most likely activity that might be affected is the renovation or demolition of structures or equipment containing asbestos. Rules concerning such activities are found in §§60.145 and 60.150.

Subpart V (Equipment Leaks {Fugitive Emission Sources}) Affected sources are equipment items in “VHAP service,” which is defined to mean that they contact a stream with at least 10% of a volatile HAP content by weight. The facility has no items in VHAP service.

Subpart Y (Benzene Emissions from Benzene Storage Vessels) Affected sources are vessels storing benzene. The facility has no benzene storage vessels.

Subpart BB (Benzene Emissions from Benzene Transfer Operations) Affected sources are all loading racks at which benzene is loaded into tank trucks, railcars, or marine vessels at each benzene production facility and each bulk terminal. Specifically exempted from this regulation are loading racks at which only the following are loaded: benzene-laden waste (covered under

Subpart FF of this part), gasoline, crude oil, natural gas liquids, or petroleum distillates. The facility has none of the affected sources.

Subpart FF (Benzene Waste Operations) Affected sources are benzene-containing waste streams, as identified in EUG 12. Numerous standards apply to tanks, impoundments, and other activities if the total annual benzene (TAB) quantity exceeds 10 megagrams. Test methods and procedures used in calculating the TAB are found in § 61.355, paragraphs (a) through (c). Because the refinery has TAB less than 10 Mg, it is subject to only the recordkeeping, reporting, and testing requirements found in §§61.355, 356, and 357.

NESHAP, 40 CFR Part 63 [Subparts CC, UUU, ZZZZ, DDDDD and GGGGG Applicable]
The following paragraphs are general in nature, with some reference to specific facilities. The Specific Conditions contain specific requirements under NESHAP for all HFTR affected facilities.

Subpart F (Synthetic Organic Chemical Manufacturing Industry) The refinery is not a SOCOMI facility.

Subpart G (Hazardous Organic NESHAPS {HON} Equipment Leaks) This MACT contains standards that must be referenced through other MACTs. The refinery is not an affected facility under this subpart.

Subpart R (Gasoline Distribution Facilities {Bulk Gasoline Terminals and Pipeline Breakout Stations}) The refinery is not an affected facility under this subpart, although some provisions of this subpart and of NSPS Subpart XX are invoked by NESHAP Subpart CC.

Subpart Q (Industrial Process Cooling Towers) The provisions of this subpart apply to all new and existing industrial process cooling towers that are operated with chromium-based water treatment chemicals on or after September 8, 1994, and are either major sources or are integral parts of facilities that are major sources. The refinery ceased the use of chromium-based treatment before this MACT was issued.

Subpart Y (Marine Tank Vessel Tank Loading Operations) The refinery has no marine vessel loading capability.

Subpart CC (Petroleum Refineries) Affected facilities include process vents, storage vessels, storage tanks, wastewater streams and treatment, equipment leaks, gasoline loading racks, marine vessel loading systems, and pipeline breakout stations. Of the facilities named in Subpart CC, storage tanks, equipment leaks, process vents, wastewater streams and treatment, cooling towers, and a gasoline loading rack are affected facilities at HFTR.

Storage Tanks

Existing storage tanks with HAP concentrations above 4%_w and which have vapor pressures above 1.5 psia are required to implement controls. All tanks in EUGs 18 and 19 are Group 1 Storage Vessels as defined in § 63.641 and are to be controlled and monitored per § 63.646. The tanks in EUG-39 are Group 1 tanks, subject to those requirements. Reports and records required for these tanks are found at § 63.654. General Provisions for startup/shutdown/malfunction (SSM) plans, as

defined at § 63.641, are found at § 63.6(e)(3). Semi-annual and immediate reporting requirements are listed at § 63.10(d)(5). Electronic documentation, including the date of the inspection, any defects noted, and the initials of the inspector, is maintained on-site in the facility's "Refinery Tanks Database."

EUG 20 lists Group 2 Storage Vessels as defined at § 63.641. EUG-23A and EUG-28A are Group 2 tanks. Subparagraph § 63.654(i)(1)(iv) requires a determination of Group 2 Tanks. The facility maintains a list of tanks that do not contain any HAPs and are not Group 2 Tanks per § 63.640(a)(2).

Tank TK-700 is a Group 2 tank, not subject to any control requirements under Subpart CC. Tanks TK-473 and TK-474 remain subject to Subpart CC as Group 1 tanks.

Process Vents

Any refinery unit process miscellaneous vent with greater than 20 ppmv HAPs and which emits more than 33 kg/day of VOC is subject to control requirements. Subpart CC requires affected vents to be equipped with 98% efficient controls, be vented to a flare, be vented to a combustion unit firebox, or be reduced to 20 ppmv HAP or less. Group 1 process vents are listed in EUG 14 and Group 2 process vents are listed in EUG 15. Group 1 process vents are vents for which the total organic HAP concentration is greater than or equal to 20 ppmv, and whose total VOC emissions are greater than or equal to 33 kg per day (75 lbs/day). Group 2 process vents are vents that do not meet the definition of a Group 1 vent. Details of compliance requirements are in the Specific Conditions.

Miscellaneous process vent monitoring provisions are found at § 63.644, and test methods and procedures are found at § 63.645. The CDU vacuum tower vent is introduced into the flame zone of the CDU H-2 Heater. The LEU T-1 hydrostripper vent is introduced into the flame zone of the LEU H-102 heater. Both vents are exempt from monitoring and performance testing requirements because they are directed into the flame zone of a boiler or process heater.

Cooling Towers

Specifications for "Heat exchange system" have been added as § 63.654. A facility is exempt from these standards if a cooling tower operates with a pressure difference of at least 5 psia between the cooling water side and process side, or employ an intervening cooling fluid with is less than 5% organic HAPs. Otherwise, the operator must perform monitoring to identify leaks and repair those leaks. There are separate standards for closed-loop systems and once-through systems. The existing "grandfathered" cooling towers and the new CT-7 are subject to the MACT.

Equipment Leaks

EUG 8 is a grouping of all the HAP fugitive equipment component sources that exist in the refinery. Two compliance options are given at § 63.648, consisting of a modified 40 CFR Part 63, Subpart H method, and a modified 40 CFR Part 60, Subpart VV method. The HFTR Refinery currently chooses to follow the Subpart VV option. The 40 CFR Part 63 Subpart CC modifications to Subpart VV are primarily in applicability and component exemptions. Applicability is limited to components that contain equal to or more than 5% by weight HAP. Exemptions in addition to Subpart VV include wastewater system drains, storage tank sample valves, and tank mixers. Also,

reciprocating pumps in light liquid service and reciprocating compressors are exempt from § 60.482 if recasting the distance pieces or new equipment is required. Subpart VV requires, among other things, leak detection and repair at valves in gas/vapor and light liquid service, and offers three options for such valves. The first is the main standard at § 60.482-7, which requires monthly monitoring unless the valve shows no leaks after two successive months after which the valve may be monitored quarterly until it indicates leakage. The second option is given at § 60.483-1, in which valves are tested initially, and then annually or as requested by DEQ, and the percentage of leaking valves is not allowed to exceed 2%. The third option is given at § 60.483-2, in which good leak performance leads to skip periods of monitoring that leads to annual monitoring so long as leakers remain below 2%. The use of either of the second two options requires prior notification to DEQ. This facility currently follows the base procedures given at § 60.482-7, but requests alternative scenario status for the other two options since they represent another form of compliance measurement, and because they require notification to DEQ. Whether these scenarios will be used or not depends on the facility's analysis of the benefits of invoking them. At the present time these options are moot because OAC 252:100-39-15 requires quarterly monitoring of valves. If Section 39-15 is modified in the future to provide reduced monitoring after periods of continuous compliance, the facility will select the compliance option described in § 63.648(a)(2).

All Leak Detection and Repair (LDAR) reporting required by 40 CFR Part 60 Subparts GGG and GGGa (semi-annual), and 40 CFR Part 63 Subpart CC (semi-annual) has been consolidated to simplify overlapping requirements. All LDAR reporting is included in the MACT semi-annual report covering all monitoring required from January 1st through June 30th and July 1st through December 31st. Reports are due 60 days after the end of each six-month period per § 63.654(g).

Fugitive components in the proposed loading arm are not "within a process unit" as defined by NSPS Subparts GGG and GGGa; therefore, the fugitives are not subject to LDAR.

Gasoline Loading Terminal

The west refinery no longer loads gasoline.

Wastewater Streams and Treatment

Requirements for the wastewater system are defined at § 63.647 as equivalent to the provisions of 40 CFR Part 61, Subpart FF. Recordkeeping, reporting, and monitoring is also defined at § 63.654 to be what is required at § 61.356 and § 61.357. The facility is in compliance based on compliance with 40 CFR Part 61, Subpart FF.

Coker Unit

Requirements for the Coker Unit are in §63.657. A delayed coking unit shall depressure each coke drum to a closed blowdown system until the coke drum vessel pressure or temperature measured at the top of the coke drum or in the overhead line of the coke drum as near as practical to the coke drum is either (i) an average vessel pressure of 2 psig or less determined on a rolling 60-event average; or (ii) an average vessel temperature of 220 degrees Fahrenheit or less determined on a rolling 60-event average prior to venting to the atmosphere, draining or deheading the coke drum at the end of the cooling cycle.

Heat Exchange Systems

Requirements for Heat Exchange Systems are in §63.654. Heat exchange systems are not subject to Subpart CC if the heat exchange system either: (1) operates with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side; or (2) employs 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. All of the heat exchange systems meet the exemption criteria.

Flares

Requirements for flares are stated in § 63.11(b). Flares shall be operated at all times when emissions may be vented to them. Flares shall be operated with a pilot flame, which shall be monitored by a thermocouple or equivalent device. There shall be no visible emissions from flares except for up to five minutes in any consecutive two hours.

Subpart DD (Off-Site Waste and Recovery Operations) Affected facilities are those that are major under § 63.2 and process, recover, or recycle waste that is generated off-site and brought to the facility. The refinery processes no off-site waste. Any recovered material, regardless of processing, is generated on-site.

Subpart WW (Synthetic Organic Chemical Manufacturing Industry Process Vents, Storage Vessels, Transfer Operations, and Wastewater) Although the refinery is not a SOCOMI facility, the refinery MACT (NESHAP Subpart CC) references provisions of this subpart.

Subpart UUU (Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units) This MACT was issued April 11, 2002, and the compliance date for existing units was April 11, 2005. The Platformer (EUG 16) is the only process unit at the facility subject to this MACT. The facility submitted their initial notification of affected source on August 7, 2002. An analysis performed 9/25/02 through 9/28/02, during regeneration, demonstrated HCl levels below detectable levels, demonstrating that inorganic HAP emissions are below limitations discussed in § 63.1567 and listed at Table 22 of Subpart UUU. Options for compliance with organic HAP limits are discussed in § 63.1566. Any performance test must be performed and results submitted no more than 150 days after the compliance date (§ 63.1671). A performance test was conducted on March 11, 2005. The Notice of Compliance Status Report and the Operation, Maintenance, and Monitoring Plan were submitted on June 16, 2005.

Subpart EEEE (Organic Liquids Distribution (Non-Gasoline)). This MACT affects the handling equipment, including storage tanks, transfer racks, equipment components, and transport vehicles while at the transfer racks. Tanks with capacities less than 5,000 gallons are not affected. Except for the loading rack, all components of the HSR loading rack are already covered under MACT Subpart CC, and are thus exempt from Subpart EEEE per 40 CFR § 63.2338(c)(1). Because the rack is not subject to any of the initial limits of this subpart, it is not subject to any other standard except for the initial notification under § 63.2382(b)(2).

Subpart ZZZZ (Reciprocating Internal Combustion Engines (RICE)). The facility has several RICE. EUG-36 contains the spark ignition (SI) engines, which are all existing emergency 4SRB (EG-6349, EG-5879, and EG6235). The engines in EUG-38 are all existing emergency compression ignition (CI) engines. The engines in EUG-38A are CI engines subject to NSPS Subpart IIII. Subpart ZZZZ provides that compliance with Subpart IIII constitutes compliance with Subpart ZZZZ.

A summary of these requirements for engines located at this facility is shown following.

For each	You must meet the following requirement, except during periods of startup	During periods of startup you must
Emergency CI and black start CI. ¹	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ² 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. ³	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. ³
Emergency SI RICE and black start SI RICE. ¹	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ² b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. ³	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. ³
Non-emergency, non-black start 4SRB stationary RICE 100 <HP<500.	Limit concentration of formaldehyde in stationary RICE exhaust to 10.3 ppmvd or less at 15% O ₂ .	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. ³
Non-emergency, non-black start 4SRB stationary RICE >500 HP.	Reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and using NSCR;	

¹If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

²Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2c of this subpart.

³Sources can petition the Administrator pursuant to the requirements of §63.6(g) for alternative work practices.

Subpart DDDDD (Industrial, Commercial and Institutional Boilers and Process Heaters) This subpart affects industrial, commercial and institutional boilers and process heaters at major sources of HAPs. “New” gas-fuel “1” units (which include RFG) are not subject to any emissions limits under Subpart DDDDD. Existing RFG-burning heaters and boilers are subject to the work practice standards of Table 3 of Subpart DDDDD:

If your unit is . . .	You must meet the following . . .
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	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); or unit designed to burn light liquid	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	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

If your unit is . . .	You must meet the following . . .
	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.

Subpart GGGGG (Site Remediation) This subpart is applicable to facilities that conduct a site remediation which cleans up a remediation material at a facility that is co-located with one or more other stationary sources that emit HAP and meet the affected source definition. This facility is a major source of HAP and currently conducts site remediation at the facility.

Site remediation at a facility is not subject to this subpart, except for the recordkeeping requirements specified in § 63.7881(c), if the site remediation meets all of the following conditions:

1. Before beginning the site remediation, you determine that for the remediation material to be excavated, extracted, pumped, or otherwise removed during the site remediation that the total quantity of the HAPs (listed in Table 1 of Subpart GGGGG) is less than 1.10 TPY.
2. The facility prepares and maintains at the facility written documentation to support the determination of the total HAP quantity used to demonstrate compliance with § 63.7881(c)(1). The documentation must include a description of the methodology and data used for determining the total HAPs content of the material.
3. This exemption may be applied to more than one site remediation at the facility provided that the total quantity of the HAPs (listed in Table 1 of Subpart GGGGG) for all of the site remediation exempted under this provision is less than 1.10 TPY.

This facility has documented that all of the site remediation at the facility totals less than 1.10 TPY and is only subject to the recordkeeping requirements of this subpart.

Subpart LLLLL (Asphalt Processing and Asphalt Roofing Manufacturing) affects asphalt blowstills and Group 1 storage vessels, which are defined as those vessels which are larger than 47,000 gallons and store asphalt at a temperature greater than 500°F or have a maximum true vapor pressure greater than 1.5 psia. Subpart LLLLL requires affected facilities to reduce total hydrocarbons by 95%, or to route emissions to a 99.5% efficient combustion device, or to route emissions to a combustion device which does not use auxiliary fuel and which achieves hydrocarbon destruction of 95.8%, or to route emissions to a process heater or boiler with a heat input capacity of 44 MW or greater, or to route emissions to a flare. The storage tanks in EUG-23A are regulated as “Group 2” storage vessels since their storage temperatures are less than 500°F.

Compliance Assurance Monitoring, 40 CFR Part 64

[Applicable]

This part applies to any pollutant-specific emission unit at a major source that is required to obtain an operating permit, for any application for an initial operating permit submitted after April 18, 1998, that addresses “large emissions units,” or any application that addresses “large emissions units” as a significant modification to an operating permit, or for any application for renewal of an operating permit, if it meets all of the following criteria.

- It is subject to an emission limit or standard for an applicable regulated air pollutant
- It uses a control device to achieve compliance with the applicable emission limit or standard
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant of 100 TPY or 10/25 TPY of a HAP

Although there have been very few emission limits for sources in the refinery, many sources within the refinery are subject to the standards of 40 CFR Part 63 Subparts CC and UUU. Provisions for monitoring contained in these subparts is considered presumptively acceptable monitoring in accordance with § 64.4(b)(4).

Chemical Accident Prevention Provisions, 40 CFR Part 68

[Applicable]

Toxic and flammable substances subject to this regulation are present in the facility in quantities greater than the threshold quantities. A Risk Management Plan was submitted to EPA on June 1,

1999, and resubmitted as required by rule. More information on this federal program is available on the web page: www.epa.gov.rmp.

Stratospheric Ozone Protection, 40 CFR Part 82

[Applicable]

These standards require phase out of Class I & II substances, reductions of emissions of Class I & II substances to the lowest achievable level in all use sectors, and banning use of nonessential products containing ozone-depleting substances (Subparts A & C); control servicing of motor vehicle air conditioners (Subpart B); require Federal agencies to adopt procurement regulations which meet phase out requirements and which maximize the substitution of safe alternatives to Class I and Class II substances (Subpart D); require warning labels on products made with or containing Class I or II substances (Subpart E); maximize the use of recycling and recovery upon disposal (Subpart F); require producers to identify substitutes for ozone-depleting compounds under the Significant New Alternatives Program (Subpart G); and reduce the emissions of halons (Subpart H).

Subpart A identifies ozone-depleting substances and divides them into two classes. Class I controlled substances are divided into seven groups; the chemicals typically used by the manufacturing industry include carbon tetrachloride (Class I, Group IV) and methyl chloroform (Class I, Group V). A complete phase-out of production of Class I substances is required by January 1, 2000 (January 1, 2002, for methyl chloroform). Class II chemicals, which are hydrochlorofluorocarbons (HCFCs), are generally seen as interim substitutes for Class I CFCs. Class II substances consist of 33 HCFCs. A complete phase-out of Class II substances, scheduled in phases starting by 2002, is required by January 1, 2030.

Subpart F requires that any persons servicing, maintaining, or repairing appliances except for motor vehicle air conditioners; persons disposing of appliances, including motor vehicle air conditioners; refrigerant reclaimers, appliance owners, and manufacturers of appliances and recycling and recovery equipment comply with the standards for recycling and emissions reduction.

The Standard Conditions of the permit address the requirements specified at §82.156 for persons opening appliances for maintenance, service, repair, or disposal; §82.158 for equipment used during the maintenance, service, repair, or disposal of appliances; §82.161 for certification by an approved technician certification program of persons performing maintenance, service, repair, or disposal of appliances; §82.166 for recordkeeping; §82.158 for leak repair requirements; and §82.166 for refrigerant purchase records for appliances normally containing 50 or more pounds of refrigerant.

This facility does not utilize any Class I & II substances in its manufacturing processes.

SECTION VIII. COMPLIANCE

This application has been determined to be **Tier II** based on the request for construction permit for a significant modification to a Part 70 operating permit. Construction permit fee of \$5,000 has been received. This permit will be processed under the “enhanced” review process.

The applicant published the “Notice of Filing a Tier II Application” in the *Tulsa World* newspaper, a local newspaper in Okfuskee County on May 12, 2022. The notice stated that the application was available for review at the DEQ Regional Office at Tulsa in Tulsa County, and also at the Air Quality Division’s main office in Oklahoma City. The information on all permit actions is available for review by the public in the Air Quality section of the DEQ web page at <http://www.deq.ok.gov>.

Enhanced public review procedures will be conducted. The applicant requested and was granted concurrent public and EPA review periods. The draft permit will be available for public review on the Air Quality section of the DEQ web page at <http://www.deq.ok.gov>. A “Notice of Draft Tier II Permit” will be published in a local newspaper. The proposed permit will be sent to EPA for a 45-day review period.

This facility is not located within 50 miles of the border of Oklahoma so no notice to other states is required. Tribal Nations will be notified of the draft permit.

If the Administrator does not object in writing during the 45-day EPA review period, any person that meets the requirements of OAC 252:100-8-8(j) may petition the Administrator within 60 days after the expiration of the Administrator's 45-day review period to make such objection. Any such petition shall be based only on objections to the permit that the petitioner raised with reasonable specificity during the public comment period provided for in 27A O.S. § 2-14-302.A.2., unless the petitioner demonstrates that it was impracticable to raise such objections within such period, or unless the grounds for such objection arose after such period. If the Administrator objects to the permit as a result of a petition filed under OAC 252:100-8-8(j), the DEQ shall not issue the permit until EPA's objection has been resolved, except that a petition for review does not stay the effectiveness of a permit or its requirements if the permit was issued after the end of the 45-day review period and prior to an EPA objection. If the DEQ has issued a permit prior to receipt of an EPA objection under OAC 252:100-8-8(j), the DEQ will modify, terminate, or revoke such permit, and shall do so consistent with the procedures in 40 CFR §§ 70.7(g)(4) or (5)(i) and (ii) except in unusual circumstances. If the DEQ revokes the permit, it may thereafter issue only a revised permit that satisfies EPA's objection. In any case, the source will not be in violation of the requirement to have submitted a timely and complete application.

SECTION IX. SUMMARY

The facility has demonstrated the ability to comply with the requirements of the several air pollution control rules and regulations. There are no compliance or enforcement issues concerning this facility that would prevent the issuance of this permit. Issuance of the permit is recommended, contingent on public and EPA review.

**PERMIT TO CONSTRUCT
AIR POLLUTION CONTROL FACILITY
SPECIFIC CONDITIONS**

**HollyFrontier Tulsa Refining – Tulsa LLC
Tulsa Refinery West**

Permit Number 2018-0594-C (M-7)

The permittee is authorized to construct in conformity with the specifications submitted to Air Quality on March 4, 2022. The Evaluation Memorandum dated October 31, 2022, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Commencing construction or continuing operations under this permit constitutes acceptance of, and consent to, the conditions contained herein.

SPECIFIC CONDITION 1

[OAC 252:100-8-6(a)]

The permittee shall be authorized to operate the affected facilities noted in this permit continuously (24 hours per day, every day of the year) subject to the following conditions. Records necessary to show compliance with each of the requirements below must be maintained. These records shall be maintained on-site or at a local field office for at least five years after the date of recording and shall be provided to regulatory personnel upon request. [OAC 252:100-8-6(a)(1)]

- a. EUG Plant-Wide: Certain equipment within the refinery is subject to 40 CFR Part 63 Subpart CC and all affected equipment shall comply with all applicable requirements including, but not limited to: [40 CFR Part 63 Subpart CC]
 - 1. § 63.642 General Standards
 - 2. § 63.643 Miscellaneous Process Vent Provisions
 - 3. § 63.644 Monitoring for Miscellaneous Process Vents
 - 4. § 63.645 Test Methods and Procedures for Miscellaneous Process Vents
 - 5. § 63.654 Reporting and Recordkeeping Requirements
 - 6. The permittee shall comply with the provisions of 40 CFR Part 63 Subpart A as specified in Appendix to Subpart CC, Table 6.

- b. Various asbestos renovation and demolition projects at the Tulsa Refinery are subject to State and Federal standards, including:
 - 1. The federal standards found in 40 CFR Part 61 Subpart M. [40 CFR § 61.145]
 - 2. The following requirements for handling asbestos are in addition to those listed in the asbestos NESHAP, 40 CFR Part 61 Subpart M. [OAC 252:100-40-5]
 - A. Before being handled, stored or transported in or to the outside air, friable asbestos from demolition/renovation operations shall be wetted, double bagged in six-mil plastic bags, or single bagged in one six-mil plastic bag and placed in a disposable drum, or contained in any other manner approved in advance by the AQD Director.

- B. When demolition/renovation operations must take place in the outdoor air, friable asbestos removed in such operations shall be immediately bagged or contained in accordance with (A).
 - C. Friable asbestos materials used on pipes or other outdoor structures shall not be allowed to weather or deteriorate and become exposed to, or dispersed in the outside air.
 - D. Friable asbestos materials shall, in addition to other provisions concerning disposal, be disposed of in a facility approved for asbestos by the Solid Waste Management Division of DEQ.
- c. The following procedures are required for any process unit shutdown, purging, or blowdown operation. [OAC 252:100-39-16]
- 1. Recovery of VOC shall be accomplished during the shutdown or turnaround to a process unit pressure compatible with the flare or vapor system pressure. The unit shall then be purged or flushed to a flare or vapor recovery system using a suitable material such as steam, water or nitrogen. The unit shall not be vented to the atmosphere until pressure is reduced to less than 5 psig through control devices.
 - 2. Except where inconsistent with the "Minimum Federal Safety Standards for the Transportation of Natural and Other Gas by Pipeline," or any State of Oklahoma regulatory agency, no person shall emit VOC gases to the atmosphere from a vapor recovery blowdown system unless these gases are burned by smokeless flares or an equally effective control device as approved by the Division Director.
 - 3. At least fifteen days prior to a scheduled turnaround, a written notification shall be submitted to the Division Director. As a minimum, the notification shall indicate the unit to be shutdown, the date of shutdown, and the approximate quantity of VOC to be emitted to the atmosphere.
 - 4. Scheduled refinery unit turnaround may be accomplished without the controls specified in (1) and (2) during non-oxidant seasons provided the notification to the Division Director as required in (3) specifically contains a request for such an exemption. The non-oxidant season is from November 1 through March 31.
- d. Non-condensable VOC from surface condensers and accumulators in the CDU / LEU vacuum producing system shall be vented to a heater firebox or otherwise combusted at least 90% of uncontrolled emissions. [OAC 252:100-39-17]
- e. Cold metal-cleaning units using any VOC shall comply with the following requirements.
- 1. Mechanical design. The unit shall have a cover or door that can be easily operated with one hand, and shall have an internal drain board allowing lid closure or an external drain facility if the internal option is not practical. The unit shall have a permanently attached conspicuous label summarizing the operating requirements. [OAC 252:100-39-42(a)(1)]
 - 2. Operating requirements. All clean parts shall drain for at least 15 seconds or until dripping ceases before removal, the degreaser cover shall be closed when not handling parts, and VOC shall be sprayed only in a solid fluid stream, not in an atomized spray. Waste VOC shall be stored in covered containers and waste VOC shall not be handled in such a manner that more than 20% by weight can evaporate. [OAC 252:100-39-42(a)(2)]

- 3. If the VOC used has vapor pressure greater than 0.6 psia or if the VOC is heated to 248 °F, the unit requires additional control. Such control shall be a freeboard with ratio at least 0.7, a water cover where the VOC is insoluble in and denser than water, or another system of equivalent control as approved by the AQD Director. [OAC 252:100-39-42(a)(3)]
- f. For units subject to 40 CFR Part 63 (NESHAP), a startup, shutdown, and malfunction plan has been prepared by HFTR in compliance with 40 CFR Part 63 Subpart A. The current plan shall be retained for the life of the facility and superseded versions of the plan shall be retained for five years after the date of revision. Both current and retained versions shall be readily available for review. [40 CFR § 63.6(e)(3)]
- g. VOC storage vessels greater than 40,000 gallons in capacity and storing a liquid with vapor pressure greater than 1.5 psia shall be pressure vessels or shall be equipped with one of several vapor loss control systems. [OAC 252:100-37-15(a)]
- h. Per OAC 252:100-8-36.2(c), records shall be kept comparing actual emissions of pollutants subject to PSD from units in the Refinery Integration project with projected actual emissions.

SPECIFIC CONDITION 2

Standards for affected Emission Unit Groups (EUG).

[OAC 252:100-8-6(a)]

EUG 1: Existing Refinery Fuel Gas Burning Equipment

Const Date	EU	Point ID
1961	201N	CDU H-1,N,#7
1961	201S	CDU H-1,S,#8
1957	206	Unifiner H-2
1957	207	Unifiner H-3
1960	246	MEK H-2

Const Date	EU	Point ID
1957	210	#2 Plat PH-3
1956	238	PDA B-30
1962	240	PDA B-40
1963	242	LEU H101
1963	244	LEU H-201

CDU H-1 has two stacks, H-1 North and H-1 South.

- a. These units are “grandfathered” (constructed prior to any applicable rule). It is limited to the existing equipment as it is.
- b. The above unit shall only be fired with NSPS Subpart Ja compliant refinery fuel gas or pipeline-grade natural gas. The boiler shall be equipped with a fuel gas meter. [40 CFR Part 60, Subpart Ja; OAC 252:100-8-6(a)(1)]
- c. The emissions of particulate matter resulting from the combustion of fuel in any new or existing fuel-burning unit shall not exceed the limits specified in OAC 252:100 Appendix C. [OAC 252:100-19-4]
- d. All fuel-burning or refuse-burning equipment shall be operated to minimize emissions of VOC. Among other things, such operation shall assure, based on manufacturer's data and good engineering practice, that the equipment is not overloaded; that it is properly cleaned, operated, and maintained; and that temperature and available air are sufficient to provide essentially complete combustion. [OAC 252:100-37-36]

EUG 1A: Modified Refinery Fuel Gas Burning Equipment

MFR, BTUH, MM	EU	Point ID	NOx		CO		PM ₁₀		SO ₂		VOC	
			lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
44.8	211	#2 Plat PH-4	4.48	19.62	3.76	16.48	0.34	1.49	1.16	1.92	0.25	1.08
158.5	243	LEU H-102	4.76	20.83	6.47	28.32	0.59	2.57	4.24	6.89	0.54	2.36

- a. The above units are subject to New Source Performance Standards (NSPS), Subpart Ja and shall comply with all applicable provisions including, but not limited to:

[40 CFR Part 60, Subpart Ja]

 - 1. § 60.102a Emission limitations;
 - 2. § 60.103a Design, equipment, work practice or operational standards;
 - 3. § 60.104a Performance tests as applicable;
 - 4. §60.107a Monitoring of emissions and operations for fuel gas combustion devices and flares – (a)(2), (3), and (4); and
 - 5. § 60.108a Recordkeeping and reporting requirements.
- b. The above units shall only be fired with NSPS Subpart Ja compliant refinery fuel gas or pipeline-grade natural gas. [40 CFR Part 60, Subpart Ja; OAC 252:100-8-6(a)(1)]
- c. The emissions of particulate matter resulting from the combustion of fuel in any new or existing fuel-burning unit shall not exceed the limits specified in OAC 252:100 Appendix C.

[OAC 252:100-19-4]
- d. All fuel-burning or refuse-burning equipment shall be operated to minimize emissions of VOC. Among other things, such operation shall assure, based on manufacturer's data and good engineering practice, that the equipment is not overloaded; that it is properly cleaned, operated, and maintained; and that temperature and available air are sufficient to provide essentially complete combustion.

[OAC 252:100-37-36]

EUG 2: Non-Grandfathered Boilers

CD	EU	Point ID	CO		NOx		PM ₁₀		SO ₂		VOC	
			lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1975	109	#7 Boiler, 150 MFR	12.6	55.2	30.00	131.4	1.12	4.90	3.90	17.08	0.83	3.62
1976	110	#8 Boiler, 150 MFR	12.6	55.2	30.00	131.4	1.12	4.90	3.90	17.08	0.83	3.62
1976	111	#9 Boiler, 150 MFR	12.6	55.2	30.00	131.4	1.12	4.90	3.90	17.08	0.83	3.62

- a. Nitrogen oxides emissions shall not exceed 0.20 lb/MMBTU (3-hr average).

[OAC 252:100-33-2(a)]
- b. All fuel-burning or refuse-burning equipment shall be operated to minimize emissions of VOC. Among other things, such operation shall assure, based on manufacturer's data and good engineering practice, that the equipment is not overloaded; that it is properly cleaned, operated, and maintained; and that temperature and available air are sufficient to provide essentially complete combustion.

[OAC 252:100-37-36]
- c. All boilers are subject to 40 CFR Part 60 Subpart J, and shall comply with all applicable provisions including, but not limited to:

[40 CFR Part 60, Subpart J]

1. §60.100 Applicability, designation of affected facility, and reconstruction.
 2. §60.101 Definitions.
 3. §60.102 Standard for particulate matter.
 4. §60.103 Standard for carbon monoxide.
 5. §60.104 Standards for sulfur oxides.
 6. §60.105 Monitoring of emissions and operations.
 7. §60.106 Test methods and procedures.
 8. §60.107 Reporting and recordkeeping requirements.
 9. §60.108 Performance test and compliance provisions.
 10. §60.109 Delegation of authority.
- d. At least once during the term of this permit, the permittee shall conduct performance testing of NOx emissions from Boiler 9 and furnish a written report to Air Quality. Results of this testing may be used to estimate emissions from Boilers 7 and 8. [OAC 252:100-43]
- e. The emissions of particulate matter resulting from the combustion of fuel in any new or existing fuel-burning unit shall not exceed the limits specified in OAC 252:100 Appendix C. [OAC 252:100-19-4]

EUG 2A: Boiler Subject to NSPS Subparts Db and Ja

CD	EU	Point ID	CO		NOx		PM ₁₀		SO ₂		VOC	
			lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
2013	---	#10 Boiler, 215 MMBTUH	18.06	79.10	12.88	39.00	1.63	7.16	5.59	9.23	1.18	5.18

NOx lb/hr emission limits on a 3-hour rolling average, based on 1-hour blocks.

- a. The boiler is subject to federal NSPS, 40 CFR Part 60, Subpart Db, and shall comply with all applicable requirements, including, but not necessarily limited to those conditions shown following. (NOTE: Permit limitations are more stringent than Subpart Db limitations and will result in compliance with Subpart Db.) [40 CFR §§ 60.40b through 60.49b]
 1. The boiler shall not discharge into the atmosphere any gases that contain nitrogen oxides (expressed as nitrogen dioxide) in excess of 0.20 lbs/MMBTU, 3-hour rolling average, based on 1-hour blocks. [40 CFR § 60.44b(a)(1)(ii)]
 2. § 60.46b Performance test and compliance provisions;
 3. § 60.48b Emission Monitoring, and
 4. § 60.49b Reporting and recordkeeping requirements.
- b. The above units are subject to NSPS, Subpart Ja and shall comply with all applicable provisions including, but not limited to: [40 CFR Part 60, Subpart Ja]
 1. § 60.102a Emission limitations;
 2. § 60.103a Work practice standards as applicable;
 3. § 60.104a Performance tests as applicable;
 4. § 60.107a Monitoring of operations; and
 5. § 60.108a Recordkeeping and reporting requirements.
- c. The above units shall only be fired with NSPS Subpart Ja compliant refinery fuel gas or pipeline-grade natural gas. The boiler shall be equipped with a fuel gas meter. [40 CFR Part 60, Subpart Ja, OAC 252:100-8-6(a)(1)]
- d. The emissions of particulate matter resulting from the combustion of fuel in any new or existing fuel-burning unit shall not exceed the limits specified in OAC 252:100 Appendix C. [OAC 252:100-19-4]

- e. All fuel-burning or refuse-burning equipment shall be operated to minimize emissions of VOC. Among other things, such operation shall assure, based on manufacturer's data and good engineering practice, that the equipment is not overloaded; that it is properly cleaned, operated, and maintained; and that temperature and available air are sufficient to provide essentially complete combustion. [OAC 252:100-37-36]
- f. The facility shall maintain records of the amount of fuel combusted in the boiler and fuel heating value. The facility shall maintain records of the amount of steam produced by the boiler. The facility shall calculate and maintain records of the lb/hr and TPY CO_{2e} emissions based on metered gas usage and the emission factor from the EPA GHG MRR. The facility shall calculate and maintain records of the lb CO_{2e} / 1000 lb steam produced (30 day rolling average). The facility shall also maintain records of NO_x emissions (monthly) calculated from fuel heating value (BTU/SCF), fuel usage (SCFD), and monitored NO_x emission rates (lb/MMBTU). [OAC 252:100-43]

EUG 3: #2 Plat PH-5 Heater.

In the event of conflict between limits set by permit or by regulation, the more stringent limit shall apply.

#2 PLAT PH-5 HEATER (AUTHORIZED EMISSIONS IN TPY)

CD	EU	Point ID	CO	NO _x	PM ₁₀	SO _x	VOC
1990	212	#2 Plat PH-5 65.3 MMBTU/hr	23.55	28.04	2.13	7.43	1.54

- a. The emissions of particulate matter resulting from the combustion of fuel in any new or existing fuel-burning unit shall not exceed the limits specified in OAC 252:100 Appendix C. [OAC 252:100-19-4]
- b. Sulfur oxide emissions (calculated as sulfur dioxide) from any new gas-fired fuel-burning equipment shall not exceed 0.2 lbs/MMBTU heat input (86 ng/J), three-hour average. [OAC 252:100-31-25(a)(1)]
- c. Nitrogen oxide emissions (measured as nitrogen dioxide) from any new gas-fired fuel-burning equipment shall not exceed 0.20 lbs/MMBTU (86 ng/J) heat input, three-hour average. [OAC 252:100-33-2(a)]
- d. Operator is permitted to burn #2 Platformer absorber tower offgas, commercial natural gas, or NSPS Subpart J Refinery Fuel Gas in PH-5. Fuel gas shall not contain hydrogen sulfide in excess of 230 mg/dscm (0.1 gr/dscf).
- e. The above unit is subject to New Source Performance Standards (NSPS), Subpart J and shall comply with all applicable provisions. [40 CFR Part 60, Subpart J]
 - 1. § 60.100 Applicability, designation of affected facility, and reconstruction.
 - 2. § 60.101 Definitions.
 - 3. § 60.102 Standard for particulate matter.
 - 4. § 60.103 Standard for carbon monoxide.
 - 5. § 60.104 Standards for sulfur oxides.
 - 6. § 60.105 Monitoring of emissions and operations.
 - 7. § 60.106 Test methods and procedures.
 - 8. § 60.107 Reporting and recordkeeping requirements.
 - 9. § 60.108 Performance test and compliance provisions.

10. § 60.109 Delegation of authority.

- f. When burning #2 Platformer absorber tower offgas or commercial natural gas, PH-5 is not required to meet the monitoring requirements in 40 CFR §§60.105(a)(3) and 60.105(a)(4) because it meets the exemptions in 40 CFR §§60.105(a)(4)(iv)(B)&(C).
- g. All fuel-burning or refuse-burning equipment shall be operated to minimize emissions of VOC. Among other things, such operation shall assure, based on manufacturer's data and good engineering practice, that the equipment is not overloaded; that it is properly cleaned, operated, and maintained; and that temperature and available air are sufficient to provide essentially complete combustion. [OAC 252:100-37-36]

EUG 3A: #2 Plat PH-6 Heater.

In the event of conflict between limits set by permit or by regulation, the more stringent limit shall apply.

#2 PLAT PH-6 HEATER (AUTHORIZED EMISSIONS IN TPY)

CD	EU	Point ID	CO	NO _x	PM ₁₀	SO _x	VOC
1957	213	#2 Plat PH-6 34.8 MMBTUH	12.55	14.94	1.14	3.96	0.82

- a. The emissions of particulate matter resulting from the combustion of fuel in any new or existing fuel-burning unit shall not exceed the limits specified in OAC 252:100 Appendix C. [OAC 252:100-19-4]
- b. All fuel-burning or refuse-burning equipment shall be operated to minimize emissions of VOC. Among other things, such operation shall assure, based on manufacturer's data and good engineering practice, that the equipment is not overloaded; that it is properly cleaned, operated, and maintained; and that temperature and available air are sufficient to provide essentially complete combustion. [OAC 252:100-37-36]
- c. The above unit shall only be fired with NSPS Subpart J compliant refinery fuel gas or pipeline-grade natural gas. [40 CFR Part 60, Subpart J]

EUG 4: Coker H-3 Heater

EU 24	Pollutant	Authorized Emissions	
		lb/hr	TPY
Coker H-3 32.2 MMBTUH, constructed 1995	SO ₂	0.84	1.38
	NO _x	3.22	14.10
	VOC	0.18	0.78
	CO	2.70	11.85
	PM	0.25	1.07

- a. The emissions of particulate matter resulting from the combustion of fuel in any new or existing fuel-burning unit shall not exceed the limits specified in OAC 252:100 Appendix C. [OAC 252:100-19-4]
- b. The above unit is subject to NSPS, Subpart Ja and shall comply with all applicable provisions including, but not limited to: [40 CFR Part 60, Subpart Ja]

1. § 60.102a Emission limitations;
 2. § 60.103a Design, equipment, work practice or operational standards;
 3. § 60.104a Performance tests as applicable;
 4. §60.107a Monitoring of emissions and operations for fuel gas combustion devices and flares – (a)(2), (3), and (4); and
 5. § 60.108a Recordkeeping and reporting requirements.
- c. The above unit shall only be fired with Subpart Ja compliant refinery fuel gas or pipeline-grade natural gas. The heater shall be equipped with a fuel gas meter.
 [40 CFR Part 60, Subpart Ja, OAC 252:100-8-6(a)(1)]
- d. All fuel-burning or refuse-burning equipment shall be operated to minimize emissions of VOC. Among other things, such operation shall assure, based on manufacturer's data and good engineering practice, that the equipment is not overloaded; that it is properly cleaned, operated, and maintained; and that temperature and available air are sufficient to provide essentially complete combustion.
 [OAC 252:100-37-36]

EUG 5: Coker B-1 Heater

CD	EU	Point ID	CO		NO _x		PM ₁₀		SO ₂		VOC	
			lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1992	225	Coker B-1, 60 MMBTUH	5.04	22.08	6.00	26.28	0.46	2.00	5.85	25.63	0.33	1.45

- a. The above unit is subject to 40 CFR Part 60 Subpart J, and shall comply with all applicable provisions including, but not limited to: [40 CFR Part 60, Subpart J]
1. §60.100 Applicability, designation of affected facility, and reconstruction.
 2. §60.101 Definitions.
 3. §60.102 Standard for particulate matter.
 4. §60.103 Standard for carbon monoxide.
 5. §60.104 Standards for sulfur oxides.
 6. §60.105 Monitoring of emissions and operations.
 7. §60.106 Test methods and procedures.
 8. §60.107 Reporting and recordkeeping requirements.
 9. §60.108 Performance test and compliance provisions.
 10. §60.109 Delegation of authority.
- b. The above unit shall be fired with NSPS Subpart J compliant refinery fuel gas or pipeline grade natural gas.
- c. Sulfur oxide emissions (measured as sulfur dioxide) from any new gas-fired fuel-burning equipment shall not exceed 0.2 lbs/MMBTU heat input (86 ng/J) heat input, three-hour average.
 [OAC 252:100-31-25(1)]
- d. Nitrogen oxide emissions (measured as nitrogen dioxide) from any new gas-fired fuel-burning equipment shall not exceed 0.20 lbs/MMBTU (86 ng/J) heat input, three-hour average.
 [OAC 252:100-33-2(a)]
- e. The emissions of particulate matter resulting from the combustion of fuel in any new or existing fuel-burning unit shall not exceed the limits specified in OAC 252:100 Appendix C.
 [OAC 252:100-19-4]

- f. All fuel-burning or refuse-burning equipment shall be operated to minimize emissions of VOC. Among other things, such operation shall assure, based on manufacturer's data and good engineering practice, that the equipment is not overloaded; that it is properly cleaned, operated, and maintained; and that temperature and available air are sufficient to provide essentially complete combustion. [OAC 252:100-37-36]

EUG 6: MEK H-101 Heater, Constructed 1977 Subject to NSPS Subpart J and 40 CFR Part 63 NESHAP Subpart DDDDD

Pollutant	Limit (Lb/MMBTU)
PM ₁₀	0.37
SO ₂	0.20
NO _x	0.20

- a. The above unit is subject to New Source Performance Standards (NSPS), Subpart J and shall comply with all applicable provisions. [40 CFR Part 60, Subpart J]
 - 1. §60.100 Applicability, designation of affected facility, and reconstruction.
 - 2. §60.101 Definitions.
 - 3. §60.102 Standard for particulate matter.
 - 4. §60.103 Standard for carbon monoxide.
 - 5. §60.104 Standards for sulfur oxides.
 - 6. §60.105 Monitoring of emissions and operations.
 - 7. §60.106 Test methods and procedures.
 - 8. §60.107 Reporting and recordkeeping requirements.
 - 9. §60.108 Performance test and compliance provisions.
 - 10. §60.109 Delegation of authority.
- b. The above unit shall only be fired with refinery fuel gas or pipeline-grade natural gas. [OAC 252:100-8-6(a)(1)]
- c. Sulfur oxide emissions (measured as sulfur dioxide) from any new gas-fired fuel-burning equipment shall not exceed 0.20 lb/MMBTU (86 ng/J), three-hour average. [OAC 252:100-31-25(1)]
- d. Nitrogen oxide emissions (measured as nitrogen dioxide) from any new gas-fired fuel-burning equipment shall not exceed 0.20 lb/MMBTU (86 ng/J) heat input, three-hour average. [OAC 252:100-33-2(a)]
- e. The emissions of particulate matter resulting from the combustion of fuel in any new or existing fuel-burning unit shall not exceed the limits specified in OAC 252:100 Appendix C. [OAC 252:100-19-4]
- f. All fuel-burning or refuse-burning equipment shall be operated to minimize emissions of VOC. Among other things, such operation shall assure, based on manufacturer's data and good engineering practice, that the equipment is not overloaded; that it is properly cleaned, operated, and maintained; and that temperature and available air are sufficient to provide essentially complete combustion. [OAC 252:100-37-36]

EUG 7: Refinery Fugitive Emissions Subject To 40 CFR § 60.590 (Subpart GGG) LEU and Perc Filter

- a. The facility shall comply with the following applicable requirements of 40 CFR Part 60 Subpart GGG, including but not limited to:
1. The operator shall comply with the applicable requirements referenced in Subpart VV at §§60.482-2 to 60.482-10. [§60.592(a)]
 2. The operator shall comply with the provisions of Subpart VV §60.485, except as provided in §60.593. The operator shall comply with the provisions of Subpart VV §60.487. The operator shall submit Semiannual Reports no later than 60 days after January 1st and July 1st of each year. [§60.592(d)]
 3. The operator shall comply with the provisions of Subpart VV §60.486. [§60.592(e)]

EUG 8: Refinery Fugitive Emissions Subject To 40 CFR § 63.640 (Subpart CC), Coker, CDU, MEK Unit, Truck Loading Dock, Tank Farm, Unifiner)

- a. The facility shall comply with the applicable requirements of 40 CFR Part 63 Subpart CC including, but not limited to:
1. Per paragraph (a), the operator of an existing source subject to the provisions of this subpart shall comply with the applicable provisions of 40 CFR Part 60 Subpart VV and paragraph (b) of §648 except as provided in subparagraphs (a)(1) through (a)(3), and paragraphs (c) through (j) of §648. [§63.648]
 2. The operator shall comply with the recordkeeping provisions in paragraph (d)(1) through (d)(6) of §655. The operator shall comply with the provisions of §60.486. [§63.655(d)]
 3. The owner or operator shall keep copies of all applicable reports and records for at least 5 years except as otherwise specified. All applicable records shall be maintained in such a manner that they can be readily accessed within 24 hours. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche. [§63.655(i)]
 4. The operator shall comply with the reporting provisions in paragraph (d)(1) through (d)(6) of §655. The operator shall comply with the provisions of §60.487. The operator shall submit Periodic Reports no later than 60 days after January 1st and July 1st of each year. [§63.655(d)]

EUG 9: Refinery Fugitive Emissions Subject To OAC 252:100-39-15

- a. The refinery is subject to OAC 252:100-39-15 and shall comply with the applicable provisions,
1. §39-15(b)(2) The operator shall maintain a Leak Detection and Repair Program (LDAR) for all components that have the potential to leak VOCs with a vapor pressure greater than or equal to 0.3 kPa (0.0435 psia) under actual storage conditions.
 2. §39-15(c) Monitoring requirements
 3. §39-15(e) Testing and calibration procedures;
 4. §39-15(f) Monitoring;
 5. §39-15(g) Monitoring log.
 6. §39-15(h) Reporting.

EUG 11: Flares Subject to MACT Subpart CC

EU	Point ID	Equipment	Date Installed
269	LEU Flare	Smokeless flare tip	1976
268	Coker Flare	Smokeless flare tip	1970

- a. These flares shall comply with the applicable requirements of NESHAP Subpart CC including, but not limited to:
 1. The flares shall be operated with a pilot flame present at all times. [§63.670(b)]
 2. The 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. [§63.670(c)]
 3. The flares shall be used only when the net heating value of the gas being combusted is 270 Btu/scf or greater. [§63.670(e)]
 4. Steam-assisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR § 63.670(d).
- b. Development of a flare management plan. A flare gas recovery system to prevent continuous or routine combustion of process gases shall be operated on the flares. [§63.670(o)]
- c. The facility shall take all reasonable measures to minimize emissions while periodic maintenance on a flare gas recovery system is being performed. Under certain conditions, a flare gas recovery system may need to be bypassed in the event of an emergency or in order to ensure safe operation of refinery processes. Nothing in this permit precludes HFTR from temporarily bypassing a flare gas recovery system under such conditions. [§63.6(e)]
- d. The facility shall comply with the operation, monitoring plan, out-of-control, and data reduction requirements of §63.671.

EUG 11A: Platformer Flare Subject to MACT Subpart CC

EU	Point ID	Equipment	Date Installed
269	Plat Flare	John Zink EEF-QS-30 smokeless flare tip	1960

- a. These flares shall comply with the applicable requirements of NESHAP Subpart CC including, but not limited to:
 1. The flares shall be operated with a pilot flame present at all times. [§63.670(b)]
 2. The 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. [§63.670(c)]
 3. The flares shall be used only when the net heating value of the gas being combusted is 270 Btu/scf or greater. [§63.670(e)]
 4. Steam-assisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR § 63.670(d).
- b. Development of a flare management plan. A flare gas recovery system to prevent continuous or routine combustion of process gases shall be operated on the flares. [§63.670(o)]
- c. The facility shall take all reasonable measures to minimize emissions while periodic maintenance on a flare gas recovery system is being performed. Under certain conditions, a flare gas recovery system may need to be bypassed in the event of an emergency or in order to

ensure safe operation of refinery processes. Nothing in this permit precludes HFTR from temporarily bypassing a flare gas recovery system under such conditions. [§63.6(e)]

- d. The facility shall comply with the operation, monitoring plan, out-of-control, and data reduction requirements of §63.671.

EUG 12: Wastewater Processing System

EU	Point ID	Equipment	Installed Date
15943	WPU-1	Wastewater Processing Unit and Open Sewers 1. Headworks 2. Storm water Diversion Tank 1039 3. Primary Clarifier 4. North / South DAF 5. Cooling Towers 6. Equalization Basis 7. Aeration Basin 8. North/South Secondary DAF 9. Aerobic Digester 10. East/West Firewater Basin 11. Solid Waste Recovery (Centrifuge) 12. Slop Oil Recovery 13. East/West Storm Water Basin	Various

- a. The facility shall meet the applicable requirements of 40 CFR Part 63 Subpart CC (Petroleum Refineries) and 40 CFR Part 61 Subpart FF (Benzene Waste). For facilities with a total annual benzene (TAB) quantity from waste operations falling between 1 and 10 megagrams, compliance with the requirements of Subpart FF satisfies the requirements of Subpart CC.
- b. The refinery is subject to NESHAP, 40 CFR Part 61, Subpart FF and shall comply with all applicable requirements including, but not limited to:
 - [40 CFR Part 61, NESHAP, Subpart FF]
 - 1. § 61.342 Standards: General.
 - 2. § 61.343 Standards: Tanks.
 - 3. § 61.344 Standards: Surface Impoundments.
 - 4. § 61.345 Standards: Containers.
 - 5. § 61.346 Standards: Individual drain systems.
 - 6. § 61.347 Standards: Oil-water separators.
 - 7. § 61.348 Standards: Treatment processes.
 - 8. § 61.349 Standards: Closed-vent systems and control devices.
 - 9. § 61.350 Standards: Delay of repair.
 - 10. § 61.351 Alternative standards for tanks.
 - 11. § 61.352 Alternative standards for oilwater separators.
 - 12. § 61.353 Alternative means of emission limitation.
 - 13. § 61.354 Monitoring of operations.
 - 14. § 61.355 Test methods, procedures, and compliance provisions.
 - 15. § 61.356 Recordkeeping requirements.
 - 16. § 61.357 Reporting requirements.

EUG 13: Group 1 Process Vents Subject to 40 CFR Part 63, Subpart CC

EU	Equipment Point ID	Control Device
N/A	CDU Vacuum Tower Vent *	CDU H-2 Heater or flare
N/A	LEU T-201 Hydrostripper Tower Vent *	LEU H-102 Heater or flare
N/A	Coker Enclosed Blowdown Vent *	Flare

*When the vents discharge to the flare gas recovery system for fuel, the flare requirements do not apply.

- a. The above vents are subject to 40 CFR Part 63 Subparts A and CC and shall comply with all applicable requirements including, but not limited to:
 - 1. § 63.642 (e) General standards;
 - 2. § 63.643 (a) and (b) Miscellaneous process vent provisions;
 - 3. § 63.644 (a) and (c) Monitoring provisions for miscellaneous process vents; and,
 - 4. § 63.645 Test methods and procedures for miscellaneous process vents.
 - 5. § 63.657 Delayed coking unit decoking operation standards.
 - 6. § 63.11 (b) Flares

EUG 14: Group 2 Process Vents Subject to 40 CFR Part 63, Subpart CC

EU	Equipment Point ID	Control Device
N/A	MEK T-7 Vent	NA
N/A	LEU-T101 Vent	NA
N/A	LEU D-101 Vent	NA
N/A	MEK Flue Gas Oxygen Vent	NA
N/A	MEK Knockout Drum O-52	LEU Flare

- a. The above vents are subject to 40 CFR Part 63 Subparts A and CC CC and shall comply with all applicable requirements including, but not limited to:
 - 1. § 63.640 Applicability and designation of affected sources;
 - 2. § 63.643 (a) and (b) Miscellaneous process vent provisions;
 - 3. § 63.644 (a) and (c) Monitoring provisions for miscellaneous process vents; and
 - 4. § 63.645 Test methods and procedures for miscellaneous process vents.

**EUG 15, Group 2 Process Vents Subject to 40 CFR Part 63, Subpart CC,
 EUG 16, Process Vent Subject to 40 CFR Part 63, Subpart UUU by April 11, 2005, and
 EUG 17, Coker Enclosed Blowdown**

- a. The above units shall be vented to a flare which complies with MACT Subpart CC.
[40 CFR §63.657]

EUG 18: §63.640 (Subpart CC) Existing Group 1 Internal Floating Roof Storage Vessels

Tank #	EU	Point ID	Size (bbl)
13	6333	Tk13	55,000
31	6340	Tk31	35,411
153	6346	Tk153	47,858
186	6348	Tk186	55,000
187	6349	Tk187	55,000
188	13592	Tk188	55,000
242	6359	Tk242	---
244	6360	Tk244	55,000
502	1359	Tk502	7,000
742	6392	Tk742	---

- a. The tanks are subject to 40 CFR Part 63 Subpart CC (§63.640 *et seq*), OAC 252:100-37-15(a) and (b) and OAC 252:100-39-41(a), (b), and (e)(1), and shall comply with all applicable requirements including but not limited to the following. Subpart CC references provisions of MACT G (SOCMI) found at 40 CFR § 63.110 *et seq*. Many of the requirements overlap, so conditions represent the most stringent version of each.
- b. Each of the above storage tanks shall be equipped with an internal floating roof.
[40 CFR § 63.119]
- c. Each tank shall comply with the internal floating roof requirements listed in 40 CFR § 63.119(b)
- d. The permittee shall comply with the compliance provisions found in 40 CFR § 63.120(a).
- e. The permittee shall follow the reporting requirements found in 40 CFR § 63.122(a) and (c).
- f. The permittee shall maintain records as required in 40 CFR § 63.123(a).

EUG 19: §63.640 (Subpart CC) Existing Group 1 External Floating Roof Storage Vessels

Tank #	EU	Point ID	Size (bbl)
199	6353	Tk199	72,288
307	6367	Tk307	10,000
750	6396	Tk750	---
755	6399	Tk755	10,000
779	6401	Tk779	---
874	6405	Tk874	121,275

- a. The tanks are subject to 40 CFR Part 63 Subpart CC (§63.640 *et seq*), OAC 252:100-37-15(a) and (b) and OAC 252:100-39-41(a), (b), and (e)(1), and shall comply with all applicable requirements including but not limited to the following. Subpart CC references provisions of MACT G (SOCMI) found at 40 CFR § 63.110 *et seq*. Many of the requirements overlap, so conditions represent the most stringent version of each.
- b. The tanks may not store VOCs that have a true vapor pressure that exceeds 11.1 psia.
[§63.119(a)(1)]

- c. The accumulated areas of gaps between the vessel wall and the primary seal shall not exceed 10 square inches per foot of vessel diameter, and the width of any portion of any gap shall not exceed 1.5 inches. [§63.120(b)(3)]
- d. The accumulated area of gaps between the vessel wall and the secondary seal, as determined below, shall not exceed 1.0 square inch per foot of vessel diameter and the width of any portion of any gap shall not exceed 0.5 inches. These seal gap requirements may be exceeded during the measurement of primary seal gaps as required by § 63.120(b)(1)(i) per § 63.119(c)(1)(iii). [§63.120(b)(4)]
- e. The operator of a Group 1 storage vessel subject to 40 CFR Part 63, Subpart CC shall comply with the applicable requirements of §§63.119 through 63.121 except as provided in paragraphs (b) through (l) of §646. [§63.646]
- f. When the operator and the DEQ do not agree on whether the annual weight percent organic HAP in the stored liquid is above or below four (4) percent for a storage vessel, EPA Method 18, of 40 CFR Part 60, Appendix A shall be used to determine the HAP content. [§63.646(b)(2)]
- g. Except as provided below, the operator shall determine the gap areas and maximum gap widths between the primary seal and the wall of the storage vessel, and the secondary seal and the wall of the storage vessel according to the following frequency. [§63.120(b)(1)]
1. Measurements of gaps between the vessel wall and the primary seal shall be performed at least once every five (5) years. [§63.120(b)(1)(i)]
 2. Measurements of gaps between the vessel wall and the secondary seal shall be performed at least once per year. [§63.120(b)(1)(iii)]
 3. If any storage vessel ceases to store organic HAP for a period of one (1) year or more, or if the maximum true vapor pressure of the total organic HAPs in the stored liquid falls below the value defining Group 1 storage vessels for a period of one (1) year or more, measurements of gaps between the vessel wall and the primary seal, and the gaps between the vessel wall and the secondary seal shall be performed within ninety (90) calendar days of the vessel being refilled with organic HAP. [§63.120(b)(1)(iv)]
- h. The operator shall determine gap widths and gap areas in the primary and secondary seals (seal gaps) individually by complying with applicable requirements in § 63.120 (b). [§§63.120(b)(2)(i)-(iii)]
- i. If the operator utilizes the extension specified for this source, the operator shall document the decision. Documentation of a decision to utilize the extension shall include: a description of the failure, document that alternate storage capacity is unavailable, and specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied, as soon as practical. [§63.120(b)(8)]
- j. If during the inspections required, 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, the operator shall repair the items as necessary so that none of the conditions specified in this subcondition exist before refilling the storage vessel with organic HAP. [§63.120(b)(10)(i)]
1. Except as below, for all the inspections required, the operator shall notify the DEQ in writing at least thirty (30) calendar days prior to the refilling of each storage vessel with organic HAP to afford the DEQ the opportunity to inspect the storage vessel prior to refilling. [§63.120(b)(10)(ii)]

2. If the inspection required is not planned and the operator could not have known about the inspection thirty (30) calendar days in advance of refilling the vessel with organic HAP, the operator shall notify the DEQ at least seven (7) calendar days prior to refilling of a storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. Alternately, the notification including the written documentation may be made in writing and sent so that it is received by the DEQ at least seven (7) calendar days prior to refilling.
[§63.120(b)(10)(iii)]
- k. The DEQ can waive the notification requirements specified for all or some storage vessels subject to these requirements. The Department may also grant permission to refill storage vessels sooner than thirty (30) days after submitting the notifications specified or sooner than 7 days after submitting the notification required for all storage vessels at a refinery or for individual storage vessels on a case-by case basis.
[§63.646(l)]
- l. The operator shall notify the DEQ in writing thirty (30) calendar days in advance of any gap measurements required to afford the DEQ the opportunity to have an observer present.
[§63.120(b)(9)]
- m. If seal gaps in exceedance are found during the inspections required or if the specifications are not met, the operator shall report the following information in the Periodic Report:
[§63.122(e)(1)]
 1. Date of the seal gap measurement.
 2. The raw data obtained in the seal gap measurement and the calculations described.
 3. Description of any seal condition that is not met.
 4. Description of the nature of and date the repair was made, or the date the storage vessel was emptied.
- n. The owner or operator shall visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.
- o. If a failure is detected during the inspection (i.e., internal inspection), the operator shall report the following information in the Periodic Report. A failure is defined as any time in which the external 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 has holes, tears, or other openings in the seal or the seal fabric.
[§63.122(e)(3)(ii)]
 1. Date of the inspection.
 2. Identification of each storage vessel in which a failure was detected.
 3. Description of the failure.
 4. Describe the nature of and date the repair was made.
- p. The external floating roof shall be floating on the liquid surface at all times except when the floating roof must be supported by the leg supports during the following periods.
[§63.119(c)(3)]
 1. During the initial fill.
 2. After the vessel has been completely emptied and degassed.
 3. When the vessel is completely emptied before being subsequently refilled.

- q. When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as practical. [§63.119(c)(4)]
Note: The intent is to avoid having a vapor space between the floating roof and the stored liquid for extended periods. Storage vessels may be emptied for purposes such as routine storage vessel maintenance, inspections, petroleum liquid deliveries, or transfer operations. Storage vessels where liquid is left on walls, as bottom clingage, or in pools due to floor irregularity are considered completely empty.
- r. 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 meets the following criteria. [§63.119(c)(1)]
1. §63.119(c)(1)(i) Consist of two seals, one above the other.
 2. §63.119(c)(1)(ii) The primary seal shall be either a metallic shoe seal or a liquid-mounted seal.
- s. Except during inspections required, both the primary and secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion. [§63.119(c)(1)(iii)]
- t. If a cover or lid is installed on an opening on a floating roof, the cover or lid shall remain closed except when the cover or lid must be open for access. [§63.646(f)(1)]
- u. 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. [§63.646(f)(3)]
- v. Rim space vents are to be set to open only when the floating roof is not floating or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting. [§63.646(f)(2)]
- w. The primary seal shall also meet the following requirements: [§63.120(b)(5)]
1. Where a metallic shoe seal is in use, one end of the metallic shoe shall extend into the stored liquid and the other end shall extend a minimum vertical distance of 24 inches above the stored liquid surface. [§63.120(b)(5)(i)]
 2. There shall be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope. [§63.120(b)(5)(ii)]
- x. The secondary seal shall also meet the following requirements: [§63.120(b)(6)]
1. The secondary seal shall be installed above the primary seal so that it completely covers the space between the roof edge and the vessel wall except as allowed.
 2. There shall be no holes, tears, or other openings in the seal or seal fabric.
- y. The owner or operator shall keep copies of all applicable reports and records for at least 5 years. All applicable records shall be maintained in such a manner that they can be readily accessed within 24 hours. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche. [§63.642(e)]

EUG 20: §63.640 (Subpart CC) Group 2 Fixed Roof Storage Vessels. All Tanks Constructed Before 1970.

Tank #	EU	Point ID	Current Service	Size (bbl)
6	20128	Tk6	Kerosene	1,890
30	13559	Tk30	Kerosene	30,000
41	1356	Tk41	Out of Service	---
50	13561	Tk50	Naphtha wash	1,890
51	13562	Tk51	Out of Service	---
155	13563	Tk155	Out of Service	54,132
181	20129	Tk181	Jet fuel	1,000
281	13574	Tk281	Slop Oil	7,000
283	13576	Tk283	Out of Service	---
312	6368	Tk312	Out of Service	7,000
315	6370	Tk315	Out of Service	7,000
401	6375	Tk401	Kerosene	55,000
582	13596	Tk582	Slop Oil	4,061
696	NA	Tk696	Slop Oil	1,700
747	6393	Tk747	Out of Service	---
751	5397	Tk751	Out of Service	---

- a. The tanks shall not store liquids with a stored-liquid maximum true vapor pressure greater than or equal to 1.5 psia and stored-liquid annual average true vapor pressure greater than or equal to 1.2 psia and annual average HAP liquid concentration greater than four (4) percent by weight total organic HAP. [§63.641]
- b. When the operator and the DEQ do not agree on whether the annual average weight percent organic HAP in the stored liquid is above or below four (4) percent for a storage vessel, EPA Method 18, of 40 CFR Part 60, Appendix A, shall be used to determine the HAP content. [§63.646(b)(2)]
- c. If a storage vessel is determined to be a Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent, a record of any data, assumptions, and procedures used to make this determination shall be retained. [§63.654(i)(iv)]
- d. The operator shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 2 status and is in operation. [§63.123(a)]
- e. If a deliberate operational process change is made to an existing petroleum refining process unit 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 requirements for existing sources for the Group 1 emission point upon initial start-up, unless the owner or operator demonstrates to DEQ that achieving compliance will take longer than making the change. If this demonstration is made to DEQ’s satisfaction, the owner or operator shall follow the procedures in §§63.640(m)(1) through (m)(3) to establish a compliance date. [§63.640(l)(ii)]

- f. If a change that does not meet the criteria above is made to a petroleum refining process unit 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 requirements 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. The owner or operator shall submit a compliance schedule to the DEQ for approval, along with a justification for the schedule. [§63.640(m)(1)]
- g. 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. [§ 63.640(m)(2)]
- h. The DEQ 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 DEQ within 120 calendar days of receipt. [§63.640(m)(3)]
- i. If a performance test for determination of compliance 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. [§63.655(k)]
- j. The owner or operator shall keep copies of all applicable reports and records for at least 5 years. All applicable records shall be maintained in such a manner that they can be readily accessed within 24 hours. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche. Records and reports of start-up, shutdown and malfunction are not required if they pertain solely to Group 2 emission points that are not included in an emission average. [§63.642(e) and §63.655(i)]

EUG 21: NSPS §60.110b (Subpart Kb) Internal Floating Roof Storage Vessels Storing Volatile Organic Liquids Above 0.75 psia Vapor Pressure

Tank #	EU	Point ID	Size (bbl)
1061	13594	Tk1061	80,000
1070	20126	Tk1070	5,377
1080	NA	Tk1080	3,200
782	6402	Tk782	15,000
226	NA	Tk226	80,000
22A	6337	TK-22A	74,500

- a. The tanks are subject to 40 CFR Part 60 Subpart Kb (§60.110b *et seq*) and OAC 252:100-39-41(a), (b), and (e)(1) and shall comply with the applicable requirements including but not limited to the following, except as provided in §640(n)(8)(i – vii). Conditions represent the most stringent provisions of each.
- b. The tanks may not store VOCs that have a true vapor pressure that exceeds 11.1 psia. [§60.112b(b)]

- c. Internal floating roof standards [§60.112b(a)(10)]
1. 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.
 2. 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.
 3. 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.
 4. 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.
 5. 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.
 6. 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.
 7. 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.
 8. 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.
 9. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

- d. Available data on the storage temperature may be used to determine the maximum true vapor pressure 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. [§60.116b(e)(1)]
- e. For crude oil or refined petroleum products the vapor pressure may be obtained by using the 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 to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference – see §60.17), unless the DEQ specifically requests that the liquid be sampled, the actual storage temperature determined and the Reid vapor pressure determined from the sample(s). [§60.116b(e)(2)]
- f. As specified in 40 CFR § 60.7(f), any owner or operator subject to the provisions of NSPS shall maintain a file of all measurements and all other information required by this part recorded in a permanent file suitable for inspection. This file shall be retained for at least two years following the date of such measurements, maintenance and records. [§60.116b(a)]
1. The permittee shall keep readily accessible records showing the dimensions of the storage vessels and an analysis showing the capacity of the vessels. This record shall be kept for the life of the source. [§60.116b(b)]
 2. The permittee shall maintain a record for each tank of the cumulative annual throughput, the volatile organic liquid stored, the period of storage and the maximum true vapor pressure of that VOL during the respective storage period.
 3. The permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of the air pollution control equipment on these vessels. These records shall be retained in a file for at least two years after the dates of recording. [§60.7(b)]
- g. As specified in §60.113b, the permittee shall comply with the following testing procedures requirements:
1. The permittee shall 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 §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 §60.112b(a)(1)(ii)(B):
 - A. Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or
 - B. 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 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.
- h. The operator shall keep a record of each inspection performed as required. 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 or the control equipment. [§ 60.115b(a)(2)]
- i. Except as provided below, for all the inspections required, the operator shall notify the DEQ in writing at least thirty (30) calendar days prior to the refilling of each storage vessel with VOL to afford the DEQ the opportunity to inspect the storage vessel prior to refilling. [§60.113b(a)(5)]
 1. If the inspection required above, is not planned and the operator could not have known about the inspection thirty (30) calendar days in advance of refilling the vessel with organic HAP, the operator shall notify the DEQ at least seven (7) calendar days prior to refilling of a storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. Alternately, the notification including the written documentation may be made in writing and sent so that it is received by the DEQ at least seven (7) calendar days prior to refilling. [§60.113b(a)(5)]
- j. As specified in §60.115b, the permittee shall comply with the applicable reporting and recordkeeping requirements.
 1. Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of §60.112b(a)(1) and §60.113b(a)(1). This report shall be an attachment to the notification required by §60.7(a)(3).
 2. Keep a record of each inspection performed as required by §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. After each inspection required by §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 §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 §60.112b(a)(1) or §60.113b(a)(3) and list each repair made.

EUG 22: NSPS §60.110b (Subpart Kb) External Floating Roof Storage Vessel Storing VOL Above 0.75 psia Vapor Pressure.

Tank #	EU	Point ID
583	13591	Tk583
TK-279	6364	TK279
TK-280	6365	TK280

- a. The tank is subject to 40 CFR Part 60 Subpart Kb (§60.110b *et seq*) and OAC 252:100-39-41(a), (b), and (e)(1), and shall comply with all applicable requirements including but not limited to the following, except as provided in §§63.640(n)(8)(i – vii). Conditions represent the most stringent provisions of each.
- b. The tank may not store VOCs that have a true vapor pressure that exceeds 11.1 psia. [§60.112b(b)]
- c. The accumulated areas of gaps between the vessel wall and the primary seal shall not exceed 10 square inches per foot of vessel diameter, and the width of any portion of any gap shall not exceed 1.5 inches. [§60.113b(b)(4)(i)]
- d. The accumulated area of gaps between the vessel wall and the secondary seal shall not exceed 1.0 square inch per foot of vessel diameter and the width of any portion of any gap shall not exceed 0.5 inches. These seal gap requirements may be exceeded during the measurement of primary seal gaps. [§60.113b(b)(4)(ii)(B)]
- e. Available data on the storage temperature may be used to determine the maximum true vapor pressure 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. [§60.116b(e)(1)]
- f. For crude oil or refined petroleum products the vapor pressure may be obtained by using the 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 to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference – see §60.17), unless the DEQ specifically requests that the liquid be sampled, the actual storage temperature determined and the Reid vapor pressure determined from the sample(s). [§60.116b(e)(2)]
- g. The operator shall determine the gap areas and maximum gap widths between the primary seal and the wall of the storage vessel, and the secondary seal and the wall of the storage vessel according to the following frequency. [§60.113b(b)(1)]
 - 1. Measurements of gaps between the vessel wall and the primary seal shall be performed at least once every five (5) years. [§60.113b(b)(1)(i)]
 - 2. §60.113b(b)(1)(ii) Measurements of gaps between the vessel wall and the secondary seal shall be performed at least once per year. [§60.113b(b)(1)(ii)]
 - 3. If any storage vessel ceases to store VOL for a period of one (1) year or more, measurements of gaps between the vessel wall and the primary seal, and the gaps between the vessel wall and the secondary seal shall be performed within sixty (60) calendar days of the vessel being refilled with VOL. [§60.113b(b)(1)(iii)]

- h. The operator shall determine gap widths and gap areas in the primary and secondary seals (seal gaps) individually by the procedures described below. [§60.113b(b)(2)]
1. Seal gaps, if any, shall be measured at one or more floating roof levels when the roof is not resting on the roof leg supports. [§60.113b(b)(2)(i)]
 2. Seal gaps, if any, shall be measured around the entire circumference of the vessel in each place where a one-eighth (1/8) inch diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the storage vessel. The circumferential distance of each such location shall also be measured. [§60.113b(b)(2)(ii)]
 3. The total surface area of each gap described in subcondition (2)(B), above, shall be determined by using probes of various widths to measure accurately the actual distance from the vessel wall to the seal and multiplying each such width by its respective circumferential distance. [§60.113b(b)(2)(iii)]
- i. The operator shall add the gap surface area of each gap location for the primary seal and divide the sum by the nominal diameter of the vessel. [§60.113b(b)(3)]
- j. The operator shall add the gap surface area of each gap location for the secondary seal and divide the sum by the nominal diameter of the vessel. [§60.113b(b)(3)]
- k. The operator shall visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed. [§60.113b(b)(6)]
- l. Within 60 days of performing the seal gap measurements required, the operator shall furnish DEQ with a report that contains: [§60.115b(b)(2)]
1. the date of the measurement;
 2. the raw data obtained in the measurement; and
 3. the calculations of seal gap areas.
- m. The owner shall keep a record of each gap measurement performed as required. Each record shall identify the storage vessel in which the measurement was performed and shall contain the data above. These records shall be maintained for a period of two years from date of recording. [§60.115b(b)(3)]
- n. As specified in 40 CFR § 60.7(f), any owner or operator subject to the provisions of NSPS shall maintain a file of all measurements and all other information required by this part recorded in a permanent file suitable for inspection. This file shall be retained for at least two years following the date of such measurements, maintenance and records. [§60.116b(a)]
- o. The permittee shall keep readily accessible records showing the dimensions of the storage vessels and an analysis showing the capacity of the vessels. This record shall be kept for the life of the source. [§60.116b(b)]
- p. The permittee shall maintain a record for the tanks of the cumulative annual throughput, the volatile organic liquid stored, the period of storage and the maximum true vapor pressure of that VOL during the respective storage period. Copies of these records shall be retained on location for at least two years after the dates of recording. [§60.116b(c)]
- q. The permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of the air pollution control equipment on these vessels. These records shall be retained in a file for at least two years after the dates of recording. [§60.7(b)]

- r. If the operator utilizes the repair extension specified, the operator shall document the decision. Documentation of a decision to utilize the extension shall include: a description of the failure, document that alternate storage capacity is unavailable, and specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied, as soon as practical. [§60.113b(b)(4)(iii)]
- s. Except as provided below, for all the inspections required, the operator shall notify the DEQ in writing at least thirty (30) calendar days prior to the refilling of each storage vessel with VOL to afford the DEQ the opportunity to inspect the storage vessel prior to refilling. [§60.113b(b)(6)(ii)]
- t. If the inspection required above is not planned and the operator could not have known about the inspection thirty (30) calendar days in advance of refilling the vessel with organic HAP, the operator shall notify the DEQ at least seven (7) calendar days prior to refilling of a storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. Alternately, the notification including the written documentation may be made in writing and sent so that it is received by the DEQ at least seven (7) calendar days prior to refilling. [§60.113b(b)(6)(ii)]
- u. The operator shall notify the DEQ in writing thirty (30) calendar days in advance of any gap measurements to afford the DEQ the opportunity to have an observer present. [§60.113b(b)(5)]
- v. If seal gaps in exceedance of limitations above are found during the inspections required or if the specification is not met, the operator shall report the following information to the DEQ within 30 days of the inspection. [§60.115b(b)(4)]
1. Date of the seal gap measurement.
 2. The raw data obtained in the seal gap measurement and the calculations.
 3. Description of the nature of and date the repair was made, or the date the storage vessel was emptied.
- w. The external floating roof shall be floating on the liquid surface at all times except when the floating roof must be supported by the leg supports during the following periods. [§60.112b(a)(2)(iii)]
1. During the initial fill.
 2. When the vessel is completely emptied before being subsequently refilled.
- x. When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. [§60.112b(a)(2)(iii)]
- y. 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 must meet the following criteria. [§60.112b(a)(2)(i)]
1. Consist of two seals, one above the other. [§60.112b(a)(2)(i)]
 2. The primary seal shall be either a metallic shoe seal or a liquid-mounted seal. [§60.112b(a)(2)(i)(A)]
- z. Except as allowed, both the primary and secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion. [§60.112b(a)(2)(i)]

- aa. 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. [§60.112b(a)(2)(ii)]
- bb. 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 with the device is in actual use. 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. [§60.112b(a)(2)(ii)]
- cc. Rim vents are to be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. [§60.112b(a)(2)(ii)]
- dd. The primary seal shall also meet the following requirements. Each external floating roof must meet the following specifications:
1. Where a metallic shoe seal is in use, one end of the metallic shoe shall extend into the stored liquid and the other end shall extend a minimum vertical distance of 24 inches above the stored liquid surface. [§60.113b(b)(4)(i)(A)]
 2. There shall be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope. [§60.113b(b)(4)(i)(B)]
- ee. The secondary seal shall also meet the following requirements. [§60.113b(b)(4)(ii)]
1. The secondary seal shall be installed above the primary seal so that it completely covers the space between the roof edge and the vessel wall except as provided. [§60.113b(b)(4)(ii)(A)]
 2. There shall be no holes, tears, or other openings in the seal or seal fabric. [§60.113b(b)(4)(ii)(C)]
- ff. If during the inspections required, 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, the operator shall repair the items as necessary so that none of the conditions specified in this subcondition exist before refilling the storage vessel with VOL. [§60.113b(b)(6)(i)]
- gg. The operator shall repair any conditions that do not meet the requirements above, no later than forty-five (45) calendar days after identification, or shall empty the storage vessel. If a failure is detected that cannot be repaired within forty-five (45) calendar days and if the vessel cannot be emptied within forty-five (45) calendar days, a 30-day extension may be requested from DEQ in the inspection report required. 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. [§60.113b(b)(4)(iii)]

EUG 23: MACT CC Group 2 Storage Vessels Storing Volatile Organic Liquids Below 0.507 psia Vapor Pressure

Const Date	Tank #	EU	Point ID	Size (bbl)	Current Service
1917	84	N/A	Tk84	1,890	Out of Service
1917	85	N/A	Tk85	1,890	Out of Service
2012	189	6350	Tk189	55,000	Out of Service
2009	405	6377	TK405	72,443	Diesel
2009	406	13578	TK406	71,526	Diesel
2014	998	13589	Tk998	3,500	Slop Oil
1987	1002	6406	Tk1002	55,000	Lube Oil
1989	1005	N/A	Tk1005	4,800	Out of Service
1990	1012	15950	Tk1012	5,000	Furfural/ Water
2012	1038	N/A	Tk1038	120,000	Sewer Storm water
1993	1039	16561	Tk1039	120,000	Sewer Storm water
2013	157	14307	Tk157	75,000	Lube Oil
2015	156	13564	Tk156	80,000	Lube Oil
2016	25A	N/A	Tk25A	88,800	Resid
2016	23A	N/A	Tk23A	11,300	Resid
2016	277	N/A	Tk277	20,000	Resid

- a. These tanks are subject to only the recordkeeping requirements of MACT Subpart CC for Group 2 storage vessels, as follow. [40 CFR § 63.654(i)(1)(iv)]
- b. Readily accessible records showing the dimensions of each vessel and an analysis of the capacity of each vessel shall be maintained for the life of the vessel. [40 CFR §63.123(a)]
- c. Data, assumptions, and procedures used in determining Group 2 status for these tanks shall be documented.

EUG 23A: NSPS Subpart UU / MACT CC Group 2 Storage Vessel - Fixed Roof (FR)

Const Date	Tank #	EU	Point ID	Size bbl
2010	27	13588	Tk27	55,000
2018	193	15945	Tk193	65,000

- a. The tank in EUG 23A is subject to 40 CFR Part 60, Subpart UU (Asphalt Processing and Asphalt Roofing Manufacture) and shall comply with all applicable standards:
 1. § 60.470: Applicability and designation of affected facilities
 2. § 60.471: Definitions
 3. § 60.472: Standards for particulate matter
 4. § 60.473: Monitoring of operations
 5. § 60.474: Test methods and procedures

EUG 24: NSPS §60.110a Storage Vessels Storing Petroleum Liquids Below 1.0 psia Vapor Pressure

Const Date	Tank #	EU	Point ID	Size bbl
1980	224	13569	Tk224	55,000
1979	881	NA	Tk881	2,090
1983	890	NA	Tk890	---
1982	992	NA	Tk992	1,815
1982	993	NA	Tk993	1,815

- a. Storage vessels that are of the capacity identified in §60.110a(a) and that are constructed after May 18, 1978, and before July 23, 1984, and storing petroleum liquids with true vapor pressure (TVP) less than 1.5 psia are exempt from the standards of §60.112a, from the testing and procedures of §60.113a, and from the alternative limitations of §60.114a. Further, vessels storing liquids with TVP less than 1.0 psia are exempt from the monitoring requirements of §60.115a. Thus, the only requirement for this EUG is that the operator shall not store petroleum liquids with a true vapor pressure that exceeds 1.0 psia.

EUG 25: NSPS §60.110 (Subpart K) Storage Vessels Storing Petroleum Liquids Below 1.0 psia Vapor Pressure

Const Date	Tank #	EU	Point ID	Size (bbl)	Current Service
1974	152	6324	Tk152	---	Out of Service
1973	158	13565	Tk158	63,709	Gas Oil
	470		Tk470	170	Gas Oil
1978	472	NA	Tk472	3,080	Lube Oil
1976	983	NA	Tk983	15,000	Lube Oil
1976	984	NA	Tk984	15,000	Out of Service
1976	986	NA	Tk986	6,000	Wax
1976	987	NA	Tk987	6,000	Wax

- a. Storage vessels that are of the capacity identified in §60.110 and that are constructed after June 11, 1973, and before May 19, 1978, and storing petroleum liquids with true vapor pressure (TVP) less than 1.5 psia are exempt from the VOC standards of §60.112. Further, vessels storing liquids with TVP less than 1.0 psia are exempt from the monitoring requirements of §60.113. Thus, the only requirement for this EUG is that the operator shall not store petroleum liquids with a true vapor pressure that exceeds 1.0 psia.

**EUG 27: External Floating Roof Storage Vessels Subject to OAC 252:100-39-41.
(Previously listed in group 2 tanks)**

Const Date	Tank #	EU	Point ID	Size bbl
1957	314	6369	Tk314	7,000

- a. The operator shall not store VOCs that have a vapor pressure of 11.1 psia or greater under actual storage conditions. [OAC 252:100-37-15(a)(1) and OAC 252:100-39-41(a)(1)]
- b. Each vessel with a capacity greater than 40,000 gal (151 m³ which stores gasoline or any VOC shall be a pressure vessel capable of maintaining working pressures that prevent the loss of VOC vapor or gas to the atmosphere or shall be equipped with one or more of the following vapor control devices. [OAC 252:100-37-15(b) and OAC 252:100-39-41(b)]
 1. An external floating roof, that consists of a pontoon-type or double-deck type cover, or a fixed roof with an internal-floating cover. The cover shall rest on the surface of the liquid contents at all times (i.e., off the leg supports), except during initial fill, when the storage vessel is completely empty, or during refilling. When the cover is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. The floating roof shall be equipped with a closure seal, or seals, to close the space between the cover edge and vessel wall. Floating roofs are not appropriate control devices if the VOCs have a vapor pressure of 11.1 psia (76.6 kPa) or greater under actual conditions. All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place. Closure seals for fixed roof vessels with an internal-floating cover shall meet the requirements of 252:100-39-30(c)(1)(B)(i) and (ii). Closure seals for vessels with external floating roofs shall meet the requirements of 252:100-39-30(c)(1)(B)(i), (ii), and (iii).
 2. A vapor-recovery system that consists of a vapor-gathering system capable of collecting 90 percent by weight or more of the uncontrolled VOCs that would otherwise be emitted to the atmosphere and a vapor-disposal system capable of processing VOCs to prevent emissions in excess of 6.68×10^{-4} lb/gal (80 mg/l) of VOCs transferred. All vessel gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.
 3. Other equipment or methods that are of equal efficiency for purposes of air pollution control may be used when approved by the Division Director and in concert with federal guidelines.
- c. Although OAC 252:100-39-41 and 100-37 do not specify inspection frequency or recordkeeping requirements, inspections shall be performed annually.

EUG 28: Cone Roof Tanks

All of these tanks were constructed before the applicability date of any rules and contain liquids with vapor pressure below any of the thresholds necessary to make the tanks subject to any state rules affecting “existing” tanks.

EU	Point ID	Current Service	Capacity (bbls)
20127	Tk1	Out of Service	1,698
Tk9	Tk9	Extract	7,000
Tk10	Tk10	Out of Service	7,000
Tk11	Tk11	Out of Service	7,000
6334	Tk15	Lube Oil	7,000
6335	Tk16	Lube Oil	7,000
Tk26	Tk26	Lube Oil	55,000
20130	Tk28	Coker Chg	38,000
6339	Tk29	Out of Service	55,000
Tk33	Tk33	Lube Oil	55,000
Tk34	Tk34	Out of Service	55,000
6342	Tk35	Out of Service	55,000
6343	Tk36	Gasoil	55,000
Tk38	Tk38	Gasoil	1,890
Tk45	Tk45	Wax	4,200
Tk46	Tk46	Wax	4,200
Tk52	Tk52	Out of Service	1,890
Tk53	Tk53	Wax	1,890
Tk54	Tk54	Out of Service	1,890
Tk62	Tk62	Wax	4,200
Tk65	Tk65	Out of Service	1,890
Tk66	Tk66	Out of Service	1,890
Tk68	Tk68	Wax	1,890
Tk69	Tk69	Out of Service	1,890
Tk71	Tk71	Lube Oil	5,680
Tk72	Tk72	Lube Oil	5,680
Tk73	Tk73	Lube Oil	5,680
Tk74	Tk74	Lube Oil	5,680
Tk75	Tk75	Out of Service	1,890
Tk76	Tk76	Lube Oil	1,890
Tk79	Tk79	Out of Service	1,890
Tk80	Tk80	Extract	1,890
Tk81	Tk81	Out of Service	1,890
Tk83	Tk83	Extract	1,890
Tk132	Tk132	Extract	1,800
Tk133	Tk133	Extract	1,800
Tk134	Tk134	Extract	7,000
6344	Tk151	Out of Service	7,000
13567	Tk194	Lube Oil	53,100
Tk195	Tk195	Lube Oil	55,000
Tk196	Tk196	Lube Oil	55,000
6355	Tk215	Out of Service	50,914

EU	Point ID	Current Service	Capacity (bbls)
15946	Tk217	Diesel	7,000
13568	Tk218	Out of Service	7,000
Tk223	Tk223	Extract	7,000
Tk227	Tk227	Extract	7,000
Tk228	Tk228	Wax	1,890
Tk229	Tk229	Out of Service	1,890
Tk232	Tk232	Wax	1,890
Tk233	Tk233	Wax	1,890
Tk234	Tk234	Wax	1,890
Tk235	Tk235	Wax	1,890
Tk236	Tk236	Lube Oil	1,890
Tk237	Tk237	Wax	1,890
Tk240	Tk240	Out of Service	1,500
Tk252	Tk252	Lube Oil	7,000
Tk264	Tk264	Out of Service	1,890
Tk265	Tk265	Out of Service	1,890
Tk266	Tk266	Extract	1,890
Tk267	Tk267	Out of Service	1,890
Tk271	Tk271	Out of Service	1,890
6363	Tk272	Out of Service	1,890
Tk273	Tk273	Lube Oil	7,000
Tk274	Tk274	Lube Oil	7,000
Tk275	Tk275	Lube Oil	7,000
Tk276	Tk276	Gasoil	7,000
6366	Tk284	Out of Service	7,000
Tk305	Tk305	Lube Oil	7,000
Tk318	Tk318	Lube Oil	7,000
Tk319	Tk319	Out of Service	1,890
Tk320	Tk320	Out of Service	1,890
Tk321	Tk321	Lube Oil	1,890
Tk322	Tk322	Out of Service	1,890
6371	Tk323	Out of Service	7,000
Tk327	Tk327	Out of Service	1,890
Tk328	Tk328	Lube Oil	1,890
Tk329	Tk329	Lube Oil	1,890
Tk331	Tk331	Lube Oil	7,000
Tk332	Tk332	Lube Oil	7,000
Tk335	Tk335	Out of Service	1,890
Tk390	Tk390	Extract	7,000
Tk391	Tk391	Extract	5,000
Tk392	Tk392	Extract	5,000
Tk393	Tk393	Out of Service	1,000
Tk394	Tk394	Out of Service	1,120

EU	Point ID	Current Service	Capacity (bbls)
Tk396	Tk396	Out of Service	5,940
Tk397	Tk397	Out of Service	5,940
6373	Tk398	Out of Service	2,600
6374	Tk399	Out of Service	2,600
Tk471	Tk471	Wax	3,780
Tk509	Tk509	Out of Service	4,000
6389	Tk510	Out of Service	1,890
6390	Tk511	Out of Service	1,890
6391	Tk519	Out of Service	4,000
Tk645	Tk645	Extract	1,500
Tk646	Tk646	Lube Oil	1,500
Tk649	Tk649	Out of Service	1,008
Tk650	Tk650	Extract	10,000
Tk675	Tk675	Out of Service	1,500
Tk691	Tk691	Extract	2,400
Tk692	Tk692	Lube Oil	2,400
Tk693	Tk693	Lube Oil	2,400
Tk694	Tk694	Lube Oil	2,400
Tk700	Tk700	Raffinate	15,000
13585	Tk701	Lube Oil	15,000
13584	Tk702	Wax	7,000
6403	Tk799	Out of Service	1,890
Tk800	Tk800	Wax	7,000
15958	Tk801	Lube Oil	15,000
13586	Tk802	Lube Oil	15,000
15949	Tk803	Out of Service	15,000
Tk807	Tk807	Wax	4,200
Tk828	Tk828	Lube Oil	30,000
Tk829	Tk829	Lube Oil	30,000
Tk830	Tk830	Lube Oil	30,000
Tk831	Tk831	Lube Oil	30,000
Tk835	Tk835	Out of Service	2,000
6404	Tk838	Out of Service	2,000
Tk847	Tk847	Wax	2,032
Tk848	Tk848	Wax	2,032
Tk851	Tk851	Out of Service	2,088
Tk852	Tk852	Out of Service	4,025
Tk853	Tk853	Out of Service	4,025
Tk854	Tk854	Resid	4,025
Tk855	Tk855	Out of Service	4,025
Tk856	Tk856	Resid	4,025
Tk857	Tk857	Out of Service	2,011
Tk861	Tk861	Out of Service	1,000

EU	Point ID	Current Service	Capacity (bbls)
Tk865	Tk865	Out of Service	1,890
Tk867	Tk867	Lube Oil	1,675
13587	Tk870	Furfural	5,300
Tk875	Tk875	Wax	2,090
Tk876	Tk876	Out of Service	3,000
Tk877	Tk877	Wax	2,090
Tk878	Tk878	Slop Oil	2,090
Tk879	Tk879	Out of Service	2,090
Tk880	Tk880	Slop Oil	3,000
Tk882	Tk882	Lube Oil	20,000
Tk883	Tk883	Lube Oil	1,000
Tk884	Tk884	Lube Oil	1,000
Tk885	Tk885	Lube Oil	1,000
Tk886	Tk886	Lube Oil	10,492
Tk887	Tk887	Lube Oil	19,500
Tk888	Tk888	Lube Oil	10,492
Tk891	Tk891	Out of Service	1,000
Tk893	Tk893	Wax	10,500
Tk898	Tk898	Out of Service	2,455
Tk913	Tk913	Lube Oil	2,090
Tk914	Tk914	Lube Oil	2,090
Tk916	Tk916	Lube Oil	2,090
Tk918	Tk918	Extract	30,000
Tk921	Tk921	Lube Oil	2,094
Tk922	Tk922	Lube Oil	3,058
Tk923	Tk923	Lube Oil	2,084
Tk924	Tk924	Lube Oil	4,455
Tk925	Tk925	Lube Oil	4,455
Tk926	Tk926	Lube Oil	1,313
Tk927	Tk927	Extract	1,313
Tk928	Tk928	Lube Oil	4,455
Tk929	Tk929	Lube Oil	4,455
Tk930	Tk930	Lube Oil	1,313
Tk931	Tk931	Lube Oil	1,313
Tk932	Tk932	Lube Oil	3,058
Tk933	Tk933	Lube Oil	1,000
Tk934	Tk934	Out of Service	1,000
Tk935	Tk935	Out of Service	1,000
Tk936	Tk936	Out of Service	1,000
Tk937	Tk937	Out of Service	1,000
Tk938	Tk938	Out of Service	1,000
Tk939	Tk939	Out of Service	1,000
Tk940	Tk940	Out of Service	1,000

EU	Point ID	Current Service	Capacity (bbls)
Tk941	Tk941	Out of Service	1,000
Tk942	Tk942	Out of Service	1,000
Tk943	Tk943	Out of Service	1,000
Tk944	Tk944	Out of Service	1,000
Tk955	Tk955	Out of Service	1,000
TkAGT1	TkAGT1	Slop Diesel	2,000
TkAGT2	TkAGT2	Slop Diesel	1,000
TkAGT3	TkAGT3	Slop Diesel	1,000
TkAGT4	TkAGT4	Slop Diesel	2,000

- a. Records sufficient to demonstrate that these tanks contain liquids with vapor pressure below any applicable standard shall be maintained. Such records shall be sufficient to demonstrate that each tank remains a Group 2 tank under 40 CFR Part 63 Subpart CC.

EUG 28A: Cone Roof Tanks (2019)

EU	Point ID	Capacity (bbls)	Liquid Stored*	Annual Throughput (bbl.)	VOC TPY
15944	TK-159A	80,000	No. 2 distillate	200,000	1.22
6351	TK-190A	73,000	No. 2 distillate	3,000,000	1.94
TK192	TK-192A	80,000	No. 2 distillate	3,000,000	3.92
TK-1215	TK-1215	10,000	Wax	1,000,000	0.47
TK-317A	TK-317A	9,400	Lube oil	8,760,000	0.53

*Worst-case liquid with highest vapor pressure.

- a. Records sufficient to demonstrate that these tanks contain liquids with vapor pressure below any applicable standard shall be maintained. Such records shall be sufficient to demonstrate that each tank remains a Group 2 tank under 40 CFR Part 63 Subpart CC.
- b. Records of contents, throughput, and VOC emissions shall be kept.

EUG 29: Pressurized Spheres Containing VOC with Vapor Pressure > 11.1 psia

Tank #	EU	Point ID
Tk 585	NA	Tk585
Tk 586	NA	Tk586
Tk 587	NA	Tk587
Tk 588	NA	Tk588
Tk 589	NA	Tk589
Tk 788	NA	Tk788
Tk 789	NA	Tk789
Tk 797	NA	Tk797
Tk 798	NA	Tk798
Tk 804	NA	Tk804

Tank #	EU	Point ID
Tk 805	NA	Tk805
Tk 806	NA	Tk806

- a. No limits apply to these vessels. These vessels predate most federal and state rules and regulations. Since they are pressurized, they satisfy the requirements of OAC 252:100-39-41. Pressurized vessels do not meet the definition of storage vessels in MACT CC, per 40 CFR § 63.641.

EUG 30: Pressurized Bullet Tanks Containing VOC with Vapor Pressure > 11.1 psia

Tank #	EU	Point ID
Tk 1007	NA	Tk1007
Tk 1008	NA	Tk1008
Tk 791	NA	Tk 791
Tk 792	NA	Tk 792
Tk 793	NA	Tk 793
Tk 794	NA	Tk 794
Tk 795	NA	Tk 795

- a. No limits apply to the vessels. These vessels predate most federal and state rules and regulations. Since they are pressurized, they satisfy the requirements of OAC 252:100-39-41. Pressurized vessels do not meet the definition of storage vessels in MACT CC, per 40 CFR § 63.641.

EUG 31: Underground LPG Cavern (Pseudo Pressure Vessel)

CD	Tank #	EU	Point ID
1961	Tk-900	NA	Tk900

- a. No limits apply to this cavern. This “vessel” predates federal and state rules and regulations. Since it is pressurized, it satisfies the requirements of OAC 252:100-39-41. Pressurized vessels do not meet the definition of storage vessels in MACT CC, per 40 CFR § 63.641.

EUG 32: Non-gasoline Loading Racks

EU	Equipment Point ID	Installed Date
NA	Black Oil Loading Rack	1937
NA	Extract Truck Loading Rack	1993
NA	Extract Rail Loading Rack	1930
NA	Wax Truck Loading Rack	1979
NA	Wax Rail Loading Rack	1917
NA	LOB Rail Loading Rack	1967
NA	LOB Truck Loading Rack	1978

EU	Equipment Point ID	Installed Date
NA	Resid Truck Loading Rack	1962
NA	Diesel Rail Loading Rack	1986
NA	Coke Truck Loading Area	1991
NA	560 Rail Oil Loading Rack	
NA	Brightstock Rail Rack	
NA	Heavy Oil Railcar Loading	2018
NA	702tk Truck Loading	
NA	Sundex Truck Loading Rack	
NA	Sundex Railcar Loading Rack	
NA	PDA Bottoms Loading Rack	
NA	Raffinate Loading	2020

- a. No limits apply to the loading racks.

EUG 33: LPG Loading Racks

EU	Equipment Point ID	Installed Date
NA	LPG Rail Loading Rack	1917
NA	LPG Truck Loading Rack	1956

- a. When loading is by means other than hatches, all loading and vapor lines shall be equipped with fittings that make vapor-tight connections and which close automatically when disconnected per OAC 252:100-39-41(c)(4).
- b. In addition to those requirements contained in OAC 252:100-39-41(c), stationary loading facilities shall be checked annually in accordance with EPA Test Method 21, Leak Test. Leaks greater than 5,000 ppmv shall be repaired within 15 days. Facilities shall retain inspection and repair records for at least two years.

EUG 34: Cooling Towers

EU	Point ID	Equipment
15942	CT2	LEU/MEK Cooling Tower
15942	CT3	Removed from Service
15942	CT4	LEU/MEK Cooling Tower
15942	CT6	PDA/#5 BH Cooling Tower
15942	CT7	Coker Cooling Tower
15942	CT8	CDU Cooling Tower
15942	CT9	BSU Cooling Tower

- a. Cooling towers are subject to 40 CFR Part 63 Subpart CC and shall comply with applicable standards for “heat exchange systems.” [40 CFR §63.654]

EUG 35: Oil/Water Separators Subject to OAC 252:100-37-37 and 39-18

EU	Point ID	Equipment	Installed Date
NA	D-40	Separator at Lube Packaging	Before 7/1/72
NA	D-41	Separator at Lube Blending and Tankage	Before 7/1/72
NA	D-42	Separator from MEK/Lube Unit	Before 7/1/72
NA	S1-51	Separator at Belt Press (sealed)	1985
NA	Primary clarifier	Primary clarifier at WPU	
6332	Tk 532	Separator at T&S (sealed)	Before 7/1/72
6331	Tk 533	Separator at T&S (sealed)	Before 7/1/72

- a. A single-compartment or multiple-compartment VOC/water separator that receives effluent water containing 200 gals/d (760 l/d) or more of any VOC from any equipment processing, refining, treating, storing or handling VOCs shall be equipped such that the container totally encloses the liquid contents and all openings are sealed. All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place. The oil removal devices shall be gas-tight except when manual skimming, inspection and/or repair is in progress.
 [OAC 252:100-37-37 (1) and OAC 252:100-39-18(b)(1)]

EUG 36: Spark Ignition Internal Combustion Engines Subject to 40 CFR Part 63 Subpart ZZZZ

Equipment	Point ID	HP	Equip #
Emergency		45	EG-6349
Emergency		69	EG-5879
Emergency		175	EG-6235

- a. No initial notification is necessary for these emergency engines. [§ 63.6590(b)(3)]
- b. The owner/operator shall comply with all applicable requirements of the NESHAP: Reciprocating Internal Combustion Engines, Subpart ZZZZ, for each affected facility, by October 20, 2013, including but not limited to:
1. §63.6580 What is the purpose of subpart ZZZZ?
 2. §63.6585 Am I subject to this subpart?
 3. §63.6590 What parts of my plant does this subpart cover?
 4. §63.6595 When do I have to comply with this subpart?
 5. §63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?
 6. §63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?
 7. §63.6602 What emission limitations and other requirements 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?

8. §63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?
9. §63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?
10. §63.6605 What are my general requirements for complying with this subpart?
11. §63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?
12. §63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?
13. §63.6612 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 HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?
14. §63.6615 When must I conduct subsequent performance tests?
15. §63.6620 What performance tests and other procedures must I use?
16. §63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?
17. §63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?
18. §63.6635 How do I monitor and collect data to demonstrate continuous compliance?
 §63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?
19. §63.6645 What notifications must I submit and when?
20. §63.6650 What reports must I submit and when?
21. §63.6655 What records must I keep?
22. §63.6660 In what form and how long must I keep my records?
23. §63.6665 What parts of the General Provisions apply to me?
24. §63.6670 Who implements and enforces this subpart?
25. §63.6675 What definitions apply to this subpart?

EUG 37: CDU H-2, CDU H-3 Heaters

Const Date	EU	Point ID
1961	202	CDU H-2
1961	203	CDU H-3

- a. OAC 252:100-19-4. The emissions of particulate matter resulting from the combustion of fuel in any new or existing fuel-burning unit shall not exceed the limits specified in OAC 252:100 Appendix C.
- b. The facility shall maintain records that show compliance with OAC 252:100-19-4.

**EUG 38: Compression Ignition Internal Combustion Engines Subject to 40 CFR Part 63
Subpart ZZZZ**

Engine Number	HP	USE	Fuel
EG 6192	603	Emergency	Diesel
EG 6217	603	Emergency	Diesel
EG 6218	603	Emergency	Diesel
EG 6312	603	Emergency	Diesel
EG 6289	603	Emergency	Diesel
EG 6290	603	Emergency	Diesel
EG 6472	170	Emergency	Diesel
EG 5886	363	Emergency	Diesel
EG 6031	340	Emergency	Diesel
EG 6522	330	Emergency	Diesel

- a. No initial notification is necessary for these emergency engines. [§ 63.6590(b)(3)]
- b. The owner/operator shall comply with all applicable requirements of the NESHAP: Reciprocating Internal Combustion Engines, Subpart ZZZZ, for each affected facility, by May 3, 2013, including but not limited to:
 1. §63.6580 What is the purpose of subpart ZZZZ?
 2. §63.6585 Am I subject to this subpart?
 3. §63.6590 What parts of my plant does this subpart cover?
 4. §63.6595 When do I have to comply with this subpart?
 5. §63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?
 6. §63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?
 7. §63.6602 What emission limitations and other requirements 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?
 8. §63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?
 9. §63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?
 10. §63.6605 What are my general requirements for complying with this subpart?
 11. §63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?
 12. §63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

13. §63.6612 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 HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?
14. §63.6615 When must I conduct subsequent performance tests?
15. §63.6620 What performance tests and other procedures must I use?
16. §63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?
17. §63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?
18. §63.6635 How do I monitor and collect data to demonstrate continuous compliance?
§63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?
19. §63.6645 What notifications must I submit and when?
20. §63.6650 What reports must I submit and when?
21. §63.6655 What records must I keep?
22. §63.6660 In what form and how long must I keep my records?
23. §63.6665 What parts of the General Provisions apply to me?
24. §63.6670 Who implements and enforces this subpart?
25. §63.6675 What definitions apply to this subpart?

EUG 38A: Compression Ignition Internal Combustion Engines Subject to 40 CFR Part 60 Subpart III

Engine Number	HP	USE	Fuel
RE-1	140	Water Processing Unit	Diesel
RE-2	140	Water Processing Unit	Diesel
RE-3	154	Water Processing Unit	Diesel
RE-4	154	Water Processing Unit	Diesel
GE-BOHO	320	Boiler House	Diesel
GE-COKER	320	Coker	Diesel
RE-5	60	Water Processing Unit	Diesel

EU	CO		NO _x		PM ₁₀		SO ₂		VOC	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
RE-1	0.94	4.10	0.93	4.06	0.07	0.30	0.29	1.26	0.35	1.52
RE-2	0.94	4.10	0.93	4.06	0.07	0.30	0.29	1.26	0.35	1.52
RE-3	1.03	4.51	1.02	4.46	0.07	0.33	0.32	1.48	0.38	1.67
RE-4	1.03	4.51	1.02	4.46	0.07	0.33	0.32	1.48	0.38	1.67
GE-BOHO	1.84	0.46	2.00	0.50	0.11	0.03	0.01	0.01	0.11	0.03
GE-COKER	1.84	0.46	2.00	0.50	0.11	0.03	0.01	0.01	0.11	0.03
RE-5	0.49	2.16	0.44	1.93	0.04	0.17	0.01	0.01	0.02	0.10

- a. The above engines are subject to 40 CFR Part 60, Subpart III, and shall comply with all applicable requirements: [40 CFR §§ 60.4200 – 4219]

1. § 60.4200: Am I subject to this subpart?
2. § 60.4201: What emissions standards must I meet for non-emergency engines if I am a stationary CI engine manufacturer?
3. § 60.4202: What emissions standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?
4. § 60.4203: How long must my engines meet the emissions standards if I am a stationary CI internal combustion engine manufacturer?
5. § 60.4204: What emissions standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?
6. § 60.4205: What emissions standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?
7. § 60.4206: How long must my engines meet the emissions standards if I am an owner or operator of a stationary CI internal combustion engine?
8. § 60.4207: What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?
9. § 60.4208: What is the deadline for importing or installing stationary CI ICE produced in the previous model year?
10. § 60.4209: What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?
11. § 60.4210: What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?
12. § 60.4211: What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?
13. § 60.4212: What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?
14. § 60.4213: What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?
15. § 60.4214: What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?
16. § 60.4215: What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?
17. § 60.4216: What requirements must I meet for engines used in Alaska?
18. § 60.4217: What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?
19. § 60.4218: What parts of the General Provisions apply to me?

EUG 39: Cone Roof Tanks MACT CC Group 1 Storage Vessels

EU	Point ID	Current Service	Capacity (bbls)	Construction Date
TKD-14	162212	MEK / Toluene	2,715	Before 1964
TKD-15		Mixed Solvent	2,715	Before 1964
TK-473		MEK	1,500	1970
TK-474		MEK	1,500	1979

- a. Upon the next emptying and degassing of TKD-14 and TKD-15, not to exceed January 30, 2026, emissions controls as required by MACT CC shall be implemented. [40 CFR § 63.660]
- b. Upon removal of floating roofs in TK-473 and TK-474, all discharges from TK-473 and TK-474 shall be processed by a solvent recovery system to capture MEK emissions.
- c. The above tanks are subject to 40 CFR Part 63, Subpart CC, and shall comply with applicable provisions for Group 1 storage vessels. [40 CFR § 63.646]

INSIGNIFICANT ACTIVITIES

- a. The following records shall be maintained on-site to verify Insignificant Activities. No recordkeeping is required for those operations that qualify as Trivial Activities.
 1. Space heaters, boilers, process heaters, and emergency flares less than or equal to 5 MMBTU/hr heat input (commercial natural gas).
 - A. A list shall be maintained on-site.
 2. Cold degreasing operations utilize solvents that are denser than air, have a low vapor pressure and produce negligible emissions.
 - A. For each designated piece of equipment, the facility shall maintain on file a record, such as an MSDS, showing the name of the solvent used and a record of the solvent density.
 3. Non-commercial water washing operations (less than 2,250 barrels/year) and drum crushing operations of empty barrels less than or equal to 55 gallons with less than three percent by volume of residual material.
 - A. The facility shall maintain a record of the annual total number of barrels washed.
 - B. The facility shall develop and implement a standard operating procedure to ensure the residual material in drums < 55 gallons is less than 3 percent by volume of residual material.
4. Hazardous waste and hazardous materials drum staging areas.
5. Hydrocarbon contaminated soil aeration pads utilized for soils excavated at the facility only.
6. Exhaust systems for chemical, paint, and/or solvent storage rooms or cabinets, including hazardous waste satellite (accumulation) areas.
7. Hand wiping and spraying of solvents from containers with less than 1 liter capacity used for spot cleaning and/or degreasing in ozone attainment areas
8. Additions or upgrades of instrumentation or control systems that result in emissions increases less than the pollutant quantities specified in 252:100-8-3(e)(1).

9. Emissions from fuel storage/dispensing equipment operated solely for facility owned vehicles if fuel throughput is not more than 2,175 gallons/day, averaged over a 30-day period.

A. Maintain a record of the monthly facility owned vehicle dispensed fuel amount.

10. Emissions from the operation of groundwater remediation wells including but not limited to emissions from venting, pumping, and collecting activities subject to limits for HAPS (§112(b) of CAAA90).

A. A list of all equipment shall be maintained on-site.

11. Emissions from storage tanks constructed with a capacity less than 39,894 gallons which store VOC with a vapor pressure less than 1.5 psia at maximum storage temperature.

A. The facility shall maintain a record on-site.

SPECIFIC CONDITION 3. The Permit Shield is identified in the Standard Conditions, Section VI. Permittee waives the extensive listing required by VI(B). [OAC 252:100-8-6(d)(2)]

SPECIFIC CONDITION 4. The drain rate of the LERU Caustic Scrubber system to the sewer shall not exceed 14 barrels per day and shall not exceed 75 gallons in any two-hour period. The facility complies with this requirement using equipment designed to limit draining.

[Consent Order 98-294]

SPECIFIC CONDITION 5. The owner/operator shall comply with all applicable requirements of the NESHAP: Industrial, Commercial, and Institutional Boilers and Process Heaters, Subpart DDDDD, no later than the date specified in the finalized subpart.

[40 CFR Part 63 §§63.7480 to 63.7575]

- a. §63.7480 What is the purpose of this subpart?
- b. §63.7485 Am I subject to this subpart?
- c. §63.7490 What is the affected source of this subpart?
- d. §63.7491 Are any boilers or process heaters not subject to this subpart?
- e. §63.7495 When do I have to comply with this subpart?
- f. §63.7499 What are the subcategories of boilers and process heaters?
- g. §63.7500 What emission limitations, work practice standards, and operating limits must I meet?
- h. §63.7501 [Reserved]
- i. §63.7505 What are my general requirements for complying with this subpart?
- j. §63.7510 What are my initial compliance requirements and by what date must I conduct them?
- k. §63.7515 When must I conduct subsequent performance tests, fuel analyses, or tune-ups?
- l. §63.7520 What stack tests and procedures must I use?
- m. §63.7521 What fuel analyses, fuel specification, and procedures must I use?
- n. §63.7522 Can I use emissions averaging to comply with this subpart?
- o. §63.7525 What are my monitoring, installation, operation, and maintenance requirements?

- p. §63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?
- q. §63.7533 Can I use efficiency credits earned from implementation of energy conservation measures to comply with this subpart?
- r. §63.7535 Is there a minimum amount of monitoring data I must obtain?
- s. §63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?
- t. §63.7541 How do I demonstrate continuous compliance under the emissions averaging provision?
- u. §63.7545 What notifications must I submit and when?
- v. §63.7550 What reports must I submit and when?
- w. §63.7555 What records must I keep?
- x. §63.7560 In what form and how long must I keep my records?
- y. §63.7565 What parts of the General Provisions apply to me?
- z. §63.7570 Who implements and enforces this subpart?
- aa. §63.7575 What definitions apply to this subpart?

SPECIFIC CONDITION 6. No later than 30 days after each anniversary date of December 31, the permittee shall submit to Air Quality Division of DEQ, with a copy to the US EPA, Region 6, certification of compliance with the terms and conditions of this permit.

[OAC 252:100-8-6(c)(5)(A), (C) & (D)]

SPECIFIC CONDITION 7. The refinery fuel gas shall be treated and monitored to the sulfur specifications of NSPS Subpart J. [Permit No. 2010-599-C (M-2) and 40 CFR § 60.104(a)(1)]

SPECIFIC CONDITION 8. The permittee shall apply for a modified operating permit within 180 days of start-up of new/modified/reconstructed equipment authorized by this permit.

SPECIFIC CONDITION 9. The facility was granted an extension of compliance until July 29, 2019, to flare requirements under 40 CFR § 63.670(e), (i), and (m). [40 CFR § 63.6(i)(4)(i)(A)]

SPECIFIC CONDITION 10. This facility is considered a Prevention of Significant Deterioration (PSD) facility. As such, the facility is subject to the provisions of OAC 252:100-8-36.2(c) for any project as defined therein. [OAC 252:100-8-36.2(c)]

**MAJOR SOURCE AIR QUALITY PERMIT
STANDARD CONDITIONS
(June 21, 2016)**

SECTION I. DUTY TO COMPLY

A. This is a permit to operate / construct this specific facility in accordance with the federal Clean Air Act (42 U.S.C. 7401, et al.) and under the authority of the Oklahoma Clean Air Act and the rules promulgated there under. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

B. The issuing Authority for the permit is the Air Quality Division (AQD) of the Oklahoma Department of Environmental Quality (DEQ). The permit does not relieve the holder of the obligation to comply with other applicable federal, state, or local statutes, regulations, rules, or ordinances. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

C. The permittee shall comply with all conditions of this permit. Any permit noncompliance shall constitute a violation of the Oklahoma Clean Air Act and shall be grounds for enforcement action, permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application. All terms and conditions are enforceable by the DEQ, by the Environmental Protection Agency (EPA), and by citizens under section 304 of the Federal Clean Air Act (excluding state-only requirements). This permit is valid for operations only at the specific location listed.

[40 C.F.R. §70.6(b), OAC 252:100-8-1.3 and OAC 252:100-8-6(a)(7)(A) and (b)(1)]

D. 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 the permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations. [OAC 252:100-8-6(a)(7)(B)]

SECTION II. REPORTING OF DEVIATIONS FROM PERMIT TERMS

A. Any exceedance resulting from an emergency and/or posing an imminent and substantial danger to public health, safety, or the environment shall be reported in accordance with Section XIV (Emergencies). [OAC 252:100-8-6(a)(3)(C)(iii)(I) & (II)]

B. Deviations that result in emissions exceeding those allowed in this permit shall be reported consistent with the requirements of OAC 252:100-9, Excess Emission Reporting Requirements. [OAC 252:100-8-6(a)(3)(C)(iv)]

C. Every written report submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F. [OAC 252:100-8-6(a)(3)(C)(iv)]

SECTION III. MONITORING, TESTING, RECORDKEEPING & REPORTING

A. The permittee shall keep records as specified in this permit. These records, including monitoring data and necessary support information, shall be retained on-site or at a nearby field office for a period of at least five years from the date of the monitoring sample, measurement, report, or application, and shall be made available for inspection by regulatory personnel upon request. Support information includes all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Where appropriate, the permit may specify that records may be maintained in computerized form.

[OAC 252:100-8-6 (a)(3)(B)(ii), OAC 252:100-8-6(c)(1), and OAC 252:100-8-6(c)(2)(B)]

B. Records of required monitoring shall include:

- (1) the date, place and time of sampling or measurement;
- (2) the date or dates analyses were performed;
- (3) the company or entity which performed the analyses;
- (4) the analytical techniques or methods used;
- (5) the results of such analyses; and
- (6) the operating conditions existing at the time of sampling or measurement.

[OAC 252:100-8-6(a)(3)(B)(i)]

C. No later than 30 days after each six (6) month period, after the date of the issuance of the original Part 70 operating permit or alternative date as specifically identified in a subsequent Part 70 operating permit, the permittee shall submit to AQD a report of the results of any required monitoring. All instances of deviations from permit requirements since the previous report shall be clearly identified in the report. Submission of these periodic reports will satisfy any reporting requirement of Paragraph E below that is duplicative of the periodic reports, if so noted on the submitted report.

[OAC 252:100-8-6(a)(3)(C)(i) and (ii)]

D. If any testing shows emissions in excess of limitations specified in this permit, the owner or operator shall comply with the provisions of Section II (Reporting of Deviations From Permit Terms) of these standard conditions.

[OAC 252:100-8-6(a)(3)(C)(iii)]

E. In addition to any monitoring, recordkeeping or reporting requirement specified in this permit, monitoring and reporting may be required under the provisions of OAC 252:100-43, Testing, Monitoring, and Recordkeeping, or as required by any provision of the Federal Clean Air Act or Oklahoma Clean Air Act.

[OAC 252:100-43]

F. Any Annual Certification of Compliance, Semi Annual Monitoring and Deviation Report, Excess Emission Report, and Annual Emission Inventory submitted in accordance with this permit shall be certified by a responsible official. This certification shall be signed by a responsible official and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

[OAC 252:100-8-5(f), OAC 252:100-8-6(a)(3)(C)(iv), OAC 252:100-8-6(c)(1), OAC 252:100-9-7(e), and OAC 252:100-5-2.1(f)]

G. Any owner or operator subject to the provisions of New Source Performance Standards (“NSPS”) under 40 CFR Part 60 or National Emission Standards for Hazardous Air Pollutants (“NESHAPs”) under 40 CFR Parts 61 and 63 shall maintain a file of all measurements and other information required by the applicable general provisions and subpart(s). These records shall be maintained in a permanent file suitable for inspection, shall be retained for a period of at least five years as required by Paragraph A of this Section, and shall include records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility, any malfunction of the air pollution control equipment; and any periods during which a continuous monitoring system or monitoring device is inoperative.

[40 C.F.R. §§60.7 and 63.10, 40 CFR Parts 61, Subpart A, and OAC 252:100, Appendix Q]

H. The permittee of a facility that is operating subject to a schedule of compliance shall submit to the DEQ a progress report at least semi-annually. The progress reports shall contain dates for achieving the activities, milestones or compliance required in the schedule of compliance and the dates when such activities, milestones or compliance was achieved. The progress reports shall also contain an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted. [OAC 252:100-8-6(c)(4)]

I. All testing must be conducted under the direction of qualified personnel by methods approved by the Division Director. All tests shall be made and the results calculated in accordance with standard test procedures. The use of alternative test procedures must be approved by EPA. When a portable analyzer is used to measure emissions, it shall be setup, calibrated, and operated in accordance with the manufacturer’s instructions and in accordance with a protocol meeting the requirements of the “AQD Portable Analyzer Guidance” document or an equivalent method approved by Air Quality. [OAC 252:100-8-6(a)(3)(A)(iv), and OAC 252:100-43]

J. The reporting of total particulate matter emissions as required in Part 7 of OAC 252:100-8 (Permits for Part 70 Sources), OAC 252:100-19 (Control of Emission of Particulate Matter), and OAC 252:100-5 (Emission Inventory), shall be conducted in accordance with applicable testing or calculation procedures, modified to include back-half condensables, for the concentration of particulate matter less than 10 microns in diameter (PM₁₀). NSPS may allow reporting of only particulate matter emissions caught in the filter (obtained using Reference Method 5).

K. The permittee shall submit to the AQD a copy of all reports submitted to the EPA as required by 40 C.F.R. Part 60, 61, and 63, for all equipment constructed or operated under this permit subject to such standards. [OAC 252:100-8-6(c)(1) and OAC 252:100, Appendix Q]

SECTION IV. COMPLIANCE CERTIFICATIONS

A. No later than 30 days after each anniversary date of the issuance of the original Part 70 operating permit or alternative date as specifically identified in a subsequent Part 70 operating permit, the permittee shall submit to the AQD, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit and of any other applicable requirements which have become effective since the issuance of this permit.

[OAC 252:100-8-6(c)(5)(A), and (D)]

B. The compliance certification shall describe the operating permit term or condition that is the basis of the certification; the current compliance status; whether compliance was continuous or intermittent; the methods used for determining compliance, currently and over the reporting period. The compliance certification shall also include such other facts as the permitting authority may require to determine the compliance status of the source.

[OAC 252:100-8-6(c)(5)(C)(i)-(v)]

C. The compliance certification shall contain a certification by a responsible official as to the results of the required monitoring. This certification shall be signed by a responsible official, and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

[OAC 252:100-8-5(f) and OAC 252:100-8-6(c)(1)]

D. Any facility reporting noncompliance shall submit a schedule of compliance for emissions units or stationary sources that are not in compliance with all applicable requirements. This schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements for which the emissions unit or stationary source is in noncompliance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the emissions unit or stationary source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based, except that a compliance plan shall not be required for any noncompliance condition which is corrected within 24 hours of discovery.

[OAC 252:100-8-5(e)(8)(B) and OAC 252:100-8-6(c)(3)]

SECTION V. REQUIREMENTS THAT BECOME APPLICABLE DURING THE PERMIT TERM

The permittee shall comply with any additional requirements that become effective during the permit term and that are applicable to the facility. Compliance with all new requirements shall be certified in the next annual certification.

[OAC 252:100-8-6(c)(6)]

SECTION VI. PERMIT SHIELD

A. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC 252:100-8) shall be deemed compliance with the applicable requirements identified and included in this permit. [OAC 252:100-8-6(d)(1)]

B. Those requirements that are applicable are listed in the Standard Conditions and the Specific Conditions of this permit. Those requirements that the applicant requested be determined as not applicable are summarized in the Specific Conditions of this permit. [OAC 252:100-8-6(d)(2)]

SECTION VII. ANNUAL EMISSIONS INVENTORY & FEE PAYMENT

The permittee shall file with the AQD an annual emission inventory and shall pay annual fees based on emissions inventories. The methods used to calculate emissions for inventory purposes shall be based on the best available information accepted by AQD.

[OAC 252:100-5-2.1, OAC 252:100-5-2.2, and OAC 252:100-8-6(a)(8)]

SECTION VIII. TERM OF PERMIT

A. Unless specified otherwise, the term of an operating permit shall be five years from the date of issuance. [OAC 252:100-8-6(a)(2)(A)]

B. A source's right to operate shall terminate upon the expiration of its permit unless a timely and complete renewal application has been submitted at least 180 days before the date of expiration. [OAC 252:100-8-7.1(d)(1)]

C. A duly issued construction permit or authorization to construct or modify will terminate and become null and void (unless extended as provided in OAC 252:100-8-1.4(b)) if the construction is not commenced within 18 months after the date the permit or authorization was issued, or if work is suspended for more than 18 months after it is commenced. [OAC 252:100-8-1.4(a)]

D. The recipient of a construction permit shall apply for a permit to operate (or modified operating permit) within 180 days following the first day of operation. [OAC 252:100-8-4(b)(5)]

SECTION IX. SEVERABILITY

The provisions of this permit are severable and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

[OAC 252:100-8-6 (a)(6)]

SECTION X. PROPERTY RIGHTS

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

[OAC 252:100-8-6(a)(7)(D)]

B. This permit shall not be considered in any manner affecting the title of the premises upon which the equipment is located and does not release the permittee from any liability for damage to persons or property caused by or resulting from the maintenance or operation of the equipment for which the permit is issued.

[OAC 252:100-8-6(c)(6)]

SECTION XI. DUTY TO PROVIDE INFORMATION

A. The permittee shall furnish to the DEQ, upon receipt of a written request and within sixty (60) days of the request unless the DEQ specifies another time period, any information that the DEQ may request to determine whether cause exists for modifying, reopening, revoking, reissuing, terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the DEQ copies of records required to be kept by the permit.

[OAC 252:100-8-6(a)(7)(E)]

B. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 27A O.S. § 2-5-105(18). Confidential information shall be clearly labeled as such and shall be separable from the main body of the document such as in an attachment.

[OAC 252:100-8-6(a)(7)(E)]

C. Notification to the AQD of the sale or transfer of ownership of this facility is required and shall be made in writing within thirty (30) days after such sale or transfer.

[Oklahoma Clean Air Act, 27A O.S. § 2-5-112(G)]

SECTION XII. REOPENING, MODIFICATION & REVOCATION

A. The permit may be modified, revoked, reopened and reissued, or terminated for cause. Except as provided for minor permit modifications, the filing of a request by the permittee for a permit modification, revocation and reissuance, termination, notification of planned changes, or anticipated noncompliance does not stay any permit condition.

[OAC 252:100-8-6(a)(7)(C) and OAC 252:100-8-7.2(b)]

B. The DEQ will reopen and revise or revoke this permit prior to the expiration date in the following circumstances:

[OAC 252:100-8-7.3 and OAC 252:100-8-7.4(a)(2)]

- (1) Additional requirements under the Clean Air Act become applicable to a major source category three or more years prior to the expiration date of this permit. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit.
- (2) The DEQ or the EPA determines that this permit contains a material mistake or that the permit must be revised or revoked to assure compliance with the applicable requirements.

- (3) The DEQ or the EPA determines that inaccurate information was used in establishing the emission standards, limitations, or other conditions of this permit. The DEQ may revoke and not reissue this permit if it determines that the permittee has submitted false or misleading information to the DEQ.
- (4) DEQ determines that the permit should be amended under the discretionary reopening provisions of OAC 252:100-8-7.3(b).

C. The permit may be reopened for cause by EPA, pursuant to the provisions of OAC 100-8-7.3(d). [OAC 100-8-7.3(d)]

D. The permittee shall notify AQD before making changes other than those described in Section XVIII (Operational Flexibility), those qualifying for administrative permit amendments, or those defined as an Insignificant Activity (Section XVI) or Trivial Activity (Section XVII). The notification should include any changes which may alter the status of a “grandfathered source,” as defined under AQD rules. Such changes may require a permit modification.

[OAC 252:100-8-7.2(b) and OAC 252:100-5-1.1]

E. Activities that will result in air emissions that exceed the trivial/insignificant levels and that are not specifically approved by this permit are prohibited. [OAC 252:100-8-6(c)(6)]

SECTION XIII. INSPECTION & ENTRY

A. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized regulatory officials to perform the following (subject to the permittee's right to seek confidential treatment pursuant to 27A O.S. Supp. 1998, § 2-5-105(17) for confidential information submitted to or obtained by the DEQ under this section):

- (1) enter upon the permittee's premises during reasonable/normal working hours where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
- (2) have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- (3) inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- (4) as authorized by the Oklahoma Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit.

[OAC 252:100-8-6(c)(2)]

SECTION XIV. EMERGENCIES

A. Any exceedance resulting from an emergency shall be reported to AQD promptly but no later than 4:30 p.m. on the next working day after the permittee first becomes aware of the exceedance. This notice shall contain a description of the emergency, the probable cause of the exceedance, any steps taken to mitigate emissions, and corrective actions taken.

[OAC 252:100-8-6 (a)(3)(C)(iii)(I) and (IV)]

B. Any exceedance that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to AQD as soon as is practicable; but under no circumstance shall notification be more than 24 hours after the exceedance. [OAC 252:100-8-6(a)(3)(C)(iii)(II)]

C. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. [OAC 252:100-8-2]

D. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that: [OAC 252:100-8-6 (e)(2)]

- (1) an emergency occurred and the permittee can identify the cause or causes of the emergency;
- (2) the permitted facility was at the time being properly operated;
- (3) during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit.

E. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [OAC 252:100-8-6(e)(3)]

F. Every written report or document submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F. [OAC 252:100-8-6(a)(3)(C)(iv)]

SECTION XV. RISK MANAGEMENT PLAN

The permittee, if subject to the provision of Section 112(r) of the Clean Air Act, shall develop and register with the appropriate agency a risk management plan by June 20, 1999, or the applicable effective date. [OAC 252:100-8-6(a)(4)]

SECTION XVI. INSIGNIFICANT ACTIVITIES

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate individual emissions units that are either on the list in Appendix I to OAC Title 252, Chapter 100, or whose actual calendar year emissions do not exceed any of the limits below. Any activity to which a State or Federal applicable requirement applies is not insignificant even if it meets the criteria below or is included on the insignificant activities list.

- (1) 5 tons per year of any one criteria pollutant.
- (2) 2 tons per year for any one hazardous air pollutant (HAP) or 5 tons per year for an aggregate of two or more HAP's, or 20 percent of any threshold less than 10 tons per year for single HAP that the EPA may establish by rule.

[OAC 252:100-8-2 and OAC 252:100, Appendix I]

SECTION XVII. TRIVIAL ACTIVITIES

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate any individual or combination of air emissions units that are considered inconsequential and are on the list in Appendix J. Any activity to which a State or Federal applicable requirement applies is not trivial even if included on the trivial activities list.

[OAC 252:100-8-2 and OAC 252:100, Appendix J]

SECTION XVIII. OPERATIONAL FLEXIBILITY

A. A facility may implement any operating scenario allowed for in its Part 70 permit without the need for any permit revision or any notification to the DEQ (unless specified otherwise in the permit). When an operating scenario is changed, the permittee shall record in a log at the facility the scenario under which it is operating.

[OAC 252:100-8-6(a)(10) and (f)(1)]

B. The permittee may make changes within the facility that:

- (1) result in no net emissions increases,
- (2) are not modifications under any provision of Title I of the federal Clean Air Act, and
- (3) do not cause any hourly or annual permitted emission rate of any existing emissions unit to be exceeded;

provided that the facility provides the EPA and the DEQ with written notification as required below in advance of the proposed changes, which shall be a minimum of seven (7) days, or twenty-four (24) hours for emergencies as defined in OAC 252:100-8-6 (e). The permittee, the DEQ, and the EPA shall attach each such notice to their copy of the permit. For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. The permit shield provided by this permit does not apply to any change made pursuant to this paragraph. [OAC 252:100-8-6(f)(2)]

SECTION XIX. OTHER APPLICABLE & STATE-ONLY REQUIREMENTS

A. The following applicable requirements and state-only requirements apply to the facility unless elsewhere covered by a more restrictive requirement:

- (1) Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in the Open Burning Subchapter.

[OAC 252:100-13]

- (2) No particulate emissions from any fuel-burning equipment with a rated heat input of 10 MMBTUH or less shall exceed 0.6 lb/MMBTU. [OAC 252:100-19]
- (3) For all emissions units not subject to an opacity limit promulgated under 40 C.F.R., Part 60, NSPS, no discharge of greater than 20% opacity is allowed except for:
[OAC 252:100-25]
- (a) Short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity;
- (b) Smoke resulting from fires covered by the exceptions outlined in OAC 252:100-13-7;
- (c) An emission, where the presence of uncombined water is the only reason for failure to meet the requirements of OAC 252:100-25-3(a); or
- (d) Smoke generated due to a malfunction in a facility, when the source of the fuel producing the smoke is not under the direct and immediate control of the facility and the immediate constriction of the fuel flow at the facility would produce a hazard to life and/or property.
- (4) No visible fugitive dust emissions shall be discharged beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. [OAC 252:100-29]
- (5) No sulfur oxide emissions from new gas-fired fuel-burning equipment shall exceed 0.2 lb/MMBTU. No existing source shall exceed the listed ambient air standards for sulfur dioxide. [OAC 252:100-31]
- (6) Volatile Organic Compound (VOC) storage tanks built after December 28, 1974, and with a capacity of 400 gallons or more storing a liquid with a vapor pressure of 1.5 psia or greater under actual conditions shall be equipped with a permanent submerged fill pipe or with a vapor-recovery system. [OAC 252:100-37-15(b)]
- (7) All fuel-burning equipment shall at all times be properly operated and maintained in a manner that will minimize emissions of VOCs. [OAC 252:100-37-36]

SECTION XX. STRATOSPHERIC OZONE PROTECTION

A. The permittee shall comply with the following standards for production and consumption of ozone-depleting substances: [40 CFR 82, Subpart A]

- (1) Persons producing, importing, or placing an order for production or importation of certain class I and class II substances, HCFC-22, or HCFC-141b shall be subject to the requirements of §82.4;
- (2) Producers, importers, exporters, purchasers, and persons who transform or destroy certain class I and class II substances, HCFC-22, or HCFC-141b are subject to the recordkeeping requirements at §82.13; and
- (3) Class I substances (listed at Appendix A to Subpart A) include certain CFCs, Halons, HBFCs, carbon tetrachloride, trichloroethane (methyl chloroform), and bromomethane

(Methyl Bromide). Class II substances (listed at Appendix B to Subpart A) include HCFCs.

B. If the permittee performs a service on motor (fleet) vehicles when this service involves an ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all applicable requirements. Note: The term “motor vehicle” as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term “MVAC” as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC-22 refrigerant. [40 CFR 82, Subpart B]

C. The permittee shall comply with the following standards for recycling and emissions reduction except as provided for MVACs in Subpart B: [40 CFR 82, Subpart F]

- (1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156;
- (2) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158;
- (3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161;
- (4) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record-keeping requirements pursuant to § 82.166;
- (5) Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to § 82.158; and
- (6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.

SECTION XXI. TITLE V APPROVAL LANGUAGE

A. DEQ wishes to reduce the time and work associated with permit review and, wherever it is not inconsistent with Federal requirements, to provide for incorporation of requirements established through construction permitting into the Source’s Title V permit without causing redundant review. Requirements from construction permits may be incorporated into the Title V permit through the administrative amendment process set forth in OAC 252:100-8-7.2(a) only if the following procedures are followed:

- (1) The construction permit goes out for a 30-day public notice and comment using the procedures set forth in 40 C.F.R. § 70.7(h)(1). This public notice shall include notice to the public that this permit is subject to EPA review, EPA objection, and petition to EPA, as provided by 40 C.F.R. § 70.8; that the requirements of the construction permit will be incorporated into the Title V permit through the administrative amendment process; that the public will not receive another opportunity to provide comments when the requirements are incorporated into the Title V permit; and that EPA review, EPA objection, and petitions to EPA will not be available to the public when requirements from the construction permit are incorporated into the Title V permit.
- (2) A copy of the construction permit application is sent to EPA, as provided by 40 CFR § 70.8(a)(1).

- (3) A copy of the draft construction permit is sent to any affected State, as provided by 40 C.F.R. § 70.8(b).
- (4) A copy of the proposed construction permit is sent to EPA for a 45-day review period as provided by 40 C.F.R. § 70.8(a) and (c).
- (5) The DEQ complies with 40 C.F.R. § 70.8(c) upon the written receipt within the 45-day comment period of any EPA objection to the construction permit. The DEQ shall not issue the permit until EPA's objections are resolved to the satisfaction of EPA.
- (6) The DEQ complies with 40 C.F.R. § 70.8(d).
- (7) A copy of the final construction permit is sent to EPA as provided by 40 CFR § 70.8(a).
- (8) The DEQ shall not issue the proposed construction permit until any affected State and EPA have had an opportunity to review the proposed permit, as provided by these permit conditions.
- (9) Any requirements of the construction permit may be reopened for cause after incorporation into the Title V permit by the administrative amendment process, by DEQ as provided in OAC 252:100-8-7.3(a), (b), and (c), and by EPA as provided in 40 C.F.R. § 70.7(f) and (g).
- (10) The DEQ shall not issue the administrative permit amendment if performance tests fail to demonstrate that the source is operating in substantial compliance with all permit requirements.

B. To the extent that these conditions are not followed, the Title V permit must go through the Title V review process.

SECTION XXII. CREDIBLE EVIDENCE

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any provision of the Oklahoma implementation plan, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. [OAC 252:100-43-6]



PART 70 PERMIT

AIR QUALITY DIVISION
STATE OF OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY
707 N. ROBINSON, SUITE 4100
P.O. BOX 1677
OKLAHOMA CITY, OKLAHOMA 73101-1677

Permit No. 2018-0594-C (M-7)

HollyFrontier Tulsa Refining – Tulsa LLC,

having complied with the requirements of the law, is hereby granted permission to modify the Tulsa Refinery West, at 1700 S. Union, Tulsa, Tulsa County, Oklahoma, subject to the following Standard Conditions dated June 21, 2016, and Specific Conditions, both attached.

In the absence of commencement of construction, this permit shall expire 18 months from the issuance date, except as authorized under Section VIII of the Standard Conditions.

DRAFT/PROPOSED

Division Director
Air Quality Division

Date

DEQ Form #100-885

Revised 10/20/06

Jennifer Sanchez, Environmental Manager
HollyFrontier Tulsa Refining – Tulsa LLC
1700 S. Union
Tulsa, OK 74107

Re: Permit No. 2018-0594-C (M-7)
Tulsa Refinery West (FAC ID 1477)

Dear Ms. Sanchez:

Enclosed is the modified permit authorizing construction of the referenced facility. Please note that this permit is issued subject to the standard and specific conditions, which are attached. These conditions must be carefully followed since they define the limits of the permit and will be confirmed by periodic inspections.

Also note that you are required to annually submit an emissions inventory for this facility. An emissions inventory must be completed through DEQ's electronic reporting system by April 1st of every year. Any questions concerning the submittal process should be referred to the Emissions Inventory Staff at (405) 702-4100.

Thank you for your cooperation in this matter. If we may be of further service, please contact the permit writer at david.schutz@deq.ok.gov or (405) 702-4198.

Sincerely,

DRAFT/PROPOSED

Phillip Fielder, P.E.
Chief Engineer
Air Quality Division

Department of Environmental Quality (DEQ)
Air Quality Division (AQD)
Acronym List
9-10-21

ACFM	Actual Cubic Feet per Minute	GEP	Good Engineering Practice
AD	Applicability Determination	GHG	Greenhouse Gases
AFRC	Air-to-Fuel Ratio Controller	GR	Grain(s) (gr)
API	American Petroleum Institute		
ASTM	American Society for Testing and Materials	H₂CO	Formaldehyde
		H₂S	Hydrogen Sulfide
		HAP	Hazardous Air Pollutants
BACT	Best Available Control Technology	HC	Hydrocarbon
BAE	Baseline Actual Emissions	HCFC	Hydrochlorofluorocarbon
BBL	Barrel(s)	HFR	Horizontal Fixed Roof
BHP	Brake Horsepower (bhp)	HON	Hazardous Organic NESHAP
BTU	British thermal unit (Btu)	HP	Horsepower (hp)
		HR	Hour (hr)
C&E	Compliance and Enforcement	I&M	Inspection and Maintenance
CAA	Clean Air Act	IBR	Incorporation by Reference
CAM	Compliance Assurance Monitoring	ICE	Internal Combustion Engine
CAS	Chemical Abstract Service		
CAAA	Clean Air Act Amendments	LAER	Lowest Achievable Emission Rate
CC	Catalytic Converter	LB	Pound(s) [Mass] (lb, lbs, lbm)
CCR	Continuous Catalyst Regeneration	LB/HR	Pound(s) per Hour (lb/hr)
CD	Consent Decree	LDAR	Leak Detection and Repair
CEM	Continuous Emission Monitor	LNG	Liquefied Natural Gas
CFC	Chlorofluorocarbon	LT	Long Ton(s) (metric)
CFR	Code of Federal Regulations		
CI	Compression Ignition	M	Thousand (Roman Numeral)
CNG	Compressed Natural Gas	MAAC	Maximum Acceptable Ambient Concentration
CO	Carbon Monoxide or Consent Order	MACT	Maximum Achievable Control Technology
COA	Capable of Accommodating	MM	Prefix used for Million (Thousand-Thousand)
COM	Continuous Opacity Monitor	MMBTU	Million British Thermal Units (MMBtu)
		MMBTUH	Million British Thermal Units per Hour (MMBtu/hr)
D	Day	MMSCF	Million Standard Cubic Feet (MMscf)
DEF	Diesel Exhaust Fluid	MMSCFD	Million Standard Cubic Feet per Day
DG	Demand Growth	MSDS	Material Safety Data Sheet
DSCF	Dry Standard (At Standard Conditions) Cubic Foot (Feet)	MWC	Municipal Waste Combustor
		MWe	Megawatt Electrical
EGU	Electric Generating Unit	NA	Nonattainment
EI	Emissions Inventory	NAAQS	National Ambient Air Quality Standards
EPA	Environmental Protection Agency	NAICS	North American Industry Classification System
ESP	Electrostatic Precipitator	NESHAP	National Emission Standards for Hazardous Air Pollutants
EUG	Emissions Unit Group	NH₃	Ammonia
EUSGU	Electric Utility Steam Generating Unit	NMHC	Non-methane Hydrocarbon
FCE	Full Compliance Evaluation	NGL	Natural Gas Liquids
FCCU	Fluid Catalytic Cracking Unit	NO₂	Nitrogen Dioxide
FIP	Federal Implementation Plan	NO_x	Nitrogen Oxides
FR	Federal Register		
GACT	Generally Achievable Control Technology		
GAL	Gallon (gal)		
GDF	Gasoline Dispensing Facility		

NOI	Notice of Intent	SIP	State Implementation Plan
NSCR	Non-Selective Catalytic Reduction	SNCR	Selective Non-Catalytic Reduction
NSPS	New Source Performance Standards	SO₂	Sulfur Dioxide
NSR	New Source Review	SO_x	Sulfur Oxides
O₃	Ozone	SOP	Standard Operating Procedure
O&G	Oil and Gas	SRU	Sulfur Recovery Unit
O&M	Operation and Maintenance		
O&NG	Oil and Natural Gas	T	Tons
OAC	Oklahoma Administrative Code	TAC	Toxic Air Contaminant
OC	Oxidation Catalyst	TEG	Triethylene Glycol
		THC	Total Hydrocarbons
PAH	Polycyclic Aromatic Hydrocarbons	TPY	Tons per Year
PAE	Projected Actual Emissions	TRS	Total Reduced Sulfur
PAL	Plant-wide Applicability Limit	TSP	Total Suspended Particulates
Pb	Lead	TV	Title V of the Federal Clean Air Act
PBR	Permit by Rule		
PCB	Polychlorinated Biphenyls	µg/m³	Micrograms per Cubic Meter
PCE	Partial Compliance Evaluation	US EPA	U. S. Environmental Protection Agency
PEA	Portable Emissions Analyzer		
PFAS	Per- and Polyfluoroalkyl Substance	VFR	Vertical Fixed Roof
PM	Particulate Matter	VMT	Vehicle Miles Traveled
PM_{2.5}	Particulate Matter with an Aerodynamic Diameter <= 2.5 Micrometers	VOC	Volatile Organic Compound
PM₁₀	Particulate Matter with an Aerodynamic Diameter <= 10 Micrometers	VOL	Volatile Organic Liquid
POM	Particulate Organic Matter or Polycyclic Organic Matter	VRT	Vapor Recovery Tower
		VRU	Vapor Recovery Unit
ppb	Parts per Billion	YR	Year
ppm	Parts per Million	2SLB	2-Stroke Lean Burn
ppmv	Parts per Million Volume	4SLB	4-Stroke Lean Burn
ppmvd	Parts per Million Dry Volume	4SRB	4-Stroke Rich Burn
PSD	Prevention of Significant Deterioration		
psi	Pounds per Square Inch		
psia	Pounds per Square Inch Absolute		
psig	Pounds per Square Inch Gage		
RACT	Reasonably Available Control Technology		
RATA	Relative Accuracy Test Audit		
RAP	Regulated Air Pollutant or Reclaimed Asphalt Pavement		
RFG	Refinery Fuel Gas		
RICE	Reciprocating Internal Combustion Engine		
RO	Responsible Official		
ROAT	Regional Office at Tulsa		
RVP	Reid Vapor Pressure		
SCC	Source Classification Code		
SCF	Standard Cubic Foot		
SCFD	Standard Cubic Feet per Day		
SCFM	Standard Cubic Feet per Minute		
SCR	Selective Catalytic Reduction		
SER	Significant Emission Rate		
SI	Spark Ignition		
SIC	Standard Industrial Classification		

HollyFrontier Tulsa Refining
Attn: Ms. Jennifer Sanchez
1700 S. Union Avenue
Tulsa, OK 74107

Permit Number: 2018-0594-C (M-7)
Permit Writer: David Schutz
Date: October 31, 2022

SUBJECT: Tulsa Refinery West
HollyFrontier Tulsa Refining
FAC ID 1477
Tulsa County, Oklahoma

Dear Ms. Sanchez:

Air Quality Division has completed the initial review of your permit application referenced above. This application has been determined to be a **Tier II**. In accordance with 27A O.S. § 2-14-302 and OAC 252:002-31 the enclosed draft permit is now ready for public review. The requirements for public review include the following steps which you must accomplish:

1. Publish at least one legal notice (one day) in at least one newspaper of general circulation within the county where the facility is located (Instructions enclosed);
2. Submit sample notice and provide date of publication to **AQD 5 days prior to notice publishing**;
3. Provide for public review, for a period of 30 days following the date of the newspaper announcement, a copy of the application and draft permit at a convenient location (preferentially at a public location) within the county of the facility;
4. Send AQD a signed affidavit of publication for the notice(s) from Item #1 above within 20 days of publication of the draft permit. Any additional comments or requested changes you have for the draft permit or the application should be submitted within 30 days of publication.

Thank you for your cooperation. If you have any questions, please refer to the permit number above and contact me or the permit writer at (405) 702-4100.

Sincerely,



Phillip Fielder, P.E.
Chief Engineer
AIR QUALITY DIVISION

**NOTICE OF DRAFT PERMIT
TIER II or TIER III AIR QUALITY PERMIT APPLICATION**

APPLICANT RESPONSIBILITIES

Permit applicants are required to give public notice that a Tier II or Tier III draft permit has been prepared by DEQ. The notice must be published in one newspaper local to the site or facility. Note that if either the applicant or the public requests a public meeting, this must be arranged by the DEQ.

1. Complete the public notice using the samples provided by AQD below. Please use the version applicable to the requested permit action;
Version 1 – Traditional NSR process for a construction permit
Version 2 – Enhanced NSR process for a construction permit
Version 3 – initial Title V (Part 70 Source) operating permit, Title V operating permit renewal, Significant Modification to a Title V operating permit, and any Title V operating permit modification incorporating a construction permit that followed Traditional NSR process
2. Determine appropriate newspaper local to facility for publishing;
3. Submit sample notice and provide date of publication to AQD 5 days prior to notice publishing;
4. Upon publication, a signed affidavit of publication must be obtained from the newspaper and sent to AQD.

REQUIRED CONTENT (27A O.S. § 2-14-302 and OAC 252:4-7-13(c))

1. A statement that a Tier II or Tier III draft permit has been prepared by DEQ;
2. Name and address of the applicant;
3. Name, address, driving directions, legal description and county of the site or facility;
4. The type of permit or permit action being sought;
5. A description of activities to be regulated, including an estimate of emissions from the facility;
6. Location(s) where the application and draft permit may be reviewed (a location in the county where the site/facility is located must be included);
7. Name, address, and telephone number of the applicant and DEQ contacts;
8. Any additional information required by DEQ rules or deemed relevant by applicant;
9. A 30-day opportunity to request a formal public meeting on the draft permit.

SAMPLE NOTICE on page 2.

SAMPLE NOTICE (*Italicized print is to be filled in by the applicant.*):

DEQ NOTICE OF TIER ...II or III... DRAFT PERMIT

A Tier ...II or III... application for an air quality construction permit for a modification at an existing major facility has been filed with the Oklahoma Department of Environmental Quality (DEQ) by applicant, ...name and address.

The applicant requests approval to ...brief description of purpose of application... at the ...site/facility name ... [proposed to be] located at ...physical address (if any), driving directions, and legal description including county....

In response to the application, DEQ has prepared a draft construction permit (Permit Number: ...xxxx-xxxx-x...), which may be reviewed at ...locations (one must be in the county where the site/facility is located)... or at the Air Quality Division's main office (see address below). The draft permit is also available for review under Permits for Public Review on the DEQ Web Page: <http://www.deq.ok.gov/>

This draft permit would authorize the facility to emit the following regulated pollutants: (list each pollutant and amounts in tons per year (TPY)), which represents (identify the emissions change (increase or decrease) involved in the modification). [Or add: The modification will not result in a change in emissions.] [For PSD permits only, add: The project will consume the following increment levels: (list the amount of increment consumption for each pollutant in ug/m³).]

The public comment period ends 30 days after the date of publication of this notice. Any person may submit written comments concerning the draft permit to the Air Quality Division contact listed below or as directed through the corresponding online notice. Only those issues relevant to the proposed modification(s) are open for comment. A public meeting on the draft permit may also be requested in writing at the same address. Note that all public meetings are to be arranged and conducted by DEQ staff.

In addition to the public comment opportunity offered under this notice, this draft permit is subject to U.S. Environmental Protection Agency (EPA) review, EPA objection, and petition to EPA, as provided by 40 CFR § 70.8. The requirements of the construction permit will be incorporated into the Title V operating permit through the administrative amendment process. Therefore, no additional opportunity to provide comments or EPA review, EPA objection, and petitions to EPA will be available to the public when requirements from the construction permit are incorporated into the Title V operating permit.

If the Administrator (EPA) does not object to the proposed permit, the public has 60 days following the Administrator's 45-day review period to petition the Administrator to make such an objection as provided in 40 CFR 70.8(d) and in OAC 252:100-8-8(j).

Information on all permit actions including draft permits, proposed permits, final issued permits and applicable review timelines are available in the Air Quality section of the DEQ Web page: <http://www.deq.ok.gov/>.

For additional information, contact ...names, addresses and telephone numbers of contact persons for the applicant, or contact DEQ at: Chief Engineer, Air Quality Division, 707 N. Robinson, Suite 4100, P.O. Box 1677, Oklahoma City, OK, 73101-1677. Phone No. (405) 702-4100.

October 31, 2022

Cherokee Nation
Attn: Chuck Hoskins, Jr. Principal Chief
P.O. Box 948
Tahlequah, OK 74465

Re: Permit Application No. **2018-0594-C (M-7)**
HollyFrontier Tulsa Refining – Tulsa LLC (FAC ID 1477)
Tulsa Refinery West (SIC 2911 / NAICS 324110)
Heater H-102 Reconstruction
1700 South Union
Tulsa, Tulsa County, OK (36.13765° N, 96.01154° W)
Date Received: March 4, 2022

Dear Mr. Hoskins:

The Oklahoma Department of Environmental Quality (ODEQ), Air Quality Division (AQD), has received the Tier II/Tier III application referenced above. A Tier II/III application requires the facility provide a 30-day public comment period on the draft Tier II/III permit and a 20-day public comment period on a proposed Tier III permit at a public location within the county of the facility. The process requires the facility to notify the public by newspaper notice in a newspaper in the county of the proposed project. Since the proposed project falls within your Tribal jurisdiction, AQD is providing this direct notice. This letter notification is in addition to the newspaper notice.

Copies of draft permits and comment opportunities are also provided to the public on the ODEQ website at the following location:

<https://www.deq.ok.gov/air-quality-division/air-permits/public-participation-issued-permits/>

If you prefer a copy of the draft and/or proposed permit, or direct notification by letter for any remaining public comment opportunities, if applicable, on the referenced permit action, please notify me by e-mail at phillip.fielder@deq.ok.gov, or by letter at:

Department of Environmental Quality, Air Quality Division
Attn: Phillip Fielder, Chief Engineer
707 N Robinson
Oklahoma City, OK, 73102

Thank you for your cooperation. If you have any questions, I can also be contacted at (405) 702-4185.

Sincerely,



Phillip Fielder, P.E.
Chief Engineer
AIR QUALITY DIVISION

October 31, 2022

Muscogee Creek Nation
Attn: David Hill, Principal Chief
P.O. Box 580
Okmulgee, OK 74447

Re: Permit Application No. **2018-0594-C (M-7)**
HollyFrontier Tulsa Refining – Tulsa LLC (FAC ID 1477)
Tulsa Refinery West (SIC 2911 / NAICS 324110)
Heater H-102 Reconstruction
1700 South Union
Tulsa, Tulsa County, OK (36.13765° N, 96.01154° W)
Date Received: March 4, 2022

Dear Mr. Hill:

The Oklahoma Department of Environmental Quality (ODEQ), Air Quality Division (AQD), has received the Tier II/Tier III application referenced above. A Tier II/III application requires the facility provide a 30-day public comment period on the draft Tier II/III permit and a 20-day public comment period on a proposed Tier III permit at a public location within the county of the facility. The process requires the facility to notify the public by newspaper notice in a newspaper in the county of the proposed project. Since the proposed project falls within your Tribal jurisdiction, AQD is providing this direct notice. This letter notification is in addition to the newspaper notice.

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If you prefer a copy of the draft and/or proposed permit, or direct notification by letter for any remaining public comment opportunities, if applicable, on the referenced permit action, please notify me by e-mail at phillip.felder@deq.ok.gov, or by letter at:

Department of Environmental Quality, Air Quality Division
Attn: Phillip Fielder, Chief Engineer
707 N Robinson
Oklahoma City, OK, 73102

Thank you for your cooperation. If you have any questions, I can also be contacted at (405) 702-4185.

Sincerely,



Phillip Fielder, P.E.
Chief Engineer
AIR QUALITY DIVISION