



Louisville Metro Air Pollution Control District  
 850 Barret Avenue  
 Louisville, Kentucky 40204-1745



**XX Month 2015**

**FEDOOP Statement of Basis**

**Company:** Citgo Petroleum Corporation

**Plant Location:** 4724 Campground Road, Louisville, Kentucky 40216

**Date Application Received:** 1/18/2007 and 5/29/2015

**Date of Public Notice:** 12/04/2015

**District Engineer:** Shannon Hosey **Permit No:** O-0225-15-F

**Plant ID:** 0225 **SIC Code:** 5171 **NAICS:** 42271

**Introduction:**

This permit will be issued pursuant to District Regulation 2.17- *Federally Enforceable District Origin Operating Permits*. Its purpose is to limit the plant wide potential emission rates from this source to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO2), carbon monoxide (CO), 1 hr and 8 hr ozone (O3), and particulate matter less than 10 microns (PM10); is a non-attainment area for the 1997 standard for particulate matter less than 2.5 microns (PM2.5) and is a unclassifiable area for the 2012 standard for particulate matter less than 2.5 microns (PM2.5); and partial non-attainment area for sulfur dioxide (SO2).

**Application Type/Permit Activity:**

- Initial Issuance
- Permit Revision
  - Administrative
  - Minor
  - Significant
- Permit Renewal

**Compliance Summary:**

- Compliance certification signed
- Compliance schedule included
- Source is out of compliance
- Source is operating in compliance

**I. Source Information**

1. **Product Description:** Citgo Petroleum Corporation receives and dispenses, in bulk lots, various grades of gasoline, diesel fuel and chloroform.
2. **Process Description:** Shipments are transported to the terminal via truck or pipeline. Fuels received by each system are routed to the desired storage tank(s) through a fixed arrangement of pipes and valves. Fuels are withdrawn from the various tanks as desired and routed either to a loading rack, or transfer pipeline. The company has a long term contract for the chloroform unloading from barges.
3. **Site Determination:** There are no other facilities that are contiguous or adjacent and under common control.
4. **Emission Unit Summary:**

Emission Unit	Equipment Description
U1	Chloroform Storage Tanks
U2	Gasoline and Distillate Storage Tanks
U3	Truck Loading Rack with Control Unit (VCU)

5. **Fugitive Sources:** The facility uses a vapor combustion unit (VCU) for the truck loading rack under Emission Unit U3. The remaining emission points are fugitive sources.
6. **Permit Revisions:**

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Change Scope	Description
Initial	72-97-F	04/22/1997	03/16/1997	Initial	Entire Permit	Initial Permit Issuance
R1	72-97-F (R1)	04/04/2000	03/05/2000	Admin	General Conditions Pages 4-6	Incorporate revisions to General Conditions #4, #11, #12, and #13; New General Conditions #13 and #14
R2	72-97-F (R2)	06/19/2002	5/12/2002	Renewal	Entire Permit	Permit Renewal
R3	O-0225-15-F	xx/xx/2015	12/04/2015	Renewal	Entire Permit	Permit Renewal, incorporate construction permits 117-06-C, 400-05-C, 248-02-C, 56-04-C and 82-05-C

**7. Construction Permit History**

Permit No.	Issue Date	Description
117-06-C	04/30/2007	One (1) 8000 gallon vertical fixed roof tank for storage of diesel fuel additive Infineum R680
400-05-C	12/31/2006	One (1) 1000 gallon storage tank for gasoline additives
248-02-C	09/30/2003	Two (2) bulk storage tanks for storage of gasoline additive
56-04-C	4/30/2004	One (1) 557 gallon storage tank
82-05-C	3/31/2006	One (1) 1050 gallon storage tank designated as Tank #7

**8. Emission Summary:**

Pollutant	District Calculated Actual Emissions (tpy) 2009Data	Pollutant that triggered Major Source Status (based on PTE)
CO	0.08	No
NO <sub>x</sub>	0.05	No
VOC	5.9	Yes
Total HAPs	2.7	Yes
Single HAP Chloroform	2.55	Yes

**9. Applicable Requirements:**

PSD       40 CFR 60       SIP       40 CFR 63  
 NSR       40 CFR 61       District-Origin       Other

**10. Future MACT Requirements:** The source has no future MACT requirements.

**11. Referenced Federal Regulations in Permit:**

40 CFR Part 60 Subpart A      General Provisions

40 CFR Part 60 Subpart Kb      Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or

Modification Commenced After July 23, 1984

40 CFR Part 60 Subpart XX	Standards of Performance for Bulk Gasoline Terminals
40 CFR Part 63 Subpart A	General Provisions
40 CFR Part 63 Subpart BBBBBB	National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities (40 CFR Part 63 Subpart BBBBBB only applies if gasoline is stored and/or loaded at the facility.)

**12. Non-applicable Regulations:**

The company has demonstrated that its potential to emit does not exceed the MACT thresholds, therefore at this time it does not have to comply with the requirements of 40 CFR 63 Subpart R – *National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations.*

**II. Regulatory Analysis**

- 1. Acid Rain Requirements:** Citgo Petroleum Corporation is not subject to the Acid Rain Program.
- 2. Stratospheric Ozone Protection Requirements:** Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. Marathon Petroleum Company, LP does not manufacture, sell, or distribute any of the chemicals listed in Title VI of the CAAA. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.
- 3. Prevention of Accidental Releases 112(r):** Citgo Petroleum Corporation does manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District Regulation 5.15, *Chemical Accident Prevention Provisions*, in a quantity in excess of the corresponding specified threshold amount. Citgo handles Chloroform in excess of the 20,000 pounds threshold quantity and a plan was submitted to EPA on April 16, 2014.

**4. Basis of Regulation Applicability**

<b>Regulation</b>	<b>Basis for Applicability</b>
1.05	Regulation 1.05 requires the owner or operator to maintain and operate the affected facility in a manner consistent with good air pollution control practice for minimizing emissions.
2.17	Federally Enforceable District Origin Operating Permits
6.13	Regulation 6.13 applies to each storage vessel for volatile organic compounds that was in being or had a construction permit issued by the District before September 01, 1976.
6.21	Regulation 6.21 applies to each affected facility which was in being or had a construction permit issued by the District before June 13, 1979.
7.12	Regulation 7.12 applies to each storage vessel for volatile organic compounds that commences construction or modification on or after April 19, 1972
5.00, 5.01, 5.21, 5.23	Regulation 5.00, 5.01, 5.21, and 5.23 (STAR Program) establish the requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards.
40 CFR Part 60 Subpart A	Subpart A establishes the applicable standards for affected facilities.
40 CFR Part 63 Subpart A	Subpart A establishes the applicable standards for affected facilities.
40 CFR Part 60 Subpart Kb	Subpart Kb applies to each storage vessel with a storage capacity greater than or equal to 75 cubic meters (m <sup>3</sup> ) that is used to store volatile organic liquids for which construction, reconstruction, or modification commenced after July 23, 1984.
40 CFR Part 60 Subpart XX	Subpart XX applies to all the loading racks at a bulk gasoline terminal which deliver liquid product into gasoline tank trucks.
40 CFR 63 Subpart BBBBBB	Subpart BBBBBB establishes national emission limitations and management practices for hazardous air pollutants (HAP) emitted from area source gasoline distribution bulk terminals, bulk plants, and pipeline facilities. This subpart also establishes requirements to demonstrate compliance with the emission limitations and management practices.

**a. Plant-wide**

- i. Citgo Petroleum Corporation is a potential major source for the pollutant VOC, Single HAP and Total HAP. Regulation 2.17 – *Federally Enforceable District Origin Operating Permits* establishes requirements to limit the plant wide potential emission rates to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements.

- ii. The source is subject to a plant-wide VOC limit of less than 95 tons during any consecutive 12-month period. The Company requested the 95 ton per 12 consecutive month limit in the application received on 1/18/2007.
- iii. The source is subject to a plant-wide combined HAP limit of less than 25 tons during any consecutive 12-month period and individual HAP limit of less than 10 tons during any consecutive 12-month period.
- iv. Regulation 2.17, section 5.2, requires monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the district upon request.
- v. Regulation 2.17, section 7.2, requires stationary sources for which a FEDOOP is issued shall submit an Annual Compliance Certification by April 15, of the following calendar year. In addition, as required by Regulation 2.17, section 5.2, the source shall submit an Annual Compliance Report to show compliance with the permit, by March 1 of the following calendar year. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per Regulation 2.17, section 3.5.
- vi. 40 CFR Part 63 Subpart BBBBBB establishes national emission limitations, management practices, and requirements to demonstrate compliance for hazardous air pollutants (HAP) emitted from gasoline distribution bulk terminals. Subpart BBBBBB is applicable to gasoline storage tanks, gasoline loading racks, vapor collection-equipped gasoline cargo tanks, and equipment components in gasoline service. Under 40 CFR 63.11087(f) of Subpart BBBBBB, the storage tanks that are subject to and comply with 40 CFR part 60, Subpart Kb will be deemed in compliance with the requirements of 40 CFR 63, Subpart BBBBBB. An initial notification was received by the District on April 17, 2008.
- vii. District Regulation 1.05 requires the owner or operator to maintain and operate the affected facility in a manner consistent with good air pollution control practice for minimizing emissions. The owner or operator shall monitor and maintain records from the 1.05 compliance plan, which outlines various inspections and preventative maintenance procedures.

- viii. Regulations 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23 (STAR Program) establishes requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. The District received a revised plant-wide environmental acceptability (EA) demonstration on August 18, 2015. The company demonstrated that emissions from Benzene were environmentally acceptable through modeling using controlled potential emissions and limiting the gasoline throughput to 155,000,000 gallons/yr. The company also demonstrated that Chloroform controlled will not exceed the EA goals. The potential uncontrolled emissions from each of the storage tanks (EU U2) are de minimis pursuant to Regulation 5.21, sections 2.4 and 2.5. The risk value is below the environmental acceptability goal (EAG) required under District Regulation 5.21 when using controls.

Emission Unit	TAC	Maximum Ambient Concentration ( $\mu\text{g}/\text{m}^3$ )	BAC <sub>C</sub> ( $\mu\text{g}/\text{m}^3$ )	Individual Process Risk, R <sub>C</sub>	Individual Process EAG <sub>C</sub>
U3, Truck Loading	Benzene	0.44223	0.45	0.98	1.0
U1, EP E8	Chloroform	0.01285	0.043	0.30	1.0
U1, EP E9	Chloroform	0.01182	0.043	0.27	1.0
U1, EP E10	Chloroform	0.01490	0.043	0.35	1.0
Plant-wide	-	-	-	Plant-wide R <sub>C</sub> 1.90	Total EAG <sub>C</sub> 7.5

Emission Unit	TAC	Maximum Ambient Concentration ( $\mu\text{g}/\text{m}^3$ )	BAC <sub>NC</sub> ( $\mu\text{g}/\text{m}^3$ )	Individual Process Risk, R <sub>NC</sub>	Individual Process EAG <sub>NC</sub>
U3, Truck Loading	Benzene	0.44223	30	0.0147	1.0
U1, EP E8	Chloroform	0.01285	300	0.00004	1.0
U1, EP E9	Chloroform	0.01182	300	0.00004	1.0
U1, EP E10	Chloroform	0.01490	300	0.00005	1.0
Plant-wide	-	-	-	Plant-wide R <sub>NC</sub> 0.015	Total EAG <sub>NC</sub> 1

b. **Emission Unit U1 – Chloroform Storage Tanks**

i. **Equipment:**

<b>EU</b>	<b>Emission Point</b>	<b>Description Make/Model</b>	<b>Applicable Regulation</b>	<b>Control Device</b>
U1	E1	A 10,000 Barrel (420,000 gallons) Bottem Fill Floating Roof Chloroform Storage Tank #9	STAR* 5.14 and 6.13	N/A
	E2	A 10,000 Barrel (420,000 gallons) Chloroform Storage Tank #10 with Floating Roof and Fixed Roof Cover of Welded Steel Construction by Chicago Bridge & Iron	STAR* 5.14 and 7.12	
	E3	A 10,000 Barrel (420,000 gallons) Internal Floating Roof Chloroform Storage Tank #11	STAR*, 5.14, 7.12, and 40 CFR 60 Subpart Kb	
* STAR rules consist of Regulations 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23.				

ii. **Standards/Operating Limits**

1) **VOC**

- (a) Regulation 6.13, sections 3 and 4 establish the requirements to install, maintain, and operate the applicable storage tanks.
- (b) Regulation 7.12, sections 3 and 4 establish the requirements to install, maintain, and operate the applicable storage tanks.
- (c) 40 CFR Part 60, Subpart Kb, section 112b establishes the requirements to install, maintain, and operate the applicable storage tanks.

2) **HAP**

Regulation 2.17, section 5.1 allows the source to set a synthetic limit below the major source threshold.

iii. **Monitoring and Recordkeeping**

**VOC**

40 CFR Part 60, Subpart Kb, sections 113b, 115b, and 116b require sufficient monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit.

iv. **Reporting**

**VOC**

40 CFR Part 60, Subpart Kb, sections 115b and 116b require sufficient reporting to assure ongoing compliance with the terms and conditions of the permit.

c. **Emission Unit U2 – Gasoline and Distillate Storage Tanks**

i. **Equipment:**

EU	Emission Point	Description Make/Model	Applicable Regulation	Control Device
U2	E4	Gasoline Storage Tank #1, 1,464,246 Gallons	STAR* 6.13 and 40 CFR 63 Subpart BBBB	N/A
	E5	Gasoline Storage Tank #2 1,463,784 Gallons	STAR* 6.13 and 40 CFR 63 Subpart BBBB	
	E6	Gasoline Storage Tank #3 14,619,363 Gallons	STAR* 6.13 and 40 CFR 63 Subpart BBBB	
	E7	Gasoline Storage Tank #5 1,464,162 Gallons	STAR* 6.13 and 40 CFR 63 Subpart BBBB	
	E8	Gasoline Storage Tank #6 1,885,086 Gallons	STAR* 6.13 and 40 CFR 63 Subpart BBBB	
	E9	Distillate Storage Tank #7 1,416,786 Gallons	STAR* and 6.13	
	E10	Distillate Storage Tank #8 1,416,786 Gallons	STAR* and 6.13	
	E11 <sup>1</sup>	Diesel Fuel Additive Infineum R680 Tank #18 8000 Gallons	STAR* and 7.12	
	E12 <sup>1</sup>	Gasoline Additive Storage	STAR* and 7.12	

1 Regulation 7.12 applies due to the size of the tanks, but as long as the vapor pressure as stored is less than 1.5 psia there are no applicable standards.

EU	Emission Point	Description Make/Model	Applicable Regulation	Control Device
		Tank #19 1000 Gallons		
	E13 <sup>1</sup>	Gasoline Additive Storage Tank #14 8000 Gallons	STAR* and 7.12	
	E14 <sup>1</sup>	Storage Tank #16 557 Gallons	STAR* and 7.12	
	E15 <sup>1</sup>	Storage Tank #17 1050 Gallons	STAR* and 7.12	
* STAR rules consist of Regulations 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23.				

**i. Standards/Operating Limits**

**1) VOC**

- (a) Regulation 6.13, sections 3 and 4 establish the requirements to install, maintain, and operate the applicable storage tanks.
- (b) Regulation 7.12, sections 3 and 4 establish the requirements to install, maintain, and operate the applicable storage tanks.

**2) HAP**

- (a) The applicable storage tanks are subject to 40 CFR 63 Subpart BBBBBB.
- (b) Regulation 2.17, section 5.1 allows the source to set a synthetic limit below the major source threshold.

**ii. Monitoring and Recordkeeping**

**HAP**

The source is required to comply with applicable monitoring and record keeping requirements of 40 CFR Part 63, Subpart BBBBBB.

**iii. Reporting**

**HAP**

The source is required to comply with applicable reporting requirements of 40 CFR Part 63, Subpart BBBBBB.

d. **Emission Unit U3 – Truck Loading Rack**

i. **Equipment:**

EU	Emission Point	Description Make/Model	Applicable Regulation	Control Device
U3	E16	Truck loading rack consisting of two bays, 225,000 gal/hr (4 arms for gasoline and 3 arms for distillate). All loading is by bottom fill	STAR*, 5.14, 6.21, 40 CFR Part 60 Subpart XX and 40 CFR 63 Subpart BBBBBB	C1 (VCU)
* STAR rules consist of Regulations 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23.				

ii. **Standards/Operating Limits**

1) **VOC**

- (a) The source shall limit source-wide throughput to the following to demonstrate compliance with the annual allowable emission limit for specified pollutants, based on AP-42 emission factors and TANKS 4.0 program, as calculated on a 12-month rolling total basis per Regulation 2.17.<sup>2</sup>

Limit (gal/12-month period)	Product
25,000,000	Chloroform
155,000,000	Gasoline
280,320,000	Distillate Fuel Oil

- (b) Regulation 6.21, section 3 establishes requirements to operate the loading rack.
- (c) 40 CFR Part 60, Subpart XX, section 502 also establishes requirements to install, maintain, and operate the loading rack.

2) **HAP**

- (a) The loading rack is subject to 40 CFR 63 Subpart BBBBBB.

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<sup>2</sup> Since all petroleum products delivered to the terminal are subsequently loaded onto trucks, limiting the loading rack throughput essentially creates a “bottleneck” that limits the storage tank throughput as well. Therefore the entire terminal’s potential to emit is limited to 95 tons of VOCs per year. Emissions are based on AP-42 emission factors and EPA TANKS version 4.0 software.

- (b) Regulation 2.17, section 5.1 allows the source to set a synthetic limit below the major source threshold.

iii. **Monitoring and Record Keeping**

1) **VOC**

40 CFR Part 60, Subpart XX, section 505 requires sufficient monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit.

2) **HAP**

The source is required to comply with applicable monitoring and record keeping requirements of 40 CFR Part 63, Subpart BBBBBB.

iv. **Reporting**

1) **VOC**

40 CFR Part 60, Subpart XX, section 505 requires sufficient reporting to assure ongoing compliance with the terms and conditions of the permit.

2) **HAP**

The source is required to comply with applicable reporting requirements of 40 CFR Part 63, Subpart BBBBBB.

v. **Testing**

1) **VOC**

40 CFR Part 60, Subpart XX, section 503 establishes testing requirements to assure ongoing compliance with the terms and conditions of the permit.

2) **HAP**

The source is required to comply with applicable testing requirements of 40 CFR Part 63, Subpart BBBBBB.

**III. Other Requirements**

1. **Temporary Sources:** The source did not request to operate any temporary facilities.
2. **Short Term Activities:** The source did not report any short term activities.
3. **Emissions Trading:** N/A
4. **Alternative Operating Scenarios:** The source did not request to operate under any alternative operating scenarios.
5. **Compliance History:**

Incident #	Date	Regulations Violated	Result
06581	11/04/2013	Regulation 2.17, Section 03 Failure to Comply with FEDOOP Permit	Agreement \$550

6. **Insignificant Activities**

Equipment	Quantity	Regulation Basis
Natural gas, indirect heat exchangers less than 10 MMBtu/hr	1	Regulation 1.02, Appendix A, section 1.1
Internal combustion engines, whether fixed or mobile, and vehicles used for transport of passengers or freight, except as may be provided for in subsequent regulations	5	Regulation 1.02, Appendix A, section 2
Emergency relief vents, stacks and ventilating systems	1	Regulation 1.02, Appendix A, section 3.10

- 1) Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.
- 2) Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements.
- 3) The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15<sup>th</sup>.
- 4) Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.

- 5) The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.
- 6) The District has determined that no monitoring, record keeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.