

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

MEMORANDUM

August 6, 2026

TO: Lee Warden, P.E., Chief Engineer

THROUGH: Richard Kienlen, P.E., Engineering Manager, New Source Permits Section

THROUGH: Alexandria Mills, P.E., Engineering Section

FROM: Nathaniel Craig, E.I., Existing Source Permits Section

SUBJECT: Evaluation of Permit Application No. **2026-0286-C**
Citadel Asset Ventures LLC
Citadel Facility (SIC 7374/NAICS 518210)
Facility ID: 25467
Latitude: 36.27133°N, Longitude: 95.90837°W
Section 27, Township 21N, Range 13E, Tulsa County, Oklahoma
Directions: From the intersection of W. 2nd Ave. and S. Main St. in Owasso, travel west on W. 2nd Ave. for 2.6 miles. Turn north on N. Shepard Rd. and travel 0.5 miles. The facility will be located on the west side of the road.

SECTION I. INTRODUCTION

Citadel Asset Ventures LLC (Citadel or the applicant) has applied for an individual minor source construction permit for their Citadel Facility. This facility will be a newly constructed facility.

Facility-wide actual emissions are estimated to be 96.72 TPY of NO_x, 24.90 TPY of CO, 3.33 TPY of VOC, 5.43 TPY of PM₁₀, and 0.11 TPY HAPs. The facility requested facility-wide cap limits under a major source threshold of 100 TPY for regulated pollutants and the HAP emissions are below the 10 TPY threshold for a single HAP and below the 25 TPY threshold for any combination of HAPs. This facility, therefore, qualifies for a “synthetic minor” permit.

SECTION II. PROCESS DESCRIPTION

Citadel proposes to construct and operate an electronic data center at the intersection of N. Yale Ave. and E. 86th Street N. in Sperry, Oklahoma. The data center is designed to operate continuously, 24 hours per day, 365 days per year. The data center will consist of diesel-fired emergency generators that will operate for maintenance and testing purposes and in response to disruptions in the main power supply. Cooling for server equipment will be supported by cooling towers which are expected to operate continuously. Ancillary equipment includes fire pumps, fuel oil storage, water treatment systems, and maintenance activities typical of data center operations.

SECTION III. EQUIPMENT

The following is a list of the proposed equipment at this facility.

EU#	Description	Manufacturing/ Const. Date	NSPS/NESHAP Subpart
1-36	(36) 3,997-hp Diesel Emergency Generators	TBD	NSPS III/ NESHAP ZZZZ
37-108	(72) 4,043-hp Diesel Emergency Generators	TBD	NSPS III/ NESHAP ZZZZ
109-114	(6) 2,584-hp Diesel Emergency Generators	TBD	NSPS III/ NESHAP ZZZZ
115-118	(4) 1,340-hp Diesel Backup Generators	TBD	NSPS III/ NESHAP ZZZZ
119	(1) 1,340-hp Diesel Fire Pump	TBD	NSPS III/ NESHAP ZZZZ
120-238	(119) Diesel Belly Tanks	TBD	-
239-278	(40) Cooling Towers	TBD	-

SECTION IV. EMISSIONS

Unless otherwise stated emissions are based on 8,760 hours per year of operation.

ENGINES

For the diesel-fired emergency engines 1 through 114, emissions for NO_x, CO, PM₁₀, and VOC are based on manufacturer data at various loads (i.e., 10, 25, 50, 75, and 100%). NO_x, CO, PM₁₀, and VOC emissions for engines 115 through 119 are based on AP-42 (4/25) Section 3.4, Table 3.4-1, Table 3.4-2, and the standard brake-specific fuel consumption of 7,000 BTU/hp-hr. HAP emissions for each engine are based on AP-42 (4/25) Section 3.4, Table 3.4-3 and the standard brake-specific fuel consumption of 7,000 BTU/hp-hr. SO₂ emissions for each engine are based on AP-42 (4/25) Section 3.4, Table 3.4-1 and a maximum allowable sulfur content of 0.0015% by weight. Emissions for engines 1 through 114 are based on the engines operating for 25 hours at 100% load and 6 hours at 10% load. Emissions for engines 37 through 108 are based on the worst-case emission factors and the corresponding horsepower ratings from two different engine types. Emissions for engines 109 through 114 are based on the worst-case emission factors and the associated horsepower ratings between three different engines. Emissions from engines 115 through 119 were estimated based on 100 hours of operation per year at 100% load.

Engine Operating Parameters

EU#	Engine Model	Horsepower at 10% Load (hp)	Hours of Operation at 10% Load (hr)	Horsepower at 100% Load (hp)	Hours of Operation at 100% Load (hr)	No. of Engines
1-36	Cummins DQLF	505	6	3,997	25	36

EU#	Engine Model	Horsepower at 10% Load (hp)	Hours of Operation at 10% Load (hr)	Horsepower at 100% Load (hp)	Hours of Operation at 100% Load (hr)	No. of Engines
37-108	Caterpillar 3516E	549	6	4,043	25	72
	MTU 20V4000G74S	401		4,042		
109-114	Caterpillar 3512C	361	6	2,584	25	6
	Cummins DQKAD	334		2,536		
	MTU 12V4000G84S	256		2,561		
115-118	TBD	N/A	0	1,340	100	4
119	TBD	N/A	0	1,340	100	1

Engine Emission Factors at 10% Load

EU#	Engine Model	Emission Factors (g/hp-hr)					
		NO _x	CO	VOC ⁽¹⁾	PM ₁₀	SO ₂	H ₂ CO
1-36	Cummins DQLF	8.91	3.60	1.36	0.47	0.005	2.5E-4
37-108	Caterpillar 3516E	8.51	3.43	0.46	0.21	0.005	2.5E-4
	MTU 20V4000G74S	13.75	8.01	4.34	1.04	0.005	2.5E-4
109-114	Caterpillar 3512C	5.62	4.64	1.07	0.29	0.005	2.5E-4
	Cummins DQKAD	6.29	4.40	1.17	0.44	0.005	2.5E-4
	MTU 12V4000G84S	11.66	5.45	4.01	1.37	0.005	2.5E-4

⁽¹⁾ VOC includes H₂CO.

Engine Emission Factors at 100% Load

EU#	Engine Model	Emission Factors (g/hp-hr)					
		NO _x	CO	VOC ⁽¹⁾	PM ₁₀	SO ₂	H ₂ CO
1-36	Cummins DQLF	8.52	2.00	0.19	0.20	0.005	2.5E-4
37-108	Caterpillar 3516E	6.00	1.58	0.10	0.07	0.005	2.5E-4
	MTU 20V4000G74S	5.99	1.36	0.15	0.10	0.005	2.5E-4
109-114	Caterpillar 3512C	6.18	0.94	0.16	0.07	0.005	2.5E-4
	Cummins DQKAD	6.98	0.20	0.15	0.04	0.005	2.5E-4
	MTU 12V4000G84S	5.99	0.98	0.10	0.05	0.005	2.5E-4
115-118	TBD	10.89	2.50	0.32	0.18	0.005	2.5E-4
119	TBD	10.89	2.50	0.32	0.18	0.005	2.5E-4

⁽¹⁾ VOC includes H₂CO.

Worst-Case Emission Factors and Horsepower Ratings at 10% Load

EU#	Emission Factors (g/hp-hr)						Horsepower (hp)					
	NO _x	CO	VOC ⁽¹⁾	PM ₁₀	SO ₂	H ₂ CO	NO _x	CO	VOC	PM ₁₀	SO ₂	H ₂ CO
1-36	8.91	3.60	1.36	0.47	0.005	2.5E-4	505					
37-108	13.75	8.01	4.34	1.04	0.005	2.5E-4	401				549	
109-114	11.66	5.45	4.01	1.37	0.005	2.5E-4	256				361	

⁽¹⁾ VOC includes H₂CO.

Worst-Case Emission Factors and Horsepower Ratings at 100% Load

EU#	Emission Factors (g/hp-hr)						Horsepower (hp)					
	NO _x	CO	VOC ⁽¹⁾	PM ₁₀	SO ₂	H ₂ CO	NO _x	CO	VOC	PM ₁₀	SO ₂	H ₂ CO
1-36	8.52	2.00	0.19	0.20	0.005	2.5E-4	3,997					
37-108	6.00	1.58	0.15	0.10	0.005	2.5E-4	4,043		4,042		4,043	
109-114	6.98	0.98	0.16	0.07	0.005	2.5E-4	2,536	2,561	2,584			
115-118	10.89	2.50	0.32	0.18	0.005	2.5E-4	1,340					
119	10.89	2.50	0.32	0.18	0.005	2.5E-4	1,340					

⁽¹⁾ VOC includes H₂CO.

Worst-Case Engine Emissions

EU#	NO _x	CO	VOC ⁽¹⁾	PM ₁₀	SO ₂	H ₂ CO
	TPY	TPY	TPY	TPY	TPY	TPY
1-36	34.86	8.36	0.92	0.85	0.02	<0.01
37-108	50.76	14.20	2.03	1.00	0.04	<0.01
109-114	3.05	0.48	0.11	0.04	2.20E-3	<0.01
115-118	6.44	1.48	0.19	0.11	2.91E-3	<0.01
119	1.61	0.37	0.05	0.03	7.28E-4	<0.01
Totals	96.72	24.90	3.30	2.03	0.07	<0.01

⁽¹⁾ VOC includes H₂CO.

TANKS

Working and breathing emissions from the diesel belly tanks are based on AP-42 (9/25) Section 7.1 and the listed throughputs.

Tank Emissions (per tank)

Parameter	EU# 1-108 Belly Tanks	EU# 109-114 Belly Tanks	EU# 115-119 Belly Tanks
No. of Tanks	108	6	5
Tank Capacity (gal)	4,930	4,500	1,000
Throughput (gal/year)	5,000	5,000	19,000
Contents	Distillate Fuel Oil No. 2	Distillate Fuel Oil No. 2	Distillate Fuel Oil No. 2
Working/Breathing Method/Tool	AP-42 (9/25) Section 7.1	AP-42 (9/25) Section 7.1	AP-42 (9/25) Section 7.1
Control Type	None	None	None

Parameter	EU# 1-108 Belly Tanks	EU# 109-114 Belly Tanks	EU# 115-119 Belly Tanks
Working VOC Emissions per Tank (TPY)	0.00021	0.00021	0.00004
Breathing VOC Emissions per Tank (TPY)	0.000055	0.000055	0.000205
Total VOC Emissions (TPY)	0.0284	0.00157	0.00123

COOLING TOWERS

PM₁₀ emissions from the cooling towers are estimated using the equation below. The circulation and drift rates are based on vendor design specifications, and the total dissolved solids concentration is based on the typical operating range for non-contact cooling towers and equipment allowances.

$$PM \text{ rate (lb/hr)} = F * TDS * C * DR * D * \left(60 \frac{\text{min}}{\text{hr}}\right) * \frac{1}{1,000,000} * \frac{1}{100\%}$$

F = flow rate (gpm)

TDS = total dissolved solids (ppm)

C = cycle of concentration

DR = drift rate (%)

D = density of water (8.34 lb/gal)

Cooling Tower Emissions

Circulation Rate (gpm)	Total Dissolved Solids (ppm)	Cycles of Concentration	Drift Rate (%)	No. of Cooling Towers	PM ₁₀ Emissions			
					Per Cooling Tower		All Cooling Towers	
					lb/hr	TPY	lb/hr	TPY
5,160	1,500	1	0.0005	40	0.019	0.085	0.77	3.39

FACILITY-WIDE EMISSIONS

EU#	NO _x	CO	VOC ⁽¹⁾	PM ₁₀	SO ₂	H ₂ CO	HAP
	TPY	TPY	TPY	TPY	TPY	TPY	TPY
1-36	34.86	8.36	0.92	0.85	0.02	<0.01	0.02
37-108	50.76	14.20	2.03	1.00	0.04	<0.01	0.04
109-114	3.05	0.48	0.11	0.04	<0.01	<0.01	<0.01
115-118	6.44	1.48	0.19	0.11	<0.01	<0.01	<0.01
119	1.61	0.37	0.05	0.03	<0.01	<0.01	<0.01
120-238	-	-	0.03	-	-	-	-
239-278	-	-	-	3.39	-	-	-
Totals	96.72	24.90	3.33	5.43	0.07	<0.01	0.11

⁽¹⁾ VOC includes H₂CO.

HAP EMISSIONS

HAP	Emissions (TPY)
Acetaldehyde	<0.01
Acrolein	<0.01
Benzene	0.04
H ₂ CO	<0.01
Toluene	0.01
Xylene	0.01
Totals	0.11

The total HAP emissions from the equipment at the facility are 0.11 TPY. Therefore, the individual and the total emissions of HAPs do not exceed the major source thresholds of 10/25 TPY.

SECTION V. 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]
Primary Standards are in Appendix E and Secondary Standards are in Appendix F of the Air Pollution Control Rules. 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. The owner/operator will be required to submit emissions inventories and pay the appropriate fees.

OAC 252:100-7 (Permits for Minor Facilities) [Applicable]
Subchapter 7 sets forth the permit application fees and the basic substantive requirements of permits for minor facilities. Since criteria pollutant emissions are less than 100 TPY for each pollutant, and emissions of HAP will not exceed 10 TPY for any one HAP, or 25 TPY for any aggregate of HAP, the facility is defined as a synthetic minor source.

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 emission 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)) [Not 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. Fuel-burning equipment is defined in OAC 252:100-19 as any internal combustion engine or gas turbine, or other combustion device used to convert the combustion of fuel into usable energy. Appendix C specifies a PM emission limitation of 0.60 lb/MMBTU for all equipment at this facility with a heat input rating of 10 MMBTUH or less. For equipment with rated heat input greater than 10 but less than 1,000 MMBTUH, the PM limit is calculated using the equation from OAC 252:100 Appendix C, which is listed below.

$$E = 1.0428080X^{(-0.238561)}$$

All engines at this facility are uncontrolled diesel-fired engines. AP-42 (4/25), Section 3.4, Table 3.4-2 lists the total PM emissions to be 0.07 lb/MMBtu for large uncontrolled diesel-fired industrial engines. Based on the potential PM factor, these engines are not expected to exceed the Appendix C PM limit. These engines are in compliance with this section. The permit requires the use of diesel fuel that meets the requirements of 40 CFR §1090.305.

EU#	Description	Maximum Fuel Usage (gal/hr)	Maximum Heat Input (MMBTUH)	Appendix C PM Limit Per Engine (lb/MMBTU)	Potential PM Emission Rate Per Engine (lb/MMBTU)
1-36	(36) 3,997-hp Diesel Emergency Generators	186	25.89 ⁽¹⁾	0.48	0.07
37-108	(72) 4,043-hp Diesel Emergency Generators	192.6	26.39 ⁽¹⁾	0.48	0.07
109-114	(6) 2,584-hp Diesel Emergency Generators	121.8	16.69 ⁽¹⁾	0.54	0.07
115-118	(4) 1,340-hp Diesel Backup Generators	-	11.38 ⁽²⁾	0.58	0.07
119	(1) 1,340-hp Diesel Fire Pump	-	11.38 ⁽²⁾	0.58	0.07

- (1) Based on manufacturers' maximum fuel usage, an average heating value of 19,300 Btu/lb, and density of 7.1 lb/gal.
- (2) Based on engines with similar horsepower ratings. Exact engine model is still to be determined.

Section 19-12 limits particulate emissions from new and existing directly fired fuel-burning units and/or emission points in an industrial process based on process weight rate, as specified in Appendix G. This specification states a PM emission limitation for process weight rates of 30 tons per hour (60,000 pounds per hour) or less shall be based on the following calculation: $E = 4.10P^{0.67}$, where E is the allowable emission rate and P is the process weight rate in tons per hour. For process weights greater than 30 tons per hour (60,000 pounds per hour), the allowable total particulate matter emission rate shall be calculated using the following formula: $E = (55.00P^{0.11}) - 40$, where E is the allowable emission rate and P is the process weight rate in tons per hour.

EU#	Process Rate Per Cooling Tower (TPH)	Emissions Per Cooling Tower (lb/hr)	
		Appendix G Limit	Potential
239-278	1,291.03 ⁽¹⁾	80.94	0.019

(1) Process rate based on 5,160 gpm and water density of 8.34 lb/gal

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. In no case shall the average of any six-minute period exceed 60% opacity. Units subject to an opacity limit promulgated under section 111 of the Federal Clean Air Act are exempt from this section. The diesel-fired emergency generators are subject to the smoke opacity standards in 40 CFR §1039.105, therefore, all engines are exempt from this section.

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 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. Under normal operating conditions, this facility will not cause a problem in this area, 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 concentration of hydrogen sulfide (H₂S) emissions from any facility to 0.2 ppm (24-hour average) at standard conditions which is equivalent to 283 µg/m³. Fuel-burning equipment fired with ULSD will not have the potential to exceed the H₂S ambient air concentration limit.

Part 5 limits sulfur dioxide emissions from new fuel-burning equipment (constructed after July 1, 1972). For liquid fuels the limit is 0.8 lb/MMBTU. The diesel-fired emergency generators will use a fuel with a maximum sulfur content of 15 ppmw. This fuel will produce emissions of <0.01 lb/MMBTU. Therefore, the emergency generators are in compliance with this part.

OAC 252:100-33 (Nitrogen Oxides)

[Not Applicable]

This subchapter limits NO_x emissions from new fuel-burning equipment with rated heat input greater than or equal to 50 MMBTUH to emissions of 0.2 lb of NO_x per MMBTU. None of the engines at this facility have heat input greater than or equal to 50 MMBTUH.

OAC 252:100-35 (Carbon Monoxide)

[Not Applicable]

None of the following affected processes are located at this facility: gray iron cupola, blast furnace, basic oxygen furnace, petroleum catalytic cracking unit, or petroleum catalytic reforming unit. There are no affected sources.

OAC 252:100-37 (Volatile Organic Compounds)

[Applicable]

Part 3 requires storage tanks constructed after December 28, 1974, with a capacity of 400 gallons or more and storing VOC with a vapor pressure above 1.5 psia to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. All tanks at this facility store petroleum liquid (diesel) that has vapor pressure less than 0.01 psia. Therefore, these tanks are not required to have submerged fill pipe, and thus, this facility is in compliance with this subchapter.

Part 3 requires loading facilities with a throughput equal to or less than 40,000 gallons per day to be equipped with a system for submerged filling tank trucks or trailers if the capacity of the vehicle is greater than 200 gallons. This facility does not have the physical equipment (loading arm and pump) to conduct this type of loading. Therefore, this requirement is not applicable.

Part 5 limits the organic solvent content of coating of parts and products. This facility will not normally conduct coating or painting operations except for routine maintenance of the facility and equipment, which is not an affected operation.

Part 7 requires fuel-burning and refuse-burning equipment to be operated to minimize emissions of VOC. The fuel-burning equipment at this location is subject to this requirement.

Part 7 requires effluent water separators, which receive water containing more than 200 gallons per day of any VOC, to be equipped with vapor control devices. There is no water effluent separator at this location.

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

[Applicable]

This subchapter regulates TAC that are emitted into the ambient air in areas of concern (AOC). 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 AOC has been designated 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.

SECTION VI. FEDERAL REGULATIONS

NSPS, 40 CFR Part 60

[Subpart IIII Applicable]

Subparts Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels. This subpart regulates storage vessels with a capacity greater than or equal to 75 m³ (472 bbl or 19,813 gallons) that are used to store volatile organic liquids for which construction, reconstruction, or modification is commenced after July 23, 1984. All the storage tanks at this facility have a capacity less than the threshold, 19,813 gallons. This subpart is not applicable.

Subparts Kc, Standards of Performance for Volatile Organic Liquid Storage Vessels. This subpart regulates storage vessels with a capacity greater than or equal to 75.7 m³ (20,000 gallons) that are used to store volatile organic liquids for which construction, reconstruction, or modification is commenced after October 4, 2023. All the storage tanks at this facility have a capacity less than the threshold, 20,000 gallons. This subpart is not applicable.

Subpart IIII, Stationary Compression Ignition Internal Combustion Engines. The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) that are constructed (ordered) after July 11, 2005, and manufactured after April 1, 2006 (July 1, 2006, for fire pump engines). All engines at this facility are CI engines and are subject to this subpart.

Per §60.4202(a) and §60.4202(b), applicable emergency engines must meet the Tier 2 emission standards for new nonroad CI engines for the same rated power as described in 40 CFR part 1039, appendix I and the smoke standards in 40 CFR 1039.105. According to §60.4205(c), owners and operators of applicable fire pump engines must comply with the emission standards in table 4 of NSPS Subpart IIII.

Engines' Emission Standards

Engines	NO _x + NMHC	CO	PM
	g/kW-hr (g/hp-hr)	g/kW-hr (g/hp-hr)	g/kW-hr (g/hp-hr)
3,997-hp Diesel Emergency Generators	6.4 (4.77)	3.5 (2.61)	0.20 (0.15)
4,043-hp Diesel Emergency Generators	6.4 (4.77)	3.5 (2.61)	0.20 (0.15)
2,584-hp Diesel Emergency Generators	6.4 (4.77)	3.5 (2.61)	0.20 (0.15)
1,340-hp Diesel Backup Generators	6.4 (4.77)	3.5 (2.61)	0.20 (0.15)
1,340-hp Diesel Fire Pump	6.4 (4.77)	3.5 (2.61)	0.20 (0.15)

The facility will comply with these emission standards by purchasing certified engines. These engines will be required to use fuel that meets the requirements of §60.4207.

Subpart JJJJ, Stationary Spark Ignition Internal Combustion Engines. This subpart promulgates emission standards for all new SI engines ordered after June 12, 2006, and all SI engines modified or reconstructed after June 12, 2006, regardless of size. There are no engines of this type at this facility.

NESHAP, 40 CFR Part 61

[Not Applicable]

There are no emissions of any of the regulated pollutants: arsenic, asbestos, beryllium, coke oven emissions, mercury, radionuclides or vinyl chloride. Benzene is emitted in trace quantities and therefore does not trigger applicability to any section of this part.

Subpart J, Equipment Leaks of Benzene, only affects process streams, which contain more than 10% benzene by weight. All process streams at this facility are below this threshold.

NESHAP, 40 CFR Part 63

[Subpart ZZZZ Applicable]

Subpart Q, National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers. This subpart affects all new and existing industrial process cooling towers that are operated with chromium-based water treatment chemicals and are either major sources or are integral parts of facilities that are major sources as defined in §63.401. This facility is not a major source of HAP, and the facility's cooling towers do not use chromium-based water treatment chemicals. Therefore, this subpart does not apply.

Subpart ZZZZ, Reciprocating Internal Combustion Engines (RICE). This subpart affects any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions. Owners and operators of new or reconstructed engines at area sources and of new or reconstructed engines with a site rating equal to or less than 500 HP located at a major source (except new or reconstructed 4-stroke lean-burn engines with a site rating greater than or equal to 250 HP and less than or equal to 500 HP located at a major source) must meet the requirements of Subpart ZZZZ by complying with either 40 CFR Part 60 Subpart IIII (for CI engines) or 40 CFR Part 60 Subpart JJJJ (for SI engines). All the proposed engines are manufactured after June 12, 2006, and are considered new engines subject to this subpart. These engines are subject to NSPS Subpart IIII, and thus, these engines comply with this subpart by complying with the requirements of NSPS Subpart IIII.

SECTION VII. COMPLIANCE

Tier Classification

This application has been classified as **Tier I** based on the request for a minor source construction permit.

The draft permit underwent public notice on the DEQ's web site as required in OAC 252:4-7-13(g). The public, tribal governments, and the EPA had 30 days to comment on the draft permit. No comments were received.

Landowner Affidavit

The applicant has submitted an affidavit that they are not seeking a permit for land use or for any operation upon land owned by others without their knowledge. The affidavit certifies that the applicant owned the land.

Inspection

No inspection is required for a construction permit application.

Fee Paid

A fee of \$2,000 was paid for a minor source construction permit on April 9, 2026

SECTION VIII. SUMMARY

The facility has demonstrated the ability to comply with all applicable Air Quality rules and regulations. Ambient air quality standards are not threatened at this site. There are no active Air Quality compliance or enforcement issues concerning this facility. Issuance of the construction permit is recommended.

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

**Citadel Asset Ventures LLC
Citadel Facility**

Permit No. 2026-0286-C

The permittee is authorized to construct in conformity with the specifications submitted to the Air Quality Division on April 13, 2026. The Evaluation Memorandum dated August 6, 2026, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Commencing construction and continuing operations under this permit constitutes acceptance of, and consent to, the conditions contained herein:

1. Equipment and Points of Emissions:

EU#	Description	Manufacturing/ Const. Date
1-36	(36) 3,997-hp Diesel Emergency Generators	TBD
37-108	(72) 4,043-hp Diesel Emergency Generators	TBD
109-114	(6) 2,584-hp Diesel Emergency Generators	TBD
115-118	(4) 1,340-hp Diesel Backup Generators	TBD
119	(1) 1,340-hp Diesel Fire Pump	TBD
120-238	(119) Diesel Belly Tanks	TBD
239-278	(40) Cooling Towers	TBD

2. Facility-wide emission limits: NO_x, CO, VOC, PM₁₀, and HAPs emissions from the facility shall be based on manufacturer emission factors and horsepower ratings when available, current AP-42 factors, and hours of operation. Facility-wide emissions shall not exceed the emission limits shown in the table below. Compliance with the emission limits for NO_x, CO, VOC, PM₁₀, and HAPs from the facility shall be determined monthly, and be based on a 12-month rolling total.

Pollutant	Emission Limits
	TPY
NO _x	99.9
CO	99.9
VOC	99.9
PM ₁₀	99.9
HAP	
Individual	9.9
Aggregated	24.9

- a. Emissions from all engines, tanks, and cooling towers at the facility will be limited by, and contribute to, the facility-wide cap for NO_x, CO, VOC, PM₁₀, and HAPs identified in Specific Condition No. 2.
 - i. Each calendar month, the permittee shall calculate emissions of NO_x, CO, VOC, PM₁₀, and HAPs from each engine, tank, and cooling towers using the methods outlined below:
 - ii. The permittee shall use the manufacturer's emission factors for NO_x, CO, PM₁₀ and VOC at various loads (i.e., 10, 25, 50, 75, and 100%) for each engine, when available. When manufacturer data is unavailable, the permittee shall use current AP-42 factors for NO_x, CO, PM₁₀, VOC, and HAPs. Permittee shall use manufacturer's horsepower ratings at various loads (i.e. 10, 25, 50, 75 and 100%) for each engine, when available. Each engine's load shall be continuously monitored and recorded. Calculations shall use the emission factors and horsepower ratings for each recorded load in any given operating hour times the hours of operation at that load interval.
 - iii. For each diesel belly tank, the permittee shall use the method described in the latest version of AP-42 Section 7.1 for calculating working and breathing VOC emissions based on the monthly diesel throughput in gallons.
 - iv. The permittee shall record the emissions of the cooling towers using manufacturer data, emission factors referenced in the permit application, or the latest emission factors from testing/EPA sources.
 - v. Each calendar month the permittee shall incorporate emissions from all engines, tanks, and cooling towers into the 12-month rolling total emissions for NO_x, CO, VOC, PM₁₀, and HAPs. These emissions shall be summed with other emissions for determining compliance with the facility-wide cap.
3. All the engines shall be fueled with diesel as specified in §1090.305 containing no more than 15 ppmw sulfur and having either a minimum cetane index of 40 or a maximum aromatic content of 35%. Compliance can be shown by the supplier's latest delivery ticket(s). Compliance shall be demonstrated at least once every calendar year.
4. Each engine shall have permanent identification plates attached, which show the make, model number, and serial number.
5. Each engine shall be equipped with a non-resettable hour-meter.
6. Each engine shall be equipped with a programmable logic controller to monitor the load.
7. Engines shall be maintained and operated in accordance with certification protocols established for Tier 2 NSPS IIII emergency engines.

8. The permittee shall keep records of the operating hours at each different load (emergency and non-emergency) for each engine, monthly and 12-month rolling total.
9. The permittee shall be authorized to operate this facility continuously (24 hours per day, every day of the year, 8,760 hours).
10. Replacement of any equipment with emissions specified in this permit are authorized under OAC 252:100-7-15(a)(2)(C), provided the replacement unit does not require a change in any emission limit and the owner or operator notifies the DEQ in writing within fifteen (15) days of the startup of the replacement unit. The replacement unit shall meet the definition under OAC 252:100-7-1.1. Installation of an "affected facility," "affected source," or "new source" as those terms are defined in 40 CFR Section 60.2, 40 CFR Section 63.2, and 40 CFR Section 61.02, respectively, that is subject to an emission standard, equipment standard, work practice standard or recordkeeping requirement in a federal NSPS (40 CFR Part 60) or a federal NESHAP (40 CFR Parts 61 and 63) shall comply with all applicable requirements.
11. The permittee shall comply with all applicable standards and requirements of 40 CFR Part 60, NSPS Subpart IIII, for the diesel-fired emergency generator engines and fire pump engine including, but not necessarily limited to, the following.
 - a. §60.4200 Am I subject to this subpart?
 - b. §60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?
 - c. §60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?
 - d. §60.4203 How long must my engines meet the emission standards if I am a manufacturer of stationary CI internal combustion engines?
 - e. §60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?
 - f. §60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?
 - g. §60.4206 How long must I meet the emissions standards if I am an owner or operator of a stationary SI internal combustion engine?
 - h. §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?
 - i. §60.4208 What is the deadline for importing or installing stationary CI ICE produced in the previous model year?
 - j. §60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?
 - k. §60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?
 - l. §60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

- m. §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?
 - n. § 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?
 - o. §60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?
 - p. §60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?
 - q. §60.4216 What requirements must I meet for engines used in Alaska?
 - r. §60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?
 - s. §60.4218 What General Provisions and confidential information provisions apply to me?
 - t. §60.4219 What definitions apply to this subpart?
12. The permittee shall comply with all applicable standards and requirements of 40 CFR Part 63, NESHAP Subpart ZZZZ, National Emissions Standards for Hazardous air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE), including, but not limited to, the following.
- a. §63.6580 What is the purpose of subpart ZZZZ?
 - b. §63.6585 Am I subject to this subpart?
 - c. §63.6590 What parts of my plant does this subpart cover?
 - d. §63.6595 When do I have to comply with this subpart?
 - e. §63.6600 What emission 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?
 - f. §63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB with a site rating of greater or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?
 - g. §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 or less than 500 brake HP located at area major source of HAP emissions?
 - h. §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?
 - i. §63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?
 - j. §63.6605 What are my general requirements for complying with this subpart?
 - k. §63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operating a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?
 - l. §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?

- m. §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?
 - n. §63.6615 When must I conduct subsequent performance tests?
 - o. §63.6620 What performance tests and other procedures must I use?
 - p. §63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?
 - q. §63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?
 - r. §63.6635 How do I monitor and collect data to demonstrate continuous compliance?
 - s. §63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?
 - t. §63.6645 What notifications must I submit and when?
 - u. §63.6650 What reports must I submit and when?
 - v. §63.6655 What records must I keep?
 - w. §63.6660 In what form and how long must I keep my records?
 - x. §63.6665 What parts of the General Provisions apply to me?
 - y. §63.6670 Who implements and enforces this subpart?
 - z. §63.6675 What definitions apply to this subpart?
13. The permittee shall maintain records of operations as listed below. These records shall be retained on-site or at a local field office for a period of at least five years following dates of recording, and shall be made available to regulatory personnel upon request.
- a. Facility-wide emissions of NO_x, CO, VOC, PM₁₀, and HAPs (monthly, 12-month rolling total) as specified by Specific Condition No. 2.
 - b. Record of hours of operation at each different load for all engines (monthly and 12-month rolling totals), as specified in Specific Condition No. 8.
 - c. For the fuel(s) burned, the appropriate document(s) as specified in Specific Condition No. 3.
 - d. Records required under NESHAP 40 CFR Part 63, Subpart ZZZZ.
 - e. Records required under NSPS 40 CFR Part 60, Subpart IIII.
14. The permittee shall submit an application for an operating permit within 180 days of starting operation of any emission source whose construction has been authorized by this permit.

**MINOR SOURCE PERMIT TO OPERATE / CONSTRUCT
AIR POLLUTION CONTROL FACILITY
STANDARD CONDITIONS**

(February 13, 2020)

- A. The issuing Authority for the permit is the Air Quality Division (AQD) of the Oklahoma Department of Environmental Quality (DEQ) in accordance with and under the authority of the Oklahoma Clean Air Act. The permit does not relieve the holder of the obligation to comply with other applicable federal, state, or local statutes, regulations, rules, or ordinances. This specifically includes compliance with the rules of the other Divisions of DEQ: Land Protection Division and Water Quality Division.
- B. A duly issued construction permit or authorization to construct or modify will terminate and become null and void (unless extended as provided in OAC 252:100-7-15(g)) 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 252:100-7-15(f)]
- C. 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 252:100-7-18(a)]
- D. Unless specified otherwise, the term of an operating permit shall be unlimited.
- E. Notification to the Air Quality Division of DEQ of the sale or transfer of ownership of this facility is required and shall be made in writing by the transferor within 30 days after such date. A new permit is not required. [OAC 252:100-7-2(f)]
- F. The following limitations apply to the facility unless covered in the Specific Conditions:
1. No person shall cause or permit the discharge of emissions such that National Ambient Air Quality Standards (NAAQS) are exceeded on land outside the permitted facility. [OAC 252:100-3]
 2. All facilities that emit air contaminants are required to file an emission inventory and pay annual operating fees based on the inventory. Instructions are available on the Air Quality section of the DEQ web page. <https://oklahoma.gov/deq.html> [OAC 252:100-5]
 3. 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 252:100-9]
 4. 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]
 5. No particulate emissions from new fuel-burning equipment with a rated heat input of 10 MMBTUH or less shall exceed 0.6 lbs/MMBTU. [OAC 252:100-19]
 6. No discharge of greater than 20% opacity is allowed except for 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. [OAC 252:100-25]

7. 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]
8. No sulfur oxide emissions from new gas-fired fuel-burning equipment shall exceed 0.2 lbs/MMBTU. No existing source shall exceed the listed ambient air standards for sulfur dioxide. [OAC 252:100-31]
9. 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 an organic material vapor-recovery system. [OAC 252:100-37-15(b)]
10. 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]

G. Any owner or operator subject to provisions of NSPS shall provide written notification as follows: [40 CFR 60.7 (a)]

1. A notification of the date construction (or reconstruction as defined under §60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
2. A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in §60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.
3. A notification of the actual date of initial start-up of an affected facility postmarked within 15 days after such date.
4. If a continuous emission monitoring system is included in the construction, a notification of the date upon which the test demonstrating the system performance will commence, along with a pretest plan, postmarked no less than 30 days prior to such a date.

H. Any owner or operator subject to provisions of NSPS shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility or any malfunction of the air pollution control equipment. [40 CFR 60.7 (b)]

I. Any owner or operator subject to the provisions of NSPS shall maintain a file of all measurements and other information required by this subpart recorded in a permanent file suitable for inspection. This file shall be retained for at least five years following the date of such measurements, maintenance, and records. [40 CFR 60.7 (f)]

J. Any owner or operator subject to the provisions of NSPS shall conduct performance test(s) and furnish to AQD a written report of the results of such test(s). Test(s) shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated, but not later than 180 days after initial start-up. [40 CFR 60.8]



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. 2026-0286-C

Citadel Asset Ventures LLC,

having complied with the requirements of the law, is hereby granted permission to construct the Citadel Facility, located Section 27, Township 21N, Range 13E, Tulsa County, Oklahoma, subject to standard conditions dated February 13, 2020, and specific conditions, both attached.

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

Lee Warden, P.E.
Chief Engineer

August 6, 2026

Date Issued

Michael Montfort
Citadel Asset Ventures LLC
2801 Centerville Road, 1st Floor, PMB 160
Wilmington, DE 19808

Subject: Construction Permit No. **2026-0286-C**
Citadel Facility (Fac. ID: 25467)
Section 27, Township 21N, Range 13E, Tulsa County, Oklahoma

Dear Mr. Montfort:

Enclosed is the permit authorizing construction at the referenced facility. Please note that this permit is issued subject to 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 emission inventory for this facility. An emission inventory must be completed through DEQ's electronic reporting system by April 1st of every year. Any questions concerning the form or submittal process should be referred to the Emission Inventory Staff at (405) 702-4100.

Thank you for your cooperation. If you have any questions, please refer to the permit number above and contact permit writer at (405) 702-4200, or by email at Nathaniel.Craig@deq.ok.gov.

Sincerely,



Nathaniel Craig, E.I.,
Existing Source Permits Section
AIR QUALITY DIVISION

Enclosure

Department of Environmental Quality (DEQ)
Air Quality Division (AQD)
Acronym List
9-8-2025

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

NESHAP	National Emission Standards for Hazardous Air Pollutants	SCC	Source Classification Code
NH₃	Ammonia	SCF	Standard Cubic Foot
NMHC	Non-methane Hydrocarbon	SCFD	Standard Cubic Feet per Day
NGL	Natural Gas Liquids	SCFM	Standard Cubic Feet per Minute
NO₂	Nitrogen Dioxide	SCR	Selective Catalytic Reduction
NO_x	Nitrogen Oxides	SEP	Supplemental Environmental Project
NOI	Notice of Intent	SER	Significant Emission Rate
NSCR	Non-Selective Catalytic Reduction	SI	Spark Ignition
NSPS	New Source Performance Standards	SIC	Standard Industrial Classification
NSR	New Source Review	SIP	State Implementation Plan
		SNCR	Selective Non-Catalytic Reduction
O₃	Ozone	SO₂	Sulfur Dioxide
O&G	Oil and Gas	SO_x	Sulfur Oxides
O&M	Operation and Maintenance	SOP	Standard Operating Procedure
O&NG	Oil and Natural Gas	SRU	Sulfur Recovery Unit
OAC	Oklahoma Administrative Code	T	Tons
OC	Oxidation Catalyst	TAC	Toxic Air Contaminant
OGI	Optical Gas Imaging	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	µg/m³	Micrograms per Cubic Meter
PCB	Polychlorinated Biphenyls	US EPA	U. S. Environmental Protection Agency
PCE	Partial Compliance Evaluation		
PEA	Portable Emissions Analyzer	VFR	Vertical Fixed Roof
PFAS	Per- and Polyfluoroalkyl Substance	VMT	Vehicle Miles Traveled
PM	Particulate Matter	VOC	Volatile Organic Compound
PM_{2.5}	Particulate Matter with an Aerodynamic Diameter <= 2.5 Micrometers	VOL	Volatile Organic Liquid
PM₁₀	Particulate Matter with an Aerodynamic Diameter <= 10 Micrometers	VRT	Vapor Recovery Tower
POM	Particulate Organic Matter or Polycyclic Organic Matter	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		