

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

MEMORANDUM

July 23, 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: Anu Arun, E.I., Existing Source Permits Section

SUBJECT: Evaluation of Permit Application No. **2026-0216-C**
6000 N Shartel Ave, LLC
OKC2 (SIC 7374, NAICS 518210)
Facility ID No. 25431
Latitude: 35.53351°N, Longitude: 97.52242°W
Section 9, Township 12N, Range 3W, Oklahoma County, Oklahoma
Directions: From the intersection of I-44/ US Rte. 66 and I-235/Hwy 77 in Oklahoma City, OK, travel west on I-44 for 0.6 miles. Take the exit towards Western Ave. and travel 0.1 miles. Turn right onto NW Grand Blvd./ W I-44 Service Rd. and travel east for 0.2 miles. Turn left onto N Shartel Ave. and travel north for 0.3 miles. The facility is on the right side of the road.

SECTION I. INTRODUCTION

6000 N Shartel Ave, LLC (Shartel) has applied for an individual minor source construction permit for their OKC2. This will be a newly constructed facility.

Facility-wide controlled emissions are estimated to be 42.15 TPY of NO_x, 81.05 TPY of CO, 52.89 TPY of VOC, 2.33 TPY of PM₁₀, 2.33 TPY of PM_{2.5}, 1.29 TPY of SO₂ and 23.52 TPY of HAPs. The facility has requested a facility-wide cap in order to limit emissions below major source thresholds of 100 TPY for a single criteria pollutant, 10 TPY for a single HAP, and below 25 TPY for any combination of HAPs. This facility, therefore, qualifies for a “synthetic minor” permit.

SECTION II. PROCESS DESCRIPTION

The facility will install up to eleven natural gas-fired, four-stroke, spark-ignited reciprocating internal combustion engines to provide continuous onsite power. The 20V34SG engines will be divided into two groups of four. Three are designated as primary operating engines that will run under normal load conditions. The remaining engine is designated as a backup unit and is expected to operate intermittently to support system reliability, maintenance needs, or other operational scenarios. There will be three 18V34SG engines, where two are operating and one is designated as back-up. The engines will operate exclusively in island mode, thus making the facility fully independent of the external utility grid. Each engine converts mechanical energy into three-phase

AC electrical power, which is managed via switchgear and stepped down for internal consumption. Downstream battery banks provide supplemental load balancing to accommodate rapid fluctuations in power demand associated with graphical processing unit (GPU) based computing. Engine exhaust streams are routed through an emissions control system consisting of selective catalytic reduction and oxidation catalysts for nitrogen oxide, carbon monoxide and volatile organic compound reduction. Thermal loads from engine operation are managed by a closed-loop water/glycol radiator system that maintains appropriate engine temperatures under all operating conditions.

A facility-wide distributed control system (DCS)/ supervisory control and data acquisition (SCADA) system provides integrated monitoring and control of engine performance, emissions control equipment, electrical distribution, and cooling systems to ensure reliable operation and continuous environmental compliance.

SECTION III. EQUIPMENT

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

ID#	Description	Rating	Manufacture/ Construction Date	Control Equipment		Subject to NSPS or NESHAP?
				Type	Efficiency (%)	
ENG1	Wartsila 20V34SG, 4SLB, RICE Engine Serial No. PAAE204225	12,704-hp	Manufacture: 2010 Construction: 2026	OC/ SCR	NOx: 95	NSPS JJJJ NESHAP ZZZZ
					CO: 95	
					VOC: 95	
					H ₂ CO: 95	
ENG2	Wartsila 20V34SG, 4SLB, RICE Engine Serial No. PAAE204224	12,704-hp	Manufacture: 2010 Construction: 2026	OC/ SCR	NOx: 95	NSPS JJJJ NESHAP ZZZZ
					CO: 95	
					VOC: 95	
					H ₂ CO: 95	
ENG3	Wartsila 20V34SG, 4SLB, RICE Engine Serial No. PAAE204223	12,704-hp	Manufacture: 2010 Construction: 2026	OC/ SCR	NOx: 95	NSPS JJJJ NESHAP ZZZZ
					CO: 95	
					VOC: 95	
					H ₂ CO: 95	
ENG4	Wartsila 20V34SG, 4SLB, RICE Engine Serial No. PAAE204222	12,704-hp	Manufacture: 2010 Construction: 2026	OC/ SCR	NOx: 95	NSPS JJJJ NESHAP ZZZZ
					CO: 95	
					VOC: 95	
					H ₂ CO: 95	
ENG5	Wartsila 20V34SG, 4SLB, RICE Engine Serial No. PAAE204221	12,704-hp	Manufacture: 2010 Construction: 2026	OC/ SCR	NOx: 95	NSPS JJJJ NESHAP ZZZZ
					CO: 95	
					VOC: 95	
					H ₂ CO: 95	
ENG6	Wartsila 20V34SG, 4SLB, RICE Engine Serial No. PAAE204220	12,704-hp	Manufacture: 2010 Construction: 2026	OC/ SCR	NOx: 95	NSPS JJJJ NESHAP ZZZZ
					CO: 95	
					VOC: 95	
					H ₂ CO: 95	
ENG7	Wartsila 20V34SG, 4SLB, RICE	12,704-hp	Manufacture: 2010 Construction: 2026	OC/ SCR	NOx: 95	NSPS JJJJ NESHAP ZZZZ
					CO: 95	
					VOC: 95	

ID#	Description	Rating	Manufacture/ Construction Date	Control Equipment		Subject to NSPS or NESHAP?
				Type	Efficiency (%)	
	Engine Serial No. TBD				H ₂ CO: 95	
ENG8	Wartsila 20V34SG, 4SLB, RICE Engine Serial No. TBD	12,704-hp	Manufacture: 2010 Construction: 2026	OC/ SCR	NOx: 95	NSPS JJJJ NESHAP ZZZZ
					CO: 95	
					VOC: 95	
					H ₂ CO: 95	
ENG17	Wartsila 18V34SG, 4SLB, RICE Engine Serial No. 21212	8,212-hp	Manufacture: 2001 Construction: 2026	OC/ SCR	NOx: 95	NSPS JJJJ NESHAP ZZZZ
					CO: 95	
					VOC: 95	
					H ₂ CO: 95	
ENG18	Wartsila 18V34SG, 4SLB, RICE Engine Serial No. 21213	8,212-hp	Manufacture: 2001 Construction: 2026	OC/ SCR	NOx: 95	NSPS JJJJ NESHAP ZZZZ
					CO: 95	
					VOC: 95	
					H ₂ CO: 95	
ENG19	Wartsila 18V34SG, 4SLB, RICE Engine Serial No. TBD	8,212-hp	Manufacture: 2001 Construction: 2026	OC/ SCR	NOx: 95	NSPS JJJJ NESHAP ZZZZ
					CO: 95	
					VOC: 95	
					H ₂ CO: 95	
Fugitives	Fugitives	-	-	-	-	-

SECTION IV. EMISSIONS

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

ENGINES

Emissions of NO_x, CO, VOC, PM₁₀ and PM_{2.5} from ENG1 through ENG8 and ENG17 through ENG19 are based on manufacturer's data. Emissions of SO₂ are based on AP-42 (10/24) Section 3.2, Table 3.2-2 for uncontrolled, 4SLB. H₂CO is included in the VOC emission factors. Controlled emission factors for all engines are based on the design efficiency provided by the manufacturer design team, using a 100% load assumption.

Engine Operating Parameters

Parameter	ENG1-ENG8 Data	ENG17-ENG19 Data
Engine	Wartsila 20V34SG	Wartsila 18V34SG
Capacity, HP	12,704	8,212
Fuel Consumption (BTU/hp-hr)	5,304	5,790
Fuel Consumption (MMBTUH)	67.38 ⁽¹⁾	47.55 ⁽¹⁾
Control Devices	Oxidation Catalyst and SCR	Oxidation Catalyst and SCR

⁽¹⁾ Calculated using manufactures specifications and a heating value of pipeline Natural Gas HHV fuel of 1,020 Btu/scf.

Uncontrolled Engine Emission Factors

Group ID#	Engines	NO _x	CO	VOC ⁽¹⁾	PM ₁₀	PM _{2.5}	SO ₂
		g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr	lb/MMBTU
20V34SG	ENG1 – ENG8	0.97	1.64	0.45	0.0026	0.0026	0.00059

Group ID#	Engines	NO _x	CO	VOC ⁽¹⁾	PM ₁₀	PM _{2.5}	SO ₂
		g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr	lb/MMBTU
18V34SG	ENG17 – ENG19	0.86	2.61	4.10	0.0026	0.0026	0.00059

⁽¹⁾ VOC emission factors include formaldehyde.

Controlled Engine Emission Factors

Group ID#	Engines	NO _x ⁽¹⁾	CO ⁽²⁾	VOC ⁽³⁾⁽⁴⁾	PM ₁₀	PM _{2.5}	SO ₂
		g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr	lb/MMBTU
20V34SG	ENG1 – ENG8	0.048	0.082	0.0224	0.0026	0.0026	0.00059
18V34SG	ENG17 – ENG19	0.043	0.1305	0.2051	0.0026	0.0026	0.00059

⁽¹⁾ Control efficiency for NO_x is 95%.

⁽²⁾ Control efficiency for CO is 95%.

⁽³⁾ Control efficiency for VOC is 95%.

⁽⁴⁾ VOC emission factors include formaldehyde.

Engine Emissions

ID#	NO _x		CO		VOC		PM ₁₀		PM _{2.5}		SO ₂	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
ENG1	1.34	5.89	2.30	10.06	0.63	2.75	0.07	0.32	0.07	0.32	0.04	0.17
ENG2	1.34	5.89	2.30	10.06	0.63	2.75	0.07	0.32	0.07	0.32	0.04	0.17
ENG3	1.34	5.89	2.30	10.06	0.63	2.75	0.07	0.32	0.07	0.32	0.04	0.17
ENG4 ⁽¹⁾	Standby Engine											
ENG5	1.34	5.89	2.30	10.06	0.63	2.75	0.07	0.32	0.07	0.32	0.04	0.17
ENG6	1.34	5.89	2.30	10.06	0.63	2.75	0.07	0.32	0.07	0.32	0.04	0.17
ENG7	1.34	5.89	2.30	10.06	0.63	2.75	0.07	0.32	0.07	0.32	0.04	0.17
ENG8 ⁽¹⁾	Standby Engine											
ENG17	0.78	3.41	2.36	10.35	3.71	16.26	0.05	0.21	0.05	0.21	0.03	0.12
ENG18	0.78	3.41	2.36	10.35	3.71	16.26	0.05	0.21	0.05	0.21	0.03	0.12
ENG19 ⁽¹⁾	Standby Engine											
Totals⁽²⁾	9.62	42.15	18.50	81.05	11.19	49.01	0.53	2.33	0.53	2.33	0.29	1.29

⁽¹⁾ For emission calculation purposes, the engines ENG4, ENG8 and ENG19 are treated as standby/backup engines. The facility has not designated which specific engine will serve as the standby unit, and this assumption is used only for calculating potential emissions.

⁽²⁾ Total represents the sum of all engines excluding the standby engines.

FUGITIVES

Emissions from fugitive equipment leaks are based on EPA's "Protocol for Equipment Leak Emission Estimates" (11/95, EPA-453/R-95-017), an estimated number of components, and the VOC (C₃₊) and HAP content of the materials handled.

Fugitive Emissions

ID#	Equipment	Emission Factor	No. of Sources	VOC Wt (%)	VOC Emissions	
		lb/hr/source			lb/hr	TPY
Fugitives	Gas/Vapor Valves	0.00092	253	100	0.23	1.02
	Gas/Vapor Valves	0.00086	506	100	0.44	1.91
	Heavy Liquid Valves	0.000018	88	100	<0.01	0.01
	Heavy Liquid Flanges	0.0000009	176	100	<0.01	<0.01

ID#	Equipment	Emission Factor	No. of Sources	VOC Wt (%)	VOC Emissions	
		lb/hr/source			lb/hr	TPY
	Heavy Liquid Pump Seals	0.000053	22	100	<0.01	0.01
	Sampling Connections - All	0.0194	11	100	0.21	0.93
Totals					0.88	3.87

FACILITY-WIDE EMISSIONS

ID#	NO _x	CO	VOC	PM ₁₀	PM _{2.5}	SO ₂
	TPY	TPY	TPY	TPY	TPY	TPY
Engines	42.15	81.05	49.01	2.33	2.33	1.29
Fugitives	-	-	3.87	-	-	-
Total Emissions	42.15	81.05	52.89	2.33	2.33	1.29
Requested Limits⁽¹⁾	99.00	99.00	99.00	-	-	-

⁽¹⁾ The facility has requested a facility-wide cap on NO_x, CO and VOC.

HAP EMISSIONS

Emissions of formaldehyde from engines (ENG1 through ENG8 and ENG17 through ENG19) are based on manufacturer data. HAP emissions from engines are calculated based on AP-42 (10/24) Section 3.2, Table 3.2-2 for uncontrolled, 4SLB. HAP emissions from fugitives are calculated by using emission factors from AP-42 (10/24) section 3.2, Table 3.2-2 as applied relative weight fractions for heavy liquid components.

HAP Fugitive Emissions

Pollutant	Emission Factor lb/MMBTU	Weight Fraction %	Emissions (lb/hr)				Totals	
			Heavy Liquid Valves	Heavy Liquid Flanges	Heavy Liquid Pump Seals	Sampling Connections	lb/hr	TPY
Benzene	0.00040	18.80	0.00030	0.00003	0.00022	0.04018	0.04	0.18
Toluene	0.00041	19.00	0.00030	0.00003	0.00022	0.04058	0.04	0.18
Ethylbenzene	0.00004	1.90	0.00003	0.000003	0.00002	0.00395	0.00	0.02
Xylene	0.00018	8.60	0.00014	0.000014	0.00010	0.01830	0.02	0.08
Hexane	0.00111	51.70	0.00082	0.00008	0.00060	0.11040	0.11	0.49
Totals	0.00215	100	0.00158	0.00016	0.00117	0.21340	0.22	0.95

HAP Emissions

Pollutant	Wartsila 20V34SG ⁽¹⁾⁽³⁾				Wartsila 18V34SG ⁽²⁾⁽³⁾				Fugitives		Total
	Individual Engine Emissions		Total Emissions		Individual Engine Emissions		Total Emissions		lb/hr	TPY	TPY
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY			
Formaldehyde ⁽⁴⁾	0.28	1.23	1.68	7.36	0.18	0.79	0.36	1.59	-	-	8.95
Acetaldehyde ⁽⁵⁾	0.06	0.26	0.35	1.54	0.04	0.17	0.08	0.33			1.87
Acrolein ⁽⁵⁾	0.04	0.16	0.22	0.95	0.02	0.10	0.05	0.20			1.15
Benzene	0.03	0.12	0.16	0.72	0.02	0.08	0.04	0.17	0.04	0.18	1.06

Pollutant	Wartsila 20V34SG ⁽¹⁾⁽³⁾				Wartsila 18V34SG ⁽²⁾⁽³⁾				Fugitives		Total
	Individual Engine Emissions		Total Emissions		Individual Engine Emissions		Total Emissions		lb/hr	TPY	TPY
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY			
1,1,2,2-Tetra-chloroethane	<0.01	0.01	0.02	0.07	<0.01	0.01	<0.01	0.02	-	-	0.09
1,1,2-Tri-chloro-ethane	<0.01	0.01	0.01	0.06	<0.01	0.01	<0.01	0.01	-	-	0.07
1,1-Dichloro-ethane	<0.01	0.01	0.01	0.04	<0.01	<0.00	<0.01	0.01	-	-	0.05
1,2-Dichloro-ethane	<0.01	0.01	0.01	0.04	<0.01	<0.00	<0.01	0.01	-	-	0.05
1,2-Dichloropropane	<0.01	0.01	0.01	0.05	<0.01	0.01	<0.01	0.01	-	-	0.06
1,3 Butadiene	0.02	0.08	0.11	0.47	0.01	0.06	0.03	0.11	-	-	0.58
1,2-Dichlorpropene	<0.01	0.01	0.01	0.05	<0.01	0.01	<0.01	0.01	-	-	0.06
2,2,4-Tri-methylpentane	0.02	0.07	0.10	0.44	0.01	0.05	0.02	0.10	-	-	0.55
Biphenyl	0.02	0.06	0.09	0.38	0.01	0.04	0.02	0.09	-	-	0.46
Carbon tetrachloride	<0.01	0.01	0.01	0.06	<0.01	0.01	<0.01	0.02	-	-	0.08
Chloro-benzene	<0.01	0.01	0.01	0.05	<0.01	0.01	<0.01	0.01	-	-	0.07
Chloroform	<0.01	0.01	0.01	0.05	<0.01	0.01	<0.01	0.01	-	-	0.06
Ethyl benzene	<0.01	0.01	0.02	0.07	<0.01	0.01	<0.01	0.02	<0.01	0.02	0.10
Ethylene dibromide (Dibromoethane)	<0.01	0.01	0.02	0.08	<0.01	0.01	<0.01	0.02	-	-	0.10
Methanol	0.17	0.74	1.01	4.43	0.12	0.52	0.24	1.04	-	-	5.47
Methylene chloride (Dichloromethane)	<0.01	0.01	0.01	0.04	<0.01	<0.01	<0.01	0.01	-	-	0.04
Hexane ⁽⁵⁾	0.01	0.04	0.05	0.20	0.01	0.02	0.01	0.04	0.11	0.49	0.74
Naphthalene	0.01	0.02	0.03	0.13	<0.01	0.02	0.01	0.03	-	-	0.16
Phenol	<0.01	0.01	0.01	0.04	<0.01	<0.01	<0.01	0.01	-	-	0.05
Styrene	<0.01	0.01	0.01	0.04	<0.01	<0.01	<0.01	0.01	-	-	0.05
Toluene	0.03	0.12	0.16	0.72	0.02	0.08	0.04	0.17	0.04	0.18	1.07
Vinyl Chloride	<0.01	<0.01	0.01	0.03	<0.01	<0.01	<0.01	0.01	-	-	0.03
Xylene	0.01	0.05	0.07	0.33	0.01	0.04	0.02	0.08	0.02	0.08	0.48
Totals	0.70	3.07	4.21	18.43	0.47	2.07	0.94	4.14	0.22	0.95	23.52
Requested Limits – Individual⁽⁶⁾											9.99
Requested Limits- Total Combined⁽⁶⁾											24.99

¹⁾ HAP emissions for the Wartsila 20V34SG engines were estimated using an assumption of 6 engines operating at 8,760 hr/yr.

²⁾ HAP emissions for the Wartsila 18V34SG engines were estimated using an assumption of 2 engines operating at 8,760 hr/yr.

³⁾ Remaining 2 Wartsila 20V34SG and 1 Wartsila 18V34SG engines are designated as standby/backup units and not included in the HAP emission calculation.

⁴⁾ Control efficiency for formaldehyde is 95%.

⁵⁾ Control efficiencies for acetaldehyde, acrolein and hexane are 90%.

⁶⁾ The facility has requested a facility-wide cap on individual HAPs and total combined HAPs.

The total HAP emissions from the equipment at the facility based are 23.56 TPY. The facility has requested a facility-wide cap in order to limit emissions below major source thresholds 10 TPY for a single HAP, and below 25 TPY for any combination of HAPs.

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)) [Applicable]
Section 19-4 limits emissions of PM from new and existing indirect fired fuel-burning equipment, based on maximum design heat input rating, as specified in OAC 252:100, Appendix C. 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. OAC 252:100, Appendix C specifies a PM emission limitation of 0.60 lb/MMBtu for all equipment at this facility

with heat input rating of 10 MMBtu/hr or less. Additionally, Appendix C specifies that allowable total particulate emissions for all equipment at this facility with a heat input greater than 10 MMBTUH, but less than 1,000 MMBTUH can be calculated using the formula $E = 1.042808X^{0.238561}$, where E is the allowable total particulate matter emission limit in pounds per MMBTU and X is the maximum heat input in MMBTUH. As per the manufacture's data, the PM emission from each engine (ENG1 through ENG8) are 0.0011 lb/MMBTU and from each engine (ENG17 through ENG19) are 0.001 lb/MMBTU. As shown in the following table, the emission rates from the engines at this facility are in compliance with the applicable particulate matter emission limits.

**Comparison of PM Emission Rates to Allowable Emission Rates
Under OAC 252:100 Appendix C**

ID#	Description	Maximum Heat Input (MMBTUH)	Emissions (lb/MMBTU)	
			Appendix C Limit	Potential
ENG1	Wartsila 20V34SG, 4SLB, RICE	67.38	0.38	0.0011
ENG2	Wartsila 20V34SG, 4SLB, RICE	67.38	0.38	0.0011
ENG3	Wartsila 20V34SG, 4SLB, RICE	67.38	0.38	0.0011
ENG4	Wartsila 20V34SG, 4SLB, RICE	67.38	0.38	0.0011
ENG5	Wartsila 20V34SG, 4SLB, RICE	67.38	0.38	0.0011
ENG6	Wartsila 20V34SG, 4SLB, RICE	67.38	0.38	0.0011
ENG7	Wartsila 20V34SG, 4SLB, RICE	67.38	0.38	0.0011
ENG8	Wartsila 20V34SG, 4SLB, RICE	67.38	0.38	0.0011
ENG17	Wartsila 18V34SG, 4SLB, RICE	47.55	0.42	0.0010
ENG18	Wartsila 18V34SG, 4SLB, RICE	47.55	0.42	0.0010
ENG19	Wartsila 18V34SG, 4SLB, RICE	47.55	0.42	0.0010

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. When burning natural gas, there is very little possibility of exceeding these standards.

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 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 concentration of H₂S emissions from any facility to 0.2 ppm (24-hour average) at standard conditions which is equivalent to 283 µg/m³. Since the ambient impacts of H₂S from the engines are low, the facility would be in compliance with the H₂S ambient air concentration limit

Part 5 limits sulfur dioxide emissions from new fuel-burning equipment (constructed after July 1, 1972). Emissions of SO₂ from combustion of natural gas or other gaseous fuel in fuel-burning

equipment shall not exceed 0.2 lb/MMBTU heat input averaged over 3 hours. For fuel gas having gross calorific value of 1,020 BTU/scf, this limit corresponds to a fuel sulfur content of approximately 1,227 ppmv. The fuel-burning equipment shall only be fueled with pipeline natural gas to ensure compliance with Subchapter 31. Pipeline natural gas (as defined under 40 CFR §72.2), is limited to 0.5 grains of total reduced sulfur (TRS) per 100 scf.

OAC 252:100-33 (Nitrogen Oxides)

[Applicable]

This subchapter limits NO_x emissions from new fuel-burning equipment with rated heat input greater than or equal to 50 MMBTUH. Emissions of nitrogen oxides from any new gas-fired fuel-burning equipment shall not exceed 0.2 lb/MMBTU heat input averaged over 3 hours. Engines (ENG17 through ENG19) each have a rated heat input capacity of 47.55 MMBTUH, which is below the applicability threshold of 50 MMBTUH. Therefore, these engines are not subject to this subchapter. Engines (ENG1 through ENG8) have a rated heat capacity greater than 50 MMBTUH. The post-control NO_x emission rate for the engine (ENG1 through ENG8) at this facility is 0.02 lb/MMBTU, which is well below the applicable limit. Therefore, the emission rates from the engines at this facility are in compliance with the applicable NO_x emission limits.

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 VOC storage tanks constructed after December 28, 1974, with a size of 400 gallons or more and storing a VOC with a vapor pressure greater than 1.5 psia to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. This facility does not have any VOC storage tanks.

Part 3 requires VOC loading facilities with a throughput equal to or less than 40,000 gallons per day to be equipped with a system for submerged filling of tank trucks or trailers if the capacity of the vehicle is greater than 200 gallons. This facility does not have any VOC storage tanks or loading activities.

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 and maintained so as to minimize VOC emissions. Temperature and available air must be sufficient to provide essentially complete combustion. All fuel-burning equipment at this location is subject to this requirement.

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. 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.

SECTION VI. FEDERAL REGULATIONS

NSPS, 40 CFR Part 60

[Subpart JJJJ 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 19,184 gallons) that are used to store volatile organic liquids for which construction, reconstruction, or modification is commenced after July 23, 1984. This facility does not have any VOL storage vessels. 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. This facility does not have any VOL storage vessels. This subpart is not applicable.

Subpart GG, Stationary Gas Turbines. There is no applicable equipment at this facility.

Subpart JJJJ, Stationary Spark Ignition Internal Combustion Engines (SI-ICE). 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. ENG1 through ENG8 and ENG17 through ENG19 are subject to this subpart. The owner/operator of a stationary SI-ICE with a maximum engine power greater than or equal to 500-HP must comply with the emission standards in Table 1 of Subpart JJJJ. The applicable standards of Table 1 of Subpart JJJJ are listed as follows.

**Emission Standards from Table 1, Subpart JJJJ
For Non-Emergency SI Lean-Burn Engines Burning Natural Gas
(Except Lean Burn $500 \leq \text{HP} < 1,350$)**

ID#	Description	Rated Power (hp)	Manufacture / Construction Date	NOx	CO	VOC
				g/hp-hr	g/hp-hr	g/hp-hr
ENG1	Wartsila 20V34SG	12,704	Manufacture: 2010 Construction: 2026	1.0	2.0	0.7
ENG2	Wartsila 20V34SG	12,704	Manufacture: 2010 Construction: 2026	1.0	2.0	0.7
ENG3	Wartsila 20V34SG	12,704	Manufacture: 2010 Construction: 2026	1.0	2.0	0.7
ENG4	Wartsila 20V34SG	12,704	Manufacture: 2010 Construction: 2026	1.0	2.0	0.7
ENG5	Wartsila 20V34SG	12,704	Manufacture: 2010 Construction: 2026	1.0	2.0	0.7
ENG6	Wartsila 20V34SG	12,704	Manufacture: 2010 Construction: 2026	1.0	2.0	0.7
ENG7	Wartsila 20V34SG	12,704	Manufacture: 2010 Construction: 2026	1.0	2.0	0.7
ENG8	Wartsila 20V34SG	12,704	Manufacture: 2010 Construction: 2026	1.0	2.0	0.7
ENG17	Wartsila 18V34SG	8,212	Manufacture: 2001 Construction: 2026	1.0	2.0	0.7
ENG18	Wartsila 18V34SG	8,212	Manufacture: 2001 Construction: 2026	1.0	2.0	0.7
ENG19	Wartsila 18V34SG	8,212	Manufacture: 2001 Construction: 2026	1.0	2.0	0.7

Since ENG1 through ENG8 and ENG17 through ENG19 are non-certified engines, the owner/operator must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the owner/operator must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours of use or 3 years, whichever comes first, thereafter, to demonstrate compliance. Performance tests must comply with the requirements specified in §60.4244. All applicable requirements have been incorporated into the permit.

Subpart IIII, Stationary Compression Ignition (CI) Internal Combustion Engines (ICE). The subpart promulgates emission standards for all new CI engines ordered after July 11, 2005, and manufactured after certain dates, and are not fire pumps. There are no stationary compression ignition internal combustion engines at this facility. This subpart is not applicable.

NESHAP, 40 CFR Part 61

[Not Applicable]

There are no emissions of any of the regulated pollutants: arsenic, asbestos, beryllium, benzene, coke oven emissions, mercury, radionuclides or vinyl chloride except for benzene.

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 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).

- 1) Stationary RICE located at an area source;
- 2) The following Stationary RICE located at a major source of HAP emissions:
 - i. 2SLB and 4SRB stationary RICE with a site rating of ≤ 500 brake HP;
 - ii. 4SLB stationary RICE with a site rating of < 250 brake HP;
 - iii. Stationary RICE with a site rating of ≤ 500 brake HP which combust landfill or digester gas equivalent to 10% or more of the gross heat input on an annual basis;
 - iv. Emergency or limited use stationary RICE with a site rating of ≤ 500 brake HP; and
 - v. CI stationary RICE with a site rating of ≤ 500 brake HP.

No further requirements apply for engines subject to NSPS under this part. A stationary RICE located at an area source of HAP emissions is new if construction commenced after June 12, 2006. Based on emission calculations, this facility is an area source of HAP. ENG1 through ENG8 and ENG17 through ENG19 will comply with the requirements of Subpart ZZZZ by complying with NSPS Subpart JJJJ.

SECTION VII. COMPLIANCE

COMPLIANCE AND ENFORCEMENT CASE

There are no active Air Quality compliance or enforcement issues concerning this facility.

INSPECTION

No inspection is required for a construction permit application.

SECTION VIII. ADMINISTRATIVE

TIER CLASSIFICATION AND PUBLIC REVIEW

This application has been classified as **Tier I** based on the request for a minor source construction permit. The draft permit will undergo public notice on the DEQ's web site as required in OAC 252:4-7-13(g). The public, tribal governments, and the EPA will have 30 days to comment on the draft permit. Permits available for public review and comment are found at the Air Quality section of the DEQ Web page: <https://oklahoma.gov/deq.html>.

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 has a current lease given to accomplish the permitted purpose.

FEE PAID

A fee of \$2,000 was paid for a minor source construction permit on March 18, 2026.

SECTION IX. 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, contingent upon public review.

DRAFT

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

**6000 N Shartel Ave, LLC
OKC2**

Permit No. 2026-0216-C

The permittee is authorized to construct in conformity with the specifications submitted to the Air Quality Division on March 18, 2026. The Evaluation Memorandum dated July 23, 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:

ID#	Description	Rating	Manufacture/ Construction Date
ENG1	Wartsila 20V34SG, 4SLB, RICE Engine Serial No. PAAE204225	12,704-hp	Manufacture: 2010 Construction: 2026
ENG2	Wartsila 20V34SG, 4SLB, RICE Engine Serial No. PAAE204224	12,704-hp	Manufacture: 2010 Construction: 2026
ENG3	Wartsila 20V34SG, 4SLB, RICE Engine Serial No. PAAE204223	12,704-hp	Manufacture: 2010 Construction: 2026
ENG4	Wartsila 20V34SG, 4SLB, RICE Engine Serial No. PAAE204222	12,704-hp	Manufacture: 2010 Construction: 2026
ENG5	Wartsila 20V34SG, 4SLB, RICE Engine Serial No. PAAE204221	12,704-hp	Manufacture: 2010 Construction: 2026
ENG6	Wartsila 20V34SG, 4SLB, RICE Engine Serial No. PAAE204220	12,704-hp	Manufacture: 2010 Construction: 2026
ENG7	Wartsila 20V34SG, 4SLB, RICE Engine Serial No. TBD	12,704-hp	Manufacture: 2010 Construction: 2026
ENG8	Wartsila 20V34SG, 4SLB, RICE Engine Serial No. TBD	12,704-hp	Manufacture: 2010 Construction: 2026
ENG17	Wartsila 18V34SG, 4SLB, RICE Engine Serial No. 21212	8,212-hp	Manufacture: 2001 Construction: 2026
ENG18	Wartsila 18V34SG, 4SLB, RICE Engine Serial No. 21213	8,212-hp	Manufacture: 2001 Construction: 2026
ENG19	Wartsila 18V34SG, 4SLB, RICE Engine Serial No. TBD	8,212-hp	Manufacture: 2001 Construction: 2026
Fugitives	Fugitives	-	-

- 2) The permittee shall not allow emissions from ENG1 through ENG8 and ENG17 through ENG19, as identified in S.C. #1, to exceed the emission limits shown in the table below. These limits apply during normal operating conditions.

ID#	Engine Emission Limit						
	NO _x	CO	VOC	Formaldehyde	Acetaldehyde	Acrolein	Hexane
	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
ENG1	1.34	2.30	0.63	0.28	0.06	0.04	0.01
ENG2	1.34	2.30	0.63	0.28	0.06	0.04	0.01
ENG3	1.34	2.30	0.63	0.28	0.06	0.04	0.01
ENG4	1.34	2.30	0.63	0.28	0.06	0.04	0.01
ENG5	1.34	2.30	0.63	0.28	0.06	0.04	0.01
ENG6	1.34	2.30	0.63	0.28	0.06	0.04	0.01
ENG7	1.34	2.30	0.63	0.28	0.06	0.04	0.01
ENG8	1.34	2.30	0.63	0.28	0.06	0.04	0.01
ENG17	0.78	2.36	3.71	0.18	0.04	0.02	0.01
ENG18	0.78	2.36	3.71	0.18	0.04	0.02	0.01
ENG19	0.78	2.36	3.71	0.18	0.04	0.02	0.01

- 3) Facility-wide emission limits: NO_x, CO, VOC, PM₁₀, PM_{2.5}, SO₂ and HAPs emissions from the facility shall be based on manufacture emission factors where 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, PM_{2.5}, SO₂ and HAPs from the facility shall be determined monthly and be based on a 12-month rolling total.

Facility-Wide Emission Limits

Pollutant	Emission Limits
	TPY
NO _x	99.00
CO	99.00
VOC	99.00
PM ₁₀	2.33
PM _{2.5}	2.33
SO ₂	1.29
HAP - Individual	9.99
HAP – Total	24.99

- 4) Emissions from all engines at the facility will be limited by, and contribute to, the facility-wide cap for NO_x, CO, VOC, PM_{10/2.5}, SO₂ and HAPs identified in S.C. #3. Each calendar month, the permittee shall calculate emissions of NO_x, CO, VOC, PM₁₀, PM_{2.5}, SO₂ and HAPs from each engine using the method outlined below:
- a) For NO_x, CO, and VOC, the permittee shall use manufacturer's emission factors, current AP-42 factors, or emission factors based on the most recent engine performance test. Calculations shall use the appropriate emission factors, manufacturer horsepower ratings, and the engine's recorded hours of operation.

- b) For HAP emissions, the permittee shall use manufacturer's emission factors when available, current AP-42 factors, or emission factors based on the most recent engine performance test. Calculations shall use the appropriate emission factors, manufacturer horsepower ratings, and the recorded operating hours of the engine.
 - c) Permittee shall use the emission factors and methods from EPA's "Protocol for Equipment Leak Emission Estimates" (11/95, EPA-453/R-95-017), an estimated number of components, and the VOC (C3+) and HAP content of the materials handled to calculate emissions of VOC and HAPs.
 - d) Each calendar month the permittee shall incorporate emissions from all engines into the 12-month rolling total emissions for NO_x, CO, VOC, PM₁₀, PM_{2.5}, SO₂, and HAPs. These emissions shall be summed with all other emissions, including any applicable fugitive emissions, for determining compliance with the facility-wide cap.
 - e) Each engine's load shall be continuously monitored by a programmable logic controller (PLC).
 - f) If the permittee reduces engine load to lower emissions, the permittee shall use emission factors that correspond to the actual operating load. The permittee shall record engine load, or an equivalent indicator, as the load changes. If valid load data are not available for any operating period, the permittee shall assume the engine operated at the highest applicable load for emission-calculation purposes.
- 5) All the engines shall be fueled with pipeline grade natural gas as defined in Part 72 having a sulfur limit of 0.5 grains sulfur/100 scf or less. Compliance can be shown by the following method: a current gas company bill. Compliance shall be demonstrated at least once per calendar year.
- 6) Each engine shall have a permanent identification plate attached, which shows the make, model number, and serial number.
- 7) Each engine shall be equipped with a properly functioning and maintained oxidation catalyst and selective reduction catalyst.
- 8) Each engine shall be equipped with a non-resettable hour-meter.
- 9) The permittee shall keep records of operating hours and engine load for each engine. Records shall reflect hours of operation at each load and be recorded as load changes.
- 10) The permittee shall be authorized to operate this facility continuously (24 hours per day, every day of the year, 8,760 hours).
- 11) The permittee shall conduct an initial test of NO_x and CO emissions from any engine listed in S.C. #1 or any replacement engine; other than (1) an Emergency Use Engine (i.e., any engine that drives an emergency power generator, peaking power generator, firewater pump, or other emergency use equipment and operates no more than 500 hours per year), or (2) any engine equal to or less than 250 horsepower (hp). The initial test must be performed within 180 days of engine startup. Testing shall be conducted using EPA reference methods, if applicable, or a

portable analyzer in accordance with a protocol meeting the requirements of the latest AQD “Portable Analyzer Guidance” document, or an equivalent method approved by AQD. The initial test shall comply with the applicable lb/hr emission limits specified in S.C. #2.

- 12) At least twice per calendar year, the permittee shall conduct tests of NO_x and CO emissions from any controlled engine greater than 250 hp. Testing shall be conducted using EPA reference methods, if applicable, or a portable analyzer in accordance with a protocol meeting the requirements of the latest AQD “Portable Analyzer Guidance” document, or an equivalent method approved by AQD. Testing is required for any controlled engine greater than 250 hp that runs for more than 440 hours during a semi-annual period. A semi-annual period is defined as a calendar semi-annual period (i.e., January through June & July through December). Each semi-annual test shall be separated by at least 120 days. In the first year of operation, any engine started after March 31st only requires one test regardless of hours operated. The initial test may be counted as the first semi-annual test of an engine. Each semi-annual test shall comply with the applicable lb/hr emission limits specified in S.C. #2.
 - a. Compliance with the CO emission limits for these engines is deemed compliance with the formaldehyde emission limits based on the AQD surrogate policy.
- 13) The permittee shall conduct an initial test of VOC emission from any engine listed in S.C. #1 or any replacement engine; other than (1) an Emergency Use Engine (i.e., any engine that drives an emergency power generator, peaking power generator, firewater pump, or other emergency use equipment and operates no more than 500 hours per year), or (2) any engine equal to or less than 250 horsepower (hp). The initial test must be performed within 180 days of engine startup. Testing shall be conducted following the procedures described in 40 CFR Part 60 Subpart JJJJ §60.4244. The initial test shall demonstrate compliance with the applicable lb/hr emission limits specified in S.C. #2.
- 14) The permittee shall conduct subsequent performance tests of VOC from any engine listed in S.C. #1 or any replacement engine; other than (1) an Emergency Use Engine (i.e., any engine that drives an emergency power generator, peaking power generator, firewater pump, or other emergency use equipment and operates no more than 500 hours per year), or (2) any engine equal to or less than 250 horsepower (hp), after the engine operates 8,760 hours or after 3 years, whichever comes first. Testing shall be conducted following the procedures described in 40 CFR Part 60 Subpart JJJJ §60.4244. The initial test shall demonstrate compliance with the applicable lb/hr emission limits specified in S.C. #2.
- 15) The permittee shall conduct initial performance testing for formaldehyde, acetaldehyde, acrolein and hexane emissions for each different engine model listed in S.C. #1, when operating under representative conditions. The initial test must be performed within 180 days of engine startup. The initial test shall comply with the applicable lb/hr emission limits specified in S.C. #2.
 - a. The following EPA reference method specified in 40 CFR Part 60 and Part 63 shall be used unless otherwise approved by Air Quality.
 - i. Method 1: Sample and Velocity Traverses for Stationary Sources.

- ii. Method 2: Determination of Stack Gas Velocity and Volumetric Flow Rate.
 - iii. Method 3A: Gas Analysis for the Determination of Dry Molecular Weight.
 - iv. Method 4: Determination of Moisture Content in Stack Gases.
 - v. Method 320: Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive FTIR Spectroscopy.
- b. Alternative test methods may be used if approved by Air Quality in accordance with 40 CFR 60.8(b) or 63.7(f).
 - c. A sampling protocol and notification of testing date(s) shall be submitted to Air Quality at least 30 days prior to commencement of testing.
 - d. A written test report documenting the results shall be submitted within 60 days of completion of on-site testing.
- 16) The permittee shall conduct periodic performance testing for formaldehyde, acetaldehyde, acrolein and hexane emissions from each engine listed in S.C. #1 or each replacement engine, when operating under representative conditions. The test must be performed after 8,760 hours of operation or after two years, whichever occurs first. The test shall comply with the applicable lb/hr emission limits specified in S.C. #2.
- a. The permittee shall demonstrate the EPA reference method and conditions specified in S.C. #15.a, S.C. #15.b and S.C. #15.c for the periodic performance testing.
- 17) 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.
- 18) When periodic compliance testing shows engine exhaust emissions in excess of the lb/hr limits in S.C. #2, the permittee shall comply with the provisions of OAC 252:100-9 for excess emissions.
- 19) The permittee shall comply with all applicable requirements of NSPS, Subpart JJJJ, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, for any of the engines subject to these requirements, including, but not limited to, the following.
- a. § 60.4230 Am I subject to this subpart?
 - b. § 60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?
 - c. § 60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?

- d. § 60.4235 What fuel requirements must I meet if I am an owner or operator of a stationary SI gasoline fired internal combustion engine subject to this subpart?
 - e. § 60.4236 What is the deadline for importing or installing stationary SI ICE produced in previous model years?
 - f. § 60.4237 What are the monitoring requirements if I am an owner or operator of an emergency stationary SI internal combustion engine?
 - g. § 60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?
 - h. § 60.4244 What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?
 - i. § 60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?
 - j. § 60.4246 What General Provisions and confidential information provisions apply to me?
 - k. § 60.4248 What definitions apply to this subpart?
- 20) 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. §63.6603 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?
 - f. §63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?
 - g. §63.6605 What are my general requirements for complying with this subpart?
 - h. §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?
 - i. §63.6615 When must I conduct subsequent performance tests?
 - j. §63.6620 What performance tests and other procedures must I use?
 - k. §63.6625 What are my monitoring, installation, operation, and maintenance requirements?
 - l. §63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?
 - m. §63.6635 How do I monitor and collect data to demonstrate continuous compliance?
 - n. §63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?
 - o. §63.6645 What notifications must I submit and when?
 - p. §63.6650 What reports must I submit and when?
 - q. §63.6655 What records must I keep?
 - r. §63.6660 In what form and how long must I keep my records?
 - s. §63.6665 What parts of the General Provisions apply to me?

- t. §63.6670 Who implements and enforces this subpart?
- u. §63.6675 What definitions apply to this subpart?

21) 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, PM_{2.5}, SO₂, and HAPs (monthly, 12-month rolling total) as specified by S.C. #3.
- b. For the fuel(s) burned, the appropriate document(s) as specified in S.C. #5.
- c. Record of hours of operation for all engines (monthly and 12-month rolling totals), as specified in S.C. #8.
- d. Periodic testing of NO_x and CO exhaust from engines subject to S.C. #12.
- e. Periodic testing of VOC exhaust from engines subject to S.C. #14.
- f. Periodic testing of formaldehyde, acetaldehyde, acrolein and hexane exhaust from engines subject to S.C. #16.
- g. Records required under NESHAP 40 CFR Part 63, Subpart ZZZZ.
- h. Records required under NSPS 40 CFR Part 60, Subpart JJJJ.
- i. Records of each engine's load, continuously monitored and automatically recorded by the facility's programmable logic controller (PLC).

22) 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.

DRAFT

**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]

DRAFT



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. 2026-0216-C

6000 N Shartel Ave, LLC,

having complied with the requirements of the law, is hereby granted permission to construct the OKC 2, located Section 9, Township 12N, Range 3W, Oklahoma 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.

DRAFT

Lee Warden, P.E.
Chief Engineer

Date Issued

Trevor Francis
6000 N Shartel Ave, LLC
300 NW 62nd Street
Oklahoma City, OK 73118

Subject: Minor Source Construction Permit No. **2026-0216-C**
OKC2 (Facility ID: 25431)
Section 9, Township 12N, Range 3W; Oklahoma County, Oklahoma

Dear Trevor Francis:

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 me at (405) 702-4206, or by email at Anu.Arun@deq.ok.gov.

Sincerely,



Anu Arun, E.I.,
Existing Source Permits Section
AIR QUALITY DIVISION

Enclosure: AQD Acronym List

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)	NESHAP	National Emission Standards for Hazardous Air Pollutants
FESOP	Federally Enforceable State Operating Permit	NH₃	Ammonia
FIP	Federal Implementation Plan	NMHC	Non-methane Hydrocarbon
FR	Federal Register		

NGL	Natural Gas Liquids	SEP	Supplemental Environmental Project
NO₂	Nitrogen Dioxide	SER	Significant Emission Rate
NO_x	Nitrogen Oxides	SI	Spark Ignition
NOI	Notice of Intent	SIC	Standard Industrial Classification
NSCR	Non-Selective Catalytic Reduction	SIP	State Implementation Plan
NSPS	New Source Performance Standards	SNCR	Selective Non-Catalytic Reduction
NSR	New Source Review	SO₂	Sulfur Dioxide
		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
OGI	Optical Gas Imaging	THC	Total Hydrocarbons
		TPY	Tons per Year
PAH	Polycyclic Aromatic Hydrocarbons	TRS	Total Reduced Sulfur
PAE	Projected Actual Emissions	TSP	Total Suspended Particulates
PAL	Plant-wide Applicability Limit	TV	Title V of the Federal Clean Air Act
Pb	Lead		
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		
SCC	Source Classification Code		
SCF	Standard Cubic Foot		
SCFD	Standard Cubic Feet per Day		
SCFM	Standard Cubic Feet per Minute		
SCR	Selective Catalytic Reduction		