

**PERMIT TO CONSTRUCT OR MODIFY  
AN AIR POLLUTANT SOURCE**

**Permittee (Company Name):** Tennessee Gas Pipeline Company,  
LLC – Compressor Station 563

**Permit Number:** C-3125

**Installation Address:** 7650 Whites Creek Pike

**Date of Issuance:** June 23, 2017

**City, State:** Joelton, Tennessee

**Designated Representative:** Thomas C. Dender  
**Title:** Vice President Operations

**Emission Source Number:** 003

**NAICS Code:** 486210

**Emission Source Description:** One 1,500 kW Caterpillar G3516C natural gas-fired emergency generator powered by a spark ignition (SI) internal combustion engine (ICE) rated at 2,175 hp.

**Permit Conditions:**

- (1) This permit, issued in accordance with Section 10.56.020, “Construction Permits” of Chapter 10.56, “Air Pollution Control” of the Metropolitan Code of Laws (MCL), allows the operation of the air pollutant source described above.
- (2) This permit shall serve as a temporary operating permit for a period of time not to exceed 180 days after startup, provided that this Agency is notified in writing of the date of startup. The notification must be submitted to this Agency in writing within five (5) working days of the date of startup.
- (3) Semi-annual Progress Reports (SAR) must be submitted to this Agency for construction projects extending over a six-month period. The reports must specify the percent of the project completed and give an estimated completion date. The first Progress Report is due six months after the date of issuance of this permit and additional reports are due every six months thereafter until construction is complete and this office has been notified of the startup date.
- (4) This permit shall become null and void if construction has not commenced within one (1) year of the date of issuance.
- (5) This permit is not transferable and must be posted or filed on the premises for which it was issued.
- (6) The following emission points are covered by this permit and are subject to the emission standards and operating schedule limitations outlined below. The allowable emission standards for all criteria pollutants not listed below are 0.0 pounds per hour, except for those sources that are exempt from permitting in accordance with Section 10.56.050, “Exemptions” of Chapter 10.56, “Air Pollution Control” of the MCL.

(Conditions continued on next page)

*Permission has been granted to maintain and operate the aforementioned equipment or process in Davidson County, Tennessee, under and in accordance with any applicable statutes, ordinances, regulations, or other provisions of law including additions, deletions or modifications which may be hereafter enacted or promulgated.*

Conditions continued for Construction Permit C-3125.

(6) Continued:

Emission Point	Pollutant	Mass Emission Standards			Visible Emission Standard	Operating Schedule	
		Lb/Hr	Lb/Day	Ton/12 Mo. (Rolling)		Hr/Day	Hr/12 Mo.
301	PM <sub>10</sub>	0.16	3.84	0.04	10%	24	500
	SO <sub>2</sub>	0.01	0.23	0.0024			
	NO <sub>x</sub>	9.59	229	2.40			
	CO	19.2	462	4.80			
	VOC	4.80	114	1.20			

Emission Point 301 – (563-A-Aux-01) – Caterpillar 1,500 kW G3516C emergency generator powered by a 2,175 hp natural gas-fired SI ICE.

- (7) A daily log of operating hours must be maintained on site and made available for inspection upon request. The log must differentiate between time used for emergency operation and time used for maintenance and readiness operation. Past records must be maintained for at least five years.
- (8) The mass emission standards outlined in Condition (6) are based on the proposed mass emission rates reported in the permit application, dated September 15, 2015, for the purpose of calculating annual emission fees based on annual permitted allowable emissions in accordance with MCL 10.56.080. The mass allowable emissions are based on an operating schedule of 24 hours per day and 500 hours per rolling twelve months. The mass allowable emissions for PM<sub>10</sub> and SO<sub>2</sub> are based on AP-42, Section 3.2 dated 7/00 and mass allowable emissions for NO<sub>x</sub>, CO, and VOC are based on an engine certified to the requirements of 40 CFR Part 60, Subpart JJJJ, Table 1 emission limits for emergency SI engine greater than 130 hp.
- (9) This source is subject to MCL 10.56.240, “Internal Combustion Engines” which restricts visible emissions from the source to 40% opacity. The source is also subject to MCL 10.56.270, “Visible Emissions,” which restricts visible emissions from the source to 20% opacity. The visible emission requirements have been streamlined into the more stringent standard outlined in Condition (6). Compliance with the visible emission standard will be ensured through the combustion of natural gas only.
- (10) This source is subject to MCL 10.56.260, “Process Emissions,” which restricts sulfur emissions from the source to 500 ppmv. This requirement has been streamlined into the more stringent standard outlined in Condition (6) of 0.01 lb. per hour (0.08 ppmv). This regulation also limits the maximum concentration of particulate process emissions to no greater than 0.25 grains per dry standard cubic foot (dscf) of exhaust gas. This requirement has been streamlined into the more stringent standard outlined in Condition (6) of 0.16 lb. per hour (0.002 grains per dscf).
- (11) This source is subject to Regulation No. 7, “Regulation for Control of Volatile Organic Compounds” of the MCL. This source will comply with this regulation by implementing good combustion practices while operating the engine.
- (12) This facility is subject to Regulation No. 11, “Emergency Episode Regulation” of the MCL, which establishes criteria so as to prevent undesirable levels of air contaminants during adverse meteorological conditions. Major sources must submit to the Director an acceptable air pollution episode emissions reduction plan to be followed during the alert, warning, and emergency levels of an air pollution episode.
- (13) This facility is subject to Regulation No. 13, “Part 70 Operating Permit Program” of the MCL based on the facility having the potential to emit greater than 100 tons of NO<sub>x</sub> and CO annually.

Conditions continued for Construction Permit C-3125.

- (14) This facility is subject to Regulation No. 14, “Regulation for Control of Nitrogen Oxides” of the MCL based on the facility having the potential to emit greater than 100 tons of NO<sub>x</sub> annually. This source will comply with this regulation by installing an engine which is in compliance with the requirements of 40 CFR 60, Subpart JJJJ as outlined in Condition (15).
- (15) The engine is subject to the requirements of 40 CFR Part 60, Subpart JJJJ – *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*, which, in part, requires the following of engines classified as emergency stationary internal combustion engines (ICE):
- (a) §60.4233(e) requires all owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) must comply with the emission standards in Table 1 to Subpart JJJJ for their stationary SI ICE;
  - (b) §60.4234 states owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine;
  - (c) §60.4237(a) states that if an emergency stationary SI internal combustion engine that is greater than or equal to 500 HP that was built on or after July 1, 2010, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter;
  - (d) §60.4243(d) states if the permittee owns or operates an emergency stationary ICE, the permittee must operate the emergency stationary ICE according to the requirements of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, and maintenance checks and readiness testing, is prohibited. If the permittee does not operate the engine according to the requirements in paragraph §60.4243(d), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. §60.4243(d) contains the following applicable requirements:
    - (i) There is no time limit on the use of emergency stationary ICE in emergency situations;
    - (ii) On May 1, 2015, the provisions of §60.4243(d)(2)(ii)-(iii) were vacated and the provisions of these paragraphs cease to have any legal effect;
    - (iii) The emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year; and
    - (iv) The emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing. Except as provided in §60.4243(d)(3)(i), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
  - (e) §60.4243(b)(1) states that, in order to comply with the emission standards specified in §60.4233(d), the permittee must demonstrate compliance by purchasing engine certified to the emission standards outlined §60.4243(a);

Conditions continued for Construction Permit C-3125.

(15) Continued:

- (f) §60.4243(g) states that it is expected that air-to-fuel ratio (AFR) controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times;
- (g) §60.4245 states the following information must be maintained on-site:
  - (i) All notifications submitted to comply with 40 CFR Part 60, Subpart JJJJ and all documentation supporting any of the notifications;
  - (ii) Records of all maintenance conducted on the engine;
  - (iii) Documentation from the engine manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable;
  - (iv) If the engine is operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards; and
  - (v) For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter.
- (16) The engine is subject to 40 CFR Part 63, Subpart ZZZZ - *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*. However, the engine must meet the requirements of Subpart ZZZZ by meeting the applicable requirements of 40 CFR Part 60, Subpart JJJJ as outlined in Condition (15).
- (17) This source is subject to MCL 10.56.280, “Start-ups, Shutdowns and Malfunctions,” which, in part, requires the source to take all reasonable measures to keep emissions to a minimum during start-ups, shutdowns and malfunctions. Failures that are caused entirely or in part by poor maintenance, careless operation, or other preventable upset condition or preventable equipment breakdown shall not be considered a malfunction and shall be considered a violation of the applicable emission standards.
- (18) Any compliance testing shall be conducted in accordance with the requirements of MCL 10.56.300, “Testing Procedures.”
- (19) The allowable facility wide hazardous air pollutant (HAP) emission rate is restricted to less than 10.0 tons per year of any one HAP and less than 25.0 tons per year of any two or more HAPs as identified in Section 112(b) of the 1990 Clean Air Act Amendment.
- (20) One or more on-site inspections will be conducted during the temporary permitting period in order to ensure compliance with the conditions of this permit.