

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

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

Permit Number: C-3126

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: 004

NAICS Code: 486210

Emission Source Description: Fugitive emissions components. Fugitive emissions from equipment leaks, various connectors, flanges, valves, seals, and other fittings in both gas and light oil service and one condensate storage tank.

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.

(6) Continued:

Conditions continued for Construction Permit C-3126.

Emission Point	Pollutant	Mass Emission Standards			Visible Emission Standard	Operating Schedule	
		Lb/Hr	Lb/Day	Ton/12 Mo. (Rolling)		Hr/Day	Hr/Year
401	VOC	0.57	13.7	2.48	0%	24	8,760
402	VOC	N/A	N/A	0.15	0%	24	8,760

Emission Point 401 - Fugitive emissions components. Fugitive emissions from equipment leaks of various connectors, flanges, valves, seals, and other fittings in both gas and light oil service.

Emission Point 402 - Fugitive emissions from one 3,762 gallon condensate storage tank.

- (7) The facility must maintain all records applicable to the facility according to the requirements of 40 CFR Part 60, Subpart OOOOa and outlined in Condition (9). The facility must also maintain a record of monthly throughputs for the condensate storage tank. 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 the estimated total number of fugitive emissions components including connectors, flanges, valves, open ended lines, pump seals and other fittings in gas and light oil service at the facility and the emission factors in EPA Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017) dated 11/95. The mass allowable emissions for the condensate storage tank are based on a maximum rolling twelve month throughput of 6,130 gallons of pipeline liquids, AP-42, Section 7.1 dated 11/06 and using the EPA TANKS software.
- (9) This source is subject to the requirements of 40 CFR Part 60, Subpart OOOOa - *Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced after May 12, 2016*. Subpart OOOOa requires the following:
 - (a) §60.5370a requires the facility to be in compliance with Subpart OOOOa upon startup of the facility. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall maintain and operate the facility in a manner consistent with good air pollution control practice for minimizing emissions;
 - (b) §60.5380a requires the facility to perform reporting and recordkeeping as required in §60.5420a(b)(7) and (11) and §60.5420a(c)(15) as outlined below;
 - (c) §60.5397a requires the facility to monitor all fugitive emission components, as defined in §60.5430a, in accordance with §60.5397a(b) through (g). The facility must repair all sources of fugitive emissions in accordance with §60.5397a(h). The facility must keep records in accordance with §60.5397a(i) and report in accordance with §60.5397a(j). For purposes of this section, fugitive emissions are defined as: any visible emission from a fugitive emissions component observed using optical gas imaging (OGI) or an instrument reading of 500 ppm or greater using Method 21. The facility must develop an emissions monitoring plan that covers the collection of fugitive emissions components at the compressor station within each company-defined area. As outlined in §60.5397a(c) through (j), the fugitive emission monitoring plan must include the following items:

(9) Continued:

Conditions continued for Construction Permit C-3126.

- (i) Frequency for conducting surveys. Surveys must be conducted at least as frequently as required by §60.5397a(f) and (g);
- (ii) Technique for determining fugitive emissions i.e. Method 21 or OGI;
- (iii) Manufacturer and model number of fugitive emissions detection equipment to be used;
- (iv) Procedures and timeframes for identifying and repairing fugitive emissions components from which fugitive emissions are detected, including timeframes for fugitive emission components that are unsafe to repair. The repair schedule must meet the requirements of §60.5397a(h) at a minimum;
- (v) Procedures and timeframes for verifying fugitive emission component repairs;
- (vi) Records that will be kept and the length of time records will be kept;
- (vii) If the facility is using OGI, the plan must also include the elements specified in §60.5397a(c)(7)(i) through (vii);
- (viii) If the facility is using Method 21, the plan must include the elements specified in §60.5397a(c)(8)(i) and (ii);
- (ix) The fugitive emissions monitoring plan must include the following elements as specified in §60.5397a(d)(1) through (4), at a minimum, as applicable:
 - (1) Sitemap;
 - (2) A defined observation path that ensures that all fugitive emissions components are within sight of the path. The observation path must account for interferences;
 - (3) If the permittee is using Method 21, the plan must also include a list of fugitive emissions components to be monitored and method for determining location of fugitive emissions components to be monitored in the field (e.g. tagging, identification on a process and instrumentation diagram, etc.); and
 - (4) The plan must also include the written plan developed for all of the fugitive emission components designated as difficult- to-monitor in accordance with §60.5397a(g)(3)(i) of this section, and the written plan for fugitive emission components designated as unsafe-to-monitor in accordance with §60.5397a(g)(3)(ii) of this section.
- (x) Each monitoring survey shall observe each fugitive emissions component, as defined in §60.5430a, for fugitive emissions;
- (xi) The facility must conduct an initial monitoring survey within 60 days of the startup of a new compressor station for each new collection of fugitive emissions components at the new compressor station;
- (xii) A monitoring survey of each collection of fugitive emissions components at a compressor station must be performed as follows at the frequencies specified in §60.5397a(g)(2) through (4):

(9) Continued:

Conditions continued for Construction Permit C-3126.

- (1) A monitoring survey of the collection of fugitive emissions components at a compressor station within a company-defined area must be conducted at least quarterly after the initial survey. Consecutive quarterly monitoring surveys must be conducted at least 60 days apart;
 - (2) Fugitive emissions components that cannot be monitored without elevating the monitoring personnel more than 2 meters above the surface may be designated as difficult-to-monitor. Fugitive emissions components that are designated difficult-to-monitor must meet the specifications of §60.5397a(g)(3)(i) through (iv); and
 - (3) Fugitive emissions components that cannot be monitored because monitoring personnel would be exposed to immediate danger while conducting a monitoring survey may be designated as unsafe-to-monitor. Fugitive emissions components that are designated unsafe-to-monitor must meet the specifications of §60.5397a(g)(4)(i) through (iv).
- (xiii) Each identified source of fugitive emissions shall be repaired or replaced in accordance with §60.5397a(h)(1) through (3), which includes the following:
- (1) Each identified source of fugitive emissions shall be repaired or replaced as soon as practicable, but no later than 30 calendar days after detection of the fugitive emissions;
 - (2) If the repair or replacement is technically infeasible, would require a vent blowdown, a compressor station shutdown, or would be unsafe to repair during operation of the unit, the repair or replacement must be completed during the next compressor station shutdown, after an unscheduled, planned or emergency vent blowdown or within 2 years, whichever is earlier; and
 - (3) Each repaired or replaced fugitive emissions component must be resurveyed as soon as practicable, but no later than 30 days after being repaired, to ensure that there are no fugitive emissions. Operators that use OGI to resurvey the repaired fugitive emissions components, are subject to the following resurvey provisions specified in §60.5397a(h)(3)(iv)(A) and (B):
 - (i) A fugitive emissions component is repaired when the OGI instrument shows no indication of visible emissions; and
 - (ii) Operators must use the OGI monitoring requirements specified in §60.5397a(c)(7).
- (xiv) Records for each monitoring survey shall be maintained as specified §60.5420a(c)(15); and
- (xv) Annual reports shall be submitted for each collection of fugitive emissions components at a compressor station that include the information specified in §60.5420a(b)(7). Multiple collection of fugitive emissions components at a compressor station may be included in a single annual report.

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- (d) §60.5410a states the facility must comply with the following requirements to demonstrate initial compliance with the fugitive emission standards for each collection of fugitive emissions components at a compressor station. The initial compliance period begins upon startup of the facility and ends no later than 1 year after the initial startup date:
 - (i) Develop a fugitive emissions monitoring plan as required in §60.5397a(b), (c), and (d);
 - (ii) Conduct an initial monitoring survey as required in §60.5397a(f);
 - (iii) Maintain the records specified in §60.5420a(c)(15);
 - (iv) Repair each identified source of fugitive emissions for each affected facility as required in §60.5397a(h); and
 - (v) Submit the initial annual report for each collection of fugitive emissions components at a compressor station compressor station as required in §60.5420a(b)(1) and (7).
- (e) §60.5415a states that for each collection of fugitive emissions components at a compressor station, the facility must demonstrate continuous compliance with the fugitive emission standards specified in §60.5397a according to §60.5415a(h)(1) through (4);
- (f) §60.5420a outlines the following notification, reporting, and recordkeeping requirements:
 - (i) §60.5420a(b) states the facility must submit annual reports containing the information specified in §60.5420a(b)(7). The facility must submit annual reports following the procedure specified in §60.5420a(b)(11). The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to §60.5410a; and
 - (ii) §60.5420a(c) states the facility must maintain the records identified as specified in §60.7(f) and in §60.5420a(c)(15). All records required by this subpart must be maintained either onsite or at the nearest local field office for at least 5 years. Any records required to be maintained by this subpart that are submitted electronically via the EPA's CDX may be maintained in electronic format.
- (10) This source is subject MCL 10.56.170, "Emission of Gases, Vapors or Objectionable Odors" of Chapter 10.56 which states no person shall cause, suffer, allow or permit any emission of gases, vapors or objectionable odors beyond the property line from any source whatsoever which causes injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which causes or has a natural tendency to cause injury or damage to business or property.
- (11) This source is subject to MCL 10.56.270, "Visible Emissions," which restricts visible emissions from the source to no more than 20% opacity. This requirement has been streamlined into the more stringent standard of 0% opacity outlined in Condition (6). Compliance with the visible emission standards is assured since the only potential fugitive emissions are volatile organic compounds from the storage tank and natural gas from equipment leaks.
- (12) 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.

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- (13) Any compliance testing shall be conducted in accordance with the requirements of MCL 10.56.300, “Testing Procedures.”
- (14) 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 the monitoring and work practice requirements of 40 CFR Part 60, Subpart OOOOa outlined in Condition (9).
- (15) 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.
- (16) 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_x and CO annually.
- (17) 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.
- (18) 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.