

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Application Review

Issue Date: January ##, 2017

Region: Winston-Salem Regional Office
County: Rockingham
NC Facility ID: 7900131
Inspector's Name: Davis Murphy
Date of Last Inspection: 09/07/2016
Compliance Code: 3 / Compliance - inspection

Facility Data	Permit Applicability (this application only)
<p>Applicant (Facility's Name): Transcontinental Gas Pipe Line Company, LLC - Station 160</p> <p>Facility Address: Transcontinental Gas Pipe Line Company, LLC - Station 160 4300 NC 65 Reidsville, NC 27320</p> <p>SIC: 4922 / Natural Gas Transmission NAICS: 48621 / Pipeline Transportation of Natural Gas Facility Classification: Before: Title V After: Fee Classification: Before: Title V After:</p>	<p>SIP: 15A NCAC 2Q .0513 (renewal) NSPS: N/A NESHAP: 40 CFR 63 Subpart DDDDD PSD: N/A PSD Avoidance: N/A NC Toxics: N/A 112(r): N/A Other: N/A</p>

Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	<p>Application Number: 7900131.15A Date Received: 06/22/2015 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 09113/T11 Existing Permit Issue Date: 10/04/2013 Existing Permit Expiration Date: 03/31/2016</p>
Walter Romine District Manager (336) 951-2251 4300 NC Highway 65 Reidsville, NC 27320-9336	Kenny Jacobs Manager, EH&S (713) 215-3786 PO Box 1396 Houston, TX 77251	Cecilia Chapa Engineer III (713) 215-2964 PO Box 1396 Houston, TX 77251-1396	

Total Actual emissions in TONS/YEAR:							
CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2015	0.1400	510.56	53.52	183.13	10.21	31.39	22.63 [Formaldehyde]
2014	0.2000	629.11	52.05	202.81	10.66	30.42	21.94 [Formaldehyde]
2013	0.3800	672.93	61.76	241.03	13.65	36.76	26.54 [Formaldehyde]
2012	0.6800	1590.85	137.44	556.63	30.48	84.80	61.19 [Formaldehyde]
2011	1.02	1947.09	192.64	733.85	42.53	119.10	85.95 [Formaldehyde]

<p>Review Engineer: Richard Simpson</p> <p>Review Engineer's Signature: _____ Date: January ##, 2017</p>	<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue: 09113/T12 Permit Issue Date: January ##, 2017 Permit Expiration Date: December 31, 2021</p>
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I. Purpose of Application

Transcontinental Gas Pipe Line company, LLC – Station 160 currently holds Title V Permit No. 09113T11 with an expiration date of March 31, 2016 for a natural gas pipeline compressor station located in Reidsville, Rockingham County, North Carolina. The primary purpose of this application is for permit renewal with Part II 15A NCAC 02Q .0501(c)(2) modification. The Part II modification 7900131.14A was filed October 21, 2014. The renewal application was received on June 24, 2015, which was at least nine months prior to the expiration date, as required by General Permit Condition 3.K. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

II. Facility Description

According to the report for the previous compliance inspection conducted on September 7, 2016, by Davis Murphy, DAQ-WSRO Environmental Engineer, *“Transcontinental Gas Pipe Line Company, LLC – Station 160 is a natural gas pipeline compressor station. The pipeline runs from the gulf states to the northeast part of the county. This station utilizes a large group of reciprocating engines to drive compressors and compress gas, moving it on the pipeline. Gas comes in on three lines and goes through eight scrubbers to remove condensate prior to compression. The gas is then compressed using one of the engines or the turbine. Traditionally this station was used to move gas from the supplies in the Gulf states to the northeast, south to north, however the introduction of natural gas from the Marcellus Shale deposit has drastically shifted the flow of gas and reduced this facility’s operating times. Presently this site is only capable of moving gas from south to north on the pipeline. Facility representatives stated that they are planning a project to enable them to move gas in both directions, providing flexibility for these market changes.”*

III. History/Background/Application Chronology

September 16, 2013 – Permit application **7900131.13A** request was received for a minor modification to reclassify generators as emergency engines with a 02Q .0501(c)(2) Part I.

October 4, 2013 – Permit **09113T11** was submitted to the facility as a 02Q .0501(c)(2) Part I modification.

October 21, 2014 – Permit application **7900131.14A** was received as a 02Q .0501(c)(2) Part II modification to reclassify generators as emergency engines.

June 24, 2014 – Permit application **7900131.15A** was received for a Title V renewal.

November 30, 2016 – The facility, Winston-Salem Regional Office, and Stationary Compliance Section were requested by the Permitting Section to comment on the renewal. Comments were received and included in the permit.

December ##, 2016 – DRAFT permit sent to public notice and EPA for review prior to issuance. The 30-day public comment period ended **January ##, 2017** with the receipt of no comments. The 45-day EPA review period ended **January ##, 2017** with the receipt of no comments.

IV. Permit Modifications/Changes and ESM Discussion

The following table describes the modifications to the current permit as part of the renewal process.

Page(s)	Section	Description of Change(s)
Cover and throughout	Throughout	Updated all tables, dates, and permit revision numbers.
Throughout	Throughout	Corrected the regulatory reference from 2D and 2Q to 02D and 02Q.
Attachment 1	Insignificant Activities List	Since the I-0022 is no longer at the facility, removed air compressor coolant tank (18 gallon capacity).
Attachment 1	Insignificant Activities List	Inserted DEQ web link information in Item No. 3 at bottom of attachment as general information.
3	Section 1	Included column for page numbers.
3	Section 1	Updated Emission Source I.D. No. from CV-1 to CV-001 to be consistent with Section 2.1.C.
4	Section 1	Inserted MACT, Subpart DDDDD to Boiler ES-BLR2.
4	Section 2.1.A.	In the table for nitrogen oxides, inserted reference to "See Section 2.2.A.1."
4	Section 2.1.A.	In the table, inserted odor regulation with reference to Section 2.2.A.B."
5, 9, and 13	Section 2.1.(A.2.a, B.2.a., and E.3.a.)	Added "[15A NCAC 02D .0521(c)]" to the end of the referenced regulation.
8-12	Section 2.1.B-E.	In the table, inserted odor regulation with reference to Section 2.2.A.B."
10	Section 2.1.C.1.a.	Added "[15A NCAC 02D .0521(d)]" to the end of the referenced regulation.
12	Section 2.1.E.	In the table, inserted 15A NCAC 02D .1111 Boiler MACT Subpart DDDDD.
13	Section 2.1.E.4.a.	Inserted language for transition dates of CBC MACT to Boiler MACT.
13	Section 2.1.E.4.b.	Changed wording from assure to ensure.
14	Section 2.1.E.5.	Inserted language for 15A NCAC 02D .1111 Boiler MACT (40 CFR 63 Subpart DDDDD.
18	Section 2.2.A.1.d.	Changed wording from assure to ensure.
19	Section 2.2.B.1.	Inserted 15A NCAC 02D .1806 language for odor regulation.
19-29	General Conditions	Updated to latest version of DAQ shell version 4.0 12/17/15.

There were changes made to the Title V Equipment Editor (TVEE) under this permit renewal.

V. Regulatory Review

The facility is currently subject to the following regulations:

15A NCAC 2D .0503, Particulates from Fuel Burning Indirect Heat Exchangers

15A NCAC 2D .0516, Sulfur Dioxide Emissions from Combustion Sources

15A NCAC 2D .0521, Control of Visible Emissions

15A NCAC 2D .0524, New Source Performance Standards (40 CFR 60, Subpart GG)

15A NCAC 2D .1109, Case-by-Case Maximum Achievable Control Technology
15A NCAC 2D .1111, Maximum Achievable Control Technology (40 CFR 63, Subparts YYYY, ZZZZ, and DDDDD)
15A NCAC 2D .1409, Seasonal Emission Rate for Large Combustion Sources
15A NCAC 2D .1806, Control and Prohibition of Odorous Emissions
15A NCAC 2Q .0317, Avoidance Conditions (for 15A NCAC 2D .0530, Prevention of Significant Deterioration)

A regulatory review for these existing requirements will not be included in this document. 15A NCAC 02D .1806 requirement was added as a facility-wide state enforceable only requirement. 40 CFR 63 Subpart DDDDD should be applicable May 20, 2019 and Section 112(j) should expire May 19, 2019. No other new regulations are necessary for this permit renewal.

The applicability of 15A NCAC 02D .1409 was reviewed to see if any changes were required as part of this renewal permit application. To summarize, the allowed hours of operation during ozone season in the permit did not appear to match that required by the actual rule. However, the air permit review associated with 09113T02 issued **December 18, 2003** appears to provide the explanation. In summary, Seasonal Emission Rate for Large Combustion Sources and, specifically, 15A NCAC 02D .1409(g) states that a company may propose to reduce emissions from other sources to satisfy its NOx reduction requirements. As such, Transco reduced emissions from ES-M/L9 and ES-M/L11. Continued compliance with this regulation is indicated as these emissions units are subject to periodic emissions testing and consistently demonstrate compliance with the NOx emission limits.

VI. NSPS, NESHAPS/MACT, PSD, 112(r), CAM

NSPS – The facility’s natural gas-fired dry low NOx combustion turbine (**ID No. ES-M/L16**) is currently the only source at the facility subject to a new source performance standard. Specifically, it is subject to a NOx limitation of 203.4 parts per million at 15 percent oxygen on a dry basis, and to a sulfur dioxide limitation of 150 parts per million at 15 percent oxygen on a dry basis or fuel cannot contain sulfur in excess of 0.8 percent by weight. These two limits are associated with 40 CFR 60, Standards of Performance for Stationary Gas Turbines (Subpart GG). The current permit contains appropriate monitoring/recordkeeping/reporting language. This permit renewal does not affect this status.

NESHAPS/MACT – The Permittee is currently subject to the Maximum Achievable Control Technology Standards 40 CFR 63 Subpart YYYY, ZZZZ, Case-by-Case 112(j), and DDDDD for its existing engines, turbines, and boiler. The permit currently includes references to the requirements in each of the paragraphs of this Subpart.

1. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

The facility is classified as a major source of hazardous air pollutants and is subject to the following Maximum Achievable Control Technology Standards:

1. 40 CFR 63, National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines (Subpart YYYY). This Subpart applies to all existing, new, or reconstructed stationary combustion turbines [40 CFR 63.6085]. The facility currently operates one natural gas-fired dry low NOx combustion turbine (rated at 15,000 hp output and 122 million Btu per hour heat input; **ID No. ES-M/L16**). While subject to this Subpart, the turbine has no requirements. 40 CFR 63.6090(b)(4) states that “all existing stationary combustion turbines in all subcategories do not have to meet the requirements of this Subpart and of Subpart A.” This is noted in Section 2.1.C. of the permit. This permit renewal does not affect this status.

2. 40 CFR 63, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (Subpart ZZZZ). This Subpart is applicable to the following engines:
 - seven two-stroke natural gas lean-fired internal combustion engines (each rated at 1,800 maximum brake horsepower output and 14.9 million Btu per hour heat input; **ID Nos. ES-M/L1 through ES-M/L7**);
 - two two-stroke natural gas lean-fired internal combustion engines (each rated at 2,100 maximum brake horsepower output and 14.7 million Btu per hour heat input; **ID Nos. ES-M/L8 and ES-M/L9**);
 - one two-stroke natural gas lean-fired internal combustion engine with high pressure fuel injection system (rated at 2,100 maximum brake horsepower output and 14.7 million Btu per hour heat input; **ID No. ES-M/L10**);
 - three two-stroke natural gas lean-fired internal combustion engines (each rated at 3,400 maximum brake horsepower output and 23.3 million Btu per hour heat input; **ID Nos. ES-M/L11 through ES-M/L13**); and
 - two two-stroke natural gas lean-fired internal combustion engines (each rated at 5,500 maximum brake horsepower output and 37.7 million Btu per hour heat input; **ID Nos. ES-M/L14 and ES-M/L15**).
 - three four-stroke natural gas rich-fired internal combustion engines (each rated at 370 maximum brake horsepower output and 2.89 million Btu per hour heat input; **ID Nos. ES-AUX1 through ES-AUX3**);
 - one four-stroke natural gas rich-fired internal combustion engine (rated at 211 maximum brake horsepower output and 1.3 million Btu per hour heat input; **ID No. ES-A/C1**).

The existing engines are located at a major source of HAPs and 40 CFR 63 Subpart ZZZZZ applies. Permit Sections 2.1.A.3. 2.1.B.) notes the requirements. This permit renewal does not affect this status.

3. 40 CFR 63, Subpart B, Section 112(j) National Emission Standards for Hazardous Air Pollutants for Major Sources: The natural gas-fired boiler (ID No. ESBL2) is subject to 15A NCAC 2D .1109: Case-by-Case MACT. The boiler was constructed prior to June 4, 2010 and is considered to be an existing boiler under this rule. ESBL2 must meet the requirements listed in Section 2.1.E.4. of the permit and all applicable requirements of the Subpart. The Permittee shall comply with the CAA §112(j) standard in this Section through **May 19, 2019**.
4. 40 CFR 63, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers (Subpart DDDDD). The natural gas-fired boiler (ID No. ESBL2) shall be subject to the requirements of MACT Subpart 5D starting **May 20, 2019**. Note that the requirements of this standard may require action on behalf of the Permittee prior to **May 20, 2019**. Per MACT Subpart 5D, ESBL2 must meet the requirements listed in Section 2.1.E.5. of the permit and all applicable requirements of the Subpart.

PSD – The facility is a PSD major facility for NOx and VOCs and the Permittee currently operates under one PSD avoidance conditions. For the natural gas pipeline blowdown operations (**ID No. ES-BDO**), volatile organic compounds must be less than 40 tons per year. To ensure compliance with this limit, the Permittee is required to calculate VOC emissions monthly using total amount of VOC-containing material emitted and VOC content of the material. The permit also requires semiannual reporting of these calculations. This permit renewal does not affect this status.

112(r) – The facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the thresholds in the Rule. This permit renewal does not affect this status.

CAM – 40 CFR 64 requires that a compliance assurance monitoring plan be developed for all equipment located at a major facility, that have pre-controlled emissions above the major source threshold, and use a control device to meet an applicable standard. There are no permitted control devices at this facility; therefore, CAM is not applicable.

VII. Facility Wide Air Toxics

The facility is not currently subject to NC Air Toxics as never triggering a toxics review. It should be noted that although the facility is subject to MACT standards, it is not subject to the last MACT/air toxics requirements of 15A NCAC 2Q .0705, because all subject sources are combustion sources and therefore eligible for the exemption offered by 15A NCAC 2Q .0702. This permit renewal does not affect this status.

VIII. Facility Emissions Review

There is no change in Title V potential emissions for this renewal. Actual emissions from previous years are listed on Page 1.

IX. Compliance Status

DAQ has reviewed the compliance status of this facility. During the most recent inspection conducted on September 7, 2016, Davis Murphy of the WSRO indicated that the facility appeared to be in compliance with all applicable requirements.

Five year compliance history

The facility has not been sent any Notice of Violations and Deficiency in the last five years.

X. Public Notice/EPA and Affected State(s) Review

A thirty-day public notice period and a forty-five day EPA review period is required for the renewal of the Title V permit. A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to the EPA. Also pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice is provided to the public under 02Q .0521 above.

EPA's 45 Day Review period

Ms. Heather Ceron (U.S. EPA, Region IV) was provided a PROPOSED permit for review on December ##, 2016. EPA 45-day review period ended on January ##, 2017. No comments were offered or received.

Public Notice

The 30-day public notice of the proposed permit was posted on the NCDAQ website on December ##, 2016. No comments were offered or received.

XI. Other Regulatory Considerations

- A P.E. seal is NOT required for this application.
- A zoning consistency determination is NOT required for this renewal.
- Since this application was a renewal with no modification, no emission increases were noted for the PSD increment tracking purposes.

XII. Recommendations

The permit renewal application for Transcontinental Gas Pipe Line Company, LLC-Station 160 in Reidsville, Rockingham County, North Carolina has been reviewed by DAQ to determine compliance with all procedures and requirements. DAQ has determined that this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. The DAQ recommends the issuance of Air Permit No. 09113T12.