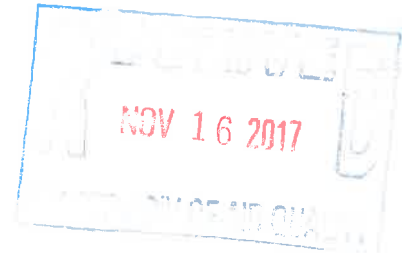


November 8, 2017

Mr. William F. Durham, Director
WVDEP - Division of Air Quality
601 57th Street SE
Charleston, West Virginia 25304

RE: Class I Administrative Update Application
Columbia Gas Transmission, LLC
Lone Oak Compressor Station (Facility ID# 051-00216)



Dear Mr. Durham,

Attached is an application for a Class I administrative update for the Columbia Gas Transmission's (Columbia) Lone Oak Compressor Station, located in Marshall County, West Virginia. The Station was issued Permit to Construct R13-3254 on December 7, 2015 for the construction of four (4) natural gas-fired turbines, one (1) natural gas-fired emergency generator, one (1) process heater, forty (40) catalytic heaters, and various insignificant tanks as described below. Columbia is requesting a decrease in the heat input of process heater HTR1 from 1.00 MMBtu/hr to 0.40 MMBtu/hr and the addition of a process heater HTR3 rated at 0.40 MMBtu/hr based on changes in heater selection.

In addition, insignificant tanks storing condensate at 1,000 gallons, condensate at 500 gallons, and waste water at 1,000 gallons have also been installed at the facility. Columbia is requesting the inclusion of the 500 gallon condensate and 1,000 gallon waste water tanks in the permit. Per Table 45-13B of West Virginia regulation 45 CSR 13, any storage vessel containing petroleum or organic liquids with a capacity less than 10,567 gallons is considered de minimis as long as emissions from the sum of the tanks is less than 2 tons per year for HAPs or VOCs.

These changes will result in a slight decrease in emissions. The Station will continue to be classified as a major source under Title V regulations (annual potential emissions of NO_x and CO are greater than 100 tons per year). The Station's PTE does not exceed Prevention of Significant Deterioration (PSD) applicability thresholds; therefore, the Station is not considered a major PSD source.

This administrative update package is being submitted along with the following required attachments:

- Permit Determination Form;
- Attachment A – Facility Map;
- Attachment B – Process Flow Diagram;
- Attachment C – Process Description;
- Attachment D – Material Safety Data Sheets; and
- Attachment E – Supporting Emissions Calculations.

Based on guidance from WVDEP, there is no application fee associated with a Class I administrative update.

Columbia Gas
Lone Oak
051-00216
R13-3254A
Ed

455 Racetrack Road, Washington, PA 15301

Phone: 724-223-2764

jeffrey_mccombs@transcanada.com

Should you have any questions or need additional information, please feel free to contact me at (724) 223-2764 or via email at jeffrey_mccombs@transcanada.com.

Sincerely,

A handwritten signature in black ink that reads "JEFF MCCOMBS". The signature is written in a cursive style with a large, stylized initial "J".

Jeff McCombs
Air Permitting Principal

Attachments



WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street, SE
Charleston, WV 25304
Phone: (304) 926-0475
www.dep.wv.gov/daq

**PERMIT DETERMINATION FORM
(PDF)**

FOR AGENCY USE ONLY: PLANT I.D. # _____
PDF # _____ PERMIT WRITER: _____

1. NAME OF APPLICANT (AS REGISTERED WITH THE WV SECRETARY OF STATE'S OFFICE):

Columbia Gas

2. NAME OF FACILITY (IF DIFFERENT FROM ABOVE):

Lone Oak Compressor Station

3. NORTH AMERICAN INDUSTRY
CLASSIFICATION SYSTEM (NAICS)
CODE:

4 8 6 2 1 0

4A. MAILING ADDRESS:

Columbia Gas Transmission LLC
1700 MacCorkle Ave, SE, Charleston, WV 25314

4B. PHYSICAL ADDRESS:

Waynesburg Pike

5A. DIRECTIONS TO FACILITY (PLEASE PROVIDE MAP AS ATTACHMENT A):

From the town of Lone Oak, travel south on Waynesburg Pike for approximately 1.7 miles.
Compressor Station will be on the left.

5B. NEAREST ROAD:

Waynesburg Pike

5C. NEAREST CITY OR TOWN:

Lone Oak

5D. COUNTY:

Marshall

5E. UTM NORTHING (KM):

4,414.8

5F. UTM EASTING (KM):

535.8

5G. UTM ZONE:

17

6A. INDIVIDUAL TO CONTACT IF MORE INFORMATION IS REQUIRED:

Jeff McCombs

6B. TITLE:

Air Permitting Principal

6C. TELEPHONE:

(724) 223-2764

6D. FAX:

6E. E-MAIL:

jeffrey_mccombs@transcanada.com

7A. DAQ PLANT I.D. NO. (FOR AN EXISTING FACILITY ONLY):

0 5 1 - 0 0 2 1 6

7B. PLEASE LIST ALL CURRENT 45CSR13, 45CSR14, 45CSR19
AND/OR TITLE V (45CSR30) PERMIT NUMBERS ASSOCIATED
WITH THIS PROCESS (FOR AN EXISTING FACILITY ONLY):

R13-3254

7C. IS THIS PDF BEING SUBMITTED AS THE RESULT OF AN ENFORCEMENT ACTION? IF YES, PLEASE LIST:

No

8A. TYPE OF EMISSION SOURCE (CHECK ONE):

- NEW SOURCE ADMINISTRATIVE UPDATE
 MODIFICATION OTHER (PLEASE EXPLAIN IN 11B)

8B. IF ADMINISTRATIVE UPDATE, DOES DAQ HAVE THE
APPLICANT'S CONSENT TO UPDATE THE EXISTING
PERMIT WITH THE INFORMATION CONTAINED HEREIN?

YES NO

9. IS DEMOLITION OR PHYSICAL RENOVATION AT AN EXISTING FACILITY INVOLVED?

YES NO

10A. DATE OF ANTICIPATED INSTALLATION OR CHANGE:

Existing / /

10B. DATE OF ANTICIPATED START-UP:

Existing / /

11A. PLEASE PROVIDE A DETAILED PROCESS FLOW DIAGRAM SHOWING EACH PROPOSED OR MODIFIED PROCESS EMISSION POINT AS ATTACHMENT B.

11B. PLEASE PROVIDE A DETAILED PROCESS DESCRIPTION AS ATTACHMENT C.

12. PLEASE PROVIDE MATERIAL SAFETY DATA SHEETS (MSDS) FOR ALL MATERIALS PROCESSED, USED OR PRODUCED AS ATTACHMENT D. FOR CHEMICAL PROCESSES, PLEASE PROVIDE A MSDS FOR EACH COMPOUND EMITTED TO AIR.

13A. REGULATED AIR POLLUTANT EMISSIONS:

⇒ FOR A NEW FACILITY, PLEASE PROVIDE PLANT WIDE EMISSIONS BASED ON THE POTENTIAL TO EMIT (PTE) FOR THE FOLLOWING AIR POLLUTANTS INCLUDING ALL PROCESSES.

⇒ FOR AN EXISTING FACILITY, PLEASE PROVIDE THE PROPOSED CHANGE IN EMISSIONS BASED ON THE PTE OF ALL PROCESS CHANGES FOR THE FOLLOWING AIR POLLUTANTS.

PTE FOR A GIVEN POLLUTANT IS TYPICALLY BEFORE AIR POLLUTION CONTROL DEVICES AND IS COLLECTED BASED ON THE MAXIMUM DESIGN CAPACITY OF PROCESS EQUIPMENT.

POLLUTANT	HOURLY PTE (LB/HR)	YEARLY PTE (TON/YR) (HOURLY PTE MULTIPLIED BY 8760 HR/YR) DIVIDED BY 2000 LB/TON
PM	9.02E-04	3.95E-03
PM ₁₀	9.02E-04	3.95E-03
VOCs	6.52E-04	2.86E-03
CO	0.01	0.04
NO _x	0.01	0.05
SO ₂	6.91E-03	3.78E-04
Pb	5.93E-08	2.60E-07
HAPs (AGGREGATE AMOUNT)	2.24E-04	9.81E-04
TAPs (INDIVIDUALLY)* CH2O	8.90E-06	3.90E-05
OTHER (INDIVIDUALLY)* :	-	-

* ATTACH ADDITIONAL PAGES AS NEEDED

13B. PLEASE PROVIDE ALL SUPPORTING CALCULATIONS AS ATTACHMENT E.

CALCULATE AN HOURLY AND YEARLY PTE OF EACH PROCESS EMISSION POINT (SHOWN IN YOUR DETAILED PROCESS FLOW DIAGRAM) FOR ALL AIR POLLUTANTS LISTED ABOVE INCLUDING INDIVIDUAL HAP'S (LISTED IN SECTION 112[b] OF THE 1990 CAAA), TAP'S (LISTED IN 45CSR27), AND OTHER AIR POLLUTANTS (E.G. POLLUTANTS LISTED IN TABLE 45-13A OF 45CSR13, MINERAL ACIDS PER 45CSR7, ETC.).

14. CERTIFICATION OF DATA

I, _____ (TYPE NAME) ATTEST THAT ALL THE REPRESENTATIONS CONTAINED IN THIS APPLICATION, OR APPENDED HERETO, ARE TRUE, ACCURATE, AND COMPLETE TO THE BEST OF MY KNOWLEDGE BASED ON INFORMATION AND BELIEF AFTER REASONABLE INQUIRY, AND THAT I AM A **RESPONSIBLE OFFICIAL**** (PRESIDENT, VICE PRESIDENT, SECRETARY OR TREASURER, GENERAL PARTNER OR SOLE PROPRIETOR) OF THE APPLICANT.

SIGNATURE OF RESPONSIBLE OFFICIAL: _____

TITLE: **Manager of Operations**

DATE: 11/8/17

**THE DEFINITION OF THE PHRASE 'RESPONSIBLE OFFICIAL' CAN BE FOUND AT 45CSR13, SECTION 2.23.

NOTE: PLEASE CHECK ENCLOSED ATTACHMENTS:

ATTACHMENT A ATTACHMENT B ATTACHMENT C ATTACHMENT D ATTACHMENT E

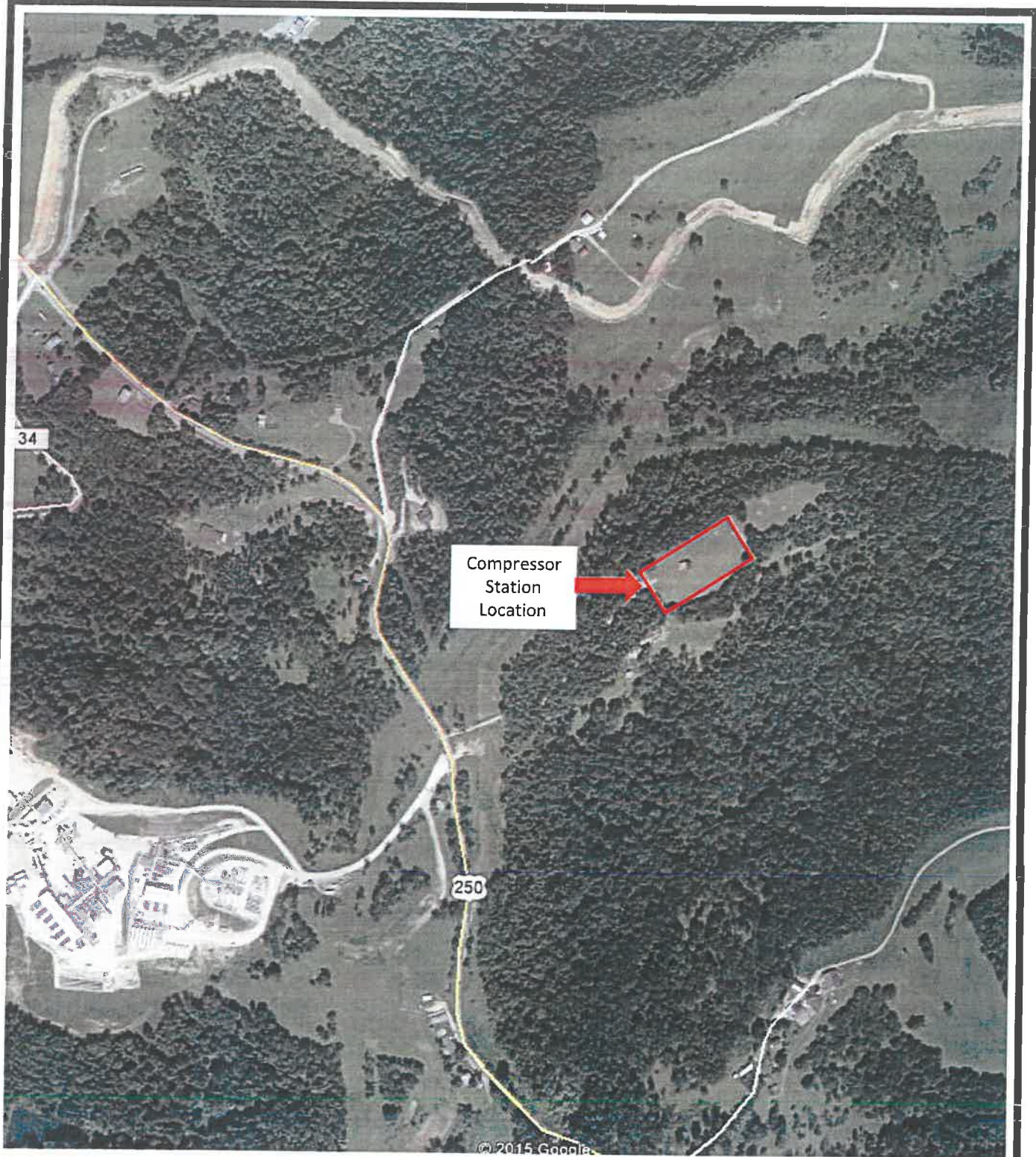
RECORDS ON ALL CHANGES ARE REQUIRED TO BE KEPT AND MAINTAINED ON-SITE FOR TWO (2) YEARS.

THE PERMIT DETERMINATION FORM WITH THE INSTRUCTIONS CAN BE FOUND ON DAQ'S PERMITTING SECTION WEB SITE:

www.dep.wv.gov/daq

Attachment A

Facility Map



From the town of Lone Oak, travel south on Waynesburg Pike for approximately 1.7 miles. Compressor Station will be on the left.

Attachment A

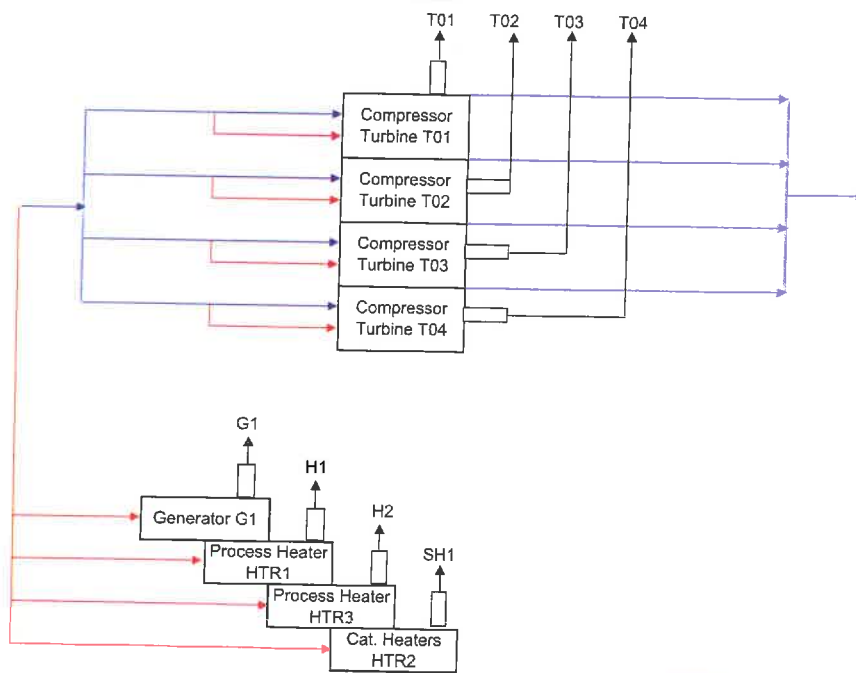
Date: November 2017

Facility Map
Lone Oak Compressor Station

Attachment B

Detailed Process Flow Diagram

**ATTACHMENT B
LONE OAK COMPRESSOR STATION PROCESS FLOW DIAGRAM**



— Transmission Gas Stream
 — Fuel Gas
 — Emission Stream



Attachment C

Process Description

Process Description

Columbia Gas Transmission, LLC's Lone Oak Compressor Station, located in Marshall County, West Virginia is a typical natural gas compressor station which was issued Permit to Construct R13-3254 on December 7, 2015.

Natural gas is received from upstream compressor stations via pipelines and compressed using four (4) Solar turbine-driven compressors for transmission to a downstream station. Auxiliary equipment permitted at the station includes one (1) natural gas-fired emergency generator, one (1) process heater, forty (40) catalytic heaters, and numerous insignificant storage tanks as described below.

The proposed modification will correct the heat input of the previously permitted process heater (HTR1), decreasing it from 1.00 MMBtu/hr to 0.40 MMBtu/hr and will also add process heater (HTR3) rated at 0.40 MMBtu/hr based on changes in heater selection. These changes result in an emissions decrease for the facility. The facility will remain a major source under Title V regulations.

In addition, insignificant tanks storing condensate at 1,000 gallons, condensate at 500 gallons, and waste water at 1,000 gallons have also been installed at the facility. Columbia is requesting the inclusion of the 500 gallon condensate and 1,000 gallon waste water tanks in the permit. Per Table 45-13B of West Virginia regulation 45 CSR 13, any storage vessel containing petroleum or organic liquids with a capacity less than 10,567 gallons is considered de minimis as long as emissions from the sum of the tanks is less than 2 tons per year for HAPs or VOCs.

Attachment D

SDSs

SDS will be provided upon request. The facility uses, handles, and stores materials that are typical for a natural gas compressor station. Pipeline quality natural gas is the primary raw material and fuel.

Attachment E

Supporting Emissions Calculations

Columbia Gas Transmission, LLC
 Lone Oak Compressor Station

Change in Facility PTE

Source	Capacity	Annual Emissions (tpy)							
		NO _x	CO	CO _{2e}	PM ₁₀ /PM _{2.5}	VOC	SO ₂	CH ₂ O	Total HAP
H1 - Process Heater #1 - as permitted	1.00 MMBtu/hr	0.43	0.36	513	0.03	0.02	3.13E-03	3.22E-04	8.11E-03
H1 - Process Heater #1 - as installed	0.40 MMBtu/hr	0.17	0.14	205	0.01	0.01	1.25E-03	1.29E-04	3.24E-03
H3 - Process Heater #2 - as installed	0.40 MMBtu/hr	0.17	0.14	205	0.01	0.01	1.25E-03	1.29E-04	3.24E-03
Change in Emissions		-0.09	-0.07	-102.58	-0.01	-4.72E-03	-6.25E-04	-6.44E-05	-1.62E-03

Columbia Gas Transmission, LLC
Lone Oak Compressor Station

Indirect-fired Heat Exchanger (HTR1) - as permitted

Heat Input 1.00 MMBtu/hr
 Operating Hours 8,760 hr/yr
 Natural Gas Heat Content 1,020 Btu/scf
 Fuel Consumption 8.59 MMscf/yr
 980 scf/hr

Pollutant	Emission Factor		Emission Rate		Emission Factor Reference
	lb/MMscf	lb/MMBtu	lb/hr	ton/yr	
NO _x	100	0.098	0.10	0.43	AP-42 Table 1.4-1 (7/98)
CO	84	0.082	0.08	0.36	AP-42 Table 1.4-1 (7/98)
CO ₂ e		117.1	117	513	40 CFR 98 Subpart C
PM ₁₀	7.6	0.007	0.01	0.03	AP-42 Table 1.4-2 (7/98)
PM _{2.5}	7.6	0.007	0.01	0.03	AP-42 Table 1.4-2 (7/98)
VOC	5.5	0.005	0.01	0.02	AP-42 Table 1.4-2 (7/98)
SO ₂ (Maximum Hourly)		0.0571	0.06		20 grains S / 100 scf
SO ₂ (Average Annual)		0.000714		3.13E-03	0.25 grains S / 100 scf
Formaldehyde	0.075	0.00007	7.35E-05	3.22E-04	AP-42 Table 1.4-3 (7/98)
Total HAPs	1.89	0.00185	1.85E-03	8.11E-03	AP-42 Table 1.4-3 & 4 (7/98)

**Columbia Gas Transmission, LLC
Lone Oak Compressor Station**

Indirect-fired Heat Exchanger (HTR1) - as installed

Heat Input 0.40 MMBtu/hr
 Operating Hours 8,760 hr/yr
 Natural Gas Heat Content 1,020 Btu/scf
 Fuel Consumption 3.44 MMscf/yr
 392 scf/hr

Pollutant	Emission Factor		Emission Rate		Emission Factor Reference
	lb/MMscf	lb/MMBtu	lb/hr	ton/yr	
NO _x	100	0.098	0.04	0.17	AP-42 Table 1.4-1 (7/98)
CO	84	0.082	0.03	0.14	AP-42 Table 1.4-1 (7/98)
CO ₂ e		117.1	47	205	40 CFR 98 Subpart C
PM ₁₀	7.6	0.007	0.00	0.01	AP-42 Table 1.4-2 (7/98)
PM _{2.5}	7.6	0.007	0.00	0.01	AP-42 Table 1.4-2 (7/98)
VOC	5.5	0.005	0.00	0.01	AP-42 Table 1.4-2 (7/98)
SO ₂ (Maximum Hourly)		0.0571	0.02		20 grains S / 100 scf
SO ₂ (Average Annual)		0.000714		1.25E-03	0.25 grains S / 100 scf
Formaldehyde	0.075	0.00007	2.94E-05	1.29E-04	AP-42 Table 1.4-3 (7/98)
Total HAPs	1.89	0.00185	7.41E-04	3.24E-03	AP-42 Table 1.4-3 & 4 (7/98)

Columbia Gas Transmission, LLC
Lone Oak Compressor Station

Indirect-fired Heat Exchanger (HTR3) - as installed

Heat Input 0.40 MMBtu/hr
 Operating Hours 8,760 hr/yr
 Natural Gas Heat Content 1,020 Btu/scf
 Fuel Consumption 3.44 MMscf/yr
 392 scf/hr

Pollutant	Emission Factor		Emission Rate		Emission Factor Reference
	lb/MMscf	lb/MMBtu	lb/hr	ton/yr	
NO _x	100	0.098	0.04	0.17	AP-42 Table 1.4-1 (7/98)
CO	84	0.082	0.03	0.14	AP-42 Table 1.4-1 (7/98)
CO _{2e}		117.1	47	205	40 CFR 98 Subpart C
PM ₁₀	7.6	0.007	0.00	0.01	AP-42 Table 1.4-2 (7/98)
PM _{2.5}	7.6	0.007	0.00	0.01	AP-42 Table 1.4-2 (7/98)
VOC	5.5	0.005	0.00	0.01	AP-42 Table 1.4-2 (7/98)
SO ₂ (Maximum Hourly)		0.0571	0.02		20 grains S / 100 scf
SO ₂ (Average Annual)		0.000714		1.25E-03	0.25 grains S / 100 scf
Formaldehyde	0.075	0.00007	2.94E-05	1.29E-04	AP-42 Table 1.4-3 (7/98)
Total HAPs	1.89	0.00185	7.41E-04	3.24E-03	AP-42 Table 1.4-3 & 4 (7/98)