Air Operating Permit (AOP) - Modification

version 2.5

(Submission #: HQC-10P7-H6ETW, version 1)

Details

Submission ID HQC-10P7-H6ETW

Form Input

Form Instructions

In accordance with NDAC 33.1-15-14-03.16, when the public interest requires or when necessary to ensure the accuracy of the permit, the department may modify any condition or information contained in a minor source permit to operate. Modification shall be made only upon the department's own motion and the procedure shall, at a minimum, conform to any requirements of federal and state law. In the event that the modification would be a major modification as defined in chapter 33.1-15-15, the department shall follow the procedures established in chapter 33.1-15-15.

When completing the online application, if uploaded files are provided in each section (when indicated), do not include those same files in the General Document Upload/File Upload section. If uploading the application files in the General Document Upload/File Upload section, only fill out the required (asterisked) sections of the online application.

Section A - Permit Information

Permit Number
AOP-27991

Permit Version
1

Permit Issue Date
12/04/2020

Expiration Date
12/09/2025

Owner

Company Name
1804 Ltd. LLC

Address

10385 Westmoor Drive, Suite 225

Westminster, CO 80021

United States

Responsible Official

Prefix
NONE PROVIDED

First Name	Last Name
Edward	Aabak

Title
Managing Director

Phone Type	Number	Extension
Business	7206969691	

Email
eaabak@flatironsfs.com

Address
10385 Westmoor Drive, Suite 225
Westminster, CO 80021
United States

Contact Person for Air Pollution Matters

Prefix
NONE PROVIDED

First Name	Last Name
Eric	Hammond

Title
Engineering Manager

Phone Type	Number	Extension
Business	7206969688	

Email
ehammond@flatironsfs.com

Address
10385 Westmoor Drive, Suite 225
Westminster, CO 80021
United States

Section B (Part 1) - Facility Location

Facility Name
1804 Ltd. LLC - Stockyard Creek Compressor Station

Portable?
No

Facility Location
SW ⬚, SE ⬚, Sec. 21, T154N, R99W
Springbrook, ND 58843
Williams

Facility Location:
48.14070300000001,-103.4260720000000

SW ⬚, SE ⬚, Sec. 21, T154N, R99W, Springbrook, ND

Section B (Part 2) - Additional Location Information

Legal Description of Facility Site

Qtr Qtr	Qtr	Section	Township	Range
SWSW	SW	21	154N	99W

Land area at facility site (in sq. ft.)
373309.00

Mean sea level (MSL) elevation at facility (in feet)
2122.0

Section C - Nature of Business

General Nature of Business

Describe Nature of Business	NAICS Code	SIC Code
Compressor Station	211130-Natural Gas Extraction	1311-Crude Petroleum and Natural Gas

Actual Start of Construction Date
08/01/2025

Actual End of Construction Date
11/01/2025

Modification Startup Date (start of change in equipment that triggered THIS permit modification)
NONE PROVIDED

Section D - Process Equipment Information (1 of 2)

Emission Unit - C-2710

Emission Unit ID
C-2710

Emission Unit Description
Stationary 4SLB ICE

Emission Point ID
EPN 12 (at Springbrook Gas Plant)

Emission Point Description
Engine Stack

Emission Process Description
Compressor Engine

Emission Unit Status
Existing, location change

Applicable PTCs

PTC Number
PTC16025
ACP-18160 v1.0

Applicable Federal Air Programs

Program Code
Federally-Enforceable State Operating Permit - Non Title V
40 CFR Part 63 Area Sources
New Source Performance Standards

NSPS Air Program Subparts

Subpart
Subpart JJJJ - STATIONARY SPARK IGNITION INTERNAL COMBUSTION ENGINES
Subpart OOOO - CRUDE OIL/NATURAL GAS PRODUCTION/TRANSMISSION & DISTRIBUTION
Subpart OOOOa - CRUDE OIL/NATURAL GAS PRODUCTION/TRANSMISSION & DISTRIBUTION (post 9/18/15)

Area Source MACT Air Program Subparts

Subpart
Subpart ZZZZ - STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES (RICE)

Applicable State Regulations

Regulation
33.1-15-01. General Provisions.
33.1-15-02-04. Ambient air quality standards.
33.1-15-03-01. Visible Emissions. Restrictions applicable to existing installations.

Emission Unit Forms

Using the Forms dropdown list, select applicable forms. For each form selected, a link to the form will be displayed below. Use the link to download each form, then complete the form and attach it to this application using the attachment control below.

When completing the online application, if uploaded files are provided in each section (when indicated), do not include those same files in the General Document Upload/File Upload section. If uploading the application files in the General Document Upload/File Upload section, only fill out the required (asterisked) sections of the online application.

Forms
SFN8532 - Air Pollution Control Equipment
SFN8891 - Internal Combustion Engines and Turbines

Link to SFN8532 - Air Pollution Control Equipment

Link to SFN8891 - Internal Combustion Engines and Turbines

Attach Forms

2025.04.25_Stockyard CS Permit Mod - C-2710 addition-signed.pdf - 05/14/2025 11:46 AM

Comment
NONE PROVIDED

Section D - Process Equipment Information (2 of 2)

Emission Unit - TEG-2

Emission Unit ID
TEG-2

Emission Unit Description
TEG Unit Still Vent

Emission Point ID
EPN-9

Emission Point Description
TEG Unit Still Vent

Emission Process Description
Triethylene glycol dehydration unit

Emission Unit Status
Existing, modification

Applicable PTCs

PTC Number
PTC16025

Applicable Federal Air Programs

Program Code
MACT Standards (40 CFR Part 63)

MACT Air Program Subparts

Subpart
Subpart HH - OIL AND NATURAL GAS PRODUCTION FACILITIES

Applicable State Regulations

Regulation
33.1-15-01. General Provisions.
33.1-15-02-04. Ambient air quality standards.
33.1-15-03-01. Visible Emissions. Restrictions applicable to existing installations.

Emission Unit Forms

Using the Forms dropdown list, select applicable forms. For each form selected, a link to the form will be displayed below. Use the link to download each form, then complete the form and attach it to this application using the attachment control below.

When completing the online application, if uploaded files are provided in each section (when indicated), do not include those same files in the General Document Upload/File Upload section. If uploading the application files in the General Document Upload/File Upload section, only fill out the required (asterisked) sections of the online application.

Forms
SFN58923 - Glycol Dehydration Units
SFN8532 - Air Pollution Control Equipment

Link to SFN8532 - Air Pollution Control Equipment

Link to SFN58923 - Glycol Dehydration Units

Attach Forms

2025.04.25_Stockyard CS Permit Mod - C-2710 addition-signed.pdf - 05/14/2025 11:53 AM

Comment
NONE PROVIDED

Section E - Facility-Wide Applicable Regulations and Potential to Emit (PTE)

Applicable Federal Air Programs

Program Code

Applicable State Regulations

Regulation
33.1-15-01. General Provisions.
33.1-15-02-04. Ambient air quality standards.
33.1-15-03-01. Visible Emissions. Restrictions applicable to existing installations.
33.1-15-03-02. Visible Emissions. Restrictions applicable to new installations and all incinerators.
33.1-15-03-03. Visible Emissions. Restrictions applicable to fugitive emissions.
33.1-15-03-03.1. Visible Emissions. Restrictions applicable to flares.
33.1-15-05-01.2. Restriction of emission of particulate matter from industrial processes. Emission Limitations.
33.1-15-07-01.3. Requirements for construction of organic compounds facilities. Submerged fill pipes required.

Regulation
33.1-15-08. Control of Air Pollution from Vehicles and Other Internal Combustion Engines.
33.1-15-11. Prevention of Air Pollution Emergency Episodes.
33.1-15-12. Standards of Performance for New Stationary Sources.
33.1-15-13. Emission Standards for Hazardous Air Pollutants.
33.1-15-14-02. Permit to Construct Required.
33.1-15-14-01. Designated Air Contaminant Sources.
33.1-15-14-03. Minor Source Permit to Operate.
33.1-15-16-02. Emissions of Odorous Substances Restricted.
33.1-15-17-04. Restriction of Fugitive Gaseous Emissions.
33.1-15-18. Stack Heights.
33.1-15-20-02. Control of Emissions from Oil and Gas Well Production Facilities. Registration and Reporting Requirements.
33.1-15-22. Emissions Standards for Hazardous Air Pollutants for Source Categories.
33.1-15-23. Fees.
33.1-15-25. Regional Haze Requirements

Potential to Emit (PTE)

Pollutant	Tons Per Year Without Fugitives	Tons Per Year With Fugitives
NOx	48.13	48.13
CO	52.32	52.32
VOCs	60.86	69.18
SO2	0.272	0.272
PM	0.055	0.055
PM10	0.055	0.055
PM2.5	0.055	0.055
Total HAPs	5.461	5.461

Section F - Redline Permit Upload

Use the attachment control below to upload a redline version of your existing permit document, showing any changes.

Attach redline version of permit here

Stockyard AOP-27991 v1.0 Redlined.pdf - 05/14/2025 12:44 PM

Comment

NONE PROVIDED

Section G - File Upload

File Upload

Use the attachment control below to upload any other information necessary for application review, such as plot plans, process diagrams, maps, etc.

When completing the online application, if uploaded files are provided in each section (when indicated), do not include those same files in the General Document Upload/File Upload section. If uploading the application files in the General Document Upload/File Upload section, only fill out the required (asterisked) sections of the online application.

Attachments

NONE PROVIDED

Comment

NONE PROVIDED

Additional Forms

Additional forms that may be needed for the application can be found at the following link:
Additional Air Quality forms

Stockyard Creek Compressor Station

Construction Permit Application

Williams County, North Dakota

April 2025

PREPARED FOR:

1804, Ltd.

Westminster, Colorado

OFFICE: 281-664-2490
FAX: 281-664-2491
20465 State Highway 249, Suite 300
Houston, TX 77070
spiritenv.com

Table of Contents

Flatirons Field Services
10385 Westmoor Dr
Westminster, CO 80021
Phone: 720.291.3232

April 24, 2025

North Dakota Department of Environmental Quality
Division of Air Quality
4201 Normandy Street, 2nd Floor
Bismarck, ND 58503-1324

RE: **Notification of Permit Modification – Compressor Engine Addition**
Stockyard Creek Compressor Station AOP – 279901 v1.0
SW ¼ SW ¼ Section 21, T154N, R99W
Williams County, North Dakota

Dear Sir / Madam,

Flatirons Field Services (Flatirons), on behalf of 1804 Ltd., would like to request a Permit Modification as detailed in the attached permit application for Stockyard Creek Compressor Station, AOP – 279901 V1.0. This modification request is to add one lean burn engine to increase the facility throughput from 25 mmscf/d to 35 mmscf/d at the compressor station. The engine is currently operating at the Springbrook Gas Plant, AOP – 28416 V1.1, and will be moved to Stockyard Creek Compressor Station upon approval of this Permit Modification.

If you should have any questions I can be reached at the contact information below. If you need any additional information, or have any specific questions related to this submittal, please contact EJ Lachendro with Spirit Environmental LLC at (303) 578-2635 or elachendro@spiritenv.com.

Sincerely,

Eric Hammond

Eric Hammond
Engineering Manager
1804, Ltd.
Office: (720) 636-9688
ehammond@flatironsfs.com

1.0 Introduction

Flatirons Field Services (Flatirons), on behalf of 1804 Ltd., is submitting this application to add a new compressor engine to increase production capabilities from 25 mmscf/d to 35 mmscf/d at the Stockyard Creek Compressor Station (Stockyard). Flatirons is requesting a modification to the existing Permit to Operate No. AOP-279901 v1.0 to allow for construction of one Caterpillar G3608 A4 Compressor Engine and the associated compressor unit. A facility location map is presented in Figure 1 and a plot plan is presented in Figure 2 (Appendix A). Emissions calculations are presented in Appendices B; permit application forms and vendor data are presented in Appendix C.

Modeling:
This project is not subject to the Prevention of Significant Deterioration of Air Quality (PSD) requirements. Per the NDDEQ Criteria Pollutant Modeling Requirements for a permit to Construct Memo dated October 6, 2014, projects which are not subject to the PSD rules, as a general rule, are not required to conduct emission modeling if the emissions remain below the following thresholds. The emissions at Stockyard will remain under these thresholds, and hence, emission modeling was not completed.

Pollutant	**All emissions vent from stacks with height ≥ 1.5 times nearby bldg. height**	**Some emissions vent from stacks with height < 1.5 times nearby bldg. height**
Nitrogen Oxides	100 tons/year	40 tons/year
Sulfur Dioxide	100 tons/year	40 tons/year
PM_{10}	40 tons/year	15 tons/year
$PM_{2.5}$	25 tons/year	10 tons/year

Name and address of owner and operator:
1804 Ltd.
10385 Westmoor Dr
Westminster, CO 80021

Address of affected sources:
Section 21, Township 154 North, Range 99 West in Williams County

An emissions summary is presented in Table B-1. As shown in the table, Stockyard will continue to be:

- Synthetic Minor source for air pollutants under Title V, and
- Area source for Hazardous Air Pollutants (HAPs)
- Minor source for criteria pollutants under Prevention of Significant Deterioration (PSD).

2.0 Process Description

Currently, Stockyard facility processes up to 25 million standard cubic feet per day (MMscfd) of natural gas by compressing the field gas to pipeline pressure and removing excess water with a TEG Dehydration Unit. The flash gas stream of the TEG Dehydration unit is recycled to the facility inlet and the still vent gas is controlled by an enclosed combustor. Treated gas is routed to a pipeline for transfer to the nearby gas processing plant with a small slipstream of sales gas routed back to Stockyard to supply fuel for on-site equipment. Produced water is stored in an atmospheric tank and condensate is stored in a bullet storage tank. The liquids from these tanks are removed from the site via a tanker truck. An emergency/process flare is located on-site to control the condensate bullet storage tank emissions, compressor and pigging blowdowns, and upset process gas. Stockyard is currently permitted for the following emission sources:

- Two gas compressors driven by natural gas-fired internal combustion (IC) engines (2,370 horsepower (hp)), lean-burn 4-stroke Caterpillar G3608 LE, equipped with oxidation catalyst control). (C-2751 and C-2752)
- Two natural gas-fired IC engines (600 hp, rich burn, 4-stroke Caterpillar CG137-12 generator sets, with three-way catalyst and air/fuel ratio control). (G-8951 and G-8952)
- One 25 MMscfd TEG dehydration contactor unit, with a 1.5 million British thermal unis per hour (MMBtu/hr) reboiler. (TEG and TEG-H)
- One 400-barrel (bbl) capacity produced water storage tank with loadout. (TANK)
- One 30,000-gallon capacity condensate storage tank with loadout. (TANK2)
- One emergency/process flare that that controls the condensate bullet tank, compressor blowdowns, and pig launcher/receiver blowdowns. (FL-8501)
- One TEG flare that controls the TEG still vent. (FL-8502)
- Associated piping components (e.g. connectors, valves, etc.) and truck loadout fugitive sources.

Flatirons is requesting to increase Stockyard facility throughput and the TEG dehydration unit throughput to 35 MMscfd. The current TEG dehydration contactor unit is capable of processing the additional throughput and will not be physically modified. The following equipment will be added:

- One gas compressor driven by natural gas-fired IC engine (2,500 hp, lean-burn 4-stroke Caterpillar G3608 A4, equipped with oxidation catalyst control). (C-2710)

3.0 Applicable Regulations

This section summarizes the applicable air quality regulations for the Stockyard Creek Compressor Station.

Table 3-1 Summary of State and Federal Regulations Applicability

Summary of State and Federal Regulations Applicability		
Program/Standard	**Code**	**Applicability**
NORTH DAKOTA AIR POLLUTION CONTROL RULES	NDAC 33.1-15	Yes
General Provisions	NDAC 33.1-15-01	Yes
Ambient Air Quality Standards	NDAC 33.1-15-02	Yes
Restriction of Emission of Visible Air Contaminants	NDAC 33.1-15-03	Yes
Open Burning Restrictions	NDAC 33.1-15-04	No
Emissions of Particulate Matter Restricted	NDAC 33.1-15-05	Yes
Emissions of Sulfur Compounds Restricted	NDAC 33.1-15-06	No
Control of Organic Compounds Emissions	NDAC 33.1-15-07	Yes
And Other Internal Combustion Engines	NDAC 33.1-15-08	Yes
Control of Pesticides	NDAC 33.1-15-10	No
Prevention of Air Pollution Emergency Episodes	NDAC 33.1-15-11	Yes
Standards of Performance for New Stationary Sources	NDAC 33.1-15-12	Yes
Emission Standards for Hazardous Air Pollutants	NDAC 33.1-15-13	Yes
Designated Air Contaminant Sources, Permit to Construct, Minor Source Permit to Operate, Title V Permit to Operate	NDAC 33.1-15-14	Yes
Prevention of Significant Deterioration (“PSD”) of Air Quality	NDAC 33.1-15-15	No
Restriction of Odorous Air Contaminants	NDAC 33.1-15-16	Yes
Restriction of Fugitive Emissions	NDAC 33.1-15-17	Yes
Stack Heights	NDAC 33.1-15-18	Yes
Visibility Protection	NDAC 33.1-15-19	No
Control of Emissions from Oil and Gas Well Production Facilities	NDAC 33.1-15-20	Yes
Acid Rain Program	NDAC 33.1-15-21	No
Emissions Standards for HAP for Source Categories	NDAC 33.1-15-22	Yes
Fees	NDAC 33.1-15-23	Yes
Standards for Lead-Based Paint Activities	NDAC 33.1-15-24	No
Regional Haze Requirements	NDAC 33.1-15-25	Yes
National Ambient Air Quality Standards (NAAQS)	40 CFR 50	Yes
New Source Review	40 CFR 52	Yes
STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES (NSPS)	40 CFR 60	Yes
SUBPART A - General Provisions	40 CFR 60	Yes
SUBPART Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (60.40c-60.48c)	40 CFR 60	No

SUBPART Dc - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (60.40c-60.48c)	40 CFR 60	No
SUBPART Kb - Standards of Performance for Volatile Organic Liquid (VOL) Storage Vessels (Including Petroleum Liquid Storage Vessels) row which Construction, Reconstruction, or Modification Commenced after July 23, 1984 (60.110a - 60.115a)	40 CFR 60	No
SUBPART JJJJ – New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines	40 CFR 60	Yes
SUBPART OOOO – Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution for which Construction, Modification or Reconstruction Commenced August 23, 2011, and on or before September 18, 2015.	40 CFR 60	Yes
SUBPART OOOOa – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015.	40 CFR 60	Yes
SUBPART OOOOb – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After December 6, 2022.	40 CFR 60	Yes
NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPs) FOR SOURCE CATEGORIES	40 CFR 63	Yes
SUBPART A - General Provisions	40 CFR 63	Yes
SUBPART HH – National Emission standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities	40 CFR 63	Yes
SUBPART ZZZZ - National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines	40 CFR 63	Yes
Title V Operating Permit	40 CFR 70	No
Mandatory Greenhouse Gas Reporting	40 CFR 98	Yes

3.1 STATE OF NORTH DAKOTA AIR QUALITY RULES

The Stockyard Creek Compressor Station is a "*designated air contaminant source*" under North Dakota Administrative Code ("NDAC") 33.1-15-14-01; therefore, it is subject to the permitting requirements and emission limitations for new stationary source of air contaminants subject to regulation, also known as "*criteria pollutants*" or "*regulated NSR pollutants.*"

Based on the PTE of regulated NSR pollutants from the Stockyard Creek Compressor Station, the facility qualifies as a Minor Source as defined in NDAC 33.1-15-14-06.

The remaining section details the applicability to the Stockyard Creek Compressor Station of the State of North Dakota Air Pollution Control Rules codified in NDAC Chapters 33.1-15-01 through 33.1-15-25.

General Provisions (33.1-15-01)

The general provisions of chapter -15-01 address the following: entry onto premises, authority, variances, circumvention, severability, land use plans and zoning regulations, measurement of air contaminants, shutdown and malfunction of an installation - requirement for notification, time schedule for compliance, prohibition of air pollution, confidentiality of records, enforcement, and compliance certifications. 1804/Flatirons is subject to the provisions of this chapter and follows the regulations of the section.

Ambient Air Quality Standards (33.1-15-02)

NDDEQ has adopted in NDAC 33.1-15-02, as mandated by North Dakota Century Code 23-25-03.2 and 23-25-03-3. Ambient Air Quality Standards affecting compressor stations are equal to NAAQS under the CAA. 1804/Flatirons is subject to the provisions of this chapter and follows the regulations of the section.

Restriction of Emission of Visible Air Contaminants (33.1-15-03)

This chapter prohibits new emission sources from producing visible emissions of greater than 20% opacity, with the exception that 40% opacity is permissible for not more than one (1) six-minute period per hour. 1804/Flatirons is subject to the provisions of this chapter and follows the regulations of the section.

Open Burning Restrictions (33.1-15-04)

This chapter states that no person may cause, conduct, or permit open burning of refuse, trade waste, or other combustible material, except as provided for in section 33.1-15-04-02 or 33.1-15-10-02, and no person may conduct, cause, or permit the conduct of a salvage operation by open burning. 1804/Flatirons will not conduct open burning as outlined in this chapter and will not be subject to the provisions of this chapter.

Emissions of Particulate Matter Restricted (33.1-15-05)

Section 33.1-15-05-01 regulates particulate matter from "any operation, process, or activity from which particulate matter is emitted except the burning of fuel for indirect heating in which the products of combustion do not come into direct contact with process materials." Each of the compressor and generator engines are operated in compliance with the maximum allowable rates of emission as outlined in the provisions of this chapter. The particulate matter ("PM") emissions of all engines and generators are less than the smallest lb/hr allowable emission rate ("E") of Table 3 of this subpart.

Section 33.1-15-05-02 regulates particulate matter from indirect heating equipment in which "fuel, including any products or byproducts of the manufacturing process, is burned for the primary purpose of producing steam, hot water, hot air, or other indirect heating of liquids, gases, or solids and, in the course of doing so, the products of combustion do not come into direct contact with process material." This section exempts fuel burning equipment in which gaseous fuel is burned, and as such, the heaters at the Stockyard Creek Compressor Station are exempted from this section since they operate on natural gas.

Emissions of Sulfur Compounds Restricted (33.1-15-06)

This chapter applies to any installation in which fuel is burned, in which the SO2 emissions are substantial due to the sulfur content of the fuel consumed, and in which the fuel is burned primarily to produce heat. All applicable units at the facility apply to sulfur dioxide emission limits under NSPS Subpart Dc which is listed under chapter 33.1-15-12 and, therefore, are not subject to this subpart.

Control of Organic Compounds Emissions (33.1-15-07)

This chapter establishes requirements for the construction of facilities that generate organic compounds and vapors and the manner of organic compounds disposal. The Stockyard Creek Compressor Station will emit organic compounds from the Condensate Storage Tank (TK-1) and has employed a closed vent system, submerged fill pipes, and submerged fill loading at the facility. Additionally, all pumps and compressors handling organic compounds are equipped and operated with adequately maintained seals.

And Other Internal Combustion Engines (33.1-15-08)

The provisions of this chapter prohibit the operation of an internal combustion engine from any source which emits "any unreasonable and excessive smoke, obnoxious or noxious gases, fumes or vapor." 1804/Flatirons will not intentionally remove, alter or otherwise render inoperative any control device at the facility.

Control of Pesticides (33.1-15-10)

The provisions of this chapter restrict the use and disposal of pesticides, surplus, and containers. 1804/Flatirons will not use pesticides and is therefore not subject to the provisions of this chapter.

Prevention of Air Pollution Emergency Episodes (33.1-15-11)

When NDDEQ declares an air pollution emergency episode, 1804/Flatirons will comply with the provisions of the chapter.

Standards of Performance for New Stationary Sources (33.1-15-12)

The North Dakota Standards of Performance for New Stationary Sources adopt in whole or in part the Federal NSPS regulations in 40 CFR 60. NDAC 33.1-15-12 identifies the applicable requirements of the Federal NSPS regulations adopted by the State. The Stockyard Creek Compressor Station is subject and complies with the following provisions of the NSPS:

- Subpart JJJJ – New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines.
- Subpart OOOO – New Source Performance Standards for Crude Oil and Natural Gas Production, Transmission and Distribution for which Construction, Modification or Reconstruction Commenced August 23, 2011, and on or before September 18, 2015.
- Subpart OOOOa – New Source Performance Standards for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced September 18, 2015.

Emissions Standards for Hazardous Air Pollutants (33.1-15-13)

The North Dakota Emission Standards of Hazardous Air Pollutants adopt in whole or in part the Federal NESHAPs in 40 CFR 61. NDAC 33.1-15-13 identifies the applicable requirements of the Federal NESHAP regulations adopted by the State. The Stockyard Creek Compressor Station is not subject to any of the NESHAPs identified in this subpart.

Designated Air Contaminant Sources, Permit to Construct, Minor Source Permit to Operate, Title V Permit to Operate (33.1-15-14)

The Stockyard Creek Compressor Station is a "designated air contaminant source" under NDAC 33.1-15-14-01; therefore, a Permit to Operate a new stationary source of air contaminants is required. Minor sources are defined by Section 112 of the Federal Clean Air Act as those with Potential to Emit ("PTE") any air contaminant subject to regulation less than 100 TPY, or any single HAP less than 10 TPY or combined HAPs less than 25 TPY.

In accordance with the allowable provisions of 33.1-15-14 and based on the PTE of regulated NSR pollutants from the Stockyard Creek Compressor Station application, under its physical and operational design and including the effect of add-on air pollution control equipment, 1804/Flatirons is pursuing a Permit to Operate for the Stockyard Creek Compressor Station as required.

Prevention of Significant Deterioration of Air Quality (33.1-15-15)

The North Dakota Prevention of Significant Deterioration ("PSD") regulations adopted in whole or in part the Federal PSD regulations. NDAC 35-15-15 identifies the applicable requirements of the Federal PSD regulations adopted by the State. The provisions of the PSD program apply to Major Sources. The Stockyard Creek Compressor Station is not a source type included in the 26 specific facility types that are considered major stationary sources if their PTE of any regulated NSR is 100 TPY or more. Based on the estimated PTE of all regulated NSR pollutants being less than the 250 TPY threshold, the Stockyard Creek Compressor Station is not applicable to the PSD program.

Restriction of Odorous Air Contaminants (33.1-15-16)

This chapter states "a person may not discharge into the ambient air any objectionable odorous air contaminant that measures seven (7) odor concentration units or higher outside the property boundary where the discharge is occurring." 1804/Flatirons will be subject to the provisions of this chapter and will not emit odorous air contaminants greater than seven (7) odor concentration units at any point beyond 0.5 miles from the facility boundary.

Restriction of Fugitive Emissions (33.1-15-17)

This chapter restricts fugitive emissions from any source without taking reasonable precautions to prevent such discharges from causing air pollution. 1804/Flatirons has quantified emissions from fugitive sources at the Stockyard Creek Compressor Station and is complying with federal fugitive emission standards outlined in NSPS Subpart OOOO/OOOOa.

Stack Heights (33.1-15-18)

The general provisions of this chapter restrict the use of stack heights above good engineering practices ("GEP") as well as other dispersion techniques to affect the concentration of a pollutant in the ambient air. Stack heights at the Stockyard Creek Compressor Station either currently meet or will meet good engineering practice standards.

Visibility Protection (33.1-15-19)

New major sources as defined in Chapter 33.1-15-15 are required to demonstrate to NDDEQ that the actual emissions of visibility-impairing pollutants from the source, including fugitive emissions, will not cause or contribute to an adverse impact on visibility within any federal Class I area if such pollutants are emitted in significant quantities. The Stockyard Creek Compressor Station is not a major source as defined in Chapter 33.1-15-15 and therefore is not subject to the provisions of this chapter.

Control of Emissions from Oil and Gas Well Production Facilities (33.1-15-20)

The Stockyard Creek Compressor Station does not possess any gas wells, as defined in Chapter 33.1-15-20-01, and therefore does not meet the definition of a 'gas well facility' and is not subject to the requirements of this section.

Acid Rain Program (33.1-15-21)

The Stockyard Creek Compressor Station is not subject to the Acid Rain Program provisions of 40 CFR Part 72-28, and consequently, not subject to the requirements of North Dakota's Acid Rain Program.

*Emissi*on Standards for Hazardous Air Pollutants for Source Categories (33.1-15-22)

The North Dakota Emission Standards for Hazardous Air Pollutants for Source Categories adopt in whole or in part the Federal MACT regulations in 40 CFR 63. NDAC 33.1-15-17 identifies the applicable requirements of the Federal MACT regulations adopted by the State. The Stockyard Creek Compressor Station is not subject to any MACT requirements.

Fees (33.1-15-23)

1804/Flatirons is responsible for any filing fee assessed by the NDDEQ for operation permit applications, plus any additional charges based on actual processing costs.

Standards for Lead-Based Paint Activities (33.1-15-24)

The Stockyard Creek Compressor Station is not subject to the Lead-Based Paint provisions of 40 CFR Part 745, and consequently, is not subject to the requirements of North Dakota's Standards for Lead-Based Paint Activities.

Regional Haze Requirements (33.1-15-25)

The Stockyard Creek Compressor Station does not contain any equipment subject to Best Available Retrofit Technology ("BART") and therefore not subject to the requirements of this chapter.

3.2 Code of Federal Regulations

National Ambient Air Quality Standards

As part of the PSD analysis, major sources or modifications of air pollution are required to demonstrate compliance with NAAQS for pollutants emitted in a significant amount. The Stockyard Creek Compressor Station emissions of the NAAQS pollutants do not exceed PSD significance levels making further analysis unnecessary.

New Source Performance Standards (40 CFR 60)

An NSPS applies to specific categories of affected facilities that are constructed, modified, or reconstructed and that meet other applicability criteria on or after a compliance date upon which a relevant subpart applies. The following sections provide a summary of NSPS applicability and emission limits for potentially affected facilities at the Stockyard Creek Compressor Station.

Subpart A – General Provisions

If an individual NSPS subpart applies to a project, the general provisions of NSPS Subpart A also apply.

Subpart Db – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Subpart Db applies to steam generating units that have a heat input capacity of greater than 100 MMBtu/hr. There are no steam generating units that have a heat input capacity of greater than 100 MMBtu/hr. Therefore, this subpart does not apply to the Stockyard Creek Compressor Station.

Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Subpart Dc applies to steam generating units for which construction is commenced after June 9, 1989, and that have a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr. There are no steam generating units that have a heat input capacity of greater than 10 MMBtu/hr. Therefore, this subpart does not apply to the Stockyard Creek Compressor Station.

Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction or Modification Commenced After July 23, 1984.

The storage tanks at this facility are less than 75 cubic meters. Therefore, this subpart does not apply to the Stockyard Creek Compressor Station §60.110b(d)(4).

Subpart JJJJ – New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines

Subpart JJJJ applies to manufacturers, owners, and operators of stationary spark ignition ("SI") internal combustion engines ("ICE"). Applicable engines are the following: engines that commence construction (ordered from the manufacturer) after June 12, 2006, and are manufactured after July 1, 2007, and are greater than or equal to 500 hp or manufactured after July 1, 2008, and are less than 500 hp, and engines that are modified or reconstructed after June 12, 2006. All internal combustion engines at the Stockyard Creek Compressor Station are greater than 500 hp and constructed after 2007. Stockyard Creek Compressor Station is and will continue to comply with the recordkeeping/reporting/testing requirements.

Subpart OOOO – Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution for which Construction, Modification or Reconstruction Commenced August 23, 2011, and on or before September 18, 2015.

Subpart OOOO applies to affected facilities that commence construction, reconstruction, or modification after August 23, 2011, and on or before September 18, 2015. Affected facilities include hydraulically fractured natural gas and oil wells, compressors, continuous bleed pneumatic controllers, pneumatic pumps, storage vessels, fugitive equipment components, and sweetening units at onshore natural gas processing plants.

- *Storage Vessel Affected Facility:* The produced water tanks at this facility have less than six (6) tpy per tank emissions. Storage vessel affected facility is not applicable to the Stockyard Creek Compressor Station.
- *Pneumatic Controllers and Pumps Affected Facility*: All facility pneumatic controllers and pumps operate on compressed air and are not applicable to the Stockyard Creek Compressor Station.
- *Centrifugal/Reciprocal Compressor Affected Facility:* All applicable centrifugal or reciprocal compressors at the Stockyard Creek Compressor Station are not located at a well site (as defined in this rule), and, therefore, are affected facilities in compliance with the requirements of this subpart as outlined below.
- *Fugitive Emissions Affected Facility:* The fugitive components at the Stockyard Compressor Station are not located at an onshore natural gas processing plant, and , therefore, are exempt from this subpart.

***Subpart OOOOa – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015*.**

Subpart OOOOa applies to affected facilities that commence construction, reconstruction, or modification after September 18, 2015. Affected facilities include hydraulically fractured natural gas and oil wells, compressors, continuous bleed pneumatic controllers, pneumatic pumps, storage vessels, collection of fugitive emissions components, and sweetening units at onshore natural gas processing plants.

- *Centrifugal/Reciprocal Compressor Affected Facility:* All applicable centrifugal or reciprocal compressors at the Stockyard Creek Compressor Station are not located at a well site (as defined

in this rule), and, therefore, are affected facilities in compliance with the requirements of this subpart as outlined below.

- *The following records, reports, and documents will be maintained as required:*
  - *Perform maintenance as required,*
  - *Submit initial and annual reports as required, and*
  - *Maintain records as required.*

Subpart OOOOb – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After December 6, 2022.

Subpart OOOOb applies to affected facilities that commence construction, reconstruction, or modification after December 6, 2022. Affected facilities include hydraulically fractured natural gas and oil wells, compressors, continuous bleed pneumatic controllers, pneumatic pumps, storage vessels, collection of fugitive emissions components, and sweetening units at onshore natural gas processing plants.

- *Centrifugal/Reciprocal Compressor Affected Facility:* All applicable centrifugal or reciprocal compressors at the Stockyard Creek Compressor Station are not located at a well site (as defined in this rule), and, therefore, are affected facilities in compliance with the requirements of this subpart as outlined below.
- *The following records, reports, and documents will be maintained as required:*
  - *Perform maintenance as required,*
  - *Submit initial and annual reports as required, and*
  - *Maintain records as required.*
- *Collection of Fugitive Emissions Components Affected Facility:* A compressor is being installed at the Stockyard Creek Compressor Station, and, therefore, the collection of fugitive emissions components is an affected facility and will comply with the requirements of this subpart as outlined below.
- *The following records, reports, and documents will be maintained as required:*
  - *Conduct quarterly OGI monitoring of fugitive components affected facility*
  - *Submit initial and annual reports as required, and*
  - *Maintain records as required.*

National Emission Standards for Hazardous Air Pollutants for Source Categories (40 CFR 63)

40 CFR 63 establishes national emission standards for source categories that emit HAPs above major source thresholds. 40 CFR 63 is also known as Maximum Achievable Control Technology (MACT) standards for Major Sources. The following sections provide a summary of MACT applicability and emission limits for potentially affected facilities at the Stockyard Creek Compressor Station.

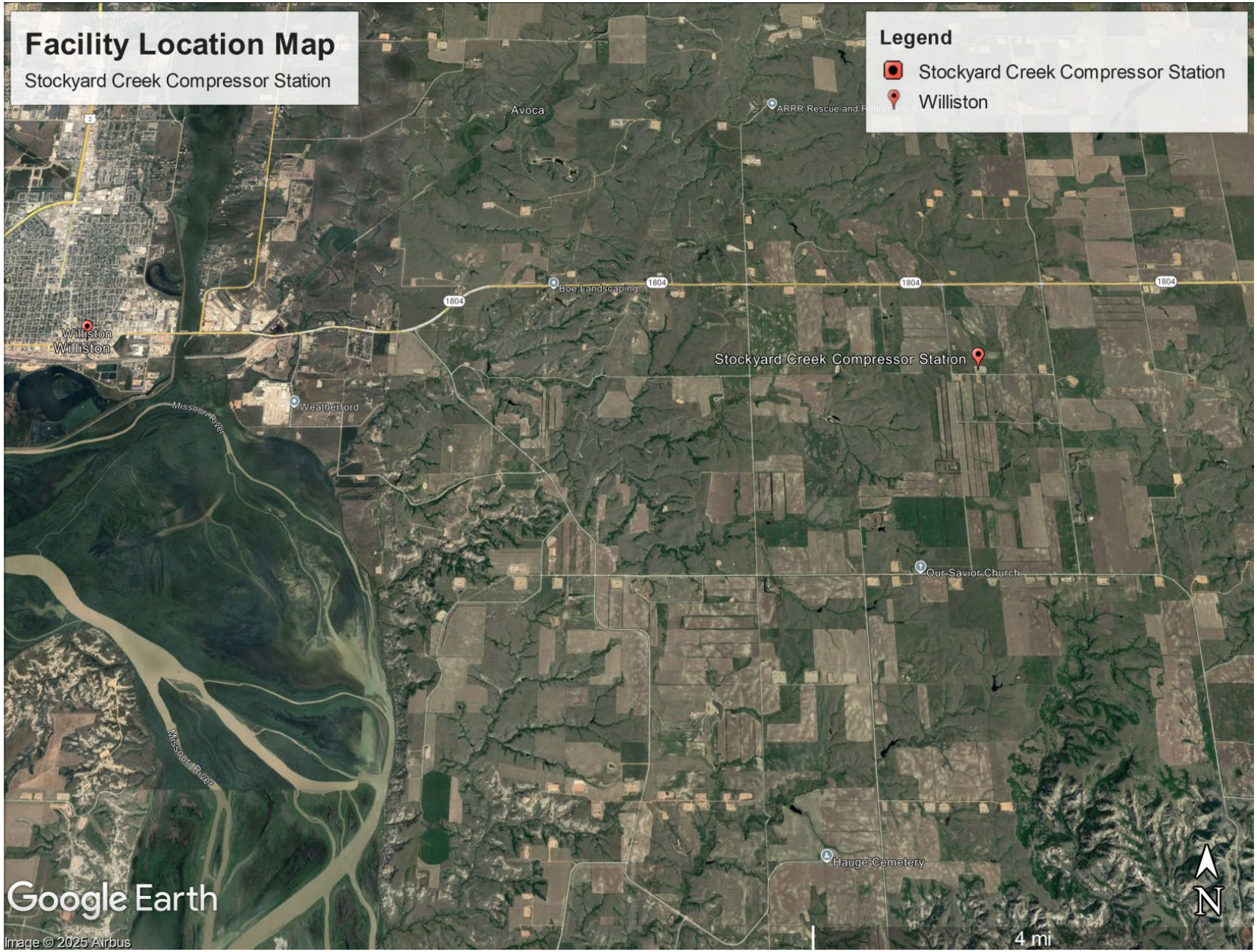
Subpart HH – National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities

Subpart HH applies to glycol dehydration units, storage vessels with the potential for flashing, and fugitive equipment at major sources of HAP emissions and triethylene glycol dehydration units at area sources of HAP emissions. The potentially applicable unit at this facility is the facility dehydrator. The dehydrator is an ethylene glycol unit located at an area source of HAPs; therefore, the unit is not an affected source per paragraph 63.760(b)(2).

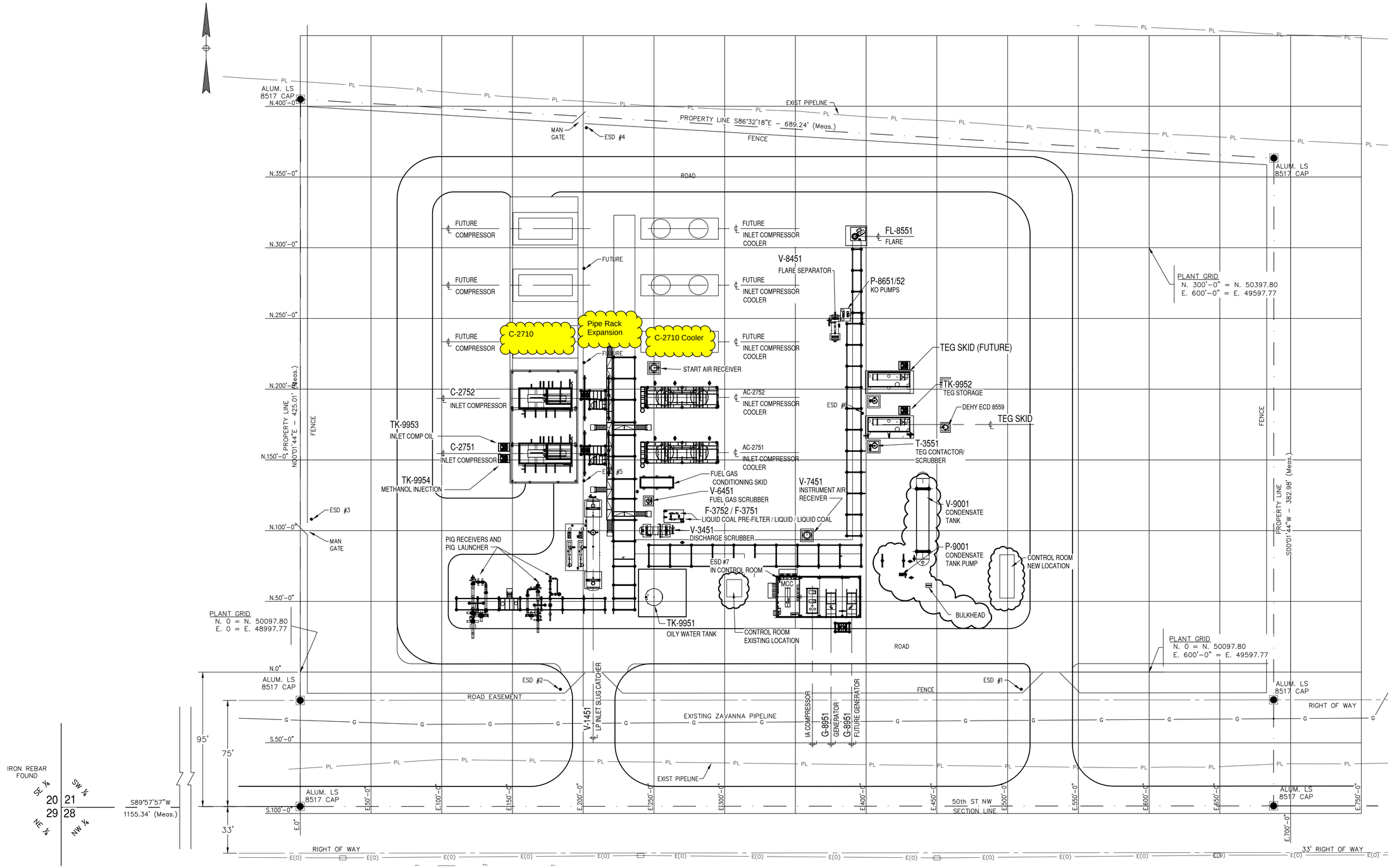
Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines

Subpart ZZZZ applies to existing, new and reconstructed engines greater than 500 hp at major sources of HAP emissions, new and reconstructed engines less than 500 hp at major sources of HAP emissions, and new or reconstructed engines at area sources of HAP emissions. This facility is an area source of HAP emissions. Compliance with Subpart ZZZZ is demonstrated by maintaining compliance with 40 CFR 60, Subpart JJJJ.

Appendix A: Figures


Facility Location Map
Stockyard Creek Compressor Station
Legend
Stockyard Creek Compressor Station
Williston
Avoca
ARRR Rescue and Retreat
Boe Landscaping
1804
Williston
Williston
Stockyard Creek Compressor Station
Weatherford
Missouri River
Missouri River
Our Savior Church
Hauge Cemetery
Google Earth
Image © 2025 Airbus
4 mi
N

PLANT NORTH



TETRA TECH

www.tetratech.com

820 Columbus Street
Rapid City, SD 57701
Phone: 605-593-9454

NOTE:

1. SEE BASIS OF SURVEY PROVIDED BY KLJ PROJECT NUMBER 8714181 FOR ADDITIONAL INFORMATION
2. REVISIONS PRIOR TO 2 AND ORIGINAL BY GWD ENGINEERING

REFERENCE DRAWINGS

No	REVISIONS	BY	CHKD	PM	DATE
4	REVISED LOCATION OF BULKHEAD	PMW			5/25/17
3	REVISED BULKHEAD LOCATION	MTS			4/26/17
2C	ADDED CTRL RMS, V-9001, P-9001 & BULKHEAD (TT)	MTS			4-24-17
1	DISPLAY MAN GATES AND ESD LOCATIONS	SOS	SS	DC	10/27/14
0	ISSUED FOR CONSTRUCTION	RLG	GWD	DC	9/22/14

Flatirons Field Services LLC.
WILLISTON, NORTH DAKOTA

STOCKYARD COMPRESSOR STATION
PIPING
PLOT PLAN

FILE NUMBER	DRAWING NUMBER	SCALE	REVISION
	SCS-PP-4000	1"-20'-0"	4

Appendix B: Emissions Calculations

Engine Emission Calculations
1804, Ltd.
Stockyard Creek Compressor Statin

Basis

Unit(s)	C-2710 - Inlet Compression		
Type	Caterpillar G3608 A4		
Emission Control	Lean Burn Engine, Oxidation Catalyst with AFRC		
Maximum Horsepower	2,500	hp	
Site Rated Horsepower	2,500	hp	
Annual Hours of Operation	8,760	hrs	
Fuel Consumption (LHV)	6,756	Btu/hp-hr	16.89 MMBtu/hr
Fuel Heat Content	1,085	Btu/SCF	
Annual Fuel Consumption	136,365	Mscf	136.37 MMscf
Fuel Use Rate	15,566.82	scf/hr	

Emissions Estimate (per engine)

Pollutant	Uncontrolled					Controlled					Reduction Efficiency
	Emissions Factor		Emissions			Emissions Factor		Emissions			
	(lb/MMBtu)	(g/hp-hr)	(lb/hr)	(lb/yr)	(tpy)	(lb/MMBtu)	(g/hp-hr)	(lb/hr)	(lb/yr)	(tpy)	
NO_X [a, h]	0.163	0.500	2.753	---	12.059	0.163	0.500	2.753	---	12.059	0%
CO [a, h]	0.740	2.270	12.500	---	54.750	0.052	0.159	0.875	---	3.833	93%
VOC [a, h]	0.085	0.260	1.432	---	6.271	0.082	0.250	1.377	---	6.030	4%
Formaldehyde [a, h]	0.075	0.230	1.267	11,095	5.547	0.018	0.055	0.304	2,663	1.331	76%
SO_2 [b]	0.001	0.002	0.010	---	0.043	0.001	0.002	0.010	---	0.043	0%
PM (condensable) [b, c]	9.91E-03	0.030	0.167	---	0.733	9.91E-03	0.030	0.167	---	0.733	0%
PM_{10} (filterable) [b]	7.71E-05	0.000	0.001	---	0.006	7.71E-05	0.000	0.001	---	0.006	0%
$PM_{2.5}$ (filterable) [b]	7.71E-05	0.000	0.001	---	0.006	7.71E-05	0.000	0.001	---	0.006	0%
Acetaldehyde [b]	0.008	0.026	0.141	1,237	0.618	0.008	0.013	0.071	618	0.309	50%
Acrolein [b]	0.005	0.016	0.087	760	0.380	0.005	0.008	0.043	380	0.190	50%
Benzene [b]	0.000	0.001	0.007	65	0.033	0.000	0.001	0.004	33	0.016	50%
Methanol [b]	0.003	0.008	0.042	370	0.185	0.003	0.004	0.021	185	0.092	50%

Uncontrolled Emission Factors from [a] Manufacturer's Specifications or [b] AP-42 Table 3.2-2 Uncontrolled Emission Factors for 4-Stroke Lean Burn Engines

[c] AP-42 PM Emission Factor is Total of Filterable and Condensable

[h] Controlled Emission Factors from Manufacturer's Specifications.

Greenhouse Gas	Emissions Factor[d]		Emissions[e]		GWP[f]	CO_2e Emissions[g]	
	(kg/MMbtu)	(g/hp-hr)	(lb/hr)	(tpy)		(tpy)	(mtpy)
CO_2	53.02	358.20	1974.22	8647.10	1	8647.10	7844.52
N_2O	0.0001	0.00	0.00	0.02	298	4.86	4.41
CH_4	0.001	0.01	0.04	0.16	25	4.08	3.70
Total			1,976.26			8,656.04	7852.62

[d]Emission Factors From 40 CFR 98, Subpart C, Table C-1 & C-2

[e]Emissions calculated using Equation C-1, 40 CFR 98 Subpart C

[f]Global Warming Potential From 40 CFR 98, Subpart A, Table A-1

[g]Emissions calculated using Equation A-1, 40 CFR 98 Subpart C

Table 1: Emissions Summary
1804, Ltd.
Stockyard Creek Compressor Station

ID	Criteria Pollutant	PM_{10} (tpy)	$PM_{2.5}$ (tpy)	NO_X (tpy)	SO_2 (tpy)	CO (tpy)	VOC (tpy)
C-2710	Compressor Engine Caterpillar G3608 A4	0.006	0.006	12.1	0.043	3.83	6.03
C-2751	Compressor Engine Caterpillar G3608 LE	0.005	0.005	11.4	0.042	5.72	9.15
C-2752	Compressor Engine Caterpillar G3608 LE	0.005	0.005	11.4	0.042	5.72	9.15
G-8951	Generator Engine Caterpillar CG137-12	0.002	0.002	2.90	0.011	2.50	4.60
G-8952	Generator Engine Caterpillar CG137-12	0.002	0.002	2.90	0.011	2.50	4.60
TEG-H	TEG Dehydration Unit Reboiler	0.036	0.036	0.467	0.003	0.393	0.026
FL-8501	Facility Emergency and Process Flare	---	---	6.94	0.120	31.7	16.7
TK-1	Condensate Tank	---	---	---	---	---	1.27
TK-1 LOAD	Condensate Tank Loading Operations	---	---	---	---	---	0.461
FUG-PIG1	Pig Receiving	---	---	---	---	---	2.39
TEG	TEG Dehydration Unit	---	---	---	---	---	6.50
FUG	Fugitive	---	---	---	---	---	8.32
TOTAL		0.055	0.055	48.13	0.272	52.32	69.18

ID	Greenhouse Gas	CO_2e (tpy)	CO_2 (tpy)	CH_4 (tpy)	N_2O (tpy)
C-2710	Compressor Engine Caterpillar G3608 A4	8,656	8,647	0.16	0.02
C-2751	Compressor Engine Caterpillar G3608 LE	8,273	8,264	0.16	0.02
C-2752	Compressor Engine Caterpillar G3608 LE	8,273	8,264	0.16	0.02
G-8951	Generator Engine Caterpillar CG137-12	2,279	2,276	0.04	0.00
G-8952	Generator Engine Caterpillar CG137-12	2,279	2,276	0.04	0.00
TEG-H	TEG Dehydration Unit Reboiler	602	580.99	0.82	1.45E-03
FL-8501	Facility Emergency and Process Flare	12,834	11,851	39	0.02
TK-1	Facility Emergency and Process Flare	9	0.00	0.38	--
TK-1 LOAD	Condensate Tank Loading Operations	1	0.00	0.03	0.00
FUG-PIG1	Pig Receiving	233	0.21	4.81	0.38
TEG	TEG Dehydration Unit	555	11.8	21.72	---
FUG	Fugitive	442.3	0.33	7.39	0.86
TOTAL		44,436	42,173	75	1.32

ID	Hazardous Air Pollutant	HAP (tpy)	n-Hexane (tpy)	Benzene (tpy)	Toluene (tpy)	E-benzene (tpy)	Xylenes (tpy)	MeOH (tpy)	224-TMP (tpy)	Acetalde-hyde (tpy)	Acrolein (tpy)	CH_2O (tpy)
C-2710	Compressor Engine Caterpillar G3608 A4	1.939	---	0.016	---	---	---	0.092	---	0.31	0.19	1.33
C-2751	Compressor Engine Caterpillar G3608 LE	2.807	---	0.031	0.029	0.003	0.013	0.177	---	0.59	0.36	1.60
C-2752	Compressor Engine Caterpillar G3608 LE	2.808	---	0.031	0.029	0.003	0.013	0.177	---	0.59	0.36	1.60
G-8951	Generator Engine Caterpillar CG137-12	0.796	---	0.009	0.008	0.001	0.004	0.049	---	0.16	0.10	0.46
G-8952	Generator Engine Caterpillar CG137-12	0.796	---	0.009	0.008	0.001	0.004	0.049	---	0.16	0.10	0.46
TEG-H	TEG Dehydration Unit Reboiler	3.60E-04	---	9.82E-06	---	---	---	---	---	---	---	3.51E-04
FL-8501	Facility Emergency and Process Flare	1.06E-01	3.21E-02	1.75E-02	1.72E-02	7.92E-03	3.17E-02	---	0.00E+00	---	---	---
TK-1	Facility Emergency and Process Flare	1.11E-01	9.93E-02	2.20E-03	1.86E-03	2.11E-04	4.56E-04		7.30E-03	---	---	---
TK-1 LOAD	Condensate Tank Loading Operations	2.57E-08	2.57E-08	1.91E-12	6.90E-14	0.00E+00	2.12E-16	---	6.66E-13	---	---	---
FUG-PIG1	Pig Receiving	1.34E-02	4.06E-03	2.21E-03	2.17E-03	1.00E-03	4.00E-03	---	---	---	---	---
TEG	TEG Dehydration Unit	2.916	9.73E-01	9.94E-01	4.87E-01	0.00E+00	4.62E-01	---	---	---	---	---
FUG	Fugitive	1.148	8.07E-01	1.78E-02	5.81E-02	2.22E-02	5.48E-02	---	1.88E-01	---	---	---
TOTAL		13.44	1.92	1.13	0.64	0.04	0.59	0.54	0.19	1.82	1.12	5.461

Proposed Modifications

Appendix C: Facility and Equipment Forms

PERMIT APPLICATION FOR AIR CONTAMINANT SOURCES

NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR QUALITY
SFN 8516 (9-2021)

SECTION A - FACILITY INFORMATION

Name of Firm or Organization 1804 Ltd.		
Applicant's Name Edward Aabak		
Title Managing Director	Telephone Number (720) 636-9691	E-mail Address eaabak@flatironsfs.com
Contact Person for Air Pollution Matters Eric Hammond		
Title Engineering Manager	Telephone Number (720) 696-9688	E-mail Address ehammond@flatironsfs.com
Mailing Address (Street & No.) 10385 Westmoor Drive, Suite 225		
City Westminster	State CO	ZIP Code 80021
Facility Name Stockyard Creek Compressor Station		
Facility Address (Street & No.) 50th Street NW		
City Williston	State ND	ZIP Code 58801

County Williams	Coordinates NAD 83 in Decimal Degrees (to forth decimal degree)	
	Latitude 48.14100000	Longitude -103.42900000

Legal Description of Facility Site

Quarter	Quarter	Section	Township	Range
SW	SW	21	154	99

Land Area at Facility Site 8.57 Acres (or) _____ Sq. Ft.	MSL Elevation at Facility 2,122

SECTION B – GENERAL NATURE OF BUSINESS

Describe Nature of Business	North American Industry Classification System Number	Standard Industrial Classification Number (SIC)
Natural Gas Gathering	211111	1311

SECTION C – GENERAL PERMIT INFORMATION

Type of Permit? ☒ Permit to Construct (PTC) ☐ Permit to Operate (PTO)

If application is for a Permit to Construct, please provide the following data:

Planned Start Construction Date	Planned End Construction Date
08/2025	11/2025

SECTION D – SOURCE IDENTIFICATION AND CATEGORY OF EACH SOURCE INCLUDED ON THIS PERMIT APPLICATION

		Permit to Construct				Minor Source Permit to Operate						
Your Source ID Number	Source or Unit (Equipment, Machines, Devices, Boilers, Processes, Incinerators, Etc.)	New Source	Existing Source Modification	Existing Source Expansion	Existing Source Change of Location	New Source	Existing Source Initial Application	Existing Source After Modification	Existing Source After Expansion	Existing Source After Change of Location	Existing Source After Change of Ownership	Other
C-2710	ICE	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Add additional pages if necessary

SECTION D2 – APPLICABLE REGULATIONS

Source ID No.	Applicable Regulations (NSPS/MACT/NESHAP/etc.)
Facility-wide	NSPS JJJJ, NSPS ZZZZ, NSPS OOOO/OOOOa/OOOOb

SECTION E – TOTAL POTENTIAL EMISSIONS

Pollutant	Amount (Tons Per Year)
NO_x	48.13
CO	52.32
PM	0.055

Pollutant	Amount (Tons Per Year)
PM_{10} (filterable and condensable)	0.055
$PM_{2.5}$ (filterable and condensable)	0.055
SO_2	0.272
VOC	69.18
GHG (as CO_2e)	44,436
Largest Single HAP	5.461
Total HAPS	13.44

*If performance test results are available for the unit, submit a copy of test with this application. If manufacturer guarantee is used provide spec sheet.

SECTION F1 – ADDITIONAL FORMS

Indicate which of the following forms are attached and made part of the application

■ Air Pollution Control Equipment (SFN 8532)	☐ Fuel Burning Equipment Used for Indirect Heating (SFN 8518)
☐ Construct/Operate Incinerators (SFN 8522)	☐ Hazardous Air Pollutant (HAP) Sources (SFN 8329)
☐ Natural Gas Processing Plants (SFN 11408)	☐ Manufacturing or Processing Equipment (SFN 8520)
☐ Glycol Dehydration Units (SFN 58923)	☐ Volatile Organic Compounds Storage Tank (SFN 8535)
☐ Flares (SFN 59652)	■ Internal Combustion Engines and Turbines (SFN 8891)
☐ Grain, Feed, and Fertilizer Operations (SFN 8524)	☐ Oil/Gas Production Facility Registration (SFN 14334)

SECTION F2 – OTHER ATTACHMENTS INCLUDED AS PART OF THIS APPLICATION

1.	Process Description	4.	Equipment Manufacturer's Information and Specifications
2.	Figures - Plot Plan, Process Flow Diagram	5.	Regulatory Applicability Analysis
3.	Emissions Calculations	6.	

I, the undersigned applicant, am fully aware that statements made in this application and the attached exhibits and statements constitute the application for Permit(s) to Construct and/or Operate Air Contaminant sources from the North Dakota Department of Environmental Quality and certify that the information in this application is true, correct and complete to the best of my knowledge and belief. Further, I agree to comply with the provisions of Chapter 23.1-06 of the North Dakota Century Code and all rules and regulations of the Department, or revisions thereof. I also understand the permit is nontransferable and, if granted a permit, I will promptly notify the Department upon sale or legal transfer of this permitted establishment.

Signature	Date
Eric Hammond	

PERMIT APPLICATION FOR AIR POLLUTION CONTROL EQUIPMENT

NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR QUALITY
SFN 8532 (9-2021)

NOTE: READ INSTRUCTIONS BEFORE COMPLETING THIS FORM.
- Must also include forms SFN 8516 or SFN 52858

SECTION A – GENERAL INFORMATION

Name of Firm or Organization	Facility Name
1804 Ltd.	Stockyard Creek Compressor Station
Source ID No. of Equipment being Controlled C-2710	

SECTION B – EQUIPMENT

Type: ☐ Cyclone ☐ Multiclone ☐ Baghouse ☐ Electrostatic Precipitator
☐ Wet Scrubber ☐ Spray Dryer ☐ Flare/Combustor
☒ Other – Specify: Oxidation Catalyst with AFRC

Name of Manufacturer	Model Number	Date to Be Installed

Application:
☐ Boiler ☐ Kiln ☒ Engine ☐ Other – Specify:

Pollutants Removed	CO	HAPs	HCHO	VOC
Design Efficiency (%)	93%	50%	76%	4%
Operating Efficiency (%)				

Describe method used to determine operating efficiency:

SECTION CD – GAS CONDITIONS

Gas Conditions			Inlet	Outlet
Gas Volume (SCFM; 68°F; 14.7 psia)				
Gas Temperature (°F)			450-1,350	
Gas Pressure (in. H_2O)				
Gas Velocity (ft/sec)				
Pollutant Concentration (Specify Pollutant and Unit of Concentration)	Pollutant	Unit of Concentration		

Pressure Drop Through Gas Cleaning Device (in. H_2O)

PERMIT APPLICATION FOR INTERNAL COMBUSTION ENGINES AND TURBINES

NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR QUALITY
SFN 8891 (9-2021)

NOTE: READ INSTRUCTIONS BEFORE COMPLETING THIS FORM.
- Must include SFN 8516 or SFN 52858

SECTION A – GENERAL INFORMATION

Name of Firm or Organization	Facility Name
1804 Ltd.	Stockyard Creek Compressor Station

SECTION B – FACILITY AND UNIT INFORMATION

Source ID Number (From form SFN 8516)
C-2710

Type of Unit (check all that apply)

- ☒ Stationary Natural Gas-Fired Engine
- ☐ Stationary Diesel and Dual Fuel Engine
- ☐ Stationary Gasoline Engine
- ☐ Stationary Natural Gas-Fired Turbine
- ☐ Emergency Use Only
- ☐ Non-Emergency Use
- ☐ Peaking
- ☐ Demand Response
- ☒ Other – Specify: Compressor Engine

SECTION C – MANUFACTURER DATA

Make	Model	Date of Manufacture
Caterpillar	G3608 A4	01/01/2018

Reciprocating Internal Combustion Engine

- ☒ Spark Ignition ☐ Compression Ignition ☒ Lean Burn
- ☒ 4 Stroke ☐ 2 Stroke ☐ Rich Burn

Maximum Rating (BHP @ rpm)	Operating Capacity (BHP @ rpm)
2,500 hp @ 1,000 rpm	2,500 hp @ 1,000 rpm

Engine Subject to:

- ☐ 40 CFR 60, Subpart IIII
- ☒ 40 CFR 60, Subpart JJJJ
- ☒ 40 CFR 63, Subpart ZZZZ
- ☒ 40 CFR 60, Subpart OOOO (for compressors)
- ☒ 40 CFR 60, Subpart OOOOa (for compressors)

Turbine
Dry Low Emissions? ☐ Yes ☐ No

Heat Input (MMBtu/hr)	Maximum Rating (HP)	75% Rating (HP)	Efficiency
16.89	2,500	1,777	

Turbine Subject to:
☐ 40 CFR 60, Subpart GG ☐ 40 CFR 60, Subpart KKKK

SECTION D – FUELS USED

Natural Gas (10^6 cu ft/year) 136.37	Percent Sulfur N/A	Percent H_2S N/A
Oil (gal/year) N/A	Percent Sulfur N/A	Grade No. N/A
LP Gas (gal/year) N/A	Other – Specify: N/A	

SECTION E – NORMAL OPERATING SCHEDULE

Hours Per Day	Days Per Week	Weeks Per Year	Hours Per Year	Peak Production Season (if any)
24	7	52	8760	N/A

SECTION F – STACK PARAMETERS

Emission Point ID Number		Stack Height Above Ground Level (feet)	
EPN12 (at Springbrook Gas Plant)		24	
Stack Diameter (feet at top)	Gas Discharged (SCFM)	Exit Temp (°F)	Gas Velocity (FPS)
1.66	15,974	842	122

SECTION G – EMISSION CONTROL EQUIPMENT

Is any emission control equipment installed on this unit?

☐ No ■ Yes – Complete and attach form SFN 8532

SECTION H – MAXIMUM AIR CONTAMINANTS EMITTED

Pollutant	Maximum Pounds Per Hour	Amount (Tons Per Year)	Basis of Estimate*
NO_x	2.75	12.06	Manufacturer Specifications
CO	0.88	3.83	Manufacturer Specifications
PM	0.17	0.75	AP-42 Table 3.2-2
PM_{10} (filterable and condensable)	0.17	0.75	AP-42 Table 3.2-2
$PM_{2.5}$ (filterable and condensable)	0.17	0.75	AP-42 Table 3.2-2
SO_2	0.01	0.04	AP-42 Table 3.2-2
VOC	1.38	6.03	Manufacturer Specifications
GHG (as CO_2e)	1,976	8,656	40 CFR 98 Subpart C
Largest Single HAP	0.30	1.33	Manufacturer Specifications
Total HAPS	0.41	1.81	AP-42 Table 3.2-2

* If performance test results are available for the unit, submit a copy of test with this application, if manufacture data used, submit manufacturers specification sheets.

IS THIS UNIT IN COMPLIANCE WITH ALL APPLICABLE AIR POLLUTION RULES AND REGULATIONS?

■ YES ☐ NO

If "NO" a Compliance Schedule (SFN 61008) must be completed and attached.

Attach and label separate sheet(s) if you need more space to explain any system or answers or to provide complete listings of Emissions, Contaminants, or other items.

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

North Dakota Department of Environmental Quality
Division of Air Quality
4201 Normandy Street, 2nd Floor
Bismarck, ND 58503-1324
(701) 328-5188

PERMIT APPLICATION FOR GLYCOL DEHYDRATION UNITS

NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR QUALITY
SFN 58923 (9-2021)

NOTE: READ INSTRUCTIONS BEFORE COMPLETING THIS FORM.
- Must include SFN 8516 or SFN 52858

SECTION A – GENERAL INFORMATION

Name of Firm or Organization	Facility Name
1804 Ltd.	Stockyard Creek Compressor Station

SECTION B - 40 CFR 63, SUBPART HH APPLICABILITY DETERMINATION

The facility is a (check one): ☐ major, or ■ area source of hazardous air pollutants (HAP) as defined in §63.761. Attach calculations showing expected HAP emissions in accordance with §63.760(a)(1).

The facility (check all that apply):

■ Processes, upgrades or stores hydrocarbon liquids prior to the point of custody transfer.

■ Processes, upgrades or stores natural gas prior to the point at which natural gas enters the transmission and storage source category or is delivered to a final end user.

Identify the 40 CFR 63 Subpart HH (MACT HH) affected source:

☐ Glycol (ethylene, diethylene, or triethylene) dehydration unit & associated equipment (located at a major source), or

■ Tryiethylene glycol (TEG) dehydration unit (located at an area source)

The facility is exempt from MACT HH because it:

☐ Is a qualifying black oil facility, or

☐ Is a major source facility, prior to the point of custody transfer, with a facility-wide actual annual average natural gas throughout less than 18.4 thousand standard cubic meters per day and a facility-wide actual annual average hydrocarbon liquid throughput less than 39,700 liters per day.

■ The facility is not exempt from MACT HH.

SECTION C – EMISSION UNIT INFORMATION

Emission Unit Description	Emission Unit Identifier (EU)	Emission Point Number (EP)	Pollutant*	Emission Rate lb/hr	Emission Rate ton/yr	Air Pollution Control Equipment
TEG Unit Still Vent	TEG-F2	9	VOC	1.53	6.71	Flare
TEG Unit Still Vent	TEG-F2	9	CO2e	219	958	Flare
TEG Unit Still Vent	TEG-F2	9	Total HAP	0.20	0.86	Flare
TEG Unit Still Vent	TEG-F2	9	NOx	0.089	0.39	Flare
TEG Unit Still Vent	TEG-F2	9	CO	0.48	2.12	Flare

* *Includes an estimate of greenhouse gas emissions (CO2e).*

Complete the following for each glycol and triethylene glycol dehydration unit.								
EU	Design Capacity (MMSCFD)	Actual Throughput (MMSCFD)	Gas Pressure (psig)	Gas Temp (°F)	Water Content (lb/MMSCF) Wet Gas	Water Content (lb/MMSCF) Dry Gas	Glycol Recirc. Rate (gal/min)	VOC Emissions (ton/yr)
TEG-2	35	35	650	50	sat	7	7.5	

SECTION D – STACK DATA

Inside Diameter (ft) TbD	Height Above Grade (ft) TBD	Gas Volume (scfm)
Gas Temperature at Exit (°F) 1,200	Gas Velocity at Exit (ft/sec) TBD	
Are Emission Control Devices in Place? If YES – Complete SFN 8532 ☒ Yes ☐ No TEG Flare		
Nearest Residence or Building Residence	Distance (ft) 3,200	Direction East
Nearest Property Line Facility Fence Line	Distance (ft) 175	Direction North

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

North Dakota Department of Environmental Quality
Division of Air Quality
4201 Normandy Street, 2nd Floor
Bismarck, ND 58503-1324
(701)328-5188

PERMIT APPLICATION FOR AIR POLLUTION CONTROL EQUIPMENT

NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR QUALITY
SFN 8532 (9-2021)

NOTE: READ INSTRUCTIONS BEFORE COMPLETING THIS FORM.
- Must also include forms SFN 8516 or SFN 52858

SECTION A – GENERAL INFORMATION

Name of Firm or Organization	Facility Name
1804 Ltd.	Stockyard Creek Compressor Station
Source ID No. of Equipment being Controlled TEG-2	

SECTION B – EQUIPMENT

Type: ☐ Cyclone ☐ Multiclone ☐ Baghouse ☐ Electrostatic Precipitator
☐ Wet Scrubber ☐ Spray Dryer ☐ Flare/Combustor
☒ Other – Specify: Incinerator/Flare

Name of Manufacturer	Model Number	Date to Be Installed
TBD	TBD	TBD

Application:
☐ Boiler ☐ Kiln ☐ Engine ☒ Other – Specify: TEG Dehy Still Ve

Pollutants Removed	VOC	HAP		
Design Efficiency (%)	95	95		
Operating Efficiency (%)				

Describe method used to determine operating efficiency:
Manufacturer guarantee.

SECTION CD – GAS CONDITIONS

Gas Conditions			Inlet	Outlet
Gas Volume (SCFM; 68°F; 14.7 psia)			58	58
Gas Temperature (°F)			278	1,200
Gas Pressure (in. H_2O)			TBD	TBD
Gas Velocity (ft/sec)			TBD	TBD
Pollutant Concentration (Specify Pollutant and Unit of Concentration)	Pollutant	Unit of Concentration		
	VOC	tpy	134.2	6.71
	HAP	tpy	17.17	0.86

Pressure Drop Through Gas Cleaning Device (in. H_2O)
N/A

NORTH Dakota | Environmental Quality

Be Legendary.™

December 4, 2020

FILE

Mr. Eric Hammond
Senior Project Engineer
Flatirons Field Services, LLC
10385 Westmoor Drive, Ste 225
Westminster CO, 80021

Re: Air Pollution Control
Permit to Operate
Minor Source

Dear Mr. Hammond:

On August 12, 2020 the North Dakota Department of Environmental Health (Department) completed a full compliance inspection at the 1804 Ltd. LLC, Stockyard Compressor Station. Based on the results of the full compliance inspection and yearly stack testing for the compressor engines EUs C-2751, C-2752, G-8951 and G-8952, the Department hereby issues Permit to Operate No. AOP-279901 v1.0 for the source. The PTO identifies the source units that are authorized to be operated and lists the conditions under which the permit is issued. The Department's issuance of the permit is contingent upon compliance with the conditions outlined in the permit. Please review each condition carefully and note the restrictions placed on the source units.

Take note that the new equipment to be added, addressed in Permit to Construct PTC16025, has not been constructed, and is not included in the enclosed Permit to Operate No. AOP-27991 v1.0. Therefore, PTC16025 is still active and the facility is required to provide the Department with a notification of the actual date of initial startup of the new equipment included in the permit to construct.

Note that the above-referenced permit addresses only air quality requirements applicable to the facility. Other divisions (Water Quality, Waste Management and Municipal Facilities) within the Department of Environmental Quality may have additional requirements. Contact information for the various divisions is listed at the bottom of this letter.

Please contact me at (701)328-2381 or email pmcdaniel@nd.gov with any questions.

Sincerely,

for Paige McDaniel
Environmental Scientist
Division of Air Quality

PBM:saj
Enc:

NORTH Dakota | Environmental Quality
Be Legendary.™

AIR POLLUTION CONTROL
MINOR SOURCE
PERMIT TO OPERATE

Pursuant to Chapter 23.1-06 of the North Dakota Century Code (NDCC), and the Air Pollution Control Rules of the State of North Dakota, and in reliance on statements and representations heretofore made by the permittee designated below, a Permit to Operate is hereby issued authorizing such permittee to operate the source unit(s) at the location designated below. This Permit to Operate is subject to all applicable rules and orders now or hereafter in effect of the North Dakota Department of Environmental Quality (Department) and to any conditions specified below:

1. **Permittee**:

   A. **Name**:
   1804 Ltd. LLC

   B. **Address**:
   10385 Westmoor Drive, Ste 225
   Westminster, CO 80021

2. A. **Permit Number**:
   AOP-27991 v1.0

   B. **Permit Description**:
   True Minor Source:
   NDAC 33.1-15-14-03

3. **Source Name & Location**:
   Stockyard Creek Compressor Station
   SW ¼, SE ¼, Sec. 21, T154N, R99W
   Williams County, North Dakota

4. **Source Type**:
   Compressor Station

5. **Expiration Date**:
   December 9, 2025

6. **Source Unit(s)**:

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	Air Pollution Control Equipment
Caterpillar Model G3608 LE natural gas-fired 4SLB compressor engine rated at approximately 2,370 bhp manufactured in 2014. Serial No. BEN00955 (JJJJ, ZZZZ)	C-2751	1	Oxidation Catalyst
Caterpillar Model G3608 LE natural gas-fired compressor engine (4SLB) rated at approximately 2,370 bhp manufactured in 2014. Serial No. BEN00962 (JJJJ, ZZZZ)	C-2752	2	Oxidation Catalyst

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	Air Pollution Control Equipment
Caterpillar Model CG137-12 natural gas-fired generator engine (4SLB) rated at approximately 600 bhp manufactured in 2013. Serial No. 9FG03196 (JJJJ, ZZZZ)	G-8951	3	Air to Fuel Ratio Control (AFRC) and Oxidation Catalyst
Caterpillar Model CG137-12 natural gas-fired generator engine (4SLB) rated at approximately 600 bhp manufactured in 2013. Serial No. 9FG03195 (JJJJ, ZZZZ)	G-8952	4	AFRC and Oxidation Catalyst
35 MMscfd triethylene glycol (TEG) dehydration unit (HH)	TEG [A]	9	TEG Flare
1.5 MM Btu/hr TEG dehydration unit reboiler fired on natural gas	TEG-H	6	None
400-barrel produced water storage tank with tanker truck loadout	TANK [B]	7	Submerged Fill Pipe
30,000-gallon field condensate bullet tank	TANK2 [B]	8	Emergency/process flare
Emergency/process flare	FL-8501	8	None
TEG flare	FL-8502	9	None

[A] The TEG dehydration unit flash gas is recycled to the facility inlet. The TEG dehydration unit still vent emissions are controlled by a dedicated flare.

[B] Insignificant unit.

CONDITIONS

7. A. **Emission Limits**: Emission limits from the operation of the source unit(s) identified in Item 6 of this Permit to Operate (hereafter referred to as "permit") are as follows. Source units not listed are subject to the applicable emission limits specified in the North Dakota Air Pollution Control Rules.

Caterpillar Model G3608 A4 natural gas-fired engine (4SLB) rated at 2,500 bhp (manf. 6/2018, NSPS JJJJ, OOOOa)	C-2710	17	Oxidation Catalyst

Emission Unit Description	EU	EP	Pollutant/ Parameter	Emission Limit
Caterpillar Engine	C-2751	1	NO_x	2.61 lb/hr and 1.0 g/hp-hr or 82 ppmvd [A]
			CO	1.31 lb/hr and 2.0 g/hp-hr or 270 ppmvd [A]
			VOC	2.09 lb/hr and 0.7 g/hp-hr or 60 ppmvd [A]
			Opacity	20% [B]
Caterpillar Engine	C-2752	2	NO_x	2.61 lb/hr and 1.0 g/hp-hr or 82 ppmvd [A]
			CO	1.31 lb/hr and 2.0 g/hp-hr or 270 ppmvd [A]
			VOC	2.09 lb/hr and 0.7 g/hp-hr or 60 ppmvd [A]
			Opacity	20% [B]
Caterpillar engine	C-2710	17	NO_x	2.75 lb/hr & 1.0 g/hp-hr or 82 ppmvd [A]
			CO	1.38 lb/hr & 2.0 g/hp-hr or 270 ppmvd [A]
			VOC	3.29 lb/hr & 0.7 g/hp-hr or 60 ppmvd [A]
			Opacity	20% [B]

Emission Unit Description	EU	EP	Pollutant/ Parameter	Emission Limit
Caterpillar Engine	C-8951	3	NO_x	0.66 lb/hr and 1.0 g/hp-hr or 82 ppmvd [A]
			CO	0.57 lb/hr and 2.0 g/hp-hr or 270 ppmvd [A]
			VOC	1.05 lb/hr and 0.7 g/hp-hr or 60 ppmvd [A]
			Opacity	20% [B]
Caterpillar Engine	C-8952	4	NO_x	0.66 lb/hr and 1.0 g/hp-hr or 82 ppmvd [A]
			CO	0.57 lb/hr and 2.0 g/hp-hr or 270 ppmvd [A]
			VOC	1.05 lb/hr and 0.7 g/hp-hr or 60 ppmvd [A]
			Opacity	20% [B]
Reboiler	TEG-H	6	Opacity	20% [B]
Emergency/process flare	FL-8501	8	Opacity	20% [C]
TEG flare	FL-8502	9	Opacity	0% [D]

[A] The emission limits in g/hp-hr and ppmvd are from 40 CFR 60, Subpart JJJJ. The engines must also meet any lb/hr emission limit and applicable emission limits established by 40 CFR 63, Subpart ZZZZ.

[B] 40% opacity is permissible for not more than one six-minute period per hour.

[C] 60% opacity is permissible for not more than one six-minute period per hour.

[D] The TEG flare controls the TEG dehydrator unit, which is subject to 40 CFR 63, Subpart HH and shall meet the provisions of §63.772(e)(2) and the requirements specified in §63.11(b). The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a

total of 5 minutes during any 2 consecutive hours. Test Method 22 in appendix A of 40 CFR 60 shall be used for determining visible emissions.

B. **Fuel Restriction**: EUs C-2751, C-2752, G-8951, and G-8952 are restricted to combusting only natural gas containing no more than 2 grains of sulfur per 100 standard cubic feet or commercial propane as defined by the Gas Processors Association.

C. **Stack Heights**: The stack height of each engine shall be at least 1.5 times the nearby building height. A nearby building is any building located a distance of less than five times the building height from the stack. In addition, emissions shall be vented from the following minimum stack heights:

Emission Unit Description	EU	Stack Height (feet)
Caterpillar Engine	C-2751	51.0
Caterpillar Engine	C-2752	51.0
Caterpillar Engine	G-8951	51.0
Caterpillar Engine	G-8952	51.0
Caterpillar engine	C-2710	24

D. **Engines Emissions Testing**: Within 12 months after issuance of this initial Permit to Operate, the permittee shall conduct emissions tests to determine the compliance status of the EUs C-2751, C-2752, G-8951, and G-8952 with respect to the CO, NO_x and, if applicable, VOC emission limits specified in Condition 7.A using EPA Reference Methods in 40 CFR 60, Appendix A or at a minimum a portable analyzer method approved by the Department. A test shall consist of at least three runs, with each run at least 20 minutes in length. Test methods other than those listed may be used upon approval by the Department.

Note: This requirement may be satisfied if recurring testing is otherwise performed in accordance with requirements under 40 CFR 60, Subpart JJJJ, or 40 CFR 63, Subpart ZZZZ.

The permittee shall notify the Department using the form in the Emission Testing Guideline, or its equivalent, at least 30 calendar days in advance of any tests of emissions of air contaminants required by the Department. If the permittee is unable to conduct the performance test on the scheduled date, the permittee shall notify the Department at least five days prior to the scheduled test date and coordinate a new test date with the Department.

E. **Storage Tanks**: Stationary volatile organic compounds storage tanks shall be equipped with a submerged fill pipe in accordance with NDAC 33.1-15-07-01.3.

F. **Like-Kind Engine Replacement**: This permit allows the permittee to replace the existing engines with a like-kind engines. Replacement is subject to the following conditions.

1) The Department must be notified within 10 days after change-out of the engine.

2) The replacement engine shall operate in the same manner, provide no increase in throughput and have equal or less emissions than the engine it is replacing.

3) The date of manufacture of the replacement engine must be included in the notification. The facility must comply with any applicable federal standards (e.g. NSPS, NESHAP, MACT) triggered by the replacement.

4) The replacement engine is subject to the same state emission limits as the existing engine in addition to any NSPS or MACT emission limit that is applicable. Testing shall be conducted to confirm compliance with the emission limits within 180 days after start-up of the new engine.

G. **New Source Performance Standards (NSPS)**: The permittee shall comply with all applicable requirements of the following NSPS subparts as referenced in Chapter 33.1-15-12 of the North Dakota Air Pollution Control Rules and 40 CFR 60.

1) 40 CFR 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (EUs C-2751, C-2752, G-8951, and G-8952).

2) 40 CFR 60, Subparts OOOO and OOOOa - Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution for which Construction, Modification or Reconstruction Commenced after August 23, 2011, and on or before September 18, 2015 and Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015.

H. **Maximum Achievable Control Technology Standards (MACT)**: The permittee shall comply with all applicable requirements of the following MACT subparts as referenced in Chapter 33.1-15-22 of the North Dakota Air Pollution Control Rules and 40 CFR 63.

1) 40 CFR 63, Subpart HH – National Emissions Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities (EU TEG). The North Dakota Department of Environmental Quality has not adopted the area source provisions of this subpart. Please send all documentation to the address above.

2) 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (EUs C-2751, C-2752, G-8951, and G-8952). The North Dakota Department of Environmental Quality has not adopted the area source provisions of this subpart. Please send all documentation to EPA at the following address:

U.S. EPA Region 8
1595 Wynkoop Street
Mail Code 8ENF-AT
Denver, CO 80202-1129

I. **Flaring Restrictions**:

1) When it is necessary to operate the emergency/process flare (EU FL-8501) during emergency, malfunction or maintenance, all precautions shall be taken to minimize emissions and maintain compliance with the applicable ambient air quality standards as outlined in NDAC 33.1-15-02 and the opacity standard of 20% not to exceed 60% for more than one six-minute period per hour.

2) The flares (EUs FL-8501 and FL-8502) must be equipped and operated with an automatic ignitor or a continuous burning pilot which must be maintained in good working order as outlined in NDAC 33.1-15-07-02.

3) The presence of a flame for the flares (EUs FL-8501 and FL-8502) shall be monitored using a thermocouple or any other equivalent device approved by the Department.

4) The TEG flare (EU FL-8502) shall be operated in accordance with the requirements of 40 CFR 63.11(b). The flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. Test Method 22 in appendix A of 40 CFR 60 shall be used for determining visible emissions.

J. **Organic Compounds Emissions**: The permittee shall comply with the applicable requirements of NDAC 33.1-15-07 – Control of Organic Compounds Emissions.

K. **Fugitive Emissions**: The release of fugitive emissions shall comply with the applicable requirements in NDAC 33.1-15-17.

L. **Annual Emission Inventory/Annual Production Reports**: The permittee shall submit an annual emission inventory report and/or an annual production report upon Department request, in a format provided or approved by the Department.

M. **Source Operations**: Operations at the facility shall be in accordance with statements, representations, procedures and supporting data contained in the initial application, and any supplemental information or renewal application(s) submitted thereafter. Any operations not listed in this permit are subject to all applicable North Dakota Air Pollution Control Rules.

N. **Alterations, Modifications or Changes**: Any alteration, repairing, expansion, or change in the method of operation of the source which results in the emission of an additional type or greater amount of air contaminants or which results in an increase in the ambient concentration of any air contaminant, must be reviewed and approved by the Department prior to the start of such alteration, repairing, expansion or change in the method of operation.

O. **Recordkeeping**: The permittee shall maintain any compliance monitoring records required by this permit or applicable requirements. The permittee shall retain records of all required monitoring data and support information for a period of at least five years from the date of the monitoring sample, measurement, report or application. Support information may include all

calibration and maintenance records and all original strip-chart recordings/computer printouts for continuous monitoring instrumentation, and copies of all reports required by the permit.

P. **Air Pollution from Internal Combustion Engines**: The permittee shall comply with all applicable requirements of NDAC 33.1-15-08-01 – Internal Combustion Engine Emissions Restricted.

Q. **Nuisance or Danger**: This permit shall in no way authorize the maintenance of a nuisance or a danger to public health or safety.

R. **Malfunction Notification**: The permittee shall notify the Department as soon as possible during normal working hours of any malfunction which can be expected to last longer than twenty-four hours and can cause the emission of air contaminants in violation of applicable rules and regulations. Immediate notification to the Department is required for any malfunction that would threaten health or welfare, or pose an imminent danger.

S. **Operation of Air Pollution Control Equipment**: The permittee shall maintain and operate all air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.

T. **Permit Renewal and Invalidation**: This permit shall be effective from the date of its issuance until the date specified in Item 5 unless sooner suspended, revoked or surrendered. Upon suspension or revocation, the permit shall be returned to the Department. Application for renewal of this permit shall be submitted ninety days prior to such expiration date. The Department shall approve or disapprove the renewal of the permit within ninety days of receipt of the renewal application.

U. **Change of Ownership**: This permit may not be transferred without prior approval from the Department.

V. **Right of Entry**: Any duly authorized officer, employee or agent of the North Dakota Department of Environmental Quality may enter and inspect any property, premise or place at which the source listed in Item 3 of this permit is located at any time for the purpose of ascertaining the state of compliance with the North Dakota Air Pollution Control Rules. The Department may conduct tests and take samples of air contaminants, fuel, processing material, and other materials which affect or may affect emissions of air contaminants from any source. The Department shall have the right to access and copy any records required by the Department's rules and to inspect monitoring equipment located on the premises.

W. **Other Regulations**: The permittee of the source unit(s) described in Item 6 of this permit shall comply with all State and Federal environmental laws and rules. In addition, the permittee shall comply with all local burning, fire, zoning, and other applicable ordinances, codes, rules and regulations.

X. **Permit Issuance**: This permit is issued in reliance upon the accuracy and completeness of the information set forth in the application. The conditions of this permit herein become, upon the

effective date of this permit, enforceable by the Department pursuant to any remedies it now has, or may in the future have, under the North Dakota Air Pollution Control Law, NDCC Chapter 23.1-06. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

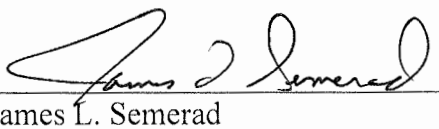
Y. **Odor Restrictions**: The permittee shall not discharge into the ambient air any objectionable odorous air contaminant which is in excess of the limits established in NDAC 33.1-15-16.

The permittee shall not discharge into the ambient air hydrogen sulfide (H_2S) in concentrations that would be objectionable on land owned or leased by the complainant or in areas normally accessed by the general public. For the purpose of complaint resolution, two samples with concentrations greater than 0.05 parts per million (50 parts per billion) sampled at least 15 minutes apart within a two-hour period and measured in accordance with Section 33.1-15-16-04 constitute a violation.

Z. **Sampling and Testing**: The Department may require the permittee to conduct tests to determine the emission rate of air contaminants from the source. The Department may observe the testing and may specify testing methods to be used. A signed copy of the test results shall be furnished to the Department within 60 days of the test date. The basis for this condition is NDAC 33.1-15-01-12 which is hereby incorporated into this permit by reference. To facilitate preparing for and conducting such tests, and to facilitate reporting the test results to the Department, the permittee shall follow the procedures and formats in the Department's Emission Testing Guideline.

FOR THE NORTH DAKOTA DEPARTMENT
OF ENVIRONMENTAL QUALITY

Date 12/4/2020

By 
James L. Semerad
Director
Division of Air Quality