NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
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AIR POLLUTION CONTROL
PERMIT TO CONSTRUCT

Pursuant to Chapter 23-25 of the North Dakota Century Code, and the Air Pollution Control Rules of the State of North Dakota (Article 33-15 of the North Dakota Administrative Code), and in reliance on statements and representations heretofore made by the owner designated below, a Permit to Construct is hereby issued authorizing such owner to construct and initially operate the source unit(s) at the location designated below. This Permit to Construct is subject to all applicable rules and orders now or hereafter in effect of the North Dakota Department of Health and to any conditions specified below:

I. General Information:

A. **Permit to Construct Number**: PTC16025

B. **Source**:

1. Name: Stockyard Creek Compressor Station
2. Location: SW ¼, SW ¼, Sec. 21, T154N, R99W
   Williams County, North Dakota
3. Source Type: Compressor Station
4. Equipment at the Facility: The facility consists of a natural gas compressor station capable of processing up to 50 million standard cubic feet of gas daily. Existing equipment includes the following:

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	Air Pollution Control Equipment
Caterpillar Model G3608 LE natural gas-fired compressor engine (4SLB) rated at approximately 2,370 bhp. The manufacture date is unknown.	C-2751	1	Oxidation Catalyst
Caterpillar Model G3608 LE natural gas-fired compressor engine (4SLB) rated at approximately 2,370 bhp. The manufacture date is unknown.	C-2752	2	Oxidation Catalyst
Caterpillar Model CG137-12 natural gas-fired generator engine (4SLB) rated at approximately 600 bhp. The manufacture date is unknown.	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. The manufacture date is unknown.	G-8952	4	AFRC and Oxidation Catalyst

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	Air Pollution Control Equipment
25 MMscfd triethylene glycol (TEG) dehydration unit*	TEG	5	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	7	None
Emergency and process flare	FL-8551**	8	None
Fugitive emissions	FUG	FUG	None

* 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.

** Unit name change from FL-8501 to FL-8551 per information provided.

5. New Equipment to be added at the Facility:

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	Air Pollution Control Equipment
Caterpillar Model G3608 LE natural gas-fired compressor engine (4SLB) rated at approximately 2,370 bhp. (JJJJ)	C-2753	9	Oxidation Catalyst
Caterpillar Model G3608 LE natural gas-fired compressor engine (4SLB) rated at approximately 2,370 bhp. (JJJJ)	C-2754	10	Oxidation Catalyst
25 MMscfd TEG dehydration unit*	TEG2	11	TEG2 Flare
1.5 MM Btu/hr TEG dehydration unit reboiler fired on natural gas	TEG-H2	12	None
Two 500 barrel condensate loadout tanks	CTANKS	13	FL-8551
400 barrel produced water storage tank with tanker truck loadout	TANK2	14	None

* 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.

C. **Owner/Operator (Permit Applicant)**:

1. Name: 1804 Ltd. LLC
2. Address: 11080 Circle Point Road, Suite 185
   Westminster, CO 80020
3. Application Date: June 2, 2014

II. **Conditions**: This Permit to Construct allows the construction and initial operation of the above-mentioned new or modified equipment at the source. The source may be operated under this Permit to Construct until a Permit to Operate is issued unless this permit is suspended or revoked. The source is subject to all applicable rules, regulations, and orders now or hereafter in effect of the North Dakota Department of Health and to the conditions specified below.

A. **Emission Limits**: Emission limits from the operation of the equipment identified in Item I.B of this Permit to Construct (hereafter referred to as "permit") are as follows. Minor source units not listed are subject to the applicable emission limits specified in the North Dakota Air Pollution Control Rules.

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*
			CO	1.31 lb/hr and 2.0 g/hp-hr or 270 ppmvd*
			VOC	2.09 lb/hr*
			Opacity	20% (40%**)
Caterpillar Engine	C-2752	2	NO_x	2.61 lb/hr and 1.0 g/hp-hr or 82 ppmvd*
			CO	1.31 lb/hr and 2.0 g/hp-hr or 270 ppmvd*
			VOC	2.09 lb/hr*
			Opacity	20% (40%**)
Caterpillar Engine	C-2753	9	NO_x	2.61 lb/hr and 1.0 g/hp-hr or 82 ppmvd*
			CO	1.31 lb/hr and 2.0 g/hp-hr or 270 ppmvd*
			VOC	2.09 lb/hr*
			Opacity	20% (40%**)
Caterpillar Engine	C-2754	10	NO_x	2.61 lb/hr and 1.0 g/hp-hr or 82 ppmvd*
			CO	1.31 lb/hr and 2.0 g/hp-hr or 270 ppmvd*
			VOC	2.09 lb/hr*
			Opacity	20% (40%**)
TEG dehydration unit	TEG2	11	Opacity	20% (60%**)
Reboiler	TEG-H2	12	Opacity	20% (40%**)
Emergency and process flare	FL-8551	8	Opacity	20% (60%**)

* The emission limits in g/hp-hr and ppmvd are from 40 CFR 60, Subpart JJJJ. The owner/operator must also meet all applicable emission limits established by 40

CFR 63, Subpart ZZZZ.

** Permissible for not more than one six-minute period per hour.

B. **Fuel Restriction**: The engines are restricted to combusting only natural gas containing no more than 2 grains of sulfur per 100 standard cubic feet.

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, the stack height for each engine shall be as shown in the following table.

Emission Unit Description	EP	Stack Height (feet)
Caterpillar Engine	9	51.0
Caterpillar Engine	10	51.0

D. **Flaring Restrictions**:

1. Flaring may not be used to burn waste gas for the purpose of increasing or maintaining well production without prior approval from the Department. When it is necessary to operate the flare 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 33-15-02 and the opacity standard of 20% not to exceed 60% for more than one six-minute period per hour.

2. The flare 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 33-15-07-02.

3. The presence of a flame shall be monitored using a thermocouple or any other equivalent device approved by the Department.

4. The flare shall be operated in accordance with the requirements of 40 CFR 60.18.

E. **Emissions Testing**:

1. Initial Testing: Within 180 days after initial startup, the permittee shall conduct emissions tests at those emission points directed by the Department using an independent testing firm, to determine the compliance status of the facility with respect to the emission limits specified in Condition II.A. Emissions testing shall be conducted for the pollutant(s) listed below in accordance with EPA Reference Methods listed in 40 CFR 60, Appendix A.

Emission Unit Description	EP	Pollutant/ Parameter
Caterpillar Engine	9	NO_x CO VOC
Caterpillar Engine	10	NO_x CO VOC

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 33-15-01-12 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 owner/operator shall follow the procedures and formats in the Department's Emission Testing Guideline.

2. Notification: 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.

3. Sampling Ports/Access: Sampling ports shall be provided downstream of all emission control devices and in a flue, conduit, duct, stack or chimney arranged to conduct emissions to the ambient air.

   The ports shall be located to allow for reliable sampling and shall be adequate for test methods applicable to the facility. Safe sampling platforms and safe access to the platforms shall be provided. Plans and specifications showing the size and location of the ports, platform and utilities shall be submitted to the Department for review and approval.

4. Other Testing:

   a) The Department may require the permittee to have tests conducted to determine the emission of air contaminants from any source, whenever the Department has reason to believe that an emission of a contaminant not addressed by the permit applicant is occurring, or the emission of a contaminant in excess of that allowed by this permit is occurring. The Department may specify testing methods to be used in accordance with good professional practice. The Department may observe the testing. All tests shall be conducted by reputable, qualified personnel. A signed copy of the test results shall be furnished to the Department within 60 days of the test date.

All tests shall be made and the results calculated in accordance with test procedures approved by the Department. All tests shall be made under the direction of persons qualified by training or experience in the field of air pollution control as approved by the Department.

b) The Department may conduct tests of emissions of air contaminants from any source. Upon request of the Department, the permittee shall provide necessary holes in stacks or ducts and such other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices, as may be necessary for proper determination of the emission of air contaminants.

F. **Like-Kind Engine Replacement**: This permit allows the permittee to replace the existing compressor engine with a like-kind engine. 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, 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 engine.

G. **40 CFR 63, Subpart ZZZZ**: The owner/operator shall comply with all applicable requirements of 40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines. For this subpart, EPA Region 8, not the North Dakota Department of Health, is the implementing and enforcement authority. The permittee shall submit all documentation to EPA at the address listed below:

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

H. **40 CFR 60, Subpart JJJJ**: The owner/operator shall comply with all applicable requirements of 40 CFR 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.

I. **40 CFR 63, Subpart HH**: The owner/operator shall comply with all applicable requirements of 40 CFR 63, Subpart HH – National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities. For this subpart, EPA Region 8, not the North Dakota Department of Health, is the implementing and enforcement authority. The permittee shall submit all documentation to EPA at the address listed under Condition II.G.

J. **Organic Compounds Emissions**: The permittee shall comply with all applicable requirements of NDAC 33-15-07 – Control of Organic Compounds Emissions.

K. **Construction**: Construction of the above described facility shall be in accordance with information provided in the permit application as well as any plans, specifications and supporting data submitted to the Department. The Department shall be notified ten days in advance of any significant deviations from the specifications furnished. The issuance of this Permit to Construct may be suspended or revoked if the Department determines that a significant deviation from the plans and specifications furnished has been or is to be made.

Any violation of a condition issued as part of this permit to construct as well as any construction which proceeds in variance with any information submitted in the application, is regarded as a violation of construction authority and is subject to enforcement action.

L. **Startup Notice**: A notification of the actual date of initial startup shall be submitted to the Department within 15 days after the date of initial startup.

M. **Permit Invalidation**: This permit shall become invalid if construction is not commenced within eighteen months after issuance of such permit, if construction is discontinued for a period of eighteen months or more; or if construction is not completed within a reasonable time.

N. **Fugitive Emissions**: The release of fugitive emissions shall comply with the applicable requirements in NDAC 33-15-17.

O. **Annual Emission Inventory/Annual Production Reports**: The owner/operator shall submit an annual emission inventory report and/or an annual production report upon Department request, on forms supplied or approved by the Department.

P. **Source Operations**: Operations at the installation shall be in accordance with statements, representations, procedures and supporting data contained in the initial application, and any supplemental information or application(s) submitted

thereafter. Any operations not listed in this permit are subject to all applicable North Dakota Air Pollution Control Rules.

Q. **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.

R. **Air Pollution from Internal Combustion Engines**: The permittee shall comply with all applicable requirements of NDAC 33-15-08-01 – Internal Combustion Engine Emissions Restricted.

S. **Recordkeeping**: The owner/operator shall maintain any compliance monitoring records required by this permit or applicable requirements. The owner/operator 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.

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

U. **Malfunction Notification**: The owner/operator shall notify the Department 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.

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

W. **Transfer of Permit to Construct**: The holder of a permit to construct may not transfer such permit without prior approval from the Department.

X. **Right of Entry**: Any duly authorized officer, employee or agent of the North Dakota Department of Health may enter and inspect any property, premise or place at which the source listed in Item I.B 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.

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

Z. **Permit Issuance**: This permit is issued in reliance upon the accuracy and completeness of the information set forth in the application. Not withstanding the tentative nature of this information, 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 23-25. Each and every condition of this permit is a material part thereof, and is not severable.

AA. **Odor Restrictions**: The owner/operator shall not discharge into the ambient air any objectionable odorous air contaminant which is in excess of the limits established in NDAC 33-15-16.

FOR THE NORTH DAKOTA
DEPARTMENT OF HEALTH

Date 9/12/16

By _____
Terry L. O'Clair, P.E.
for Director
Division of Air Quality