

**Caerus Oil and Gas– Chipeta Processing Natural Buttes
Full Compliance Evaluation (FCE)
On-Site Clean Air Act (CAA) Inspections**

Inspection Date: June 22, 2022

Inspection Report Date: July 15, 2022

EPA Representatives: Michael Stovern, Sara Loiacono, Youn Joo Kim, Colin Schwartz

Tribal Representatives: Marie Johnson

Company Representatives: Michael Otepka, JD Herbert, Linn Huber, Scott Sims, Kelly Jensen, Jerry Dismukes (Email contact)

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Inspection Report Prepared By: Michael Stovern

Inspection Report Reviewed By: Scott Patefield

Last CAA Inspection: September 8, 2020

Applicable Rules: Clean Air Act (CAA) Part 71 Title V Permit,
40 C.F.R. Part 63, Subpart HH (MACT HH)
40 C.F.R. Part 63, Subpart ZZZZ (MACT ZZZZ)
40 C.F.R. Part 60, Subpart JJJJ (NSPS JJJJ)
Consent Decree No. 07-cv-01034

SCOTT PATEFIELD
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CAA Permit History:

Part 71 initial permit (V-OU-0003-00.01) date: 2/7/2001
Part 71 permit renewal application date: 9/19/2005
Part 71 permit terminated on 9/29/2020
Synthetic minor permit (SMNSR-UO-000003-2019.001) date: 9/29/2020

General Source Information

Parent Company Name: Caerus Oil and Gas

Facility Name: Chipeta Processing – Natural Buttes

Facility Location: Latitude 40.017302, Longitude -109.507673

EPA Region: 8

County, State: Uintah, Utah

Reservation: Uintah & Ouray Reservation

Tribe: Ute Indian Tribe

Responsible Official: Brent Naherny

NAICS Code: 211111

ICIS-AIR ID Number: 080000004904700004

Source Designation: Synthetic Minor source (Major source status terminated on 9/29/2020)

Overall Inspection Findings

MACT HH concerns

1. No concerns were identified through the inspection and records review of the facility.

MACT ZZZZ concerns

1. No concerns were identified through the inspection and records review of the facility.

NSPS JJJJ concerns

1. No concerns were identified through the inspection and records review of the facility.

Title V concerns

1. No concerns were identified through the inspection and records review of the facility.

Synthetic Minor Permit concerns

1. Annual report not submitted by 3/1/2022 but the annual report required under the CD was submitted on 2/22/2022. The CD annual report mirrors the requirements of the synthetic minor permit.

Previous Areas of Concern

On March 27, 2008 a consent decree (Civil Action No. 1:07-cv-01034) was entered into United States District Court of Colorado between Kerr-McGee Corporation, State of Colorado and the United States of America to address potential Clean Air Act violations. As of August 10, 2006, Kerr-McGee Corporation, a Delaware corporation, became the wholly owned subsidiary of Anadarko Petroleum Corporation. Chipeta Processing was formed on June 1, 2008 as a Delaware limited liability company and is partially owned by Anadarko Uintah Midstream, LLC. Natural Buttes was sold to Chipeta Processing, LLC on November 17, 2009. As such, certain requirements of the Kerr-McGee consent decree apply to the Natural Buttes facility including the use of low emission dehydration units, and solid bed sulfur removal technology. The consent decree was terminated on 6/24/2021.

On September 10, 2009, a consent decree (Civil Action No. 2:09-CV-00649-TS) was entered into the United States District Court of Utah between CIG and the United States of America to address potential Clean Air Act violations at the Natural Buttes facility. The consent decree required the conversion to emergency status or decommission of three caterpillar engine units (EG1, EG2 and EG3) and an emission limit of 3.9 lbs NOx/hr on the two White Superior engines (CG01 and CG02). The consent decree was terminated on 7/3/2012.

Current Areas of Concern

Following the on-site inspection and records review, the facility did not have any areas of concern. Please be advised that this inspection report is finalized, but that the report is not a final determination of compliance.

Source Emission Units

Significant Emission Units

Emission Unit ID	Description	Control Equipment
CG-1 CG-2	682 hp Propane Refrigerant Compressor Drivers; White Superior 8G825 4SRB Reciprocating Engines; Natural Gas Fired: Serial Number: 292039 Installed: 10/1982 Serial Number: 292029 Installed: 10/1982	Air Fuel Ratio (AFR) and Non-Selective Catalytic Reduction (NSCR)
CG-3	268 hp Propane Refrigerant Compressor Driver; Ajax DPC-220 LE 2SLB Reciprocating Engine; Natural Gas Fired: Serial Number: 84885 Installed: 4/2004	None
CG-4 CG-5	3650 hp Compressor Drivers; Allison 501-KC5 Gas Turbines; Natural Gas Fired: Serial Number: ASP-1469 Installed: 1992	None

CG-6	Serial Number: ASP-1471	Installed: 1992	
CG-7	Serial Number: ASP-1478	Installed: 1992	
	Serial Number: ASP-1467	Installed: 1992	
H-1	6.67 MMBtu/hr Process Heater; Propak Hot Oil Heater; Natural Gas Fired:		None
	model Number: NA	Installed: 2000	
TL-1	Condensate Loadout – Truck Loading		None
	Ethylene Glycol Regenerator Still Vent;		Flare (X-6)
T8365	Manufacturer: Propak, Custom Skid	Installed: 11/1992	
FUG	Fugitive Emissions (equipment leaks from valves, pumps, flanges, open-ended lines, etc....)		None

Insignificant Emission Units

Emission Unit Description
T1 – 240 bbl tri-ethylene glycol storage tank
T2 – 240 bbl methanol storage tank
T3 – 6,875 gallon lubricating oil storage tank
T5 – 250 bbl pressurized unleaded gasoline storage tank
T7 & T11 – two 1,250 gallon septic tanks
T10 – 7,140 gallon slop tank
T12 – 700 gallon ambitol storage tank
T13 – 700 gallon lubricating oil storage tank
T14 – 700 gallon used oil storage tank
T15 – 700 gallon ethylene glycol storage tank
T16 – 10 gallon lubricating oil day tank
T18 – 6,300 gallon used oil storage tank
500 gallon diesel storage tank
Two 1,200 gallon ambitol storage tanks
V19 – Blowdown Vessel Vent
T8 – Fresh water tank
T6 – abandoned water tank
0.8916 MMBtu/hr process heater
EG2 – 759 Caterpillar G3512 LE emergency standby generator engine
Pigging Operations

General Inspection Observations and Commentary

This Full Compliance Evaluation (FCE) was conducted via an on-site inspection and follow-up record review.

Opening Meeting:

The EPA inspectors, Tribal reps and Caerus staff met at the Natural Buttes facility at 12:45 pm on 6/22/2022. The inspectors presented their credentials to the staff and made introductions. The inspector started the opening meeting by stating that the purpose of the inspection was to complete a Full Compliance Evaluation (FCE) of the facility with respect to all applicable Clean Air Act (CAA) regulations. The inspectors started by asked a series of questions regarding facility operations, monitoring and record keeping. The opening meeting was completed at 1:37 pm.

Walk Through Inspection Observations

The EPA began its walkthrough of the facility at 1:40 pm.

Table 1: Operating Specifics

Plant Capacity (MMscf/day)	120
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Pressure Inlet (psi)	300
From	Field compression facilities (West side)
Outlet Gas to	Chipeta Gas Plant
Outlet Pressure (psi)	900

The facility was sold on 7/1/2020 from Chipeta Processing to Caerus Oil and Gas. The sale did not include the entire facility. Several pieces of equipment were retained by Western Midstream (the parent company to Chipeta Processing).

The EPA observed that both engines C1101 and C2101 were operational at the time of the inspection and had NSCR equipped. Engines CG-1 through CG-7 have all been shut down, blind flanged and/or removed since 2016. During the facility ownership transfer to Caerus in 2020, CG-1 through CG7 and EG1 were retained by Western Midstream.

Specific engine and turbine information for those located on site can be seen in Table 2.

Table 2: Engine/Turbine Details

Engine ID	Make	Model	Serial #	Mfg Date	Max HP	Fuel	Stroke Burn	Engine Status
C1101	Caterpillar	G3612 LE	BKE00545	7/3/09	3550	NG	4SLB	Operating
C2101	Caterpillar	G3612 LE	BKE00560	9/23/09	3550	NG	4SLB	Operating
CG-1	White Superior	8G825	292039	10/1982	682	NG	4SRB	Removed
CG-2	White Superior	8G825	292029	10/1982	682	NG	4SRB	Removed
CG-3	Ajax	DPC-220 LE	84885	4/2004	268	NG	2SLB	Removed
CG-4	Allison	501-KC5	ASP-1469	1992	3650	NG	-	Removed
CG-5	Allison	501-KC5	ASP-1471	1992	3650	NG	-	Removed
CG-6	Allison	501-KC5	ASP-1478	1992	3650	NG	-	Removed
CG-7	Allison	501-KC5	ASP-1467	1992	3650	NG	-	Removed
EG-2	Caterpillar	G3512 LE	4KC00324	Pre 1992	759	NG	4SLB	Removed

The EPA inspectors observed that there are two dehydration units located at the facility that were operational at the time of the inspection. It should be noted that both of the dehydrators' reboiler still vent emissions are routed by a closed-vent system to the field low-pressure pipeline yielding no emissions.

There were eight (8) H₂S sulfur recovery towers located on site and 5 were operational at the time of the inspection.

There were four bullet tanks that were previously used for NGL extraction process that use to be operational at the site. These tanks were converted to storage tanks for the inlet slug catcher liquids. This equipment was retained by Western Midstream when the facility was sold to Caerus on 7/1/2020.

There were four 400 BBL tanks equipped to a closed vent system located at the facility that were in use at the time of the inspection. Two of the tanks held produced water/condensate and the other two held fresh and spent sulfur removal liquid.

The inspectors observed that the process flare and its electronic monitoring was operational at the time of inspection.

The facilities NGL extraction process was completely shut down at the time of the inspection. Facility operators stated that the last time NGL extraction process was operated occurred more than 5 years prior. This equipment was retained by Western Midstream when the facility was sold to Caerus on 7/1/2020.

Closing Meeting:

Following the onsite inspection at Natural Buttes compressor station, the inspectors, tribal representative and company representatives conducted an exit meeting. During the exit meeting, the inspector discussed the process to complete the inspection report including requesting additional information via email in the following weeks. Mr. Otepka agreed to provide the inspector with any needed additional information. During this meeting the inspectors told that company officials that a copy of the inspection report will be provided when completed to both the source and the tribal air quality program. The inspectors left the facility at 2:45 pm.

Requirements for Stationary Gas Turbines (NSPS GG)

1. Applicability [40 CFR 60.330]

- a. This facility is subject to the requirements of 40 CFR part 60, subpart GG. Notwithstanding conditions in this permit, the permittee shall comply with all applicable requirements of 40 CFR part 60, subpart GG.
- b. 40 CFR part 60, subpart GG applies to the following emission units:

Units CG-4, CG-5, CG-6, and CG-7: Four 34.6 MMBtu/hr (3,650 hp), natural gas fired, Allison 501-KC5 turbines.

There is nothing to evaluate with this general condition.

2. Emission Standards [40 CFR 60.332 and 60.333]

Emission units CG-4, CG-5, CG-6, and CG-7 are subject to the nitrogen oxide standard and the sulfur dioxide fuel standards listed in Table 3 below.

**Table 3 - Turbine Emission Standards
Chipeta Processing, LLC – Natural Buttes Compressor Station**

Pollutant	Emission Standard	Regulatory Reference
Nitrogen oxides	CG-4, CG-5, CG-6, and CG-7: $\text{STD} = 0.0150(14.4) + F = 172 \text{ ppm}$ Y where: Y = 12.52 kilojoules per watt hour (manufacturer's rated heat rate at manufacturer's rated peak load. The value of Y shall not exceed 14.4 kilojoules per watt hour) and F = 0 (NO _x emission allowance for fuel bound nitrogen) and STD = allowable NO _x emissions (percent by volume at 15 percent oxygen and on a dry basis)	40 CFR 60.332 (a)(2)
SO ₂	Either: (a) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis; or (b) Fuel sulfur content shall not exceed 0.8 percent by weight.*	40 CFR 60.333(a) 40 CFR 60.333(b)

* The permittee has opted to demonstrate compliance with the SO₂ limit by verifying that the fuel used meets the definition of natural gas to avoid fuel sulfur monitoring.

The turbines had been blind flanged and removed prior to previous inspection. No additional turbines have been installed or operated since July 2018. When previously operated, these turbines were fueled with field natural gas.

3. Emission units CG-4, CG-5, CG-6, and CG-7 shall be exempt from the NO_x emission standard in this section when being fired with an emergency fuel. For the purpose of this requirement, the term “emergency fuel” means “a fuel fired by a gas turbine only during circumstances, such as natural gas curtailment or breakdown of delivery system, that makes it impossible to fire natural gas in the gas turbine.” [40 CFR 60.332(k), 40 CFR 60.331(r)]

Turbines CG-4 through CG-7 have been blind flanged and removed from the facility prior to the previous facility inspection. When operational these engines were fueled with field gas.

Testing Requirements [40 CFR 60.8, 40 CFR 60.335, and 40 CFR 71.6(a)(3)(i)(A)]

1. Initial performance testing is required for off permit replacement units for turbines CG-4, CG-5, CG-6, and CG-7. The permittee shall comply with the initial performance test requirements of 40 CFR 60.8(a) - (f) for measuring NO_x emissions from replaced units CG-4, CG-5, CG-6, and CG-7 within 60 days after achieving the maximum production rate at which the turbines will be operated, but not later than 180 days after initial startup of the turbines.
2. The permittee shall comply with the test methods and procedures of 40 CFR 60.335(a), (b), and (c) when conducting the initial performance test for NO_x for units CG-4, CG-5, CG-6, and CG-7.

This requirement was not evaluated in this inspection due to the initial performance test occurring over two decades ago and the requirement that records only need to be retained for five years.

Monitoring Requirements [40 CFR 60.334(c), 40 CFR 60.334(h) and 40CFR 71.6(a)(3)(i)(A) through (C)]

1. The permittee shall comply with the requirements of 40 CFR 60.334(h) for monitoring of sulfur content and nitrogen content of the fuel being burned in units CG-4, CG-5, CG-6, and CG-7.
 - a. The permittee shall demonstrate that gaseous fuel burned in units CG-4, CG-5, CG-6, and CG-7 meets the definition of natural gas pursuant to §60.331(u).
 - b. The permittee shall demonstrate the gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less. [40 CFR 60.334(h) - (h)(3)(i)]

Turbines CG-4 through CG-7 have been blind flanged and removed from the facility. Compliance with this requirement was evaluated during the 2016 inspection.

2. The permittee shall measure NO_x emissions from emission units CG-4, CG-5, CG-6, and CG-7 at least once every quarter to show compliance with the requirements of 40 CFR 60.332(a)(2). To meet this requirement, the permittee shall measure the NO_x emissions from each turbine using a portable analyzer and the monitoring protocol approved by EPA, or by using a Mobile Test Van (MTV) and the monitoring protocols approved by EPA.
 - a. Monitoring shall begin in the first calendar quarter following EPA notification to the applicant of the approval of the monitoring protocol.

- b. If an emission unit is inoperable for 1500 hours or more in any calendar quarter, the permittee is exempt from conducting NO_x monitoring for the emissions unit for that quarter only. [40 CFR 60.334(c)]

Turbines CG-4 through CG-7 have been blind flanged and removed from the facility.

Recordkeeping Requirements [40 CFR 71.6(a)(3)(ii), 40 CFR 60.7(b) and 60.7(f)]

1. The permittee shall comply with the following recordkeeping requirements:
 - a. The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
 - b. The permittee shall maintain a file of all measurements, including performance testing measurements, monitoring device calibration checks, and other information required by the NSPS conditions of this permit.

The facility provided all requested turbine related records.

2. The permittee shall comply with the following recordkeeping requirements when firing an emergency fuel:
 - a. Monitoring of fuel sulfur content shall be recorded daily while firing an emergency fuel as defined in 40 CFR 60.331(r).
 - b. Monitoring of fuel nitrogen content shall be recorded daily while firing a fuel other than pipeline-quality natural gas or while firing an emergency fuel as defined in 40 CFR 60.331(r).

The turbines have been removed from the facility.

3. The permittee shall keep records of all required monitoring. The records shall include the following:
 - a. The date, place, and time of sampling or measurements;
 - b. The date(s) analyses were performed;
 - c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of such analyses; and
 - f. The operating conditions as existing at the time of sampling or measurement.

The facility provided all requested records of turbine monitoring.

4. The permittee shall keep a record of the number of hours an emissions unit is inoperable and document the reason(s) why the emissions unit was inoperable.

Turbines CG-4 through CG-7 have been blind flanged and removed from the facility. Additionally, the engines have not operated since the 2016 inspection.

5. The permittee shall retain records of all required monitoring data and support information, sample analyses, fuel supplier, fuel quality, and fuel make-up pertinent to the custom fuel monitoring schedule for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. These records shall be made available upon request by EPA Region 8. Support information includes all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

The facility provided all requested records.

Reporting Requirements [40 CFR 71.6(a)(3)(iii) and 40 CFR 60.8(a)]

The permittee shall submit to EPA a written report of the results of any initial performance test(s) required in this section.

This requirement was not evaluated in this inspection due to the turbines' initial performance tests occurring over two decades ago and the requirement that records only need to be retained for five years.

Requirements for Fugitive Emissions (NSPS KKK)

Affected Facilities [40 CFR 60.630]

1. The following affected facilities in onshore natural gas processing plants are subject to the provisions of 40 CFR part 60, subpart KKK:
 - a. Each compressor in VOC service or wet gas service:
 - b. The group of all equipment except compressors within a process unit:
2. A compressor station, dehydration unit, sweetening unit, underground storage tank, field gas gathering system, or liquefied natural gas unit is covered under this subpart if it is located at an onshore natural gas processing plant as defined in §60.631.

Natural Buttes used to extract NGLs meeting the definition of ‘onshore natural gas processing plant’. However, the NGL extraction at the facility has been shut down for five years. The process unit was dismantled on October 1, 2016 and notice of dismantling was provided on November 15, 2016.

Standards [40 CFR 60.632]

1. The permittee shall comply with the requirements of §§ 60.482-1(a), (b) and (d) and 60.482-2 through 60.482-10, except as provided in §60.633, as soon as practicable, but no later than 180 days after initial startup.
2. The permittee shall comply with the provisions of §60.485 except as provided in §60.633(f).
3. The permittee shall comply with the provisions of §§60.486 and 60.487, except as provided in §§60.633, 60.635 and 60.636.
4. The permittee shall use the following provision instead of §60.485(d)(1): Each piece of equipment is presumed to be in VOC service or in wet gas service unless the permittee demonstrates that the piece of equipment is not in VOC service or in wet gas service. For a piece of equipment to be considered not in VOC service, it must be determined that the VOC content can be reasonably expected never to exceed 10.0 percent by weight. For a piece of equipment to be considered in wet gas service, it must be determined that it contains or contacts the field gas before the extraction step in the process. For purposes of determining the percent VOC content of the process fluid that is contained in or contacts a piece of equipment, procedures that conform to the methods described in ASTM E169–63, 77, or 93, E168–67, 77, or 92, or E260–73, 91, or 96 (incorporated by reference as specified in §60.17) shall be used. [40 CFR 60.632]

Natural Buttes used to extract NGLs meeting the definition of ‘onshore natural gas processing plant’. However, the NGL extraction at the facility has been shut down for five years. The process unit was dismantled on October 1, 2016 and notice of dismantling was provided on November 15, 2016.

Exceptions [40 CFR 60.633]

The permittee may comply with the following exceptions to the provisions of 40 CFR part 60, subpart VV:

1. For each pressure relief device in gas/vapor service, the leak detection and repair requirements specified in §60.633(b);

2. For sampling connection systems, the exemption specified in §60.633(c);
3. For pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service that are located at a nonfractionating plant that does not have the design capacity to process 283,200 standard cubic meters per day (scmd) (10 million standard cubic feet per day) or more of field gas, the exemptions specified in §60.633(d);
4. For reciprocating compressors in wet gas service, the exemption specified in §60.633(f);
5. For flares used to comply with subpart KKK, the requirements specified in §60.633(g); and
6. For determining whether equipment is in heavy or light liquid service, the provisions specified in §60.633(h). [40 CFR 60.633]

Natural Buttes used to extract NGLs meeting the definition of ‘onshore natural gas processing plant’. However, the NGL extraction at the facility has been shut down for five years. The process unit has been dismantled on October 1, 2016 and notice of dismantling was provided on November 15, 2016.

Recordkeeping Requirements [40 CFR 60.635]

1. The permittee shall comply with the requirements of Sections below in addition to the requirements of §60.486 of 40 CFR part 60, subpart VV. [40 CFR 60.635(a)]
2. The permittee shall comply with the record keeping requirements in §60.635(b) for pressure relief devices subject to the requirements of §60.633(b)(1). [40 CFR 60.635(b)]
3. The permittee shall comply with the following requirement in addition to the requirement of §60.486(j) of 40 CFR part 60, subpart VV:
 - a. Information and data used to demonstrate that a reciprocating compressor is in wet gas service to apply for the exemption in §60.633(f) shall be recorded in a log that is kept in a readily accessible location. [40 CFR 60.635(c)]

The process unit has been dismantled on October 1, 2016 and notice was provided in the November 15, 2016 final NSPS KKK semi-annual report.

Reporting Requirements [40 CFR 60.636]

1. The permittee shall comply with the reporting requirements of §60.487 of 40 CFR part 60, subpart VV. [40 CFR 60.636(a)]
2. All reports required under 40 CFR part 60, subpart KKK shall be sent to the Administrator at the following address as listed in §60.4:

Director, Air and Toxics Technical Enforcement Program
 Office of Enforcement, Compliance and Environmental Justice
 1595 Wynkoop Street, Denver, CO 80202-1129
 Mail Code 8ENF-AT

3. The permittee shall include the following information in the initial semiannual report in addition to the information required in §§60.487(b)(1) through 60.487(b)(4) of 40 CFR part 60, subpart VV:
 - a. The number of pressure relief devices subject to the requirements of §60.633(b), except for those pressure relief devices designated for no detectable emissions under the provisions of §60.482-4(a) of 40 CFR part 60, subpart VV and those pressure relief devices complying with §60.482-4(c) of 40 CFR part 60, subpart VV. [40 CFR 60.636(b)]
4. The permittee shall include the following information in all semiannual reports in addition to the information required in §§60.487(c)(2)(i) through 60.487(c)(2)(vi) of 40 CFR part 60, subpart VV:
 - a. The number of pressure relief devices for which leaks were detected as required in §60.633(b)(2); and
 - b. The number of pressure relief devices for which leaks were not repaired as required in §60.633(b)(3). [40 CFR 60.636(c)]

The process unit has been dismantled on October 1, 2016 and notice dismantling was provided on November 15, 2016.

Requirements for Dehydration Units (MACT HH: HAP Minor Source)

Affected Sources [40 CFR 63.760(a) through (e)]

The following units are affected sources for purposes of 40 CFR part 63, subpart HH:

- i. Each glycol dehydration unit;
- ii. Each storage vessel with a potential for flash emissions;
- iii. The group of all ancillary equipment, located at natural gas processing plants, intended to operate in volatile hazardous air pollutant (VHAP) service as determined per the requirements of §63.772(a); and
- iv. Compressors, located at natural gas processing plants, intended to operate in VHAP service as determined per the requirements of §63.772(a).

There is nothing to evaluate with this general condition.

General Standards [40 CFR 63.764]

1. Table 2 of 40 CFR part 63, subpart HH specifies the General Provisions of 40 CFR part 63, subpart A that apply.
2. All reports required under 40 CFR part 63, subpart A shall be sent to the Administrator at the following address as listed in §63.13:

Director, Air and Toxics Technical Enforcement Program
Office of Enforcement, Compliance and Environmental Justice
1595 Wynkoop Street, Denver, CO 80202-1129
Mail Code 8ENF-AT

Reports may be submitted on electronic media.

There is nothing to evaluate with this general condition.

3. The permittee shall comply with 40 CFR part 63, subpart HH as follows:
 - a. For each glycol dehydration unit process vent subject to this subpart, the permittee shall comply with the following:

- (i) The control requirements for glycol dehydration unit process vents specified in §63.765;

There are two dehydration units located at the facility. Both dehydration units' reboiler emissions are routed to a vapor recovery unit and the facility fuel gas system. The MACT HH definition of closed-vent system states: "If gas or vapor from regulated equipment is routed to a process (e.g., to a fuel gas system), the conveyance system shall not be considered a closed-vent system and is not subject to closed-vent system standards". As such, there are no process vent requirements for both dehydrator units.

- (ii) The monitoring requirements specified in §63.773; and

There are no applicable CVS or control device monitoring requirements for both dehydrator units since the facility routes it's still vent emissions to the facility's fuel gas system.

- (iii) The recordkeeping and reporting requirements specified in §§63.774 and 63.775.

The facility was in compliance with the recordkeeping and reporting requirements.

- b. For each storage vessel with the potential for flash emissions subject to this subpart, the permittee shall comply with the following:

- (i) The control requirements for storage vessels specified in §63.766;
- (ii) The monitoring requirements specified in §63.773; and
- (iii) The recordkeeping and reporting requirements specified in §§63.774 and 63.775.

There are no MACT HH applicable storage vessels at this facility.

- c. For ancillary equipment and compressors subject to this subpart, the permittee shall comply with the requirements for equipment leaks specified in §63.769.

The NGL extraction at the facility has been shut down for five years. The process unit has been dismantled on October 1, 2016 and notice of dismantling was provided on November 15, 2016.

4. *Exemption for ancillary equipment and compressor in VHAP service:*

- a. The permittee is exempt from the requirements for ancillary equipment and compressors subject to this subpart if the following criteria are met:
 - (i) Any ancillary equipment and compressors that contain or contact a fluid (liquid or gas) must have a total VHAP concentration less than 10 percent by weight, as determined by the procedures specified in §63.772(a); or
 - (ii) That ancillary equipment and compressors must operate in VHAP service less than 300 hours per calendar year.
- b. Records of the determination that the exemption from requirements for ancillary equipment and compressors applies must be maintained as required in §63.774(d)(2).

The final MACT HH LDAR monitoring occurred in December 17, 2015 due to the NGL extraction process unit being permanently shut down.

- 5. In all cases where the permittee is required to repair leaks by a specified time after the leak is detected:
 - a. It is a violation of 40 CFR part 63, subpart HH to fail to take action to repair the leak(s) within the specified time;
 - b. If action is taken to repair the leak(s) within the specified time, failure of that action to successfully repair the leak(s) is not a violation of 40 CFR part 63, subpart HH.
 - c. However, if the repairs are unsuccessful and a leak is detected, the permittee shall take further action as required by the applicable provisions of this subpart.

The final MACT HH LDAR monitoring occurred in December 17, 2015 due to the NGL extraction process unit being permanently shut down.

Startups, Shutdowns, and Malfunctions [40 CFR 63.762]

1. The provisions set forth in 40 CFR part 63, subpart HH shall apply at all times except during startups or shutdowns, during malfunctions, and during periods of non-operation of the affected sources (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies. However, during the startup, shutdown, malfunction, or period of non-operation of one portion of an affected source, all emission points which can comply with the specific provisions to which they are subject must do so during the startup, shutdown, malfunction, or period of non-operation.
2. The permittee shall not shut down items of equipment that are required or utilized for compliance during times when emissions are being routed to such items of equipment, if the shutdown would contravene requirements applicable to such items of equipment. This paragraph does not apply if the item of equipment is malfunctioning, or if the permittee must shut down the equipment to avoid damage due to a contemporaneous startup, shutdown, or malfunction of the affected source or a portion thereof.
3. During startups, shutdowns, and malfunctions when the requirements of this subpart do not apply pursuant to paragraphs 1 and 2 of this section, the permittee shall implement, to the extent reasonably available, measures to prevent or minimize excess emissions to the maximum extent practical. For purposes of this paragraph, the term “excess emissions” means emissions in excess of those that would have occurred if there were no startup, shutdown, or malfunction, and the permittee complied with the relevant provisions. The measures to be taken shall be identified in the applicable startup, shutdown, and malfunction plan, and may include, but are not limited to, air pollution control technologies, recovery technologies, work practices, pollution prevention, monitoring, and/or changes in the manner of operation of the source. Back-up control devices are not required, but may be used if available.
4. The permittee shall prepare a startup, shutdown, and malfunction plan as required in §63.6(e)(3), except that the plan is not required to be incorporated by reference into the source's title V permit as specified in §63.6(e)(3)(i). Instead, the permittee shall keep the plan on record as required by §63.6(e)(3)(v). The failure of the plan to adequately minimize emissions during startup, shutdown, or malfunctions does not shield the permittee from enforcement actions.

The facility is in compliance with the startup, shutdowns, and malfunctions requirements.

Control Equipment Requirements [40 CFR 63.771]

1. The permittee shall comply with the control equipment requirements as follows:
 - a. For each cover, the permittee shall comply with the cover requirements specified in §63.771(b);

The facility does not have any MACT HH applicable storage vessels.

- b. For each closed vent system, the permittee shall comply with the closed vent system requirements specified in §63.771(c);

Both dehydration units reboiler emissions are routed to the facility's fuel gas system. The MACT HH definition of closed-vent system states: “If gas or vapor from regulated equipment is routed to a process (e.g., to a fuel gas system), the conveyance system shall not be

considered a closed-vent system and is not subject to closed-vent system standards". As such, there are no process vent requirements for both dehydrator units.

- c. For each control device, the permittee shall comply with the control device requirements specified in §63.771(d); and

Both dehydration units reboiler emissions are routed to the facility's fuel gas system. The MACT HH definition of control device states: "For the purposes of this subpart, if gas or vapor from regulated equipment is used, reused (i.e., injected into the flame zone of an enclosed combustion device), returned back to the process, or sold, then the recovery system used, including piping, connections, and flow inducing devices, is not considered to be a control device or closed-vent system". As such there are no process control device requirements for both dehydrator units.

- d. For each process modification made to comply with glycol dehydration unit process vent standards at §63.765(c)(2), the permittee shall comply with the process modification standards specified in §63.771(e).

Since the reboiler emissions are routed to the fuel gas system, these requirements do not apply.

Test Methods, Compliance Procedures and Compliance Determinations [40 CFR 63.772]

1. Determination of material VHAP or HAP concentration to determine the applicability of the equipment leak standards under §63.769 shall be made in accordance with the requirements specified at §63.772(a). Each piece of ancillary equipment and compressors are presumed to be in VHAP service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VHAP service or in wet gas service.

There is nothing to evaluate with this general condition.

2. Determination of glycol dehydration unit flowrate or benzene emissions to determine the applicability of the exemption from glycol dehydration unit process vent control requirements under §63.765, shall be made in accordance with the requirements specified in §63.772(b).

Not applicable due to the still vent emissions being routed to the facility's fuel gas system.

3. The no detectable emissions test procedure shall be conducted in accordance with the requirements specified in §63.772(c).

Not applicable due to the still vent emissions being routed to the facility's fuel gas system.

4. The control device performance test procedure shall be conducted in accordance with the requirements specified in §63.772(e).

Not applicable due to the still vent emissions being routed to the facility's fuel gas system.

5. The compliance demonstration for control device performance requirements shall be conducted in accordance with the requirements specified in §63.772(f).

Not applicable due to the still vent emissions being routed to the facility's fuel gas system.

6. The compliance demonstration with percent reduction performance requirements for condensers shall be conducted in accordance with the requirements specified in §63.772(g).

Not applicable due to the still vent emissions being routed to the facility's fuel gas system.

Inspection and Monitoring Requirements [40 CFR 63.773]

1. For each closed-vent system or cover required by the permittee to comply with 40 CFR part 63, subpart HH, the permittee shall comply with the requirements specified in §63.773(c).
2. For each control device required by the permittee to comply with 40 CFR part 63, subpart HH, the permittee shall comply with the requirements specified in §63.773(d).

Not applicable due to the still vent emissions being routed to the facility's fuel gas system.

Recordkeeping Requirements [40 CFR 63.774]

1. The recordkeeping provisions of 40 CFR part 63, subpart A, that apply are listed in Table 2 of 40 CFR part 63, subpart HH.

The facility provided all requested documents.

2. The permittee shall maintain the records specified in §63.774(b).

The facility provided all requested documents.

3. Should the permittee elect to comply with the benzene emission limit specified in §63.765(b)(1)(ii), the permittee shall document, to the Administrator's satisfaction, the following items:
 - a. The method used for achieving compliance and the basis for using this compliance method; and
 - b. The method used for demonstrating compliance with 0.90 megagrams per year of benzene.
 - c. Any information necessary to demonstrate compliance as required in the methods specified in paragraphs 3(a) and 3(b) of this section.

Not applicable due to the still vent emissions being routed to the facility's fuel gas system.

4. For glycol dehydration units operating at the facility that meets the exemption criteria in §63.764(e)(1)(i) or §63.764(e)(1)(ii), the permittee shall maintain the following records:
 - a. The actual annual average natural gas throughput (in terms of natural gas flowrate to the glycol dehydration unit per day) as determined in accordance with §63.772(b)(1), or
 - b. The actual average benzene emissions (in terms of benzene emissions per year) as determined in accordance with §63.772(b)(2).

Not applicable due to the still vent emissions being routed to the facility's fuel gas system.

5. For ancillary equipment and compressor engines exempt from the control requirements under §63.764(e)(2) of this subpart, the permittee shall maintain the following records:

- a. Information and data used to demonstrate that a piece of ancillary equipment or a compressor is not in VHAP service or not in wet gas service shall be recorded in a log that is kept in a readily accessible location; and
- b. Identification and location of ancillary equipment or compressors, located at a natural gas processing plant subject to this subpart, that is in VHAP service less than 300 hours per year.

The NGL extraction at the facility has been shut down for five years. The process unit has been dismantled on October 1, 2016 and notice dismantling was provided on November 15, 2016.

6. The permittee shall record the following when using a flare to comply with §63.771(d):
 - a. Flare design (i.e., steam-assisted, air-assisted, or non-assisted);
 - b. All visible emission readings, heat content determinations, flowrate measurements, and exit velocity determinations made during the compliance determination required by §63.772(e)(2); and
 - c. All hourly records and other recorded periods when the pilot flame is absent.

Not applicable due to the still vent emissions being routed to the facilities low pressure gas inlet.

Reporting Requirements [40 CFR 63.775]

1. The reporting provisions of subpart A that apply are listed in Table 2 of 40 CFR part 63, subpart HH.

The facility has been a minor source for HAPs since 2015, as such, the facility has not been required to submit periodic reports under MACT HH.

2. The permittee shall submit the information specified in §63.775(b).

The facility has been a minor source for HAPs since 2015, as such, the facility has not been required to submit periodic reports under MACT HH.

3. *Notification of Compliance Status Report.* The permittee shall submit a Notification of Compliance Status Report as required under §63.9(h) within 180 days after the compliance date specified in §63.760(f). In addition to the information required under §63.9(h), the Notification of Compliance Status Report shall include the information specified in paragraphs (d)(1) through (12) of §63.775. This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination of the three. If all of the information required under this paragraph has been submitted at any time prior to 180 days after the applicable compliance dates specified in §63.760(f), a separate Notification of Compliance Status Report is not required.

The notification of compliance status report was not evaluated since the facility is not required to maintain these documents for more than five years.

4. *Periodic Reports.* The permittee shall prepare Periodic Reports in accordance with §§63.775(e)(1) and (2) and submit them to the Administrator.

The facility has been a minor source for HAPs since 2015, as such, the facility has not been required to submit periodic reports under MACT HH.

5. *Notification of process change.* Whenever a process change is made, or a change in any of the information submitted in the Notification of Compliance Status Report, the permittee shall submit a

report within 180 days after the process change is made or as a part of the next Periodic Report. The report shall include the requirements of §63.775(f).

No notifications of process change were submitted since July 2016 when the NGL extraction process ceased.

Requirements for Stationary RICE (NSPS JJJJ)

Engine Unit # C1101 and C2101 Applicability (60.4230(a)(4)(i))

(4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

Engines C1101 and C2101 are stationary, reciprocating internal combustion engine (RICE), manufactured after 7/1/2007 and before 7/1/2010.

Table 4: NSPS JJJJ Engines

Unit ID	Make	Model	Serial #	Mfg Date	HP	Fuel	Stroke Burn	Engine Status
C1101	Caterpillar	G3612 LE	BKE00545	7/3/09	3550	NG	4SLB	Operating
C2101	Caterpillar	G3612 LE	BKE00560	9/23/09	3550	NG	4SLB	Operating

Emission Standards for Owners and Operators (60.4233(e))

(e) Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE.

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards ^a					
			g/HP-hr			ppmvd at 15% O ₂		
			NO _x	CO	VOC ^d	NO _x	CO	VOC ^d
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≤HP<1,350)	HP≥500	7/1/2007	2.0	4.0	1.0	160	540	86
	HP≥500	7/1/2010	1.0	2.0	0.7	82	270	60

The applicable NO_x, CO and VOC emission standards for units C1101 and C2101 from the table above are 2, 4 and 1.0 g/hp-hr respectively.

Compliance Requirements for Owners and Operators (60.4243(a)(2)(iii))

If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

The facility provided all requested maintenance records for the previous 2 years. The records show the facility has been conducting maintenance on both engines C2101 and C1101 at least quarterly. The most recent performance tests for both units occurred on 5/7/2021 and 5/4/2022. The facility

submitted the required performance test notifications prior to the compliance demonstration and both engines met their emission limits during these performance tests.

Testing Requirements for Owners and Operators (60.4244(a)-(f))

- a) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load
- b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c).
- c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.
- d) To determine compliance with the NOX mass per unit output emission limitation, convert the concentration of NOX in the engine exhaust using Equation 1 of this section
- e) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section
- f) For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section

A review of the previous performance tests, conducted on 5/7/2021 and 5/4/2022, for units C2101 and C1101 showed that the facility met all the requirements of the performance test.

Notification, Reports, and Records for Owners and Operators (60.4245(a))

Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements:

- 1) All notifications submitted to comply with this subpart and all documentation supporting any notification.
- 2) Maintenance conducted on the engine.
- 3) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.
- 4) Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed.

A review of engine reports, maintenance and notifications shows the facility submitted all required records.

Requirements for Hazardous Air Pollutants from Stationary RICE (NESHAP ZZZZ: Area Source)

Engines Units CG-1 and CG-2 Applicability and Requirements (63.6590(a)(1)(iii), 63.6603(a), Table 2d (#12), Table 5 (#14))

Engine Units CG-1 and CG-2 are an existing (constructed before 12/19/2002), stationary, RICE, non-emergency, spark ignition, 4-stroke, rich burn (4SRB), greater than 500 hp engine.

Engine ID	Make	Model	Serial #	Mfg Date	Max HP	Fuel	Stroke Burn	Engine Status
CG-1	White Superior	8G825	292039	10/1982	682	NG	4SRB	Not Operating
CG-2	White Superior	8G825	292029	10/1982	682	NG	4SRB	Not Operating

Emission Limitations for Existing, 4SRB Stationary RICE >500 HP Located at an Area Source of HAP Emissions

- a) Install NSCR to reduce HAP emissions from the stationary RICE.

The facility had equipped these engines with NSCR.

Initial Compliance With Emission Limitations, Operating Limitations, and Other Requirements (Table 5, #14)

- a) conduct an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O₂, or the average reduction of emissions of THC is 30 percent or more;
- b) Install a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F.

This was not evaluated as a part of this inspection since CG-1 and CG-2 have been removed from the site over 5 years ago.

Continuous Compliance With Emission Limitations, and Other Requirements (Table 6, #15)

- a) Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O₂, or the average reduction of emissions of THC is 30 percent or more; and either
- b) Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or
- c) Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F.

The facility has removed CG-1 and CG-2 from the facility over 5 years ago.

Requirements for Reports (Table 7, #1)

As stated in §63.6650, you must comply with the following requirements for reports: semiannual compliance report

The facility has not been required to submit any semiannual compliance reports pertaining to these engines because they have not operated and been removed from the facility before the previous inspection occurred.

Engine Unit EG2 (Emergency generator) Applicability and Requirements (63.6590(a)(1)(iii), Table 2d)

Engine Unit EG2 is an existing (constructed before 6/12/2006), stationary, RICE, emergency, spark ignition, 4-stroke, lean burn (4SLB), greater than 500 hp engine.

Engine ID	Make	Model	Serial #	Mfg Date	Max HP	Fuel	Stroke Burn	Engine Status
EG2	Caterpillar	G3512 LE	4KC00324	Pre 1992	759	NG	4SLB	Not Operating

Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions (Table 2d #5)

- a) Change oil and filter every 500 hours of operation or annually, whichever comes first;
- b) Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
- c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Unit EG2 was last operated for 6 hours in 2013. During the transfer of ownership of this facility in 2020 this engine was not transferred from Western Midstream to Caerus and has since been removed from the facility. As such, no maintenance has been required.

Continuous Compliance With Emission Limitations, and Other Requirements (Table 6 #9)

- a) Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or
- b) Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

Unit EG2 was last operated for 6 hours in 2013. As such, no maintenance has been required.

Engine Unit CG-3 Applicability and Requirements (63.6590(a)(1)(iii), Table 2d #6 and Table 6 #9)

Engine unit CG-3 is an existing (constructed before 6/12/2006), stationary, RICE, non-emergency, spark ignition, 2-stroke, lean burn (2SLB), greater than 500 hp engine.

Engine ID	Make	Model	Serial #	Mfg Date	Max HP	Fuel	Stroke Burn	Engine Status
CG-3	Ajax	DPC-2202 LE	84885	4/2004	268	NG	2SLB	Not Operating

Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions (Table 2d #6)

- d) Change oil and filter every 4,320 hours of operation or annually, whichever comes first;
- e) Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and
- f) Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.

Unit CG-3 was last operated for 12 days in June 2014. During the transfer of ownership of this facility in 2020 this engine was not transferred from Western Midstream to Caerus and has since been removed from the facility. As such, no maintenance has been required.

Continuous Compliance With Emission Limitations, and Other Requirements (Table 6 #9)

- c) Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or
- d) Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

Unit CG-3 was last operated for 12 days in June 2014. During the transfer of ownership of this facility in 2020 this engine was not transferred from Western Midstream to Caerus and has since been removed from the facility. As such no maintenance has been required.

Engines Units C2101 and C1101 Applicability and Requirements (63.6590(c)(1))

Engine Units C1101 and C2101 are a new (constructed after 6/12/2006), stationary, RICE, non-emergency, spark ignition, 4-stroke, lean burn (4SLB), greater than 500 hp engines. These engines comply with MACT ZZZZ by complying with NSPS JJJJ.

Engine ID	Make	Model	Serial #	Mfg Date	Max HP	Fuel	Stroke Burn	Engine Status
C1101	Caterpillar	G3612 LE	BKE00545	7/3/09	3550	NG	4SLB	Operating
C2101	Caterpillar	G3612 LE	BKE00560	9/23/09	3550	NG	4SLB	Not Operating

See the section titled “Requirements for Stationary RICE (NSPS JJJJ)” to see compliance determination with NSPS JJJJ requirements.

Kerr McGee Consent Decree (07-cv-01034-EWN-MJW) Requirements

Compliance with the consent decree was evaluated from September 2020 through termination on 6/24/2021

Low Emission Dehydrator Requirements

“Low-Emission Dehydrator.” For purposes of this Consent Decree, a “Low-Emission Dehydrator” shall meet the specifications set forth in Appendix C and shall mean a dehydration unit that:

1. incorporates an integral vapor recovery function such that the dehydrator cannot operate independent of the vapor recovery function;
2. either returns the captured vapors to the inlet of the facility where such dehydrator is located or routes the captured vapors to that facility’s fuel gas supply header; and
3. has a PTE less than 1.0 TPY of VOCs, inclusive of VOC emissions from the reboiler burner.

Existing Uinta Basin Facilities: Kerr-McGee shall continue to operate and maintain Low-Emission Dehydrators for all gas dehydration performed at its existing Uinta Basin Facilities.

Both dehydrators located at the facility have their reboiler emissions routed to the fuel gas system of the facility.

Sulfur Removal Technology in the Uinta Basin

Beginning on the date of lodging of this Consent Decree and continuing for so long as this Consent Decree is in effect, Kerr-McGee shall install and operate solid-bed or liquid-bed sulfur removal processes when necessary to remove hydrogen sulfide (“H₂S”) from natural gas in the Uinta Basin, in lieu of amine-based sulfur removal with flaring of removed H₂S.

The facility had eight (8) solid-bed sulfur removal towers located at the facility in lieu of amine-based sulfur removal processes and only 5 were operational during the facility walkthrough.

Synthetic Minor Permit (SMNSR-UO-000003-2019.001) Requirements

B. Requirements for 4SLB Compressor Engines

1. Construction and Operational Requirements

- (a) The Permittee shall install and operate emission controls as specified in this permit on two existing engines used for field gas compression, all meeting the following specifications:
 - (i) Operated as a 4-stroke lean-burn engine;
 - (ii) Fired with field gas; and
 - (iii) Two engines limited to a maximum site rating of 3,550 horsepower (hp) per each engine.
- (b) Only the engines that are operated and controlled as specified in this permit are approved for installation under this permit.

During the on-site inspection two 4SLB natural gas fired engines with maximum site rated hp of 3550 were observed on site.

2. Control, Operation and Maintenance Requirements

- (a) The Permittee shall install, continuously operate and maintain a catalytic control system on each engine that is capable of reducing the uncontrolled emissions of CO by at least 93.0% by weight when the engine is operating at a 90% load or higher.

During the facility walkthrough engine units 1101 and 2101 were observed to have catalysts installed.

- (b) The Permittee shall follow, for each engine and its respective catalytic control system, the manufacturer's recommended maintenance schedule and procedures or equivalent procedures developed by the Permittee or vendor, to ensure optimum performance of each engine and its respective catalytic control system to ensure compliance with the CO control efficiency requirement in this permit.
- (c) The Permittee may rebuild an existing permitted engine or replace an existing permitted engine with an engine of the same hp rating and configured to operate in the same manner as the engine being rebuilt or replaced. Any operational requirements, control technologies, testing or other provisions that apply to the engines that are rebuilt or replaced shall also apply to the replacement engines.
- (d) The Permittee may resume operation without the catalytic control system during an engine break-in period, not to exceed 200 operating hours, for any rebuilt or replaced engines.

3. Performance Test Requirements

- (a) Performance tests shall be conducted on each engine and catalytic control system for measuring CO to demonstrate compliance with the control efficiency requirement specified in this permit. The performance tests shall be conducted in accordance with the Carbon Monoxide Control Efficiency Portable Analyzer Monitoring Protocol in Appendix B of this permit to measure the oxygen (O₂) and CO concentrations at the inlet (pre-catalyst) and outlet (post-catalyst) of the catalytic control system.

- (i) Initial performance tests shall be conducted no later than 60 calendar days after installation of the catalytic control system, including installation of the catalytic control system on engines that are rebuilt or replaced. The results of initial performance tests conducted prior to the effective date of this permit may be used to demonstrate compliance with the initial performance test requirements, provided the tests were conducted in an equivalent manner as the performance test requirements in this permit.
- (ii) Subsequent performance tests shall be conducted semi-annually on each engine. After compliance is demonstrated for two consecutive tests, the testing frequency may be reduced to annually. If an annual test indicates non-compliance, then the Permittee shall resume semi-annual testing.

Engine unit 1101 had conducted performance tests on 10/12/2020 (98% CO removal efficiency) and 5/7/2021 (97%).

Engine unit 2101 had conducted performance tests on 10/12/2020 (99% CO removal efficiency) and 5/7/2021 (99%).

- (b) The Permittee may submit to the EPA a written request for approval of alternate test methods but shall only use the alternate test methods after obtaining written approval from the EPA.
- (c) The Permittee shall not perform engine tuning or make any adjustments to engine settings, catalytic control system settings, processes or operational parameters immediately prior to the engine testing or during the engine testing. Any such tuning or adjustments may result in a determination by the EPA that the test is invalid.
- (d) The Permittee shall not abort any engine tests that demonstrate non-compliance with the CO control efficiency requirement specified in this permit.

Nothing to evaluate with these general conditions

- (e) All performance tests conducted on the engines shall meet the following requirements:
 - (i) Each test shall consist of at least two consecutive 21-minute or longer valid test runs, one pre-catalyst run and one post-catalyst run;
 - (ii) The CO control efficiency shall be determined based on the pre- and post-catalyst CO measurements;
 - (iii) If the catalyst fails to meet the CO control efficiency requirement specified in this permit, appropriate steps shall be taken to correct the deficiency and the catalyst shall be retested within 30 days after the failed test;
 - (iv) Performance test plans for alternate test methods shall be submitted to the EPA for approval at least 60 calendar days prior to the date the test is planned; and
 - (v) Alternate test plans shall include and address the following elements:
 - (A) Purpose of the test;
 - (B) Engines and catalytic control systems to be tested;
 - (C) Expected engine operating rate(s) during the test;
 - (D) Sampling and analysis procedures (sampling locations and test methods);
 - (E) Quality assurance plan (calibration procedures and frequency and field documentation; and
 - (F) Data processing and reporting (description of data handling and quality control

procedures, report content).

The performance tests appear to meet the requirements above.

- (f) The Permittee shall notify the EPA at least 30 calendar days prior to scheduled performance testing. The Permittee shall notify the EPA at least 1 week prior to scheduled performance testing if the testing cannot be performed.
- (g) If a permitted engine is not operating, the Permittee does not need to start up the engine solely to conduct the subsequent performance test. The subsequent performance test requirements apply when the engine is restarted and operates more than 720 consecutive hours (or 30 consecutive days) in a given semi-annual period. If an engine for which the EPA has been notified of a scheduled test is permanently shut down prior to testing, the Permittee does not need to start up the engine solely to conduct the performance test.

[Note to Permittee: The initial performance testing has been satisfied for the engines currently operating at this facility. The requirements for initial performance testing are retained in this permit in the case of new construction, installation or modification of an affected source under this subpart.]

4. Recordkeeping Requirements

- (a) Records shall be kept of manufacturer and/or vendor specifications for each engine, catalytic control system and portable analyzer.
- (b) Records shall be kept of all calibration and maintenance conducted for each engine, catalytic control system and portable analyzer.
- (c) Records shall be kept of all required testing in this permit. The records shall include the following:
 - (i) The date, place and time of portable analyzer measurements;
 - (ii) The company or entity that performed the portable analyzer measurement;
 - (iii) The portable analyzer measurement techniques or methods used;
 - (iv) The results of such measurements; and
 - (v) The operating conditions as existing at the time of measurement.
- (d) Records shall be kept of all engine rebuilds and engine replacements.
- (e) Records shall be kept of each rebuilt or replaced engine break-in period, pursuant to the requirements of this permit, where the existing engine that has been rebuilt resumes operation without the catalyst control system for a period not to exceed 200 hours.
- (f) Records shall be kept of each time a deviation in the CO control efficiency required in this permit is detected for an engine. The Permittee shall include in the record the cause of the problem, the corrective action taken and the timeframe for bringing the CO control efficiency into compliance.

The source provided all requested records.

5. Requirements under **Section C. Requirements for 4SLB Compressor Engines** shall be effective upon

termination of the March 27, 2008, federal CD between the United States of America (Plaintiff), and the State of Colorado, the Rocky Mountain Clean Air Action and the Natural Resources Defense Council (Plaintiff-Intervenors), and Kerr-McGee Corporation (Civil Action No. 07-CV-01034-EWN-KMT).

C. Requirements for Records Retention

1. The Permittee shall retain all records required by this permit for a period of at least 5 years from the date the record was created.
2. Records shall be kept in the vicinity of the facility, such as at the facility, the location that has day-to-day operational control over the facility or the location that has day-to-day responsibility for compliance of the facility.

The source provided all requested records.

D. Requirements for Reporting

1. Test reports shall be submitted within 60 days after each required initial engine and catalytic control system performance test.
2. The Permittee shall submit a report to the EPA no later than 30 days after each retest after a failed initial test. The retest report shall include a summary of the steps taken to comply and the retest results.

The source submitted all required reports within 60 days.

3. Annual Reports

- (a) The Permittee shall submit a written annual report of all required monitoring and testing conducted on emission units at the facility covered under this permit each year no later than March 1st. The annual report shall cover the period for the previous calendar year. All reports shall be certified to truth and accuracy by the person designated by the Permittee as responsible for CAA compliance for the facility.

The facility submitted an annual report as required by the CD on 2/22/2022. The source stated that "Because the CD had the same requirements for the engines with a report date also due on March 1, [we] thought that would suffice as we included the test results with that report for Natural Buttes in that final annual Consent Decree report. Going forward, since the CD has been terminated, we will be submitting a separate report for all of the syn minor facilities by March 1 summarizing the testing required by each permit."

- (b) The report shall include:
 - (i) A summary of the results of each required initial engine and catalytic control system performance test;
 - (ii) Test reports for all required subsequent engine and catalytic control system performance tests; and
 - (iii) A summary of all deviations of permit conditions and corrective actions taken, per paragraph I.E.5. of this permit.

4. All documents required to be submitted under this permit shall be submitted to:

Branch Chief, Air and Toxics Enforcement Branch, 8ENF-AT
Enforcement and Compliance Assurance Division
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street
Denver, Colorado 80202-1129

Documents may be submitted via electronic mail to r8airreportenforcement@epa.gov.

Nothing to evaluate with this general provision

5. The Permittee shall promptly submit to the EPA a written report of any deviations of control or operational limits specified in this permit and a description of any corrective actions or preventative measures taken. A “prompt” deviation report is one that is post marked or submitted via electronic mail to r8airreportenforcement@epa.gov as follows:
- (a) Within 30 days from the discovery of a deviation that would cause the Permittee to exceed the control or operational limits in this permit if left uncorrected for more than 5 days after discovering the deviation; and
 - (b) By March 1st for the discovery of a deviation of recordkeeping or other permit conditions during the preceding calendar year that do not affect the Permittee’s ability to meet the control or operational limits, included as part of the Annual Reports required in this permit.

No prompt deviation reports were submitted since the previous inspection.

6. The Permittee shall submit any record or report required by this permit upon EPA request.

The source provided all requested records.

Part 71 Operating Permit General Provisions Requirements (Permit Renewal Pending)

Title V - Semi Annual Reports

The Part 71 operating permit requires the submittal of SIXMON semi-annual reports

The facility has submitted their Annual Compliance Certification (ACC) covering March 1, 2019 through February 28, 2020 on March 20, 2020. No ACC was submitted for March 1, 2020 through February 28, 2021 because the Title V permit was terminated on 9/29/2020. The source did provide a semi-annual monitoring report covering a period from March 1st through August 31st 2020.

Annual Fee Payment (Permit Renewal Pending)

The Part 71 operating permit requires payment of annual fees upon permit application and each year thereafter.

The facility submitted the proper fee forms and payments per their Part 71 application for 2020.

Annual Emission Inventory (Permit Renewal Pending)

The Part 71 operating permit requires submission of annual actual emissions upon permit application and each year thereafter.

The source submitted the proper emission inventories per their Part 71 operating permit application for 2020, see table below. No emission inventory is needed for 2021 because the Title V permit was terminated on 9/29/2020.

Table 5: Reported Actual Emissions

Pollutant	Actual Emission in Tons per Year	
	2020	2021
NO _x	35.8	N/A
VOC	31.6	N/A
CH ₂ O	2.50	N/A
Benzene	0.10	N/A
Total HAPs	4.6	N/A

Appendix A: Satellite Imagery of Facility





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8, MONTANA OFFICE
FEDERAL BUILDING, 10 W. 15th STREET, SUITE 3200
HELENA, MONTANA 59626

FULL COMPLIANCE EVALUATION REPORT
Northern Border Pipeline Company – Compressor Station #2
Covers the time period: September 30, 2019 – December 31, 2024

I. General Information

Report Prepared By: Robert (Bob) Gallagher
Date of Inspection: October 23, 2024, with supplemental information received via email on December 13, 2024
Date of Inspection Report: March 6, 2025
Report Reviewed By: Scott Patefield, Manager, Air and Toxics Enforcement Branch
SCOTT PATEFIELD Digitally signed by SCOTT PATEFIELD
Date: 2025.03.07 14:25:14 -07'00'

II. Source Information

Company Name: Northern Border Pipeline Company (Northern Border) – Compressor Station #2
Plant Location: NW¼ Section 30, Township 31 North, Range 48 East
Latitude: 48° 25' 0.81"N Longitude: -105° 32' 11.55"W
Roosevelt County, Montana
Mailing Address: 4001 Highway 250 East
Wolf Point, MT 59201-9707
Source Contacts: Hima Bindu Draksharam (Environmental Analyst with TC Energy) - (832) 320-5616
Reservation: Fort Peck Indian Reservation
Tribe: Assiniboine and Sioux Tribes
Tribal Contacts: Linda Weeks (Air Quality Specialist) – (406) 768-2337
SIC Code & Descript.: 4922 – Natural Gas Transmission
AFS Number: 30-085-00901
AFS Classification: Major Source (A)
Air Attainment Status: Unclassifiable/Attainment
Air Programs: NSPS (9) – Subpart GG, MACT (M) – Subpart ZZZZ, Title V (V)
Permit Number: V-FP-000001-2010.00
Title V Renewal Permit Issued: November 2011
V-FP-000001-2010.01
Title V Renewal Permit Issued: July 2020
V-FP-000001-2016.00
Minor Modification Issued: November 2013
MNSR-FP-000001-2014.001
Minor New Source Review Permit Issued: January 29, 2016

III. Process Description & History

Northern Border's Compressor Station #2 is located on Northern Border's natural gas pipeline in Roosevelt County, Montana, approximately 23 miles north-northeast of Wolf Point and 50 miles east of Glasgow, on the Fort Peck Indian Reservation.

The facility was constructed in 1992 to provide additional capacity in the Northern Border pipeline, which runs from Port of Morgan, Montana to Ventura, Iowa. The pipeline transports natural gas originating in Canada to the Midwest market.

Compressor Station #2 was a major source for NO_x and CO with respect to the Part 71 operating permit requirements; however, it has limitations and conditions in the Synthetic Minor New Source Review Permit that keep the facility's potential to emit for criteria pollutants below the Title V threshold. The primary sources for emissions are from the facility's 20,000 horsepower natural gas fired Cooper-Rolls turbine and a natural gas fired emergency generator.

IV. Emission Inventory

Facility Potential to Emit (PTE):

NO_x = 247.5 tpy; VOC = 8.8 tpy; SO₂ = 5.3 tpy; PM₁₀ = 11.3 tpy; CO = 118.6 tpy

Fuel Use (Maximum) = 1,611,840 MMBtu/year

Emission inventories were well below the PTE for the pollutants as the facility has operated very little in recent years.

V. Enforcement History

No enforcement actions have been taken against this facility during the previous five years.

VI. Applicable Requirements

Recordkeeping Requirements

All required records, such as; startup, shutdown, and malfunctions; daily maximum horsepower; hours of operation; NO_x, CO, and SO₂ emissions; maintenance and calibration of turbine; etc.; have been maintained for at least five years and all information requested as part of this full compliance evaluation was available going back the previous five years.

Testing & Monitoring Requirements

1. Monitoring of fuel nitrogen and sulfur content as outlined in the Title V permit.

Northern Border has certified that natural gas was exclusively used.

2. NO_x emission measurements from EU-001 as outlined in the Title V permit.

NO_x emission tests were measured in accordance with the Title V permit.

Reporting Requirements

1. Semi-annual report submittals to EPA of any required monitoring under the permit. Reports must be submitted semi-annually by April 1 and October 1, as outlined in the MNSR permit.
Semi-Annual monitoring reports have been submitted by Northern Border and received by EPA.
2. Promptly report deviations from permit requirements, including those attributable to upset conditions, as outlined in the Title V permit.
No deviations were reported in the semi-annual deviation and annual compliance certification reports.
3. Annual certifications of compliance with permit terms and conditions, including emission limitations, standards, or work practices annually on April 1.
Annual certifications of compliance have been submitted by Northern Border by April 1 and received by EPA.
4. Annual permit and emissions fee payment no later than April 1 of each year. *The annual fees have been submitted by Northern Border by April 1.*
5. Annual emissions inventory of actual emissions for both criteria pollutants and regulated HAPS for this facility for the preceding calendar year for fee assessment purposes. The annual emissions report shall be submitted each year on April 1. *The annual emissions inventories have been submitted by Northern Border by April 1.*

VII. Source File Review

Date: December 23, 2024
Participant: Robert (Bob) Gallagher, EPA Region 8 Montana Office

VIII. On-Site Inspection

Date/Time: October 23, 2024, approximately 9:40 am to 9:45 am
Weather: Clear, 45 °F, Winds from SW at 3-9 mph
Participants: Bob Gallagher – EPA Montana Office

An on-site inspection was attempted by Robert (Bob) Gallagher with the Environmental Protection Agency (EPA), Region 8, at the Northern Border – Compressor Station #2 on October 23, 2024, from approximately 9:40 to 9:45 a.m. There were no visible emissions observed during the inspection. This inspection along with the file review and supplemental information from Northern Border documents a full compliance evaluation.

IX. Supplemental Information Received from Northern Border (the bold and italics text was added by the inspector)

II. Synthetic Minor New Source Review Permit Requirements

A. Construction and Operational limits:

1. In accordance with Permit Condition II(A), Northern Border CS-02 operates a natural gas driven 18,561HP (184 MMBtu/hr) Cooper-Rolls Coberra 2648S compressor turbine (EU-001) at CS-02. Currently turbine serial # 38471 is on-site. Permit says 28471, but this is a typo and needs to be corrected to 38471 (see Excel file tab II.A.1 in Appendix B).



2. The horsepower of the turbine at ISO conditions is 20,200 HP. The impeller wheel with a diameter of 28.5 inches installed in 1997 reduces the horsepower output of the turbine to 18,561 HP (normal sustainable pipeline operating conditions). Except during surge conditions or malfunctions or downstream system outages which may result in instances where the horsepower exceeds 18,561 HP. Turbine EU-001 is limited to 96 hours per calendar year where the horsepower can exceed 18,561 HP. Turbine EU-001 did not exceed 18,561 HP for the 2024 calendar year (see Excel file tab II.A.2.c BHP in Appendix B). ***The highest horsepower was 3243 HP on 1/25/2024.***

3. See Excel file tab II.A.2.c BHP and II.A.3 for the SCADA system at CS-02, and the records of HP, runtime, and emissions of NOx, CO, and SO2 in Appendix B. ***The turbine was operated on 1/25/2024, 4/16/2024, 7/18/2024, 9/19/2024, and 10/25/2024. The hp, hours of operation, and emissions on those days were recorded and below the limits.***

4. Northern Border hasn't conducted a jet swap in 2024, but will comply with the requirements of II.A.4 at the next jet swap.

B. Monitoring and Recordkeeping Requirements:

1. See Excel file tab II.A.2.c BHP and II.A.3 for the SCADA system at CS-02, and the records of HP, runtime, and emissions of NOx, CO, and SO2 in Appendix B. ***The turbine was operated on 1/25/2024, 4/16/2024, 7/18/2024, 9/19/2024, and 10/25/2024. The hp, hours of operation, and emissions on those days were recorded and below the limits.***

2-3. Northern Border sets up work orders in SAP to complete regulatory tasks (see Excel file tab II.B.2-3 in Appendix B). ***Work order records and maintenance records were compiled and submitted for this FCE.***

4. See Excel file tab II.A.2.c BHP in Appendix B. ***Operational records showed that the turbine did not operate under surge conditions nor any other malfunction.***

C. Requirements for Records Retention

1-2. Records are maintained onsite, and on network folders.

D. Requirements for Reporting

1-4. Annual compliance report was submitted electronically to EPA and Fort Peck Tribe on March 28, 2024. There were no deviations to report to date.

III. 40 CFR 60, Subpart GG

A.1 – E.6. Turbine EU-001 continues to meet the requirements of Subpart GG. Performance test on the turbine was recently conducted on 07/18/2024. NOx ppm at 15% O2 was 42 ppm, within the permit limit of 171 ppm. The Sulfur content of the fuel is less than 0.8% by weight (see Excel file tab Sulfur in Appendix B). ***The highest Sulfur content in the fuel was 0.0005% by weight.*** The turbine operated less than 250 hours each quarter of 2024 (see Excel file tab Turbine Hours in Appendix B) and therefore exempted from quarterly portable analyzer testing for NOx. ***The turbine's maximum hours of operation during a quarter in 2024 was 6.08 hours during the 3rd quarter.*** Only pipeline quality gas was used as fuel for the turbine. See Excel file tab II.B.2-3 in Appendix B, for maintenance work orders in SAP. ***Maintenance records were compiled and submitted for this FCE.***

IV. 40 CFR 63, Subpart ZZZZ

A.1 – E.6. Emergency Generator EU-002 continues to meet the requirements of Subpart ZZZZ, Table 2d for existing stationary RICE located at Area Sources of HAP emissions. Northern Border utilized oil analysis program for the oil change requirement (see Excel file tab APU Oil Analysis in Appendix B). See Excel file tab II.B.2-3 in Appendix B, for maintenance work orders in SAP. The emergency generator has a non-resettable hourly meter. ***The APU Oil Analysis was submitted for this FCE and the greatest hours of operation during the rolling 12-month period was 48.9 hours which below the 500-hour limit.***

V. Facility-Wide Requirements

- A. Northern Border has conducts applicable and non-applicable requirements for NESHAPs every 5 years as part of the air permit renewal application process. There have been no off-permit changes at CS-02 since the last renewal application.
- B. SIX-MON compliance reports have been submitted electronically on 3/28/2024 and 9/16/2024.
- C. There have been no turbine jet swaps in 2024.

VI. General Provisions

- A. Annual fees were paid on 3/19/2024.
- B. Annual Emissions Inventory was submitted on 3/28/2024.
- C. Annual compliance certifications were submitted on 3/28/2024.
- D. Northern Border will provide any supplemental information requested by EPA.
- E. Northern Border will submit CTAC form signed by the responsible official when submitting applications, reports, and compliance certifications.
- F. Northern Border will comply with the Severability Clause.
- G. Northern Border will comply with the requirements of Permit Actions. Besides submitting air permit renewal application in the coming few weeks, there are no other permit actions being taken up by Northern Border.
- H. Northern Border is not requesting any administrative permit amendments currently.
- I. Northern Border is not requesting any minor permit modifications currently.
- J. Northern Border is not requesting any significant permit modifications currently.

K. Northern Border is not requesting any permit reopening's prior to the renewal application submittal.

L. Northern Border is not claiming any property rights via the air permit.

M. Northern Border will coordinate with EPA when site inspections are requested.

N. Northern Border is not currently transferring ownership or operations of CS-02.

O. Northern Border is not requesting off-permit changes prior to the submittal of the renewal application.

P. Northern Border is preparing to submit air permit renewal application before January 24, 2025.

X. Findings and Recommendations

Based on the information gathered during the inspection, the information provided via email by Hima Bindu Draksharam of TC Energy, and a complete file review, there were no areas of concern noted during the full compliance evaluation. Also, no compliance assistance was requested or provided during the inspection.

APPENDIX A

Photo Log

Date	Time	Location	File ID		Description
10/23/2024	9:40 AM	Northern Border Pipeline – Compressor Station #2	P1030839	.jpg	Sign with Company Name and Information
10/23/2024	9:40 AM	Northern Border Pipeline – Compressor Station #2	P1030840	.jpg	Facility Entrance Gate
10/23/2024	9:41 AM	Northern Border Pipeline – Compressor Station #2	P1030841	.jpg	Faded Sign with Company and Site Name



Sign with Company Name and Information



Facility Entrance Gate



Faded Sign with Company and Site Name

APPENDIX B
Supplemental Electronic Information from Northern Border



2024 NBPL CS-02
Records Request.xlsx