UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
Denver, CO 80202-1129
Phone 800-227-8917
www.epa.gov/region08

Ref: 8P-AR

MAY 19 2016

Rebecca Robert, Air Engineer
BP America Production Company
737 North Eldridge Parkway
Houston, Texas 77079

Re: BP America Production Company, Salvador I/II Central Delivery Point, Permit #SMNSR-SU-000009-2015.003, Final Synthetic Minor New Source Review Permit

Dear Ms. Robert:

The Environmental Protection Agency Region 8 has completed its review of BP America Production Company's request to obtain a synthetic minor source permit to construct pursuant to the Tribal Minor New Source Review (MNSR) Permit Program at 40 CFR part 49 for the Salvador I/II Central Delivery Point located on the Southern Ute Indian Reservation, La Plata County, Colorado. Based on the information submitted in BP's application, the EPA hereby issues the enclosed final MNSR permit to construct for the Salvador I/II Central Delivery Point. Please review each condition carefully and note any restrictions placed on this source.

A 30-day public comment period was held from March 14, 2016 to April 13, 2016. The EPA received comments from you and from the Honorable Clement J. Frost, Chairman of the Southern Ute Indian Tribal Council (the Tribe). No other comments were received during the public comment period. The EPA's responses to the public comments are enclosed. The EPA made revisions to the permit based on the comments received. The final permit will be effective on June 18, 2016.

Pursuant to 40 CFR 49.159, within 30 days after the final permit decision has been issued, any person who commented on the specific terms and conditions of the draft permit may petition the Environmental Appeals Board to review any term or condition of the permit. Any person who failed to comment on the specific terms and conditions of this permit may petition for administrative review only to the extent that the changes from the draft to the final permit or other new grounds were not reasonably ascertainable during the public comment period. The 30-day period within which a person may request review begins with this dated notice of the final permit decision. If an administrative review of the final permit is requested, the specific terms and conditions of the permit that are the subject of the request for review must be stayed.

If you have any questions concerning the enclosed final permit, please contact Claudia Smith of my staff at (303) 312-6520.

Sincerely,

Monica Morales, Acting Director
Air Program

Enclosures (2)

cc: Honorable Clement J. Frost, Chairman, Southern Ute Indian Tribe
Tom Johnson, Director, Southern Ute Indian Tribe Environmental Program
Mark Hutson, Air Quality Program Director, Southern Ute Indian Tribe Environmental Program
Julie Best, BP America Production Company

EPA Responses to Comments from the Southern Ute Indian Tribe and BP America Production Company on the Proposed Permit to Construct for the Salvador I/II Central Delivery Point Pursuant to the Tribal Minor New Source Review (MNSR) Permit Program at 40 CFR Part 49

Comments from the Honorable Clement J. Frost, Chairman, Southern Ute Indian Tribe

1. "**Permit Condition I.C.5.(f) – Montoring Requirements**

   Permit condition I.C.5(f) requires quarterly portable analyzer monitoring of CO and NO_X emissions from the exhaust of the catalytic control system to demonstrate compliance with each engine's emission limits in the permit. The Tribe seeks clarification on the engine NO_X emission limits, as no emission limits for NO_X are specified in the permit."

EPA Response: We did not make any changes to the permit in response to this comment, but provide the following explanation of the monitoring requirement. While we understand that there are no NO_X emission limits in the permit, we proposed and are finalizing the additional NO_X monitoring requirements to ensure compliance with the condition prohibiting engine tuning directly prior to or during performance testing (Permit Condition I.C.4(b)).

In general, there is fundamental relationship between engine operating parameters and exhaust emissions. According to standard stoichiometric principles, emission levels of NO_X and CO from natural gas combustion are only independent to a point; thereafter, they are inversely proportional. Lean-burn engines emit lower levels of NO_X, but higher levels of CO than rich-burn engines. This is because reduction of NO_X requires the addition of O_2 to the combustion process, which after a point can lead to combustion instability and result in higher CO and unburned hydrocarbon levels due to incomplete combustion. However, reduction of CO using oxidation catalysts requires high temperatures, which can lead to increased NO_X formation, because NO_X produced by natural gas-fired spark ignition engines is primarily thermal NO_X. Therefore, as CO emissions are reduced through emission controls, NO_X emissions will increase after a certain point. It is feasible for owners and operators of engines to adjust or tune certain engine operating parameters prior to testing for particular pollutant emissions to assure compliance with an emission limit. Requiring NO_X monitoring encourages an operator to test and monitor engines at as close to normal operating conditions as possible and ensure that operating settings are not adjusted prior to a test such that the test is not representative of emissions under normal operating conditions when the engine is not being tested.

2. "**Permit Condition I.C.5.(h) – Monitoring Requirements**

   Permit condition I.C.5.(h) allows BP to reduce portable analyzer monitoring frequency from quarterly to semi-annually if the results of consecutive quarterly analyzer measurements demonstrate compliance with the CO emission limits. The Tribe recommends specifying the number of compliant consecutive quarterly analyzer monitoring measurements required before the monitoring frequency may be reduced to semi-annually. This permit condition also does not reference demonstration of compliance with the NO_X emission monitoring requirement outlined in permit condition I.C.5.(f)."

EPA Response: We revised the permit condition in response to this comment. We agree with the Tribe that it is necessary to specify the number of compliant consecutive quarterly analyzer monitoring measurements required before the monitoring frequency may be reduced to semi-annually. It was the EPA's intent to specify that two consecutive compliant quarterly portable analyzer measurements are required before monitoring frequency may be reduced to semi-annually, and the number was inadvertently left out of the permit condition. In addition, we have revised the subsequent permit condition, I.C.5.(g) to clarify that for any engine if the result of any one semi-annual portable analyzer measurement demonstrates non-compliance with the CO emission limit, the required monitoring frequency shall revert back to quarterly.

3. "**Permit Condition II.A.6. – Conditional Approval**

Permit Condition II.A.6. requires that a permitted source shall not cause or contribute to a National Ambient Air Quality Standard (NAAQS) violation or a PSD increment violation. Additionally, the Federal TMNSR regulations at 40 CFR 49.154(d) require that an Air Quality Impact Analysis (AQIA) be performed if there is reason to be concerned that a new construction would contribute to a NAAQS or PSD increment violation. Page 8 of the TSD states that an AQIA modeling analysis is not required for this permit action because the proposed project is not a major modification, as defined under the PSD program and the estimated emissions increases are expected to have very little effect on the formation of ozone. However, the TSD does not describe how it has been demonstrated that the proposed source will not cause a violation of the one hour NO_X NAAQS at the fence line."

EPA Response: No changes have been made to the permit as a result of this comment. We agree that since the proposed project would result in an increase in NO_X emissions above the minor source thresholds in the MNSR rule, the TSD should have included a discussion of impacts to the one-hour NO_2 NAAQS. As there is no TSD associated with the final permit action and we do not revise the TSD for the proposed permit, the Tribe's comment is part of the permit record and our response here documents the discussion of the impacts of the proposed project on the one-hour NO_2 NAAQS. When proposed NO_X emissions increases fall between the minor source threshold of 10 tpy and the PSD major source significance threshold of 40 tpy, we typically are only concerned and consider requiring refined modeling under specific circumstances. Those circumstances include, but are not limited to, high background concentrations relative to the particular NAAQS (e.g., more than 33 percent of the NAAQS), and close proximity to nearby development with regular human occupancy (e.g., within 100 meters of schools, hospitals, residences). The 2014 design value for the one-hour average NO_2 measured at the closest regulatory monitor to the Salvador I/II CDP (Ute #1) is 26 ppb, which is not considered high (i.e., more than 33 percent of the one-hour average NO_2 NAAQS of 100 ppb). Additionally, the facility is located in a rural area that is not in close proximity to any nearby development with regular human occupancy. Therefore, we are not concerned that the proposed project will cause a violation of the one-hour NO_2 NAAQS at the fence line and did not require refined modeling to support that conclusion.

Comments from BP America Production Company

1. "**Permit and Technical Support Document, Universal Comment**

   BP requests to correct the permit number throughout the permit and Technical Support Document to consistently reference either "SMNSR-SU-000009-2015.003" or "SMNSR-SU-000009-2012.003." Both numbers are currently used to reference the proposed permit in the documents."

EPA Response: One change has been made to the permit in response to this comment. The correct permit number for this action is "SMNSR-SU-000009-2015.003." There were no incorrect references to the number for this permit action in the proposed permit. There were also no references in the proposed permit to number "SMSNR-SU-000009-2012.003", but there was one reference in the Summary at the beginning of the permit to permit number "SMNSR-SU-000009-2015.002," describing an MNSR permit issued to the source on December 4, 2014. That permit number was an inadvertent mistake and should have read "SMNSR-SU-00009-2012.002," which is the correct permit number for that permit action. We have corrected that number in the Summary section of the final permit. The Technical Support Document for the proposed permit did not contain any incorrect references to the permit number for this permit action or any other MNSR permit issued to this facility that was referenced.

2. **"Permit, Page 2, Summary**

   BP requests to correct the 2nd sentence in the first paragraph as follows: 'The Salvador I/II Central Delivery Point Currently operates as a synthetic minor source of carbon monoxide (CO) *and nitrogen oxides (NO_X)* with respect to the Prevention of Significant Deterioration (PSD) Permit Program….through a synthetic minor MNSR permit (#SMNSR-SU-00009-~~2015~~2012.002) issued on December 4, 2014.'"

EPA Response: The requested corrections have been made in the final permit. We agree that the Salvador I/II CDP is also a synthetic minor source of NO_X with respect to the PSD Permit Program and its omission was an inadvertent mistake. Regarding the permit number for the MNSR permit issued in 2014, see our response to BP comment #1.

3. **"Permit, Page 2, Summary**

   BP's request to establish legally and practically enforceable emission limitations on the existing 1,138 hp four-stroke lean burn (4SLB) compressor engine is contingent upon startup of the new 1,874 hp 4SLB compressor engine. Therefore, for clarity, BP requests to add the following phrase to the last sentence in the 3rd paragraph: 'Additionally, in October 2015, BP replaced an existing unpermitted compressor engine with a 1,138 hp 4SLB compressor engine, and has requested to establish legally and practically enforceable requirements to install and operate an oxidation catalyst control system on that engine and limit CO and formaldehyde emissions *upon startup of the newly constructed 1,874, or lower, site-rated hp 4SLB compressor engine*.'"

EPA Response: The requested correction has been made to the Summary section of the final permit. It was not clear in BP's application for this permit that the requested enforceable requirements for the

existing 1,138 hp 4SLB engine were intended to be contingent upon startup of the newly constructed 1,874, or lower, site-rated hp 4SLB compressor engine. However, we agree to make the requested change. Such a change also required revisions to relevant permit conditions, namely Condition I.C.1.(b), which has been revised as follows:

"Upon startup of the 1,874 hp, or lower, 4SLB compressor engine specified in this permit, t~~T~~he Permittee shall install, operate, and maintain emission controls as specified in this permit on one (1) reciprocating internal combustion engine used for compression, meeting the following specifications:…"

4. **"Permit, Page 2, Summary**

BP requests to correct the last sentence in the 4th paragraph as follows: '…the Salvador I/II Central Delivery Point will continue to be a synthetic minor source of CO *and NO_X* and HAP emissions…'

EPA Response: The permit has been revised as requested. We agree that the Salvador I/II CDP is also a synthetic minor source of NO_X with respect to the PSD Permit Program and its omission was an inadvertent mistake.

5. **"Permit, Page 4, Section I.A. General Information**

BP requests to correct the Office Location to "…380~~A~~ Airport Road."

EPA Response: The permit has been revised as requested.

6. **"Permit, Page 7, Section I.C. Requirements for Engines**

Since Condition I.C.4(a) identifies the allowed performance test methods, BP requests to change Condition I.C.4(d)(vi) on page 7 as follows: 'Performance test plans shall be submitted to the EPA for approval 60 calendar days prior to the date the test is planned *if alternative performance test methods or variations from the performance test methods in Condition I.C.4(a) will be used*."

EPA Response: We have not revised the permit condition as requested. The change is not necessary, given the immediately following Condition I.C.4(d)(vii), which allows use of test plans that have already been approved for the emission units approved in the permit or for similar emission units approved in another MNSR permit issued to the facility in lieu of new test plans.

7. **"Technical Support Document, Page 3, Section I. Introduction**

BP Requests to correct the 2nd sentence in the first paragraph as follows:

> 'The Salvador I/II Central Delivery Point currently operates as a synthetic minor source of carbon monoxide (CO) and *nitrogen oxides (NO_X)* with respect to the Prevention of Significant Deterioration (PSD) Permit Program…'"

8. **"Technical Support Document, Page 3, Section I. Introduction**

As mentioned above, BP's request to establish legally and practically enforceable emission limitations on the existing 1,138 hp four-stroke lean burn (4SLB) compressor engine is contingent upon the startup of the new 1,874 hp 4 SLB compressor engine. Therefore, for clarity, BP requests to add the following phrase to the last sentence in the 2nd paragraph:

> 'Additionally, on October 30, 2015, BP replaced an existing unpermitted compressor engine with a maximum site-rated 1,138 hp 4SLB compressor engine, and has requested to establish legally and practically enforceable requirements to install and operate an oxidation catalyst control system on the engine and limit CO and formaldehyde emissions *upon startup of the newly constructed 1,874, or lower, site-rated hp 4SLB compressor engine*.'"

9. **"Technical Support Document, Page 4, Table 1. Existing Emission Units**

In the 1st row of the table, BP requests to correct the Unit Description as follows: '~~Two (2)~~ Natural gas-fired, 4-stroke lean-burn (4SLB) RICE ~~each~~ with a maximum site rating of 1,334 hp.' Only one of these units at the Salvador I/II Central Delivery Point is controlled by an oxidation catalyst.

10. **"Technical Support Document, Page 4, Table 1. Existing Emission Units**

In the 2nd row of the table, BP requests to correct the Original Preconstruction Approval Date & Permit Number description as follows: '…which replaced a previously existing ~~655~~ *666* hp 4SLB RICE.'

11. **"Technical Support Document, Page 4, Table 1. Existing Emission Units**

In the 8th row of the table, BP requests to correct the Unit Description as follows: 'Two (2) natural gas-fired ~~tank~~ *separator* heaters…'

12. **"Technical Support Document, Page 4, Table 1. Existing Emission Units**

BP suggests updating the footnote of this table to reflect the current regulatory text as follows:

> 'Under the MNSR Permit Program at 40 CFR 49.151©(1)(iii)(A), an owner or operator of a true minor oil and natural gas new source or modification is not required to obtain a permit prior to construction until on or after ~~March 2, 2016~~ *October 3, 2016*.

13. **"Technical Support Document, Pages 5-6, Section III. Proposed MNSR Permit Emission Limits and Control**

In the 2nd sentence of the 2nd paragraph, BP requests the following correction: 'BP currently uses a combination of ~~four (4)~~ *three (3)* natural gas-fired 4SLB RICE and one (1) natural gas-fired 4SRB RICE at the facility.'

14. **"Technical Support Document, Pages 5-6, Section III. Proposed MNSR Permit Emission Limits and Control**

For the reasons mentioned above, BP requests to add the following phrase to the last sentence of the 2nd paragraph:

'BP is also proposing to install an oxidation catalyst control system on one (1) of the existing 4SLB RICE that is currently uncontrolled *when the new 1,874 hp or lower natural gas-fired 4SLB RICE is started up at the facility*.'

15. **"Technical Support Document, Pages 5-6, Section III. Proposed MNSR Permit Emission Limits and Control**

In the 1st sentence of the 4th paragraph, BP requests the following correction: '…and formaldehyde emissions by at least ~~55~~*60* % at maximum operating rate…' The formaldehyde emission limits for the 1,138 hp or lower 4SLB RICE are based on a control efficiency of 55 %.

EPA Response to Comment on the Technical Support Document for the Proposed Permit: Although we agree with the requested corrections to the Technical Support Document, there is no Technical Support Document associated with the final permit action and we do not revise the Technical Support Document for the proposed permit. BP's comments on the Technical Support Document are a part of the permit record and the necessary corrections are, therefore, documented in the permanent permit record.

United States Environmental Protection Agency
Region 8 Air Program
1595 Wynkoop Street
Denver, CO 80202

Air Pollution Control
Synthetic Minor Source Permit to Construct

40 CFR 49.151

 # SMNSR-SU-000009-2015.003

Permit to Construct to establish legally and practically enforceable limitations and requirements on emissions sources at an existing facility

Permittee:

BP America Production Company

Permitted Facility:

Salvador I/II Central Delivery Point
Southern Ute Indian Reservation
La Plata County, Colorado

Summary

On October 21, 2015, we received an application from BP America Production Company (BP) requesting a synthetic minor permit for a modification at the Salvador I/II Central Delivery Point in accordance with the requirements of the Tribal Minor New Source Review (MNSR) Permit Program at 40 CFR part 49. The Salvador I/II Central Delivery Point currently operates as a synthetic minor source of carbon monoxide (CO) and nitrogen oxides (NO_X) with respect to the Prevention of Significant Deterioration (PSD) Permit Program at 40 CFR part 52 and hazardous air pollutants (HAP) with respect to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR part 63, through a synthetic minor MNSR permit (#SMNSR-SU-000009-2012.002) issued on December 4, 2014.

The Salvador I/II Central Delivery Point is a natural gas production field compression facility located within the exterior boundary of the Southern Ute Indian Reservation in Southwest Colorado. Upstream of the facility are Fruitland Gas (coal-bed methane) wells which are connected to a gathering pipeline system and the inlet of the facility. The Salvador Gas Unit A#1 wellsite is located within the fence of the facility, and the wellsite natural gas commingles with the field gas coming into the facility and passes through an inlet separator. The commingled natural gas composition is primarily methane. In addition, the gas contains some carbon dioxide and is saturated with water vapor. No condensate or natural gas liquids are produced at the site. Free liquid water, water vapor, and entrained lubricating oil are removed from the gas, and the gas is compressed and sent on to third party or BP-owned gathering systems.

This permit authorizes the construction of a new emission source, and establishes legally and practically enforceable emission limitations for the new emissions source and an existing emissions source. BP has proposed to construct a new 1,874, or lower, site-rated horsepower (hp) four-stroke lean-burn (4SLB) compressor engine equipped with an oxidation catalyst control system and to establish carbon monoxide (CO) and formaldehyde emission limits and associated operational limitations for the engine. Additionally, in October 2015, BP replaced an existing unpermitted compressor engine with a 1,138 site-rated hp 4SLB compressor engine, and has requested to establish legally and practically enforceable requirements to install and operate an oxidation catalyst control system on that engine and limit CO and formaldehyde emissions upon startup of the newly constructed 1,874, or lower, site-rated hp 4SLB compressor engine.

Upon compliance with this MNSR permit, the legally and practically enforceable reductions in emissions can be used when determining the applicability of other Clean Air Act (CAA) requirements, such as the PSD Permit Program, the NESHAP, and the Title V Operating Permit Program at 40 CFR Part 70 (Part 70), in accordance with the Southern Ute Indian Tribe's EPA-approved Part 70 Operating Permit Program and the Salvador I/II Central Delivery Point will continue to be a synthetic minor source of CO, NO_X and HAP emissions with respect to the PSD Permit Program and the NESHAP.

The EPA determined that this approval will not contribute to National Ambient Air Quality Standard (NAAQS) violations, or have potential adverse effects on ambient air.

Table of Contents

I. Conditional Permit to Construct

A. General Information

Facility:	BP America Production Salvador I/II Central Delivery Point
Permit number:	SMNSR-SU-000009-2015.003
SIC Code and SIC Description:	1311- Crude Petroleum and Natural Gas

Site Location:	Corporate Office Location
Salvador I/II Central Delivery Point	BP America Production Company
NE ¼, NW ¼ Sec 28 T33N R7W	380 Airport Road
Southern Ute Indian Reservation	Durango, Colorado 81303
La Plata County, Colorado	

The equipment listed in this permit may only be operated by BP America Production Company at the following location:

Latitude 37.079052, Longitude -107.61829

B. Applicability

1. This permit is being issued under authority of the MNSR Permit Program.

2. The requirements in this permit have been created, at the Permittee's request, to establish legally and practically enforceable requirements for limiting carbon monoxide (CO), and formaldehyde engine emissions.

3. Any conditions for this facility or any specific units at this facility established pursuant to any permit issued under the authority of the PSD Permit Program or the MNSR Permit Program shall continue to apply.

4. By issuing this permit, the EPA does not assume any risk of loss which may occur as a result of the operation of the permitted facility by the Permittee, Owner, and/or Operator, if the conditions of this permit are not met by the Permittee, Owner, and/or Operator.

C. Requirements for Engines

1. Construction and Operational Limits:

   (a) The Permittee shall install, maintain, and operate one (1) reciprocating internal combustion engine used for compression, meeting the following specifications, and shall install, operate, and maintain emission controls on the engine as specified in this permit:

      (i) Operated as a 4-stroke lean-burn (4SLB) engine;
      (ii) Fired with natural gas; and
      (iii) Limited to a maximum site rating of 1,874 horsepower (hp).

   (b) Upon startup of the 1,874 hp, or lower, 4SLB compressor engine specified in this permit, the Permittee shall install, operate, and maintain emission controls as specified in this

permit on one (1) reciprocating internal combustion engine used for compression, meeting the following specifications:

(i) Operated as a 4SLB engine;
(ii) Fired with natural gas; and
(iii) Limited to a maximum site rating of 1,138 hp.

(c) Only the engines that are operated and controlled as specified in this permit are approved for installation under this permit.

2. Emission Limits:

(a) Emissions from the 1,874 hp, or lower, 4SLB engine shall not exceed:

(i) 1.03 pounds per hour (lb/hr) of CO; and
(ii) 0.46 lb/hr of formaldehyde.

(b) Emissions from the 1,138 hp, or lower, 4SLB engine shall not exceed:

(i) 0.64 lb/hr of CO; and
(ii) 0.32 lb/hr of formaldehyde.

(c) Emission limits specified in this permit shall apply at all times, unless otherwise specified in this permit.

3. Control and Operational Requirements

(a) The Permittee shall ensure that the 1,874 hp or lower 4SLB engine and the 1,138 hp or lower 4SLB engine are each equipped with an oxidation catalyst control system capable of reducing uncontrolled CO emissions and uncontrolled formaldehyde emissions to meet the emission limits specified in this permit.

(b) The Permittee shall install, operate, and maintain temperature-sensing devices (i.e. thermocouple or resistance temperature detectors) before the catalytic control system on each engine to continuously monitor the exhaust temperature at the inlet of the catalyst bed. Each temperature-sensing device shall be calibrated and operated by the Permittee according to manufacturer specifications or equivalent specifications developed by the Permittee or vendor.

(c) Except during startups, which shall not exceed 30 minutes, the engine exhaust temperature of each engine at the inlet to the catalyst bed shall be maintained at all times the engines operate at an inlet temperature of at least 450° F and no more than 1,350° F.

(d) During operation, the pressure drop across the catalyst bed on each engine shall be maintained to within ±2 inches of water from the baseline pressure drop measured during the most recent performance test. The baseline pressure drop for the catalyst bed shall be determined at 100% ± 10% of the engine load measured during the most recent performance test.

(e) The Permittee shall only fire each engine with natural gas. The natural gas shall be pipeline-quality in all respects except that the carbon dioxide (CO_2) concentration in the gas is not be required to be within pipeline-quality.

(f) The Permittee shall follow, for each engine and its respective catalytic control system, the manufacturer recommended maintenance schedule and procedures, or equivalent maintenance schedule and procedures developed by the Permittee or vendor, to ensure optimum performance of each engine and its respective catalytic control system.

(g) The Permittee may rebuild or replace an existing permitted engine with an engine of the same or lower horsepower rating, and configured to operate in the same manner as the engine being rebuilt or replaced. Any emission limits, requirements, control technologies, testing or other provisions that apply to the permitted engines that are replaced shall also apply to the rebuilt or replacement engines.

(h) The Permittee may resume operation without the catalytic control system during an engine break-in period, not to exceed 200 operating hours, for rebuilt and replacement engines.

4. Performance Testing Requirements

(a) Performance tests shall be conducted on the 1,874 hp or lower 4SLB engine and the 1,138 hp or lower 4SLB engine for measuring CO and formaldehyde emissions to demonstrate compliance with each emission limitation in this permit. The performance tests shall be conducted in accordance with appropriate reference methods specified in 40 CFR part 60, Appendix A and 40 CFR part 63, Appendix A, or an EPA-approved American Society for Testing and Materials (ASTM) method. The Permittee may submit to the EPA a written request for approval of an alternate test method, but shall only use that alternate test method after obtaining approval from the EPA.

(i) The initial performance test shall be conducted within 90 calendar days of startup of the new 1,874 hp or lower engine and within 90 calendar days of startup after initial installation of the catalyst on the 1,138 hp or lower engine.
(ii) Subsequent performance tests for formaldehyde emissions shall be conducted on each engine within 12 months of most recent performance test.
(iii) Performance tests shall be conducted within 90 calendar days of the replacement of the catalyst on each engine.
(iv) Performance tests shall be conducted within 90 calendar days of startup of all rebuilt and replacement engines.

(b) The Permittee shall not perform engine tuning or make any adjustments to engine settings, catalytic control system settings, processes, or operational parameters the day of or during the engine testing. Any such tuning or adjustments may result in a determination by the EPA that the test is invalid. Artificially increasing an engine load to meet test requirements is not considered engine tuning or adjustments.

(c) The Permittee shall not abort any engine tests that demonstrate non-compliance with any CO or formaldehyde emission limits in this permit.

(d) Performance tests conducted on the 1,874 hp or lower 4SLB engine and the 1,138 hp or lower 4SLB engine for measuring CO and formaldehyde emissions shall meet the following requirements:

(i) The pressure drop across each catalyst bed and the inlet temperature to each catalyst bed shall be measured and recorded at least once per test during all performance tests.

(ii) The Permittee shall measure NO_X emissions from the 1,874 hp or lower 4SLB engine and the 1,138 hp or lower 4SLB engine simultaneously with all performance test for CO emissions. NO_X emissions shall be measured using a portable analyzer and protocol approved in writing by the EPA. *[Note to Permittee: Although the permit does not contain NO_X emission limits for this engine, NO_X measurement requirements have been included as an indicator to ensure compliance with Condition C.4(b) above.]*

(iii) All performance tests shall be conducted at maximum operating rate (90% to 110% of the maximum achievable load available at the time of the test). The Permittee may submit to the EPA a written request for approval of an alternate load level for testing, but shall only test at that alternate load level after obtaining written approval from the EPA.

(iv) During each test run, data shall be collected on all parameters necessary to document how emissions were measured and calculated (such as test run length, minimum sample volume, volumetric flow rate, moisture and oxygen corrections, etc.).

(v) Each test shall consist of at least three 1-hour or longer valid test runs. Emission results shall be reported as the arithmetic average of all valid test runs and shall be in terms of the emission limits in this permit.

(vi) Performance test plans shall be submitted to the EPA for approval 60 calendar days prior to the date the test is planned.

(vii) Performance test plans that have already been approved by the EPA for the emission units approved in this permit or for similar emission units approved in another MNSR permit issued to the facility may be used in lieu of new test plans unless the EPA requires the submittal and approval of new test plans. The Permittee may submit new plans for EPA approval at any time.

(viii) The 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, test methods, laboratory identification);
(E) Quality assurance plan (calibration procedures and frequency, sample recovery and field documentation, chain of custody procedures); and

(F) Data processing and reporting (description of data handling and quality control procedures, report content).

(e) The Permittee shall notify the EPA at least 30 calendar days prior to the scheduled performance testing. The Permittee shall notify the EPA at least 1 week, prior to the scheduled performance testing if the testing cannot be performed.

(f) If the results of a complete and valid performance test of the emissions from any permitted engine demonstrate noncompliance with the emission limits in this permit, the engine shall be shut down as soon as safely possible, and appropriate corrective action shall be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The Permittee shall notify the EPA in writing within 24 hours of each such shut down. The engine must be retested within 7 days of being restarted and the emissions must meet the applicable limits in this permit. If the retest shows that the emissions continue to exceed the limits in this permit, the engine shall again be shut down as soon as safely possible, and the engine may not operate, except for purposes of startup and testing, until the Permittee demonstrates through testing that the emissions do not exceed the emission limits in this permit.

(g) If a permitted engine is not operating, the Permittee does not need to start up the engine solely to conduct a performance test. The Permittee may conduct the performance test when the engine is started up again.

5. Monitoring Requirements

(a) The Permittee shall continuously monitor the engine exhaust temperature at the inlet to the catalyst bed on each engine.

(b) Except during startups, which shall not exceed 30 minutes, if the engine's exhaust temperature at the inlet to the catalyst bed on any one (1) engine deviates from the acceptable ranges specified in this permit then the following actions shall be taken. The Permittee's completion of any or all of these actions shall not constitute, nor qualify as, an exemption from any other emission limits in this permit.

(i) Within 24 hours of determining a deviation of the engine exhaust temperature at the inlet to the catalyst bed, the Permittee shall investigate. The investigation shall include testing the temperature sensing device, inspecting the engine for performance problems and assessing the catalytic control system for possible damage that could affect catalytic system effectiveness (including, but not limited to, catalyst housing damage, and fouled, destroyed or poisoned catalyst).

(ii) If the engine exhaust temperature at the inlet to the catalyst bed can be corrected by following the engine manufacturer recommended procedures or equivalent procedures developed by the Permittee or vendor and the catalytic control system has not been damaged, then the Permittee shall correct the engine exhaust temperature at the inlet to the catalyst bed within 24 hours of inspecting the engine and catalytic control system.

(iii) If the engine exhaust temperature at the inlet to the catalyst bed cannot be corrected using the engine manufacturer recommended procedures or equivalent procedures

developed by the Permittee or vendor, or the catalytic control system has been damaged, then the affected engine shall cease operating immediately and shall not be returned to routine service until the following has been met:

(A) The engine exhaust temperature at the inlet to the catalyst bed is measured and found to be within the acceptable temperature range for that engine; and

(B) The catalytic control system has been repaired or replaced, if necessary.

(c) The Permittee shall monitor the pressure drop across the catalyst bed on each engine every 30 days using pressure sensing devices before and after the catalyst bed to obtain a direct reading of the pressure drop (also referred to as the differential pressure). *[Note to Permittee: Differential pressure measurements, in general, are used to show the pressure across the filter elements. This information will determine when the elements in the catalyst bed are fouling, blocked or blown out and thus require cleaning or replacement.]*

(d) The Permittee shall perform the first measurement of the pressure drop across the catalyst bed on each engine no more than 30 days from the date of the initial performance test. Thereafter, the Permittee shall measure the pressure drop across the catalyst bed, at a minimum every 30 days. Subsequent performance tests, as required in this permit, can be used to meet the periodic pressure drop monitoring requirement provided it occurs within the 30-day window. The pressure drop reading can be a one-time measurement on that day, the average of performance test runs conducted on that day, or an average of all the measurements taken on that day if continuous readings are taken.

(e) If the pressure drop reading exceeds ± 2 inches of water from the baseline pressure drop reading taken during the most recent performance test, then the following actions shall be taken. The Permittee's completion of any or all of these actions shall not constitute, nor qualify as, an exemption from any other emission limits in this permit:

(i) Within 24 hours of determining a deviation of the pressure drop across the catalyst bed, the Permittee shall investigate. The investigation shall include testing the pressure transducers and assessing the catalytic control system for possible damage that could affect catalytic system effectiveness (including, but not limited to, catalyst housing damage, and plugged, fouled, destroyed or poisoned catalyst).

(ii) If the pressure drop across the catalyst bed can be corrected by following the catalytic control system manufacturer recommended procedures or equivalent procedures developed by the Permittee or vendor, and the catalytic control system has not been damaged, then the Permittee shall correct the problem within 24 hours of inspecting the catalytic control system.

(iii) If the pressure drop across the catalyst bed cannot be corrected using the catalytic control system manufacturer recommended procedures or equivalent procedures developed by the Permittee or vendor, or the catalytic control system is damaged, then the Permittee shall do one of the following:

(A) Conduct a performance test within 90 calendar days, as specified in this permit, to ensure that the emission limits are being met and to re-establish the pressure drop across the catalyst bed. The Permittee shall perform a portable analyzer test for CO and NO_X to establish a new temporary

pressure drop baseline until a performance test can be scheduled and completed; or

(B) Cease operating the affected engine immediately. The engine shall not be returned to routine service until the pressure drop is measured and found to be within the acceptable pressure range for that engine as determined from the most recent performance test. Corrective action may include removal and cleaning of the catalyst or replacement of the catalyst.

(f) The Permittee shall monitor CO and NO_X emissions from the exhaust of the catalytic control system on each engine at least quarterly, to demonstrate compliance with each engine's emission limits in this permit. To meet this requirement, the Permittee shall:

(i) Measure CO and NO_X emissions at the normal operating load using a portable analyzer and a monitoring protocol approved by the EPA or conduct a performance test as specified in this permit;
(ii) Measure the CO and NO_X emissions simultaneously; and
(iii) Commence monitoring for CO and NO_X emissions within 90 calendar days of the Permittee's submittal of the initial performance test results for NO_X and/or CO emissions, as appropriate, to the EPA.

(g) The Permittee shall not perform engine tuning or make any adjustments to engine settings, catalytic control system settings, processes or operational parameters the day of or during measurements. Any such tuning or adjustments may result in a determination by the EPA that the result is invalid. Artificially increasing an engine load to meet testing requirements is not considered engine tuning or adjustments.

(h) For each engine, if the results of two (2) consecutive quarterly portable analyzer measurements demonstrate compliance with the CO emission limit, the required monitoring frequency may change from quarterly to semi-annually.

(i) For any one (1) engine: If the results of any one (1) semi-annual portable analyzer measurement demonstrates non-compliance with the CO emission limit, the required monitoring frequency shall revert back to quarterly.

(j) The Permittee shall submit portable analyzer specifications and monitoring protocols to the EPA for approval at least 45 calendar days prior to the date of initial portable analyzer monitoring.

(k) Portable analyzer specifications and monitoring protocols that have already been approved by the EPA for the emission units approved in this permit or for similar emission units approved in another MNSR permit issued to the facility may be used in lieu of new protocols unless the EPA determines it is necessary to require the submittal and approval of a new protocol. The Permittee may submit a new protocol for EPA approval at any time.

(l) The Permittee is not required to conduct emissions monitoring and parametric monitoring of exhaust temperature and catalyst differential pressure on engines that have not operated during the monitoring period. The Permittee shall certify that the engine(s) did not operate during the monitoring period in the annual report.

6. Recordkeeping Requirements

(a) Records shall be kept of manufacturer and/or vendor specifications and maintenance requirements developed by the manufacturer, vendor, or Permittee for each engine, catalytic control system, temperature-sensing device, and pressure-measuring device.

(b) Records shall be kept of all calibration and maintenance conducted for each engine, catalytic control system, temperature-sensing device, and pressure-measuring device.

(c) Records shall be kept that are sufficient to demonstrate that the fuel for each engine is pipeline quality natural gas in all respects, with the exception of CO_2 concentrations.

(d) Records shall be kept of all temperature measurements required in this permit, as well as a description of any corrective actions taken pursuant to this permit.

(e) Records shall be kept of all pressure drop measurements required in this permit, as well as a description of any corrective actions taken pursuant to this permit.

(f) Records shall be kept of all required testing and monitoring in this permit. The records shall include the following:

(i) The date, place, and time of sampling or measurements;
(ii) The date(s) analyses were performed;
(iii) The company or entity that performed the analyses;
(iv) The analytical techniques or methods used;
(v) The results of such analyses or measurements; and
(vi) The operating conditions as existing at the time of sampling or measurement.

(g) Records shall be kept of all catalyst replacements or repairs, AFR controller replacements, engine rebuilds, and replacements.

(h) Records shall be kept of each rebuilt or replacement engine break-in period, pursuant to the requirements of this permit, where an existing engine that has been rebuilt or replaced resumes operation without the catalyst control system, for a period not to exceed 200 hours.

(i) Records shall be kept of each time any engine is shut down due to a deviation in the inlet temperature to the catalyst bed or pressure drop across a catalyst bed. The Permittee shall include in the record the cause of the problem, the corrective action taken, and the timeframe for bringing the pressure drop and inlet temperature range into compliance.

D. 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.

E. Requirements for Reporting

1. Annual Emission Reports

   (a) The Permittee shall submit a written annual report of the actual annual emissions from all emission units at the facility covered under this permit, including emissions from startups, shutdowns, and malfunctions, each year no later than April 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 primarily responsible for Clean Air Act compliance for the Permittee.

   (b) The report shall include CO and formaldehyde emissions, as appropriate.

   (c) The report shall be submitted to:

   U.S. Environmental Protection Agency, Region 8
   Office of Partnerships and Regulatory Assistance
   Tribal Air Permitting Program, 8P-AR
   1595 Wynkoop Street
   Denver, Colorado 80202

   The report may be submitted via electronic mail to r8AirPermitting@epa.gov.

2. All other documents required to be submitted under this permit, with the exception of the **Annual Emission Reports**, shall be submitted to:

   U.S. Environmental Protection Agency, Region 8
   Office of Enforcement, Compliance & Environmental Justice
   Air Toxics and Technical Enforcement Program, 8ENF-AT
   1595 Wynkoop Street
   Denver, Colorado 80202

   All documents may be submitted electronically to r8airreportenforcement@epa.gov.

3. The Permittee shall promptly submit to the EPA a written report of any deviations of permit requirements, a description of the probable cause of such deviations, and 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 any deviation of the emission or operational limits that is left un-corrected for more than 5 days after discovering the deviation;

   (b) By April 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 emission or operational limits.

4. The Permittee shall submit a written report for any required performance tests to the EPA Regional Office within 60 days after completing the tests.

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

II. General Provisions

A. Conditional Approval

Pursuant to the authority of 40 CFR 49.151, the EPA hereby conditionally grants this permit. This authorization is expressly conditioned as follows:

1. *Document Retention and Availability:* This permit and any required attachments shall be retained and made available for inspection upon request at the location set forth herein.

2. *Permit Application:* The Permittee shall abide by all representations, statements of intent and agreements contained in the application submitted by the Permittee. The EPA shall be notified 10 days in advance of any significant deviation from this permit application as well as any plans, specifications or supporting data furnished.

3. *Permit Deviations:* The issuance of this permit may be suspended or revoked if the EPA determines that a significant deviation from the permit application, specifications, and supporting data furnished has been or is to be made. If the proposed source is constructed, operated, or modified not in accordance with the terms of this permit, the Permittee will be subject to appropriate enforcement action.

4. *Compliance with Permit:* The Permittee shall comply with all conditions of this permit, including emission limitations that apply to the affected emissions units at the permitted facility/source. Noncompliance with any permit term or condition is a violation of this permit and may constitute a violation of the Clean Air Act and is grounds for enforcement action and for a permit termination or revocation.

5. *Fugitive Emissions:* The Permittee shall take all reasonable precautions to prevent and/or minimize fugitive emissions during the construction period.

6. *NAAQS and PSD Increment:* The permitted source shall not cause or contribute to a NAAQS violation or a PSD increment violation.

7. *Compliance with Federal and Tribal Rules, Regulations, and Orders:* Issuance of this permit does not relieve the Permittee of the responsibility to comply fully with all other applicable federal and tribal rules, regulations, and orders now or hereafter in effect.

8. *Enforcement:* It is not a defense, for the Permittee, in an enforcement action, to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

9. *Modifications to Existing Permitted Emissions Units/Limits:* For proposed modifications, as defined at 40 CFR 49.152(d), that would increase an emissions unit allowable emissions of a pollutant above its existing permitted annual allowable emissions limit, the Permittee shall first obtain a permit modification pursuant to the MNSR regulations approving the increase. For a proposed modification that is not otherwise subject to review under the PSD or MNSR regulations, such proposed increase in the annual allowable emissions limit shall be approved through an administrative permit revision as provided at 40 CFR 49.159(f).

10. *Relaxation of Legally and Practically Enforceable Limits:* At such time that a new or modified source within this permitted facility/source or modification of this permitted facility/source becomes a major stationary source or major modification solely by virtue of a relaxation in any legally and practically enforceable limitation which was established after August 7, 1980, on the capacity of the permitted facility/source to otherwise emit a pollutant, such as a restriction on hours of operation, then the requirements of the PSD regulations shall apply to the source or modification as though construction had not yet commenced on the source or modification.

11. *Revise, Reopen, Revoke and Reissue, or Terminate for Cause:* This permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee, for a permit revision, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. The EPA may reopen this permit for a cause on its own initiative, e.g., if this permit contains a material mistake or the Permittee fails to assure compliance with the applicable requirements.

12. *Severability Clause:* The provisions of this permit are severable, and in the event of any challenge to any portion of this permit, or if any portion is held invalid, the remaining permit conditions shall remain valid and in force.

13. *Property Rights:* This permit does not convey any property rights of any sort or any exclusive privilege.

14. *Information Requests:* The Permittee shall furnish to the EPA, within a reasonable time, any information that the EPA may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating this permit or to determine compliance with this permit. For any such information claimed to be confidential, you shall also submit a claim of confidentiality in accordance with 40 CFR part 2, subpart B.

15. *Inspection and Entry:* The EPA or its authorized representatives may inspect this permitted facility/source during normal business hours for the purpose of ascertaining compliance with all conditions of this permit. Upon presentation of proper credentials, the Permittee shall allow the EPA or its authorized representative to:

    (a) Enter upon the premises where this permitted facility/source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of this permit;

    (b) Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of this permit;

    (c) Inspect, during normal business hours or while this permitted facility/source is in operation, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

    (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or other applicable requirements; and

    (e) Record any inspection by use of written, electronic, magnetic and photographic media.

16. *Permit Effective Date:* This permit is effective immediately upon issuance unless comments resulted in a change in the proposed permit, in which case the permit is effective 30 days after issuance. The Permittee may notify the EPA, in writing, that this permit or a term or condition of it is rejected. Such notice should be made within 30 days of receipt of this permit and should include the reason or reasons for rejection.

17. *Permit Transfers:* Permit transfers shall be made in accordance with 40 CFR 49.159(f). The Air Program Director shall be notified in writing at the address shown below if the company is sold or changes its name.

    U.S. Environmental Protection Agency, Region 8
    Office of Partnerships and Regulatory Assistance
    Tribal Air Permitting Program, 8P-AR
    1595 Wynkoop Street
    Denver, Colorado 80202

18. *Invalidation of Permit:* Unless this permitted source of emissions is an existing source, this permit becomes invalid if construction is not commenced within 18 months after the effective date of this permit, construction is discontinued for 18 months or more, or construction is not completed within a reasonable time. The EPA may extend the 18-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between the construction of the approved phases of a phased construction project. The Permittee shall commence construction of each such phase within 18 months of the projected and approved commencement date.

19. *Notification of Start-Up:* The Permittee shall submit a notification of the anticipated date of initial start-up of this permitted source to the EPA within 60 days of such date, unless this permitted source of emissions is an existing source.

B. Authorization

Authorized by the United States Environmental Protection Agency, Region 8

Monica S. Morales 5/19/16

Monica S. Morales, Acting Director — Date
Air Program