



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

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Ref: 8P-AR

Bryan Burns
Senior EHS Representative
LINN Operating, Inc.
600 Travis, Suite 5100
Houston, Texas 77002

JAN 20 2016

Re: LINN Operating, Inc., Section 23 Compressor Station
Permit #SMNSR-UO-000877-2014.001
Final Synthetic Minor New Source Review Permit and Response to Comments

Dear Mr. Burns:

The Environmental Protection Agency Region 8 has completed its review of LINN Operating, Inc.'s request (submitted by former owner/operator Berry Petroleum Company) to obtain a synthetic minor source permit pursuant to the Tribal Minor New Source Review (MNSR) Permit Program at 40 CFR Part 49 for the Section 23 Compressor Station located on Indian country lands within the Uintah and Ouray Indian Reservation, in Duchesne County, Utah. This permit was requested in response to the requirement at 40 CFR 49.153(a)(3)(v) for existing sources that obtained synthetic minor status through an enforceable mechanism other than an MNSR permit. The Section 23 Compressor Station is subject to a September 24, 2013, Federal Combined Complaint and Consent Agreement and Final Order (CAFO) between the EPA and Berry Petroleum Company (Docket No. CAA-08-2013-0014). Based on the information submitted in Berry Petroleum Company's application, the EPA hereby issues the enclosed final synthetic minor MNSR permit for the Section 23 Compressor Station. Please review each condition carefully and note any restrictions placed on this source.

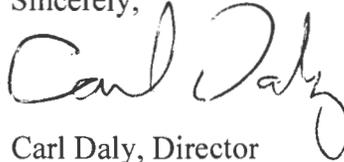
A 30-day public comment period was held from September 17, 2015 to October 19, 2015. The EPA received comments from LINN Operating, Inc. on October 19, 2015. No other comments were received during the public comment period. The EPA's responses to the public comments are enclosed. The EPA made several revisions to the permit based on LINN's comments. The final permit will be effective on February 19, 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,

A handwritten signature in black ink that reads "Carl Daly". The signature is written in a cursive, flowing style.

Carl Daly, Director
Air Program

Enclosures (2)

Bruce Pargeets, Acting Director, Energy, Minerals and Air, Ute Indian Tribe
Minnie Grant, Air Coordinator, Energy, Minerals, and Air, Ute Indian Tribe
Honorable Shaun Champoos, Chairman, Ute Indian Business Committee (w/o enclosures)
Edred Secakuku, Vice Chairman, Ute Indian Business Committee (w/o enclosures)
Reannin Tapoof, Executive Assistant, Ute Indian Business Committee (w/o enclosures)

EPA Responses to Comments from LINN Operating, Inc. on the Proposed Synthetic Minor MNSR Permit for the Section 23 Compressor Station Pursuant to the MNSR Permit Program at 40 CFR Part 49

Section I.A. General Information

1. “**Comment #1:** All permit references to ‘Berry Petroleum Company, LLC’ should be changed to ‘LINN Operating, Inc.’”

All permit references to LINN Operating, Inc. office location should be changed to

600 Travis, Suite 5100
Houston, Texas 77002

Basis #1: At the time the permit application was submitted, Berry Petroleum Company, LLC had recently been purchased by LINN Operating, Inc. During the transition, the name ‘Berry Petroleum Company, LLC’ was retained, but its use has since been discontinued. The office location has also changed from Denver to Houston.”

EPA Response: We have made the requested revisions to references in the permit to reflect current facility ownership and office location.

Section I.C. Requirements for the TEG Dehydration System

2. “Condition I.C.2.(b)”

Comment #2: Suggest adding specificity to indicate the intention of the requirement as follows:

*‘Emission limits shall apply at all times, **as demonstrated by the monthly and rolling 12-month emission records**, unless otherwise specified in this permit’*

Basis #2: The phrase “at all times” has the potential to be interpreted as a single minute of data demonstrating an exceedance of the emission limit is an indication of non-compliance. The condition must necessarily allow for fluctuations in operation of the unit such that over a period (i.e. monthly) emissions can be averaged.”

EPA Response: We disagree that the requested change is necessary and have not changed the final permit based on this comment. The permit language clearly outlines how monthly and 12-month rolling emissions must be calculated to ensure compliance with the 12-month rolling emission limits, and discusses calculating average emissions. Therefore, fluctuations in operations should be interpreted to fall under the “unless otherwise specified in this permit” portion of the condition. The intent of this condition, which is a standard permit condition for any emission limit in an EPA MNSR permit, is to indicate that exceptions to emission limits are not made for startups, shutdowns, or malfunctions where

such occurrences may cause exceedances in the emission limits, which in the case of the proposed permit condition is for facility-wide rolling 12-month limits, calculated on a monthly basis.

3. “Condition I.C.3.(b)

Comment #3: LINN request [sic] revision of the requirement language as follows:

*‘Prior to 12 full months of VOC and total HAP emissions calculations, the Permittee must, within seven (7) calendars [sic] days of the end of each month, add the emissions for that month to the calculated emissions for all previous months since ~~production commenced~~ **the permit effective date** and record the total. Thereafter, the Permittee must, within seven (7) calendars [sic] days of the end of each month, add the emissions for that month to the calculated emissions for the preceding 11 months and record a new 12-month total.’*

Basis #3: This is an existing facility and records required by the permit should not begin until the permit effective date.”

EPA Response: We agree that the requested revision is necessary for an existing source. It was an unintentional and inadvertent mistake as proposed and has been corrected in the final permit.

4. “Condition I.C.3.(c)

Comment #4: LINN request [sic] revision of the requirement language as follows:

*‘VOC and total HAP emissions shall be calculated, in tons, **using any generally accepted simulation model or software** ~~GRI-GLYCalc™ Version 4.0 or higher~~. Inputs to the model shall be representative of actual **average monthly** operating conditions of the glycol dehydration unit and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled “Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions” (GRI-95/0368.1).’*

Basis #4: The emission estimates LINN provided in the permit application and which form the basis of the emission limits for the TEG unit in the permit were calculated using ProMax process simulation software. This same emission estimation procedure should be followed in determining compliance with the emission limits.

If EPA disagrees with the use of other emission estimation models or software packages, this would necessitate re-evaluation of the emission estimates provided in the permit application and permit limits based on these estimates prior to the permit being issued.”

EPA Response: We consider ProMax an accepted simulation model/software for estimating emissions from glycol dehydration systems. The condition has been revised in the final permit to read:

“(c) VOC and total HAP emissions shall be calculated, in tons, using a generally accepted model or software (examples include ProMax and GRI-GLYCalc™ Version 4.0 or higher). Inputs to the model shall be representative of actual average monthly operating conditions of the glycol dehydration unit and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled, ‘Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions’ (GRI-95/0368.1).”

5. “Condition I.C.4.(a)

Comment #5: LINN request [sic] revision of the requirement language to specify the TEG still vent is the process vent being controlled as follows:

‘The Permittee shall route all emissions from the TEG dehydration system ~~process~~ still vent through a closed-vent system to an enclosed combustion device designed and operated as specified in this permit.’

Basis #5: The unit also has a flash separator with emissions directed to the facility inlet separator. To avoid any potential confusion, the controlled process stream should be specified.”

EPA Response: We have made the requested revision to the condition in the final permit to accurately reflect the configuration of the facility.

6. “Condition I.C.4.(b)

Comment #6: LINN requests the reference to 40 CFR 63.771(c) be replaced with the following, such that the requirement reads:

‘The Permittee shall design, install, continuously operate, and maintain the closed-vent system such that it is compliant with the following closed-vent system requirement: ~~at 40 CFR 63.771(c)~~.

(1) The closed-vent system shall route all gases, vapors, and fumes emitted from the still vent to the enclosed combustor.

(2) The closed-vent system shall be designed and operated with no detectable emissions.

(3) If the closed-vent system contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device, the owner or operator shall meet the following requirement:

(i) For each bypass device (except for low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety devices) the owner or operator shall either:

- (A) At the inlet to the bypass device that could divert the stream away from the control device to the atmosphere, properly install, calibrate, maintain, and operate a flow indicator that is capable of taking periodic readings and sounding an alarm when the bypass device is open such that the stream is being, or could be, diverted away from the control device to the atmosphere; or
- (B) Secure the bypass device valve installed at the inlet to the bypass device in the non-diverting position using a car-seal or lock-and-key type configuration.'

Basis #6: Reliance on a reference to a federal regulation which has the potential for challenge and rule changes. LINN should not be subject to changing requirements in their permit. Referencing regulatory citations as opposed to actual requirements also creates the potential for ambiguity (e.g. if the referenced section references other portions of the rule, are these other sections to apply?), which specifying the requirements in the permit will avoid.

Additionally, the request and language LINN has proposed is similar to permit #SMNSR-SU-000031-2011.001EPA [sic] issued to Samsun [sic] Resources Company on January 9, 2015 [Condition I.E.3.(b)].”

EPA Response: We agree that reliance on references to federal regulations which have the potential for challenge and rule changes is less enforceable than specifying equivalent language in the permit, and have revised this condition in the final permit, as well as other related conditions, to be consistent with other synthetic minor MNSR permits we have recently issued with limits for glycol dehydration systems.

7. “Condition I.C.4.(c)

Comment #7: LINN requests revision of the requirement language to specify the TEG still vent is the process vent being controlled as follows:

‘The Permittee shall design, install, continuously operate, and maintain an enclosed combustion device such that the mass content of the uncontrolled emissions of VOC and total HAP from the TEG dehydration system ~~process~~ still vent are reduced by at least 98% by weight.’

Basis #7: The unit also has a flash separator with emissions directed to the facility inlet separator. To avoid any potential confusion, the controlled process stream should be specified.”

EPA Response: We have made the requested revision to the condition in the final permit to accurately reflect the configuration of the facility, and have also revised the control efficiency requirement to 95%, based on Comment #8 below.

8. “General comment on TEG still vent control efficiency
[Condition I.C.4.(c) and Condition I.C.5.(a) and (b)]

Comment #8: LINN proposes to revise the enforceable control efficiency for the TEG unit still vent enclosed combustor to 95% consistent with the requirement of the CAFO and remove the performance testing requirements for the enclosed combustor.

“The Permittee shall design, install, continuously operate, and maintain an enclosed combustion device such that the mass content of the uncontrolled emissions of VOC and total HAP from the TEG dehydration system still vent are reduced by at least 98% 95% by weight.”

~~*(a) “[sic]The Permittee shall demonstrate that the enclosed combustion device achieves 98% VOC and total HAP emissions destruction efficiency and meets the VOC and total HAP emissions limits in this permit by conducting performance tests of the enclosed combustion device in accordance with the procedures specified in this permit:*~~

~~*(i)An initial performance test shall be conducted within 180 days after the effective date of this permit;*~~

~~*(ii)Subsequent performance tests of the enclosed combustion device shall be conducted every 36 months thereafter in accordance with the procedures specified in this permit.*~~

~~*Subsequent performance tests are not required for enclosed combustion devices that are model tested under and meet the criteria of 40 CFR 63.772(h);*~~

~~*(iii) If the enclosed combustion device is repaired or replaced, the Permittee shall either conduct a performance test on the repaired or replaced unit within 180 days of starting operations of the repaired or replaced unit, or the unit shall be model tested by the manufacturer under and meeting the criteria of 40 CFR 63.772(h).*~~

~~*(b) The Permittee shall demonstrate that the enclosed combustion device achieves 98% VOC and total HAP emissions destruction efficiency and meets the VOC and total HAP emissions limits in this permit using the following performance test methods and procedures:*~~

~~*(i) Method 1 or 1A, as appropriate for the selection of the sampling sites, as specified in 40 CFR 63.772(e)(3)(i);*~~

~~*(ii)Method 2, 2A, 2C, or 2D, of 40 CFR part 60, Appendix A to determine gas volumetric flowrate, as specified in 40 CFR 63.772(e)(3)(ii); and*~~

~~*(iii)Method 18 at 40 CFR Part 60, Appendix A, Method 25A at 40 CFR Part 60, Appendix A, ASTM D6420-99 (2004), or any other method or data that have been validated according to the applicable procedures in Method 301 at 40 CFR Part 63, Appendix A, to determine compliance with the 98% VOC and total HAP emissions destruction efficiency requirement.’*~~

Basis #8: The Messco VOCinerator LINN has installed to control the TEG still vent has a manufacturer guaranteed control efficiency of greater than 99%. The 98% control efficiency was used in accordance with the Utah Department of Air Quality default control efficiency for enclosed combustors. However, LINN will accept 95% control efficiency to streamline the

emissions demonstration burden and remove the requirement to conduct a performance test of the combustor.

Additionally, this request is consistent with permit #SMNSR-SU-000031-2011.001EPA [sic] issued to Samsun [sic] Resources Company on January 9, 2015 [Condition I.E.4]. In that permit, Samsun [sic] was allowed a 98% control efficiency for their combustor and was not required to conduct a performance test provided the combustor was a manufacturer tested device. As noted above, the Messco VOCinerator LINN has installed is currently pending approval from EPA for certification as a manufacturer tested device.”

EPA Response: We have revised Condition I.C.4.(c) in the final permit to require 95% VOC control efficiency to be consistent with the CAFO and current operations, as requested. We note that the application for this permit implied and was interpreted to request a requirement for 98% VOC and HAP control efficiency, resulting in the permit condition that was proposed; however, LINN has been operating the facility in accordance with the CAFO and such a relaxation would not result in an increase in actual emissions at the facility.

Based on this comment, we have also revised Condition I.C.5.(a) and (b) in the final permit to read as follows, which is consistent with other synthetic minor MNSR permits we have issued with limits on glycol dehydration systems:

“5. Testing Requirements

- (a) The Permittee shall ensure that the enclosed combustion device has sufficient capacity to achieve at least a 95.0% VOC and HAP emission destruction efficiency for the minimum and maximum hydrocarbon volumetric flow rate and BTU content routed to the device.

- (b) The Permittee shall ensure that the enclosed combustion device is:
 - (i) A model demonstrated by a manufacturer to meet the benzene destruction efficiency requirements of this permit using the procedures specified in 40 CFR 60.5413(d) for VOC emissions by the due date of the first annual report as specified in Condition I.E.1.(a) of this permit; or
 - (ii) Demonstrated by the Permittee to meet the VOC and HAP destruction efficiency requirements of this permit by using the appropriate EPA approved performance test methods specified in 40 CFR Part 63, Subpart HH for control device performance tests for enclosed combustion devices by the due date of the first annual report specified in Condition I.E.1.(a) of this permit.”

We verified with EPA Region 8’s Air Toxics and Technical Enforcement Program that the Messco VOCinerator LINN has installed has been submitted to the EPA and is currently pending approval from

at the Office of Enforcement and Compliance in EPA headquarters for certification as a manufacturer tested device under the Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution at 40 CFR Part 60, Subpart OOOO. We note that although the manufacturer tests a type of control device following the test methods in Subpart OOOO, and submits the results of that test to the EPA, it does not mean the manufacturer has demonstrated compliance with the performance requirements of the control device. The EPA must officially determine that the manufacturer has demonstrated that the specific model achieves the performance requirements of Subpart OOOO to relieve the owner or operator of such a device from performance testing requirements. Additionally, operation of such a device does not relieve LINN from other compliance obligations for the control device under this permit.

9. “Condition I.C.5.(c)

Comment #9: LINN requests revision of the permit condition for allow for sampling at the facility inlet separator:

‘The Permittee shall perform testing of the inlet wet gas stream to the TEG dehydration system (extended wet gas analysis) at least once every consecutive 12-month period. Alternatively, wet gas from the facility inlet separator can be taken for use in a process simulation software package. The analysis shall include the inlet gas temperature and pressure at which the sample was taken.’

Basis #9: The emission estimates provided in the permit application were calculated using ProMax process simulation software which used a facility inlet separator wet gas sample as the basis for the simulation. This same estimation methodology should be allowed to demonstrate continued compliance with the permit limits.

If EPA disagrees with the use of the facility inlet separator sample and subsequent emission estimation basis included in the permit application, this would necessitate re-evaluation of the emission estimates provided in the permit application and permit limits based on these estimates prior to the permit being issued.”

EPA Response: We consider ProMax an accepted simulation model/software for estimating emissions from glycol dehydration systems. The condition has been revised as requested to accurately reflect the method LINN has been using to estimate emissions and demonstrate compliance with the CAFO.

10. “Condition I.C.6.(c) [sic]

Comment #10: LINN requests the reference to 40 CFR 63.773(c) be replaced with the following, such that the requirement reads:

‘The Permittee shall monitor each closed vent system for leaks of hydrocarbon emissions from all vent lines, connections, fittings, valves, relief valves, or any other appurtenances employed to

contain, collect, and transport gases, vapors, and fumes to the enclosed combustion devices as follows:

- (i) Visit the facility on a quarterly basis to inspect all closed vent systems for defects that could result in air emissions and document each inspection. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; or broken or missing caps or other closure devices. If a quarterly visit is not feasible due to sudden, infrequent, and unavoidable events (i.e., weather, road conditions), every effort shall be made to visit the facility as close to quarterly as possible;*
- (ii) The inspections shall be based on audio, visual, and olfactory procedures; and*
- (iii) Any leaks detected in any closed vent system shall be addressed immediately unless the repair requires resources not currently available. If the resources are not available, the leak shall be repaired no later than 15 days after initial detection of the leak.'*

Basis #10: Reliance on a reference to a federal regulation which has the potential for challenge and rule changes. LINN should not be subject to changing requirements in their permit. Referencing regulatory citations as opposed to actual requirements also creates the potential for ambiguity (e.g. if the referenced section references other portions of the rule, are these other sections to apply?), which specifying the requirements in the permit will avoid.

Additionally, the request and language LINN has proposed is consistent with permit #SMNSR-SU-000031-2011.001EPA [sic] issued to Samsun [sic] Resources Company on January 9, 2015 [Condition I.E.5.(a)].”

EPA Response: We agree that reliance on references to federal regulations which have the potential for challenge and rule changes is less enforceable than specifying equivalent language in the permit, and have revised Condition I.C.6. Monitoring Requirements to be consistent with other synthetic minor MNSR permits we have recently issued with limitations for glycol dehydration systems, to read as follows:

“6. Monitoring Requirements

- (a) The Permittee shall inspect the enclosed combustion device on a monthly and bi-annual basis to ensure proper operation according to the manufacturer’s maintenance recommendations.
- (b) The Permittee shall inspect the pilot light on the enclosed combustion device at least once per calendar week to ensure that it is lit.
- (c) The Permittee shall monitor the closed-vent system for leaks of hydrocarbon emissions from all vent lines, connections, fittings, valves, relief valves, or any other appurtenance employed to contain, collect, and transport gases, vapors, and fumes to the enclosed combustion devices as follows:

- (i) Visit the facility on a quarterly basis to inspect the closed-vent system for defects that could result in air emissions and document each inspection. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; or broken or missing caps or other closure devices. If a quarterly visit is not feasible due to sudden, infrequent, and unavoidable events (i.e. weather, road conditions), every effort shall be made to visit the facility as close to quarterly as possible;
 - (ii) The inspections shall be based on audio, visual, and olfactory procedures; and
 - (iii) Any leaks detected in the closed vent system shall be addressed immediately unless the repair requires resources not currently available. If the resources are not available, the leak shall be repaired no later than 15 days after initial detection of the leak.
- (d) The Permittee shall monitor the enclosed combustion device to confirm proper operation as follows:
- (i) Inspect the enclosed combustion device on a monthly and bi-annual basis to ensure proper operation according to the manufacturer’s maintenance recommendations;
 - (ii) Visually inspect the combustion source (continuous burning pilot flame or automatic igniter) to ensure proper operation whenever an operator is on site, at a minimum, once per calendar week; and
 - (iii) Visually confirm that no smoke is present during operation of each smokeless enclosed combustion device whenever an operator is on site; at a minimum, quarterly.”

11. “Condition I.C.6.(d)

Comment #11: LINN requests revision of the requirement language as follows:

*‘The Permittee shall ~~install~~ operate and maintain a meter that continuously measures the natural gas flowrate ~~to~~ **from** the TEG dehydration system ~~with an accuracy of plus or minus 2% or better~~. The meter shall be inspected on a monthly basis to ensure proper operation per the manufacturer’s specifications.’*

Basis #11: The referenced GRI-GLYCalc™ model EPA has included in the permit requires dry gas flowrate as the model input, not TEG inlet flowrate. All gas at the facility is sent through the TEG unit and it metered currently at the outlet of the unit. LINN is requesting to utilize their current systems to demonstrate compliance for this existing facility. The sales meter LINN currently operates is used for financial tracking of gas produced and is maintained for accuracy, no additional stipulations on the meter should be required.

Additionally, other permits issued by EPA Region 8 with conditions for other TEG units or amine contactors do not include such a flow meter requirement (e.g. permit #SMNSR-SU-000031-2011.001 and SMNSR-SU-0000102011.001 [sic]).”

EPA Response: We have revised the condition as requested, now Condition I.C.6.(e) in the final permit, to accurately reflect the configuration of the facility.

12. “Condition I.C.6.(f)

Comment #12: LINN requests removal [sic] the condition:

~~*‘The Permittee shall determine the monthly and rolling 12-month VOC and total HAP emissions using the model GRI GLYCalc™, Version 4.0 or higher, and the procedures presented in the associated GRI GLYCalc™ Technical Reference Manual.’*~~

Basis #12: This condition is redundant with condition I.C.3.(c).”

EPA Response: We agree that the condition is redundant and have removed it as requested.

13. “Condition I.C.7.(a)(v)

Comment #13: LINN requests the reference to 40 CFR 63.774 be replaced with the following, such that the requirement reads:

~~*‘(v) All records required for the glycol dehydration unit, the closed vent system, and control device specified in 40 CFR 63.774, as appropriate; and’*~~

(v) Monitoring system breakdowns or other events that result in invalid data, maintenance, repairs

(vi) The date, time and length of any events in which the still vent stream was bypassing the control device or was not otherwise controlled

(vii) Inspections of the closed vent system, control device, and any defects observed and the corrective action taken

(viii) Maintenance conducted on the control device

Basis #13: Reliance on a reference to a federal regulation which has the potential for challenge and rule changes. LINN should not be subject to changing requirements in their permit. Referencing regulatory citations as opposed to actual requirements also creates the potential for ambiguity (e.g. if the referenced section references other portions of the rule, are these other sections to apply?), which specifying the requirements in the permit will avoid.”

EPA Response: We agree that reliance on references to federal regulations which have the potential for challenge and rule changes is less enforceable than specifying equivalent language in the permit, and have added the requested specific records to Condition I.C.7 Recordkeeping Requirements.

**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-UO-000877-2014.001

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

Permittee:

LINN Operating, Inc.

Permitted Facility:

Section 23 Compressor Station
Uintah and Ouray Indian Reservation
Duchesne County, Utah

Summary

On March 21, 2014, the EPA received an application from Berry Petroleum Company, LLC (Berry), a wholly owned subsidiary of LINN Energy, requesting a synthetic minor permit for the Section 23 Compressor Station in accordance with the requirements of the Tribal Minor New Source Review (MNSR) Permit Program at 40 CFR Part 49. The EPA made a proposed permit available for public inspection and comment from September 17, 2015, to October 19, 2015. LINN Energy, Inc. (LINN) submitted comments on the proposed permit on October 19, 2015. One comment indicated that all permit references to “Berry Petroleum Company, LLC” should be changed to “LINN Operating, Inc.” At the time the permit application was submitted, Berry had been recently purchased by LINN, but the name Berry Petroleum Company, LLC was being used temporarily during the transition. Use of the name Berry Petroleum Company, LLC has since been discontinued. The EPA has addressed any changes to the proposed permit resulting from the comments received in this final permit action.

This proposed permit action applies to an existing facility operating on the Uintah and Ouray Indian Reservation in Utah.

This permit does not authorize the construction of any new emission sources, or emission increases from existing units, nor does it otherwise authorize any other physical modifications to the facility or its operations. This permit is only intended to incorporate required and requested enforceable emission limits and operational restrictions from a September 24, 2013, Federal Combined Complaint and Consent Agreement and Final Order (CAFO) between the EPA and Berry (Docket No. CAA-08-2013-0014) (see 40 CFR 49.151(c)(1)(ii)(d)) and 49.158(a)(c)(4)(ii) and (iii)), and a March 21, 2014 MNSR application. Berry requested a requirement to control emissions from a tri-ethylene glycol (TEG) dehydration system using an enclosed combustor capable of reducing volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions and requested associated VOC and HAP emission limits.

Upon compliance with this permit, LINN will have legally and practically enforceable restrictions on emissions that can be used when determining the applicability of other Clean Air Act (CAA) permitting requirements, such as under the Prevention of Significant Deterioration (PSD) Permit Program at 40 CFR Part 52 and the Title V Operating Permit Program at 40 CFR Part 71 (Part 71).

The EPA has determined that issuance of this MNSR permit will not contribute to National Ambient Air Quality Standards (NAAQS) violations, or have potentially adverse effects on ambient air quality.

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I. Conditional Permit to Construct

A. General Information

<u>Facility:</u>	LINN Operating, Inc. – Section 23 Compressor Station
<u>Permit number:</u>	SMNSR-UO-000877-2014.001
<u>SIC Code and SIC Description:</u>	1311- Crude Petroleum and Natural Gas
<u>Site Location:</u>	<u>Corporate Office Location</u>
Section 23 Compressor Station	LINN Operating, Inc.
NE ¼, SE ¼ Sec 23 T5S R5W	600 Travis, Suite 5100
Uintah and Ouray Indian Reservation	Houston, Texas 77002
Duchesne County, Utah	
Latitude 40.02993, Longitude -110.40752	

The equipment listed in this permit shall be operated by LINN Operating, Inc. at the location described above.

B. Applicability

1. This federal Permit to Construct is being issued under authority of the MNSR Permit Program.
2. The requirements in this permit have been created, at the Permittee's request and pursuant to CAFO No. CAA-08-2013-0014, to establish legally and practically enforceable restrictions for limiting VOC and HAP TEG dehydration system emissions and VOC, CO, and formaldehyde engine emissions.
3. Any conditions established for this facility or any specific units at this facility 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, 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 the TEG Dehydration System

1. Construction and Operational Limits
 - (a) The Permittee shall install and operate emission controls as specified in this permit on one (1) TEG natural gas dehydration system meeting the following specifications:
 - (i) Limited to a maximum throughput of 12 million standard cubic feet per day (MMscfd) of natural gas;
 - (ii) Equipped with no more than one (1) natural gas-fired TEG reboiler with a maximum rated heat input of 0.25 million British thermal units per hour (MMBtu/hr);

- (iii) Equipped with no more than one (1) TEG/gas separation unit and one (1) flash tank; and
 - (iv) Equipped with no more than one (1) TEG recirculation pump limited to a maximum pump rate of 3.50 gallons per minute (gpm).
- (b) Only the dehydration unit that is operated and controlled as specified in this permit is approved for installation and operation under this permit.

2. Emission Limits:

- (a) Emissions from the TEG dehydration system shall not exceed the following limits:
- (i) VOC: 0.56 tons in any consecutive 12-month period; and
 - (ii) Total HAP: 0.22 tons in any consecutive 12-month period.
- (b) Emission limits shall apply at all times unless otherwise specified in this permit.

3. Emissions Calculation Requirements

- (a) VOC and total HAP emissions must be calculated, in tons, and recorded at the end of each month, beginning with the first calendar month that this permit is effective.
- (b) Prior to 12 full months of VOC and total HAP emissions calculations, the Permittee must, within seven (7) calendar days of the end of each month, add the emissions for that month to the calculated emissions for all previous months since the effective date of the permit and record the total. Thereafter, the Permittee must, within seven (7) calendar days of the end of each month, add the emissions for that month to the calculated emissions for the preceding 11 months and record a new 12-month total.
- (c) VOC and total HAP emissions shall be calculated, in tons, using a generally accepted simulation model or software (examples include ProMax and GRI-GLYCalc™ Version 4.0 or higher). Inputs to the model shall be representative of actual average monthly operating conditions of the glycol dehydration unit and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled, "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions" (GRI-95/0368.1).

4. Control and Operational Requirements

- (a) The Permittee shall route all emissions from the TEG dehydration system still vent through a closed-vent system to an enclosed combustion device designed and operated as specified in this permit.
- (b) The Permittee shall design, install, continuously operate, and maintain the closed-vent system such that it is compliant with the following requirements:
- (i) The closed-vent system shall route all gases, vapors, and fumes emitted from the still vent to the enclosed combustor;

- (ii) All vent lines, connections, fittings, valves, relief valves, or any other appurtenance employed to contain and collect gases, vapors, and fumes and transport them to control equipment shall be maintained and operated during any time the control equipment is operating;
 - (iii) The closed-vent system shall be designed to operate with no detectable emissions;
 - (iv) If the closed-vent system contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device, the Permittee shall meet the one of following requirements for each bypass device:
 - (A) At the inlet to the bypass device that could divert the stream away from the control device and into the atmosphere, properly install, calibrate, maintain, and operate a flow indicator that is capable of taking periodic readings and sounding an alarm when the bypass device is open such that the stream is being, or could be, diverted away from the control device and into the atmosphere; or
 - (B) Secure the bypass device valve installed at the inlet to the bypass device in the non-diverting position using a car-seal or a lock-and-key type configuration;
 - (v) The Permittee shall minimize leaks of hydrocarbon emissions from all vent lines, connections, fittings, valves, relief valves, or any other appurtenance employed to contain, collect, and transport gases, vapors, and fumes to the control device.
- (c) The Permittee shall design, install, continuously operate, and maintain an enclosed combustion device such that the mass content of the uncontrolled emissions of VOC and total HAP from the TEG dehydration system still vent are reduced by at least 95.0% by weight.
- (d) The Permittee shall ensure that each enclosed combustion device is:
- (i) Operated properly at all times that natural gas is routed to it;
 - (ii) Operated with a liquid knock-out system to collect any condensable vapors (to prevent liquids from going through the control device);
 - (iii) Equipped with a flash-back flame arrestor;
 - (iv) Equipped with one of the following:
 - (A) A continuous burning pilot flame, a thermocouple, and a malfunction alarm and notification system if the pilot flame fails; or
 - (B) An electronically controlled auto-ignition system with a malfunction alarm and notification system if the pilot flame fails while produced natural gas or natural gas emissions are flowing to the enclosed combustor;
 - (v) Maintained in a leak-free condition; and

- (vi) Operated with no visible smoke emissions.
- (e) The Permittee shall follow the manufacturer's recommended maintenance schedule and operational procedures to ensure optimum performance of the TEG dehydration system, closed-vent system, and enclosed combustion device.

5. Testing Requirements

- (a) The Permittee shall ensure that the enclosed combustion device has sufficient capacity to achieve at least a 95.0% VOC and HAP emission destruction efficiency for the minimum and maximum hydrocarbon volumetric flow rate and BTU content routed to the device.
- (b) The Permittee shall ensure that the enclosed combustion device is:
 - (i) A model demonstrated by a manufacturer to meet the benzene destruction efficiency requirements of this permit using the procedures specified in 40 CFR 60.5413(d) for VOC emissions by the due date of the first annual report as specified in Condition I.E.1.(a) of this permit; or
 - (ii) Demonstrated by the Permittee to meet the VOC and HAP destruction efficiency requirements of this permit by using the appropriate EPA approved performance test methods specified in 40 CFR Part 63, Subpart HH for control device performance tests for enclosed combustion devices by the due date of the first annual report specified in Condition I.E.1.(a) of this permit.
- (c) The Permittee shall perform testing of the inlet wet gas stream to the TEG dehydration system (extended wet gas analysis) at least once every consecutive 12-month period. Alternatively, wet gas from the facility inlet separator can be taken for use in a process simulation software package. The analysis shall include the inlet gas temperature and pressure at which the sample was taken.

6. Monitoring Requirements

- (a) The Permittee shall inspect the enclosed combustion device on a monthly and bi-annual basis to ensure proper operation according to the manufacturer's maintenance recommendations.
- (b) The Permittee shall inspect the pilot light on the enclosed combustion device at least once per calendar week to ensure that it is lit.
- (c) The Permittee shall monitor the closed-vent system for leaks of hydrocarbon emissions from all vent lines, connections, fittings, valves, relief valves, or any other appurtenance employed to contain, collect, and transport gases, vapors, and fumes to the enclosed combustion devices as follows:
 - (i) Visit the facility on a quarterly basis to inspect the closed-vent system for defects that could result in air emissions and document each inspection. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; or broken or missing caps or other closure devices. If a quarterly visit is not

feasible due to sudden, infrequent, and unavoidable events (e.g., weather, road conditions), every effort shall be made to visit the facility as close to quarterly as possible;

- (ii) The inspections shall be based on audio, visual, and olfactory procedures; and
 - (iii) Any leaks detected in the closed-vent system shall be addressed immediately unless the repair requires resources not currently available. If the resources are not available, the leak shall be repaired no later than 15 days after initial detection of the leak.
- (d) The Permittee shall monitor the enclosed combustion device to confirm proper operation as follows:
- (i) Inspect the enclosed combustion device on a monthly and bi-annual basis to ensure proper operation according to the manufacturer's maintenance recommendations;
 - (ii) Visually inspect the combustion source (continuous burning pilot flame or automatic igniter) to ensure proper operation whenever an operator is on site, at a minimum, once per calendar week; and
 - (iii) Visually confirm that no smoke is present during operation of each smokeless enclosed combustion device whenever an operator is on site; at a minimum, quarterly.
- (e) The Permittee shall operate and maintain a meter that continuously measures the natural gas flowrate from the TEG dehydration system. The meter shall be inspected on a monthly basis to ensure proper operation per the manufacturer's specifications.
- (f) The Permittee shall convert monthly natural gas flowrate to a daily average by dividing the monthly flowrate by the number of days in the month that the TEG dehydration system processed natural gas. The Permittee shall document the actual monthly average natural gas flowrate.

7. Recordkeeping Requirements

The Permittee shall document compliance with the VOC and HAP emissions destruction efficiency and VOC and total HAP emission limits in this permit by keeping the following records:

- (a) All manufacturer and/or vendor specifications for the TEG dehydration system, closed-vent system, enclosed combustion device, and any monitoring equipment;
- (b) The results of all required performance tests;
- (c) All extended wet gas analyses;
- (d) The actual monthly average natural gas flow rate;
- (e) Monitoring system breakdowns or other events that result in invalid data, maintenance, and repairs;

- (f) The date, time, and length of any events in which the still vent stream was bypassing the enclosed combustion device or was not otherwise controlled;
- (g) Inspections of the closed-vent system, enclosed combustion device, and any defects observed and the corrective action taken;
- (h) Maintenance conducted on the enclosed combustion device; and
- (i) The total monthly and consecutive 12-month VOC and total HAP emissions calculations for the TEG dehydration unit.

D. Requirements for Records Retention

- 1. The Permittee shall retain all records required by this permit for a period of at least five (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 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 responsible official.
- (b) The report shall include VOC and total BTEX emissions.
- (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

Documents may be submitted via electronic mail to R8AirReportEnforcement@epa.gov.

3. The Permittee shall promptly submit to the EPA a written report of any deviations of emission 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 emission limits or operational limits if left uncorrected for more than five (5) days after discovering the deviation; and
 - (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 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 to construct. This authorization is expressly conditioned as follows:

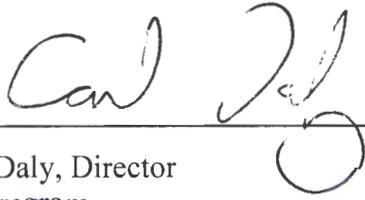
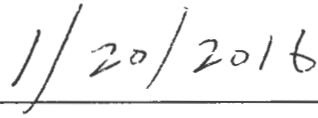
1. *Document Retention and Availability:* This permit and any required attachments shall be retained and made available for inspection upon request at the location set forth herein.
2. *Permit Application:* The Permittee shall abide by all representations, statements of intent and agreements contained 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 CAA 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 Increments:* 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 of Existing Emissions Units/Limits:* For proposed modifications, as defined at 40 CFR 49.152(d), that would increase an emissions unit's allowable emissions of pollutants 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, the Permittee 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 constructions 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

Handwritten signature of Carl Daly in cursive script.Handwritten date 1/20/2016 in cursive script.

Carl Daly, Director
Air Program

Date