United States Environmental Protection Agency
Region 5
Air Programs Branch
Air and Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604

AFTER-THE-FACT CONSTRUCTION PERMIT WITH SYNTHETIC MINOR LIMIT

Permit Number: SYN-IS-N1617-2014-01

Issue Date: AUG 19 2015 Effective Date: SEP 20 2015

In accordance with the provisions of the Clean Air Act and 40 C.F.R. Part 49,

Summit Petroleum Corporation

is authorized to construct and operate air emissions units and to conduct other air pollutant emitting activities in accordance with the permit conditions listed in this permit.

This source is authorized to construct and operate in the following location(s):

4725 North Isabella Road
Rosebush, Michigan 48878

This source is located on reservation lands held by the United States government in trust for the Saginaw Chippewa Tribal Community.

All terms and conditions of the permit are enforceable by EPA and citizens under the Clean Air Act (CAA).

Susan Hedman
Regional Administrator
U.S. EPA, Region 5

19 August 2015
Date

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1.0 FACILITY DESCRIPTION

A. General Source Information

Owner: Summit Petroleum Corporation
Robert Long, President
1315 South Mission Road
P.O. Box 365
Mount Pleasant, Michigan 48804

Facility: Summit Petroleum Corporation
4725 North Isabella Road
Rosebush, Michigan 48878

County: Isabella

Reservation: Saginaw Chippewa Tribe's Isabella Reservation

Facility Contact: J. Scott Huber, Vice-President
Telephone: (989) 772-2028

Responsible Official: Robert J. Long, President
Telephone: (989) 772-2028

SIC Code: 1311 Crude oil and natural gas
NAICS Code: 211111 Crude petroleum and natural gas extraction

This after-the-fact construction permit authorizes the construction of a natural gas conditioning, or sweetening, plant and two well sites at the Summit Petroleum Corporation facility, and establishes conditions to limit the emissions of sulfur dioxide from the plant to a level below the major source threshold.

B. Emission Unit Descriptions

Emission Unit	EUENG01 Amine sweetening compression	EUENG02 Pipeline compression	EUENG03 Refrigerant compression
Unit Type	Internal combustion engine (ICE)	ICE	ICE
Manufacturer/Model	Cooper Energy DPC-360	Cooper Energy DPC-230	Cooper Energy DP-165
Power Rating	360 hp	230 hp	165 hp
Fuel Type	Natural gas	Natural gas	Natural gas

Emission Unit	EUENG04 Well compression	EUENG05 Well compression
Unit type	ICE	ICE
Manufacturer/Model	Arrow	Arrow
Power Rating	21.4 hp	21.4 hp
Fuel Type	Natural gas	Natural gas

Emission Unit	EUSWEETENING
Unit type	Sour gas sweetening process; H_2S removal from natural gas
Manufacturer/Model	C.E. Natco
Raw Material	Sour natural gas

Natural gas from oil wells surrounding the sweetening plant is gathered and transported to the plant via pipeline. Summit Petroleum operates a flare at the facility, which serves as a collection point for minor streams of gas under normal operations, and for emergency relief from acid gas from the amine system, relief valves, storage tank pop-off, dehydration unit vent, compressor relief valves, and other vents and blowdown lines. The flare has a continuously burning pilot (sweetened fuel) and automatic re-igniter system to maintain uninterrupted operations.

2.0 UNIT-SPECIFIC REQUIREMENTS:

A. Emission Limitations and Standards

The permittee shall comply with the following requirements:

1. Sulfur dioxide (SO_2) Limitations and Requirements

   i. SO_2 emissions from the source shall not exceed 98 tons per year on a 12-month rolling basis.

   ii. The minimum reduction efficiency of the caustic unit shall not be less than 74%, for the facility operating with inlet sulfur of 2 long tons per day.

2. Operating Requirements

i. If inlet sulfur exceeds 2 long tons per day, the permittee shall operate EUSWEETENING only if the caustic unit is installed, maintained, and is operating as designed, in either one or two stage mode.

ii.. The minimum sulfur removal efficiency of the caustic contactor shall not be less than 74% for inlet sulfur quantities in excess of 2 long tons per day.

iii. The permittee shall monitor and record the volume of the caustic agent used by the caustic unit CECAUSTICUNIT.

iv. The permittee shall operate the amine unit at all times that it operates EUSWEETENING.

v. The permittee shall monitor and record the exhaust gas temperature at the outlet of the combustion chamber on the incinerator on a continuous basis. The monitoring system shall be equipped with an audio alarm which shall be set to go off when the exhaust temperature at the outlet of the combustion chamber falls below 1400°F.

vi. The permittee shall maintain the temperature of the combustion chamber at no less than 1400°F during normal operation periods.

vii. During startup, acid gas feed to the incinerator from the process shall not commence until the temperature at the outlet of the combustion chamber exceeds 1400°F. If the temperature falls below 1400°F, the permittee must bring the temperature back to 1400°F within 45 minutes. If the temperature remains below 1400°F for more than 45 minutes or falls below 1300°F, the permittee shall automatically commence shut-in of EUSWEETENING within one second.

viii. If the temperature falls below 1200°F, the permittee shall automatically commence diverting the flow of acid gas to the emergency flare. The permittee shall not send acid gas to the emergency flare for more than 45 minutes. The permittee shall not send acid gas from the amine process to the flare except as allowed by this permit.

ix. In the event of an emergency, the permittee shall immediately commence shut-in of EUSWEETENING. The permittee shall not operate EUSWEETENING unless the required temperature monitoring and recording devices are in proper operating condition and are operating.

x. All temperature monitoring data shall be kept on file for a period of at least 5 years and made available to EPA upon request.

xi. The permittee will monitor and record the oxygen content of the exhaust gases at the outlet of the combustion chamber of the incinerator on a continuous basis. The monitoring system shall be equipped with an audio alarm which shall be set to go off when the oxygen content at the outlet of the combustion chamber falls below 5.0 %, by volume.

xii. During startup, the permittee shall not commence acid gas feed to the incinerator from EUSWEETENING until the oxygen content at the outlet of the combustion chamber exceeds 5.0 %. If the oxygen content falls below 5.0 %, the permittee must bring the oxygen content back up to 5.0 % within 15 minutes. If the oxygen content is not a minimum of 5.0 % after 15 minutes, then the permittee shall automatically commence shut-in of EUSWEETENING within one second and shall automatically commence diverting the flow of acid gas to the emergency flare.

xiii. The permittee shall not send acid gas to the emergency flare for more than 45 minutes. The permittee shall not send acid gas from the amine process to the flare except as allowed by this permit.

xiv. In the event of an emergency, the permittee shall immediately commence shut-in of EUSWEETENING. The permittee shall not operate EUSWEETENING unless the required oxygen monitoring and recording devices are in proper operating condition and are operating.

xv. All oxygen monitoring data shall be kept on file for a period of 5 years and made available to EPA upon request.

xvi. The permittee will not send the untreated sour gas from the wells to the flare except in the event of an emergency or to avoid a threat to human health or safety. Periods of startup and shut down do not constitute emergency events. The permittee will not send acid gas from the amine process to the flare except as allowed by this permit or to avoid a threat to human health or safety.

xvii. In the event of an emergency, the permittee shall shut-in EUSWEETENING.

xviii. The permittee will not operate EUSWEETENING unless all emergency relief valves, all storage tanks, and all dehydrators are vented to the flare, an incinerator, or a vapor recovery system.

xix. The permittee shall operate a continuously burning pilot flame at the flare. The pilot flame shall be equipped with an automatic re-igniter.

xx. The stack heights shall be at a minimum height of 20 feet for the flare, and 60 feet for the incinerator.

B. Monitoring and Testing

1. Monitoring. The permittee shall complete all required calculations in a format acceptable by EPA by the end of the calendar month for the previous calendar month. The permittee shall determine actual SO_2 emissions for the month and shall add the amount of emissions for the month to the total for the previous 11 months to demonstrate compliance with the 12-month rolling SO_2 limit.

   i. The permittee shall monitor the mass flow rate of hydrogen sulfide entering the amine unit. The calculation of the mass flow rate shall be based on daily hydrogen sulfide concentration measurements taken using a colorimetric or other as approved by EPA method and continuous volumetric flow rate measurement using an orifice meter or other as approved by EPA gas measurement device. In addition, the permittee shall, on a monthly basis, use a gas chromatograph to analyze the gas entering the amine unit to determine the concentration of sulfur containing compounds other than hydrogen sulfide.

   ii. The permittee shall accurately calibrate all temperature, oxygen, monitoring, and recording devices in accordance with manufacturer's specifications. Records of the calibrations shall be kept on file for a period of 5 years and made available to EPA upon request.

2. Performance Tests.

   i. The permittee shall conduct a performance test when requested by EPA, under such conditions as EPA shall specify to the facility operator based on representative performance of the affected facility. The performance test methods include Method 6 for SO_2 emissions, and Method 15 for H_2S emissions. The permittee shall make available to EPA, by a date specified by EPA, such records as may be necessary to determine the conditions of the performance test. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

   ii. Operating Conditions for Performance Testing. The permittee shall conduct all performance tests at worst-case operating (non-malfunction) conditions for all emission units for each air pollutant.

   iii. Failure to Demonstrate Compliance. Upon EPA's written notice that the facility has failed to demonstrate compliance with an applicable emission

limit, the permittee, unless an alternative schedule is contained in an applicable requirement or compliance document shall:

(a). Conduct a retest within 30 days of receipt of EPA's written notice;

(b). Submit to EPA written notice of testing and submit a test plan for the retest; and

(c). Submit a complete report of the results of the retest within 45 days after completion.

iv. Agency Tests. Upon request of EPA, the permittee shall allow EPA, or any authorized employee or agent of EPA, to enter upon the premises for the purposes of conducting performance tests or inspections. The permittee shall provide performance testing facilities that enable EPA to conduct performance tests, including:

(a). Sampling ports adequate for the applicable test methods;

(b). Safe sampling platforms;

(c). Safe access to sampling platforms; and

(d). Utilities for sampling and testing equipment.

C. Recordkeeping and Reporting

1. Recordkeeping

i. The permittee shall maintain at the facility records of all monitoring required by this permit, including but not limited to:

(a). Daily hydrogen sulfide concentration of the gas going to the amine unit;

(b). Monthly measurement of total sulfur in the gas stream to the amine unit;

(c). Daily volume of gas going to the amine unit;

(d). Daily mass flow rate of hydrogen sulfide going to the amine unit (and thence to the incinerator);

(e). Daily sulfur dioxide emissions from the incinerator;

(f). Efficiency of caustic removal process;

(g). Reports of excess emissions;

(h). Calibration and maintenance records, original strip chart, or computer-based recordings; and

(i). Standard operation and maintenance procedures for each emission unit.

ii. The permittee shall retain all records at the facility location for at least 5 years following the creation of such records. Records which must be retained at this location include all calibration and maintenance records, all original recording for continuous monitoring instrumentation, and copies of all reports required by this permit. Unless this permit contains a different timeframe, the permittee shall complete all required calculations in a format acceptable to EPA by the end of the calendar month for the previous month.

iii. The permittee shall calculate SO_2 emissions using the following formula:

$$SO_2 \text{ emissions (pounds per day)} = VXF_m(0.1689)$$

V is the flow rate of gas to the amine unit in million cubic feet per day;
X is the concentration of hydrogen sulfide in parts per million;
F_m is the ratio of total sulfur to sulfur form hydrogen sulfide in the gas to the incinerator;
0.1689 is the density of SO_2 gas at standard conditions in pounds per cubic feet.

2. Deviation Reporting. The permittee shall report to EPA any deviation from any permit requirements, including those attributable to upset conditions, the probable cause of such deviation, and any corrective actions or preventative measures taken within 15 days of the deviation. Deviations include any period of time when emissions exceed the emissions limits or operating conditions vary from the operational practices allowed under this permit.

3.0. FACILITY-WIDE PERMIT CONDITIONS

A. Recordkeeping and Reporting

1. The permittee shall maintain at the facility for 5 years all measurements, including monitoring device and performance testing measurements; adjustment and maintenance performed on these systems or devices; and all other information required by this permit in a permanent form suitable for inspection.

2. Within 45 days after completion of any performance test, the permittee shall submit a copy of the results to EPA.

4.0. GENERAL PERMIT CONDITIONS

A. Definitions

Terms and conditions not otherwise defined in this permit have the meaning assigned to them in 40 C.F.R. § 49.152.

B. Issuance and Effective Date of Permit

1. This permit shall become effective on the date of signature by the Regional Administrator.

2. This permit does not convey any property rights of any sort or any exclusive privilege.

C. Construction Without a Permit

If the permittee constructs or operates any source or modification not in accordance with the terms of any approval to construct, the permittee shall be subject to appropriate enforcement action.

D. Construction Approval

1. Nothing in this permit shall alter the requirement for the permittee to obtain a construction permit before commencement of construction or modification of an emission unit.

2. Approval for construction or installation shall not relieve the permittee of the responsibility to comply fully with applicable provisions of any other requirements of federal law or regulation.

E. Compliance with Permit Requirements

The permittee must comply with each permit term and condition, including emissions limitations. Failure to comply with the terms and condition of this permit constitutes a deviation and may constitute a violation of the permit and the CAA, and is grounds for:

1. An enforcement action under Section 113 of the CAA;

2. Termination, revocation and reissuance, or modification of the permit; or

3. Denial of a federal operating permit application under 40 C.F.R. Part 71.

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

F. Prohibition on Violation of NAAQS and PSD Increment

The emission units that are the subject of this construction permit must not cause or contribute to a violation of any National Ambient Air Quality Standard or a Prevention of Significant Deterioration increment.

G. Submittals

1. Unless otherwise directed in this permit, the permittee shall submit a copy of all test plans, reports, certifications, notifications, and other information pertaining to compliance with this permit to:

   Air Enforcement and Compliance Assurance Branch (AE-17J)
   Air and Radiation Division
   EPA, Region 5
   77 West Jackson Boulevard
   Chicago, Illinois 60604

2. The permittee shall submit permit applications, applications for permit amendments, and other applicable permit information, which includes but it not limited to installation of control equipment, replacement of an emissions unit, and requests for changes that contravene current permit terms, to:

   Air Permits Section
   Air Programs Branch (AR-18J)
   EPA, Region 5
   77 West Jackson Boulevard
   Chicago, Illinois 60604

H. Severability

The terms and conditions in this permit are distinct and severable. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of this permit. If any term or condition in this permit is held invalid, such invalidity shall not affect the validity or application of other terms or conditions.

I. Permit Revision, Reopening, Revocation and Reissuance, and Termination

1. This permit shall remain in effect, unless and until EPA revises, reopens, revokes and reissues, or terminates it for cause. The permittee may request that EPA revise,

reopen, revoke and reissue or terminate this permit or a particular portion of this permit; however, such a request does not stay any permit condition.

2. The permittee shall furnish to EPA, within a reasonable time, any information EPA requests in writing to determine whether cause exists for revising, revoking and reissuing or terminating the permit or to determine compliance with the permit. For any such information claimed to be confidential, the permittee also must submit a claim of confidentiality in accordance with 40 C.F.R. Part 2 at the time of submission of the information.

J. Entry and Inspection

The permittee shall allow an EPA authorized representative, upon presentation of credentials, to:

1. Enter upon or through any premises where a source subject to this permit is located, where emissions–related activity is conducted, or where records required by this permit are kept;

2. At reasonable times, have access to any records required by this permit and make copies of any records;

3. Inspect, during normal business hours or while the source is in operation, any facilities, equipment (including monitoring and air pollution control equipment), practices or operations regulated or required by this permit;

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

5. Record any inspection by use of written, electronic, magnetic and photographic media.

K. Circumvention

The Permittee shall not build, erect, install, or use any article, machine, equipment, or process, the use of which conceals any emission which would otherwise constitute a violation of an applicable standard.