State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQE-AN151010001-15

September 9, 2015

Robert Hammer
Newfield Production Company
4 Waterway Square Place, Suite 100
The Woodlands, TX 77380

Dear Mr. Hammer:

Re: Approval Order: New Crude Oil and Natural Gas Production Tank Battery Ute Tribal 9-9-4-1E
Project Number: N15101-0001

The attached document is the Approval Order for the above-referenced project. Future correspondence on this Approval Order should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. The project engineer for this action is Mr. Todd Wetzel, who may be reached at (801) 536-4429.

Sincerely,

Bryce C. Bird
Director

BCB:TW:jc

cc: TriCounty Health Department

195 North 1950 West • Salt Lake City, UT
Mailing Address: P.O. Box 144820 • Salt Lake City, UT 84114-4820
Telephone (801) 536-4000 • Fax (801) 536-4099 • T.D.D. (801) 903-3978
www.deq.utah.gov
Printed on 100% recycled paper

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

APPROVAL ORDER: New Crude Oil and Natural Gas Production Tank Battery Ute Tribal 9-9-4-1E

Prepared By: Mr. Todd Wetzel, Engineer
Phone: (801) 536-4429
Email: twetzel@utah.gov

APPROVAL ORDER NUMBER

DAQE-AN151010001-15

Date: September 9, 2015

Newfield Production Company
Ute Tribal 9-9-4-1E Oil & Gas Tank Battery

Source Contact:
Robert Hammer
Phone: (303) 382-4420
Email: bjhammer@newfield.com

Bryce C. Bird
Director

Abstract

Newfield Production Company (Newfield) has requested a new AO for the Ute Tribal 9-9-4-1E Crude Oil & Natural Gas Production Tank Battery. Natural gas fired pump-jack engine(s) will bring produced fluids to the surface from a well. Heater treaters will separate the oil, water, and gas. The oil and water will be stored in tanks prior to being transported off site by trucks. The gas will be used as fuel for the onsite equipment or will be routed to a sales pipeline and shipped off site. This source will process up to 50,000 barrels (1 barrel = 42 gallons) of crude oil per year.

The source is located in Uintah County, which is an unclassified area for ozone and an attainment area for all other criteria pollutants. NSPS (40 CFR 60 Subparts A, JJJJ, and OOOO) and MACT (40 CFR 63 Subparts A and ZZZZ) regulations apply to this source. NESHAP 40 CFR 61 regulations do not apply to this source. Title V of the 1990 Clean Air Act does not apply to this source.

The potential emissions, in TPY, will be as follows: PM_{10} = 0.58, $PM_{2.5}$ (subset of PM_{10}) = 0.58, NO_x = 7.85, SO_x = 0.02, CO = 11.20, VOC = 5.47, HAPs = 0.93, and CO_2e = 4,340.

This air quality AO authorizes the project with the following conditions and failure to comply with any of the conditions may constitute a violation of this order. This AO is issued to, and applies to the following:

Name of Permittee:

Newfield Production Company
4 Waterway Square Place, Suite 100
The Woodlands, TX 77380

Permitted Location:

Newfield Production Company- Ute Tribal 9-9-4-1E Oil & Gas Tank Battery
Sec 9 T4S R1E
Uintah County, UT

UTM coordinates: 595,407 m Easting, 4,444,493 m Northing, UTM Zone 12
SIC code: 1311 (Crude Petroleum & Natural Gas)

Section I: GENERAL PROVISIONS

I.1 All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]

I.2 The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]

I.3 Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]

I.4 All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Director or Director's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401-8]

I.5 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]

I.6 The owner/operator shall comply with UAC R307-107. General Requirements: Breakdowns. [R307-107]

I.7 The owner/operator shall comply with UAC R307-150 Series. Inventories, Testing and Monitoring. [R307-150]

Section II: SPECIAL PROVISIONS

II.A The approved installations shall consist of the following equipment:

II.A.1 **Ute Tribal 9-9-4-1E Production Tank Battery**

II.A.2 **Pump-jack Engines**
Maximum Site-wide Rating: 195 hp combined
Fuel: Natural Gas

II.A.3 **Boilers & Heaters**
Includes: heater treaters, separators and tank heaters
Maximum Total Capacity: 6.0 MMBtu/hr combined
Fuel: Natural Gas

II.A.4 **Oil Storage Tanks**
Maximum Total Capacity: 1,600 barrels combined

II.A.5 **Produced Water Storage Tanks**
Maximum Total Capacity: 1,100 barrels combined

II.A.6 **Pneumatic Controllers**
Low Bleed Devices
Maximum Quantity: Eighteen (18)

II.A.7 **One (1) Combustor**
98% destruction efficiency

II.A.8 **Truck Loading Operations**
Submerged loading

II.A.9 **Miscellaneous Storage Tanks**
Storage of motor oil, methanol, glycol, etc
Maximum Total Capacity: 1,000 gallons combined

II.B Requirements and Limitations

II.B.1 **Site-Wide Requirements**

II.B.1.a The owner/operator shall notify the Director in writing when the equipment listed in this AO has been installed and is operational. To ensure proper credit when notifying the Director, send your correspondence to the Director, attn: Compliance Section.

If the owner/operator has not notified the Director in writing within 18 months from the date of this AO on the status of the construction and/or installation, the Director shall require documentation of the continuous construction and/or installation of the operation. If a continuous program of construction and/or installation is not proceeding, the Director may revoke the AO.

[R307-401-18]

II.B.1.b Unless otherwise specified in this AO, the owner/operator shall not allow visible emissions from any stationary point or fugitive emission source on site to exceed 10 percent opacity. [R307-401-8]

II.B.1.b.1 Unless otherwise specified in this AO, opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. [R307-201-3]

II.B.1.c The owner/operator shall only use natural gas as fuel in the pump-jack engines, boilers and heaters on site. [R307-401-8]

II.B.2 **Tank Requirements**

II.B.2.a The owner/operator shall not produce more than 50,000 barrels (1 barrel = 42 gallons) of crude oil per rolling 12-month period. [R307-401-8]

II.B.2.a.1 To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using the most recent 12 months of production data reported to the Utah Division of Oil, Gas and Mining. Records of crude oil production shall be kept for all periods when the plant is in operation. Crude oil production shall be determined by process flow meters and/or sales records. [R307-401-8]

II.B.2.b The owner/operator shall load the tanker trucks on site by the use of submerged loading. [R307-401-8]

II.B.2.c The owner/operator shall keep the storage tank thief hatches closed and latched except during tank unloading or other maintenance activities. [R307-401-8]

II.B.2.d The owner/operator shall inspect the thief hatches at least once every three months to ensure the thief hatches are closed, latched, and the associated gaskets, if any, are in good working condition. Records of thief hatch inspections shall include the date of the inspection and the status of the thief hatches. [R307-401-8]

II.B.3 **Combustor Requirements**

II.B.3.a All exhaust gas/vapors from the produced water and oil storage tanks shall be routed to the operating combustor. [R307-401-8]

II.B.3.b The combustor shall operate with no visible emissions. [R307-401-8]

II.B.3.b.1 Visual determination of smoke emissions from combustors shall be conducted according to 40 CFR 60, Appendix A, Method 22. [R307-401-8]

II.B.4 **Pumpjack Engine Requirements**

II.B.4.a Each stationary engine on site shall comply with 40 CFR 60.4233(d), 40 CFR 60.4233(e), 40 CFR 60.4243(f), 40 CFR 60.4245(a) and 40 CFR 60.4245(b). [40 CFR 60 Subpart JJJJ, R307-401-8]

II.B.5 **Leak Detection and Repair Requirements**

II.B.5.a The owner/operator shall conduct a leak detection inspection for each valve(s), flange(s) or other connection, pump(s), compressor(s), pressure relief device(s) or other vent(s), process drain(s), open-ended valve(s), pump seal(s), compressor seal(s), and access door seal(s) or other seal containing or contacting a process stream with hydrocarbons that is associated with each of the approved emission units listed in Section II: Special Provisions.

Leak detection inspections shall be conducted according to the following schedule:

A. No later than 180 days from the date of this AO .

B. At least once every 12 months after the initial leak detection inspection.

[R307-401-8]

II.B.5.b Inspections shall be conducted in one of two ways;

1. An analyzer that meets U.S. EPA Method 21, 40 CF R Part 60, Appendix A

2. An optical gas imaging instrument as defined in 40 CFR 60.18(g)(4)

The optical gas imaging instrument must meet requirements specified in 40 CFR 60.18(i)(3).

Any emissions detected with an optical gas imaging instrument shall be considered a leak in need of repair unless the owner/operator evaluates the leak with an analyzer meeting U.S. EPA Method 21, 40 CFR Part 60 and the analyzer reading is less than 500 ppmv. A reading of 500 ppmv or greater shall be considered a leak in need of repair.

Emissions detected from tank gauging, load-out operations, venting of pneumatics, properly operating pressure relief valves, or other maintenance activities shall not be considered leaks.

[R307-401-8]

II.B.5.c The owner/operator is exempt from inspecting a valve, flange or other connection, pump or compressor, pressure relief device, process drain, open-ended valve, pump or compressor seal system degassing vent, accumulator vessel vent, agitator seal, or access door seal under any of the following circumstances:

A. The contacting process stream only contains gly col, amine, methanol, or produced water.

B. Monitoring could not occur without elevating th e monitoring personnel more than six feet above a supported surface or without the assistance of a wheeled scissor-lift or hydraulic type scaffold.

C. Monitoring could not occur without exposing mon itoring personnel to an immediate danger as a consequence of completing monitoring.

D. The item to be inspected is buried, insulated i n a manner that prevents access to the components by a monitor probe, or obstructed by equipment or piping that prevents access to the components by a monitor probe.

[R307-401-8]

II.B.5.d If a leak is detected at any time, the owner/operator shall attempt to repair the leak no later than 5 calendar days after detection. Repair of the leak shall be completed no later than 15 calendar days after detection, unless parts are unavailable or unless repair is technically infeasible without a shutdown. The owner/operator shall inspect the repaired leak no later than 15 calendar days after the leak was repaired to verify that it is no longer leaking.

If replacement parts are unavailable, the replacement parts must be ordered no later than 5 calendar days after detection, and the leak must be repaired no later than 15 calendar days after receipt of the replacement parts.

If repair is technically infeasible without a shutdown, the leak must be repaired by the end of the next shutdown. If a shutdown is required to repair a leak, the shutdown must occur no later than 6 months after the detection of the leak unless the owner/operator demonstrates that emissions generated from the shutdown are greater than the fugitive emissions likely to result from delay of repair.

[R307-401-8]

II.B.5.e Records of inspections and leak detection and repair shall include the following:

A. The date of the inspection

B. The name of the person conducting the inspection

C. Any component not exempt under II.B.5.c that is not inspected and the reason it was not inspected

D. The identification of any component that was det ermined to be leaking

E. All records shall be maintained for optical gas imaging instrument as per 40 CFR 60.18(i)(4)(vi)

F. The date of first attempt to repair the leaking component

G. Any component with a delayed repair

H. The reason for a delayed repair

1. For Unavailable Parts:

i. The date of ordering a replacement component

ii. The date the replacement component was receiv ed

2. For a Shutdown:

i. The reason the repair is technically infeasibl e

ii. The date of the shutdown

iii. Emission estimates of the shutdown and the r epair if the delay is longer than 6 months

I. Corrective action taken

J. The date corrective action was completed

K. The date the component was verified to no longer be leaking

L. The records of each component exempt under II.B. 5.c

1. Type of component

2. Description of qualifying exemption

[R307-401-8]

II.B.6 **Stack Requirements**

II.B.6.a The engine stacks shall vent no greater than 2 feet above the ground. [R307-401-8]

II.B.6.b The tank heater stacks shall vent no less than 18 feet above the ground. [R307-401-8]

II.B.6.c The diameter of the tank heater stacks shall be no greater than 6 inches at the stack opening. [R307-401-8]

II.B.6.d The tank heater stacks shall vent vertically unrestricted, meaning no rain cap or diffuser shall be placed at or near the stack opening. [R307-401-8]

Section III: APPLICABLE FEDERAL REQUIREMENTS

In addition to the requirements of this AO, all applicable provisions of the following federal programs have been found to apply to this installation. This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including UAC R307.

NSPS (Part 60), A: General Provisions
NSPS (Part 60), JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
NSPS (Part 60), OOOO: Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution
MACT (Part 63), A: General Provisions
MACT (Part 63), ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

PERMIT HISTORY

This AO is based on the following documents:

Is Derived From	NOI dated October 15, 2014
Incorporates	Additional Information dated October 30, 2014
Incorporates	Additional Information dated November 7, 2014
Incorporates	Additional Information dated November 14, 2014
Incorporates	Additional Information dated November 21, 2014
Incorporates	Additional Information dated December 12, 2014
Incorporates	Additional Information dated December 16, 2014
Incorporates	Additional Information dated January 7, 2015
Incorporates	Revised NOI dated March 27, 2015
Incorporates	Additional Information dated April 7, 2015
Incorporates	Additional Information dated April 27, 2015
Incorporates	Additional Information dated April 28, 2015

ADMINISTRATIVE CODING

The following information is for UDAQ internal classification use only:

Uintah County
CDS B
MACT (Part 63), Unclassified Area, NSPS (Part 60),
API#: 43047520220000

ACRONYMS

The following lists commonly used acronyms and associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by EPA to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CMS	Continuous monitoring system
CO	Carbon monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent - 40 CFR Part 98, Subpart A, Table A-1
COM	Continuous opacity monitor
DAQ/UDAQ	Division of Air Quality
DAQE	This is a document tracking code for internal UDAQ use
EPA	Environmental Protection Agency
FDCP	Fugitive dust control plan
GHG	Greenhouse Gas(es) - 40 CFR 52.21 (b)(49)(i)
GWP	Global Warming Potential - 40 CFR Part 86.1818-12(a)
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/HR	Pounds per hour
MACT	Maximum Achievable Control Technology
MMBTU	Million British Thermal Units
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO_x	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM_{10}	Particulate matter less than 10 microns in size
$PM_{2.5}$	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO_2	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
TPY	Tons per year
UAC	Utah Administrative Code
VOC	Volatile organic compounds