Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.

Matthew H. Mead, Governor

Todd Parfitt, Director

March 5, 2015

Mr. Chuck Cornell
Senior Regulatory Lead
Jonah Energy LLC
707 17th Street, Suite 2700
Denver, CO 80202

Permit No. **MD-16984**

Dear Mr. Cornell:

The Division of Air Quality of the Wyoming Department of Environmental Quality has completed final review of Jonah Energy LLC's application to conduct well completion and re-completion activities in the Concentrated Development Area described as locations within Carbon, Fremont, Lincoln, Natrona, Sweetwater, Sublette and Uinta Counties, Wyoming. The proposed permit includes requirements to conduct well completions or re-completions using best management practices to reduce emissions of regulated pollutants associated with such activities to the extent practicable and to monitor, maintain records and report emissions from the completions or re-completion activities.

Following this agency's proposed approval of the request as published January 29, 2015, and in accordance with Chapter 6, Section 2(m) of the Wyoming Air Quality Standards and Regulations, the public was afforded a thirty (30) day period in which to submit comments concerning the proposed new source, and an opportunity for a public hearing. No comments were received during the public comment period. Therefore, on the basis of the information provided to us, approval to conduct well completion and re-completion activities in the Concentrated Development Area as described in the application is hereby granted pursuant to Chapter 6, Section 2 of the regulations with the following conditions:

1. That authorized representatives of the Division of Air Quality be given permission to enter and inspect any property, premise or place on or at which an air pollution source is located or is being constructed or installed for the purpose of investigating actual or potential sources of air pollution and for determining compliance or non-compliance with any rules, standards, permits or orders.

2. That all substantive commitments and descriptions set forth in the application for this permit, unless superseded by a specific condition of this permit, are incorporated herein by this reference and are enforceable as conditions of this permit.

3. Well Completion Emission Reports required by this permit shall be submitted to the O&G Permitting Engineer, 152 North Durbin Street, Suite 100, Casper, WY 82601 or may be submitted electronically. All other notifications, reports and correspondence required by this permit shall be submitted to the appropriate District Engineer.

   District 2 Engineer (Carbon and Natrona Counties), 152 North Durbin Street, Suite 100, Casper, WY 82601.

   District 4 Engineer (Fremont and Lincoln Counties), 510 Meadowview Drive, Lander, WY 82520.

   District 5 Engineer (Sweetwater, Sublette and Uinta Counties), 510 Meadowview Drive, Lander, WY 82520.

4. Emissions of volatile organic compounds (VOC) and hazardous air pollutants (HAP) associated with the flaring and venting of gas associated with well completion and re-completion activities shall be eliminated to the extent practicable by routing the gas into a gas sales line or collection system.

5. Circumstances unacceptable for sending gas to flare during completions are:

   A. Lack of pipeline connection due to reasons other than wildcat, exploratory or step-out well classification;

   B. Inadequate liquids disposal or storage capacity (use of flaring to evaporate flowback liquids);

   C. Undersized flow back equipment, lack of flow back equipment or lack of flowback equipment operating personnel.

6. The opacity of visible emissions associated with the flaring of hydrocarbon fluids associated with completion and re-completion activities shall be limited to twenty percent (20%) as determined by 40 CFR part 60, appendix A, Method 9.

7. This permit shall become effective for all well completion and re-completion activities commencing after issuance of this permit.

8. The Division shall reopen and revise this permit, as necessary, to add or delete requirements should the Division determine that:

   A. The practical application of the terms and conditions of the permit are unfeasible or fail to achieve the intent of the permit, or;

   B. The monitoring, recordkeeping, notification, or reporting requirements are inadequate to assure compliance with applicable requirements.

MONITORING

9. The hydrocarbon composition of gas recovered during completion and re-completion activities shall be sufficiently monitored in order to establish and verify salability or non-salability of the gas.

10. During flow back of completion and re-completion fluids, well pressure, operating pressure of surface separation equipment and sales or gathering pipeline pressure shall be monitored on no less than an hourly basis.

RECORDKEEPING

11. Records identifying and summarizing total volumes of hydrocarbon liquids (BBL) and natural gas (MMCF) recovered (flared, vented, stored in tanks, pits, trucks or other containment, or sold to gathering lines, storage or containment vessels or trucks) from the well bore during completion/re-completion activities shall be maintained on a per well basis. The records shall include summaries of associated operating pressures of the well and any surface equipment used to separate, store or collect the fluids and gas during recovery.

12. Records summarizing total tons of VOC, total HAPs, NO_X and CO emissions associated with the flaring and venting of hydrocarbon fluids, as recorded under condition eleven (11), shall be maintained for each completion and re-completion activity on a per well basis. The Division's Well Completion Emission Spreadsheet shall be used to generate the estimates of these emissions.

13. When specific operational circumstances require flaring or venting of hydrocarbon fluids associated with well completion or re-completion activities, records shall be maintained describing times, durations and causes of the events and circumstances requiring the flaring on a per well basis.

14. All records required under this permit shall be kept for a period of at least five (5) years and shall be made available to the Division upon request.

NOTIFICATION

15. The Division shall be notified of each well completion and re-completion activity at least fifteen (15) days prior to the commencement of the activity. The notification shall be submitted by mail or electronic mail to the appropriate district engineer (see condition three (3) above) and shall include:

    A. Location name and legal description;

    B. Anticipated start and finish dates.

REPORTING

16. Within ninety (90) days of the First Date of Production, defined as the date of commingled production when producing zones are commingled and sufficiently tested and product is flowing from all completed zones through permanent production and sales equipment, the permittee shall submit to the Division for each completed/re-completed well:

    A. A summary of the total volumes of hydrocarbon liquids (BBL) and natural gas (MMCF) recovered (flared, vented, stored in tanks, pits, trucks or other containment, or sold to gathering lines, storage or containment vessels or trucks) from the well bore during the completion or re-completion. The summary shall include percentages of total hydrocarbon liquids and gasses flared and vented to the atmosphere.

    B. The completed Well Completion Emission Spreadsheet described under condition twelve (12) of this permit.

It must be noted that this approval does not relieve you of your obligation to comply with all applicable county, state, and federal standards, regulations or ordinances. Special attention must be given to Chapter 6, Section 2 of the Wyoming Air Quality Standards and Regulations, which details the requirements for compliance with Condition 3. Any appeal of this permit as a final action of the Department must be made to the Environmental Quality Council within sixty (60) days of permit issuance per Section 16, Chapter I, General Rules of Practice and Procedure, Department of Environmental Quality.

If we may be of further assistance to you, please feel free to contact this office.

Sincerely,

Steven A. Dietrich
Administrator
Air Quality Division

Todd Parfitt
Director
Dept. of Environmental Quality

cc: Tony Hoyt
Chris Hanify
Greg Meeker

SD/hb