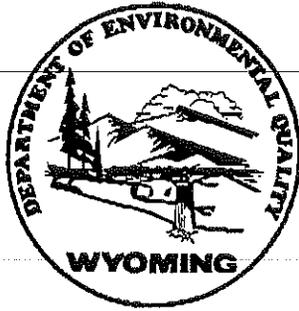

Appendix C
Wyoming Department of Environmental Quality
Air Quality Permit



DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
122 WEST 25TH STREET
HERSCHLER BUILDING
CHEYENNE, WY 82002

FAX TRANSMITTAL COVER SHEET

No. of Pages: 22 (Cover Sheet Included)

DATE: 6/19/09

TO: Cimarex Energy

PHONE NO.: 918-295-1632 FAX NO.: 918-699-5795

FROM: DEQ/AOD PHONE NO.: 307-777-7340

COMMENTS: We will be mailing out the original
signed copies in the mail

Thanks!!

Kim

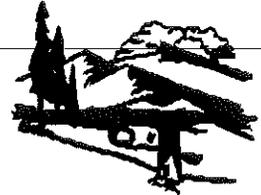
IF YOU DID NOT RECEIVE ALL OF THE PAGES, PLEASE NOTIFY THE SENDER AS SOON AS POSSIBLE.

OFFICE NO. (307) 777-7391

FAX NO. (307) 777-5616



Department of Environmental Quality



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

Dave Freudenthal, Governor

John Corra, Director

June 18, 2009

Mr. Clay Duellman
Special Project Manager
Cimarex Energy Company
15 East 5th Street, Suite 1000
Tulsa, OK 74103

Re: Air Quality Permit CT-8093
Cimarex Energy Company
Permit Application AP-8093

Dear Mr. Duellman:

Enclosed is a copy of the air quality permit referenced above to construct the Riley Ridge Plant for methane and helium recovery. The facility will be capable of processing 200 MMscfd of gas produced from wells comprised primarily of carbon dioxide (CO₂), nitrogen (N₂), methane (CH₄), helium (He), and hydrogen sulfide (H₂S). Nearly all of the CO₂ and H₂S will be extracted and injected back into the producing reservoir, the nitrogen will be extracted and vented to the atmosphere, and the helium and methane will be recovered and sold. Facility equipment will include a heat medium heater, electrical compression, propane refrigerant, a diesel or propane fired auxiliary electrical generator and an emergency flare. The Riley Ridge Plant is located in Section 16, T29N, R114W, approximately sixteen (16) miles west-southwest of Big Piney, in Sublette County, Wyoming.

Comments received during the public comment period and hearing were considered in the final permit. A copy of the decision document for this permit is included. A new condition has been added and proposed conditions have been modified in the final permit. Below is a summary of the changes.

- Condition 23 (new) establishing a VOC limit for fugitive emissions.
- Condition 25 (revised) changed to the submittal of the annual emissions inventory from January 31 to March 1 of each year.
- Condition 30 (new) to comply with applicable requirements of 40 CFR part 63, Subpart ZZZZ.
- Condition 32 (revised) to include a notification within 15 days of replacement of the Tier 0 engine.
- Condition 33 (revised) to indicate the equipment to be replaced at the respective facilities and permits which are to be modified prior to startup of the Riley Ridge Plant. The Division has also included a requirement for notification of replacement of the respective equipment at each facility within 15 days of replacement.

Herschler Building • 122 West 25th Street • Cheyenne, WY 82002 • <http://deq.state.wy.us>

ADMIN/OUTREACH (307) 777-7937 FAX 777-3610	ABANDONED MINES (307) 777-6145 FAX 777-6462	AIR QUALITY (307) 777-7391 FAX 777-5616	INDUSTRIAL SITING (307) 777-7369 FAX 777-5973	LAND QUALITY (307) 777-7756 FAX 777-5864	SOLID & HAZ. WASTE (307) 777-7752 FAX 777-5973	WATER QUALITY (307) 777-7781 FAX 777-5973
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**Air Quality Permit CT-8093
Cimarex Energy Company
Response to Comments
Page 2**

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

Sincerely,



David A. Finley
Administrator
Air Quality Division

cc: Tony Hoyt

Enclosures



Department of Environmental Quality



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

Dave Freudenthal, Governor

John Corra, Director

June 18, 2009

Mr. Clay Duellman
Special Project Manager
Cimarex Energy Company
15 East 5th Street, Suite 1000
Tulsa, OK 74103

Permit No. CT-8093

Dear Mr. Duellman:

The Division of Air Quality of the Wyoming Department of Environmental Quality has completed final review of Cimarex Energy Company's application to construct the Riley Ridge Plant for methane and helium recovery. The facility will be capable of processing 200 MMscfd of gas produced from wells comprised primarily of carbon dioxide (CO₂), nitrogen (N₂), methane (CH₄), helium (He), and hydrogen sulfide (H₂S). Nearly all of the CO₂ and H₂S will be extracted and injected back into the producing reservoir, the nitrogen will be extracted and vented to the atmosphere, and the helium and methane will be recovered and sold. Facility equipment will include a heat medium heater, electrical compression, propane refrigerant, a diesel or propane fired auxiliary electrical generator and an emergency flare. The Riley Ridge Plant is located in Section 16, T29N, R114W, approximately sixteen (16) miles west-southwest of Big Piney, in Sublette County, Wyoming.

Following this agency's proposed approval of the request as published April 16, 2009 and in accordance with Chapter 6, Section 2(m) of the Wyoming Air Quality Standards and Regulations, the public was afforded a 30-day period in which to submit comments concerning the proposed new source, and a public hearing was held May 18, 2009. Public comments were received and have been considered in the final permit. Therefore, on the basis of the information provided to us, approval to construct the Riley Ridge Plant 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. That a permit to operate in accordance with Chapter 6, Section 2(a)(iii) of the WAQSR is required after a 120-day start-up period in order to operate this facility.
4. That all notifications, reports and correspondences associated with this permit shall be submitted to the Stationary Source Compliance Program Manager, Air Quality Division, 122 West 25th Street, Cheyenne, WY 82002 and a copy shall be submitted to the District Engineer, Air Quality Division, 510 Meadowview Drive, Lander, WY 82520.

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ADMIN/OUTREACH (307) 777-7937 FAX 777-3610	ABANDONED MINES (307) 777-6145 FAX 777-6462	AIR QUALITY (307) 777-7391 FAX 777-5616	INDUSTRIAL SITING (307) 777-7369 FAX 777-5973	LAND QUALITY (307) 777-7756 FAX 777-5864	SOLID & HAZ. WASTE (307) 777-7752 FAX 777-5973	WATER QUALITY (307) 777-7781 FAX 777-5973
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**Cimarex Energy Company
Air Quality Permit CT-S093
Page 2**

5. That written notification of the anticipated date of initial start-up, in accordance with Chapter 6, Section 2(i) of the WAQSR, is required not more than 60 days or less than 30 days prior to such date. Notification of the actual date of start-up is required within 15 days after start-up.
6. That the date of commencement of construction shall be reported to the Administrator within 30 days of commencement. In accordance with Chapter 6, Section 2(h) of the WAQSR, approval to construct or modify shall become invalid if construction is not commenced within 24 months after receipt of such approval or if construction is discontinued for a period of 24 months or more. The Administrator may extend the period based on satisfactory justification of the requested extension.
7. That performance tests be conducted, in accordance with Chapter 6, Section 2(j) of the WAQSR, within 30 days of achieving a maximum design rate but not later than 90 days following initial start-up, and a written report of the results be submitted. The operator shall provide 15 days prior notice of the test date. If a maximum design rate is not achieved within 90 days of start-up, the Administrator may require testing be done at the rate achieved and again when a maximum rate is achieved.
8. Initial performance tests, as required by Condition 7 of this permit, shall be conducted on the following source:

i. Heat Medium Heater:

NO_x, CO, and VOC Emissions: Testing shall consist of three (3) 1-hour tests following EPA Reference Methods 1-4, 7E, 10, and 25.

A test protocol shall be submitted to this office for review and approval prior to testing. Notification of the test date shall be provided to the Division fifteen (15) days prior to testing. Results shall be submitted to this Division within 45 days of completion.

9. That emissions from the Heat Medium Heater shall be limited to the following:

Pollutant	lb/MMBtu	lb/hr	tpy
NO _x	0.03	2.7	7.9
CO	0.08	7.5	22.3
VOC	0.0055	0.5	1.5

10. That the Heat Medium Heater shall be limited to 583.1 MMscf/year of fuel usage. Cimarex Energy Company shall install, maintain, and operate a fuel meter(s) with a continuous recording device(s) on the Heat Medium Heater. The fuel meter(s) and recording device(s) shall be maintained per manufacturer's specifications. Cimarex Energy Company shall keep and maintain records of the fuel usage of the Heat Medium Heater.

Cimarex Energy Company
Air Quality Permit CT-8093
Page 3

11. That Cimarex Energy Company shall follow the testing requirements as follows for the Heat Medium Heater:
- a. Annually, the Heat Medium Heater shall be tested to verify compliance with the NO_x and CO limits set forth in this permit. The first annual tests are required the following calendar year after completion of the initial performance tests. Testing shall be conducted using EPA Reference Methods or a portable analyzer, following the State of Wyoming's Portable Analyzer Protocol. Notification of the test date shall be provided to the Division fifteen (15) days prior to testing. A written report of the results is to be submitted to the Division within 45 days of completion.
 - b. The Air Quality Division shall be notified within 24-hours of the heat medium heater where the testing/monitoring required by (a) of this condition shows operation outside the permitted emission limits. By no later than seven (7) calendar days of such testing/monitoring event, the owner or operator shall repair and retest/monitor the affected heater to demonstrate that the heater has been returned to operation within the permitted emission limits. Compliance with this permit condition regarding repair and retesting/monitoring shall not be deemed to limit the authority of the Air Quality Division to cite the owner or operator for an exceedance of the permitted emission limits for any testing/monitoring required by (a) of this condition which shows noncompliance.
12. That the emergency generator engine for the Riley Ridge Plant shall be less than or equal to 800 horsepower and limited to the following:
- a. Tier II certified diesel engine (≥ 750 hp)
 - b. Tier III certified diesel engine (< 750 hp)
 - c. Propane fired engine equipped with an air fuel ratio controller and a NSCR catalyst

Cimarex Energy Company shall notify the Division of the engine type installed for the emergency generator within fifteen (15) days of installation. Such notification shall be submitted on a complete Engine Installation/Removal form. The form can be downloaded from the Air Quality website <http://deq.state.wy.us/aqd> or obtained from the Air Quality Division.

13. Cimarex Energy Company shall maintain documentation that the emergency generator engine is Tier II certified if a diesel fired unit greater than or equal to 750 horsepower is installed. If a diesel fired unit less than 750 horsepower is installed Cimarex Energy Company shall maintain documentation that the emergency generator engine is Tier III certified.

Cimarex Energy Company
Air Quality Permit CT-8093
 Page 4

14. That the propane generator shall be limited to the horsepower and g/hp-hr limits in the table. Emission limits for NO_x, CO, and VOCs on a pound per hour basis are established based on the g/hp-hr limits and the engine information submitted in the Engine Installation/Removal form required by Condition 12 of this permit. Compliance with the g/hp-hr limit is presumed to demonstrate compliance with the lb/hr limit as long as the engine is operated within the horsepower reported in the Engine Installation/Removal form.

hp	NO _x g/hp-hr	CO g/hp-hr	VOC g/hp-hr
Max. 800	1.0	2.0	0.7

15. The emergency generator engine installed under Condition 12 shall be limited to 100 hours of operation per year. Cimarex Energy Company shall install and maintain an hour meter on the engine to demonstrate compliance with the hours limit in this condition. A record of hours of operation for the generator shall be maintained for a period of at least five (5) years and shall be made available to the Division upon request.
16. That for the emergency generator engine installed under Condition 12, Cimarex Energy Company shall operate and maintain the engine, air pollution control equipment, and monitoring equipment according to good air pollution control practices at all times, including startup, shutdown, and malfunction. Records of any maintenance or corrective actions shall be kept and maintained for a period of five (5) years and shall be made available to the Division upon request.
17. That H₂S emissions during power failures or upset conditions shall be controlled by the emergency flare.
18. Cimarex Energy Company shall keep and maintain records of flaring events at the Riley Ridge Plant. These records shall include:
- a. flaring events associated with malfunctions, maintenance, and/or adjustments of the compression equipment
 - b. the duration of flaring events
 - c. the amount of gas flared during the event
 - d. the reason for the flaring event
19. Cimarex Energy Company shall maintain and operate the emergency flare during all period of active operation such that the controls remain effective as viable emission control device.
20. The emergency flare shall be designed, constructed, operated and maintained to be smokeless per Chapter 3, Section 6 (b)(i) of the WAQSR, with no visible emissions except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours as determined by 40 CFR, part 60, appendix A, Method 22.
21. The presence of the emergency flare pilot flame shall be monitored using a thermocouple and continuous recording device or any other equivalent device to detect and record the presence of the flame. Records shall be maintained noting periods during active operation when the pilot flame is not present.

Cimarex Energy Company
Air Quality Permit CT-8093
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22. Emission control equipment, all vent lines, connections, fittings, valves, relief valves, hatches or any other appurtenance employed to contain and collect vapors and transport them to the emission control system or device, shall be maintained and operated during any time the facility is operating such that the emissions are controlled at all times. Records shall be maintained noting dates and durations of times during such operation when any control system or device or the associated containment and collection equipment is not functioning to control emissions as required by this permit.
23. That fugitive VOC emissions shall be limited to 12.2 tpy from the Riley Ridge Plant.
24. Cimarex Energy Company shall utilize a LDAR program in accordance with 40 CFR part 60, subpart VVa. Monitoring under the LDAR program shall be conducted a minimum of every six (6) months. Records of monitoring and repair measures shall be kept for a period of at least 5 years and shall be made available to the Division upon request.
25. Cimarex Energy Company shall submit by March 1 of each calendar year a report on actual VOC, NO_x and SO₂ emissions for the facility for the previous year. This report shall include the following:
 1. Fugitive: VOC emissions shall be calculated using the methodology in the permit application, and the average measured leak detection rates for the past calendar year.
 - a. Total fugitive VOC emissions for the facility in tons per year
 - b. Average leak detection rate by equipment in ppm (equipment as defined in 40 CFR part 60, subpart VVa)
 - c. Documentation of fugitive VOC emission calculations
 2. Heat Medium Heater: VOC and NO_x emissions shall be calculated based on actual fuel usage (MMBtu/yr) and the annual test results (lb/MMBtu)
 - a. Total VOC and NO_x emissions in tons per year
 - b. Actual fuel usage MMSCF/yr
 - c. Average Heat Content
 3. Flare: SO₂ emissions calculated based on the amount of gas flared and the average H₂S Content
 - a. Total SO₂ emissions in tons per year
 - b. Summary of information required by Condition 18 of this permit
26. Cimarex Energy Company shall comply with the applicable requirements of 40 CFR part 60, subpart Dc for the Heat Medium Heater.
27. Cimarex Energy Company shall comply with the applicable requirements of 40 CFR part 60, subpart IIII for the emergency generator engine.
28. Cimarex Energy Company shall comply with the applicable requirements of 40 CFR part 60, subpart JJJJ for the emergency generator engine.
29. Cimarex Energy Company shall comply with the applicable requirements of 40 CFR part 60, subpart Kb for the methanol storage tank.

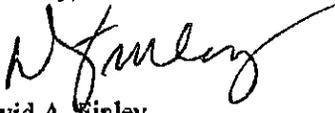
Cimarex Energy Company
Air Quality Permit CT-8093
Page 6

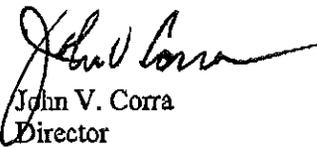
30. Cimarex Energy Company shall comply with the applicable requirements of 40 CFR part 63, subpart ~~ZZZZ~~ for the emergency generator engine.
31. That all records required by this permit shall be kept for a period of at least 5 years and shall be made available to the Division upon request.
32. That Cimarex Energy Company shall replace the Caterpillar 3408 Tier 0 (SN 4999) engine owned by Teletactors Incorporated with a Caterpillar 3408 Tier 3 engine. The engine replacement and Teletactors Incorporated air quality permit CT-4401 shall be modified to reflect the engine replacement prior to startup notification, under Condition 5 of this permit, for the Riley Ridge Plant. Cimarex Energy Company shall provide notification within 15 days of replacement of the Caterpillar 3408 Tier 0 (SN 4999) engine.
33. That Cimarex Energy Company shall replace the gas driven pneumatic pumps with electric pumps at the following facilities: Birch Creek Unit 98, Birch Creek Unit 108, Birch Creek Unit 116, Birch Creek Unit 117, Birch Creek Unit 129, Birch Creek Unit 130, Birch Creek Unit 133, Birch Creek Unit 138, Birch Creek Unit 140, Birch Creek Unit 141, Birch Creek Unit 149, Birch Creek Unit 191, Birch Creek Unit 192, LaBarge Unit 27, LaBarge Unit 28A, LaBarge Unit 35, and LaBarge Unit 38. The pneumatic pump replacements and Chevron USA air quality permits wv-KX9, wv-ZQ1, wv-UT2, wv-YU2, wv-1885, wv-8E2, wv-0401, wv-4566, and wv-3404 shall be modified to reflect the pneumatic pump replacement prior to startup notification, under Condition 5 of this permit, for the Riley Ridge Plant. Cimarex Energy Company shall provide notification within 15 days of replacement of the pneumatic pump(s) at each facility.

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 conditions 3, 5, 6 and 7. 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,


David A. Finley
Administrator
Air Quality Division


John V. Corra
Director
Dept. of Environmental Quality

cc: Tony Hoyt

Cimarex Energy Company
 Air Quality Permit CT-8093
 Page 7

Emission Unit	NO _x		CO		VOC		SO ₂		PM ₁₀	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Heat Medium Heater	2.7	7.9	7.5	22.3	0.5	1.5	0.1	0.2	--	--
Emergency Generator (worst case)	8.5	0.4	4.6	0.2	--	--	--	--	0.3	<0.1
Emergency Flare	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	--	--	--	--
Tanks	--	--	--	--	<0.1	<0.1	--	--	--	--
Fugitives ¹	--	--	--	--	2.8	12.2	--	--	--	--
Facility Total	11.2	8.3	12.1	22.6	3.3	13.7	0.1	0.2	0.3	<0.1

¹ Methanol emissions (HAPs) are estimated to be 4.0 tpy of the fugitive emissions.

IN THE MATTER OF A PERMIT APPLICATION (AP-8093) FROM CIMAREX ENERGY COMPANY TO CONSTRUCT THE RILEY RIDGE GAS PLANT LOCATED IN SUBLETTE COUNTY, WYOMING

DECISION

I. Introduction

The Air Quality Division received a permit application from Cimarex Energy Company on July 28, 2008 to construct the Riley Ridge Plant for methane and helium recovery. The facility will be capable of processing 200 MMscfd of gas produced from wells comprised primarily of carbon dioxide (CO₂), nitrogen (N₂), methane (CH₄), helium (He), and hydrogen sulfide (H₂S). Nearly all of the CO₂ and H₂S will be extracted and injected back into the producing reservoir, the nitrogen will be extracted and vented to the atmosphere and the helium and methane will be recovered and sold. Facility equipment will include a heat medium heater, electrical compression, propane refrigerant, a diesel or propane fired auxiliary electrical generator and an emergency flare. The Riley Ridge Plant is located in Section 16, T29N, R114W, approximately sixteen (16) miles west-southwest of Big Piney, in Sublette County, Wyoming.

The Division conducted an analysis of this application and on April 16, 2009, published in the Pinedale Roundup, in Pinedale, Wyoming, a public notice and notice of public hearing of the proposed intent to approve the application. A copy of the application and Division's analysis was placed in the office of Sublette County Clerk in accordance with regulations. The public notice period ran from April 16, 2009 to May 18, 2009 and a public hearing was held on May 18, 2009, at the Marbleton Town Hall, located at 10700 Hwy 189, in Marbleton, Wyoming.

The Division received comments from the public during the public hearing on May 18, 2009 in Pinedale and during the public comment period. The comments received and responses to the comments are provided below.

II. Analysis of Public Comments:

- II.1 **Interim Policy** – Comment was received that the application submitted by Cimarex fails to comply with the Division's Interim Policy for at least three reasons: 1) the Interim Policy forbids inter-company emission reductions like the kind proposed by Cimarex; 2) the application fails to provide assurances (i.e., a "demonstration") that emissions from the facility will in fact be offset and fails to provide a meaningful opportunity to review specific and detailed proposals for offsets; 3) Cimarex makes no effort to offset significant new emissions from other project components and activities such as well drilling, operation of pipelines and other project-related facilities and construction.

Response – 1) Section 4 of the Interim Policy states "No trading (i.e. inter-company emissions reductions) will be allowed". The prohibition on Inter-Company trading was not intended to restrict such trades, where companies involved in a trade can reach agreement on the value of any offset involved. Nor was the policy intended to prohibit new companies from operating in Sublette County. Given Cimarex Energy Company does not operate any other facilities in Sublette County and they have reached agreement with Teletractors and Chevron to obtain offsets, the Division accepted offsets obtained through inter-company trading for this permitting action. While the Interim Policy clearly states that it is not a regulation, the Division will be issuing a letter clarifying that a Chapter 6, Section 2 (c)(ii) Demonstration that involves emission

reductions obtained through inter-company trading will be considered on a case-by-case basis. The letter will be posted on our website upon issuance.

2) The Division has established federally enforceable permit conditions to ensure that the required VOC and NO_x offsets are obtained prior to the startup of the Riley Ridge Plant. Condition 31 (previously Condition 30) of the permit specifies the Tier 0 diesel engine must be replaced with a Tier 3 diesel engine and the Telectractors air quality permit modified prior to startup of the Riley Ridge Plant. Condition 32 (previously Condition 31) has been modified based on the information provided by Cimarex (Attachment A). This condition requires replacement of seventeen (17) pneumatic pumps with electric pumps at Chevron's Birch Creek and Labarge units and the Chevron air quality permits are modified prior to startup of the Riley Ridge Plant.

3) The Division considered the emissions represented in Cimarex's application associated with the operation of the Riley Ridge Plant, and did not include emissions which are considered to be secondary emissions in determining the facility's potential to emit. In Chapter 6, Section 4 of the Wyoming Air Quality Standards and Regulations (WAQSR), a facility's potential to emit is defined as follows:

"Potential to emit" means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the affect it would have on emissions is enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

In Chapter 6, Section 4 secondary emissions are defined as follows:

"Secondary emissions" means emissions which occur as a result of the construction or operation of a major stationary source or major modification, but do not come from the major stationary source or major modification itself. For the purposes of this section, secondary emissions must be specific, well defined, quantifiable, and impact the same general areas as the stationary source or modification which causes the secondary emissions. Secondary emissions include emissions from any offsite support facility which would not be constructed or increase its emissions except as a result of the construction or modification of the major stationary source or major modification. Secondary emissions do not include any emissions which come directly from a mobile source, such as emissions from the tailpipe of a motor vehicle or from a train.

The Division considers well drilling and completions, pipeline construction and operation, electric transmission construction to be secondary emissions and not part of the Riley Ridge Plant. Therefore, Cimarex was not required to offset these emissions because they were not considered in the potential to emit for the Riley Ridge Plant.

II.2 Impacts from accidental release – Comment was received that the Division must evaluate the potential public health and safety impacts from the proposed project, including a comprehensive assessment of the consequences of an accidental release of hazardous chemicals, such as the release of hydrogen sulfide (H₂S), caused by equipment failure, failure of sequestration, human error, well blowouts, acts of terror, etc. In particular, the Division should require the applicant to explain how it intends to comply with the “general duty” provisions set forth in 112(r), and allow the public an opportunity to review and comment on the applicant’s statements.

Response – The Division does not administer the provision under §112(r) of the Clean Air Act (CAA) in Wyoming. Therefore, the Division cannot require Cimarex to provide information required under §112(r) prior to issuing a permit.

II.3 CO₂ and H₂S sequestration – Comment was received that the Division should defer any further action on Cimarex’s application pending the promulgation of rules by the EPA and by DEQ governing the injection of CO₂ and H₂S, and pending submittal of application by Cimarex for the necessary injection permits. Additionally, attachments were provided which include scoping comments provide to the Bureau of Land Management (BLM) on the Rand Butte Project.

Response – The Division does not have the authority to defer issuance of the air quality permit until other permits, not required by the WAQSR, are obtained. The Riley Ridge Plant complies with all applicable requirements of the WAQSR and, therefore, the Division is obligated under the Environmental Quality Act to grant the permit (W.S. 35-11-801).

II.4 Aggregation – Comment was received that the Riley Ridge Plant described in the public notice and analyzed by the Division is just one component of a much larger and more complex methane and helium recovery project named the Rand’s Butte Project. Emissions from the project are much greater than the limited analysis of the Riley Ridge Plant, and emission offsets proposed by Cimarex don’t come close to offsetting total project emissions. Emissions from the entire operation, including all its various components must be aggregated and offset by emission reductions elsewhere in order to avoid a significant increase in ozone forming pollutants. Further total project emissions must be aggregated for purposes of Title V and New Source Review.

Response – See response to Public Comment II.1 item 3 in regards to defining the potential to emit for the Riley Ridge Plant. Emission increases from any other sources that require an air quality permit will be addressed in the associated permitting action. Cimarex has addressed all emission sources associated with the Riley Ridge Plant in this permitting action.

III. Analysis of Comments from Cimarex:

III.1 LDAR Monitoring Frequency – Compliance Partners, Inc. (CPI) commented on behalf of Cimarex requesting that the minimum frequency under the LDAR program be changed to once annually instead of semi-annually.

Cimarex Energy Company
Decision Document, Permit Application AP-8093
Page 4

Response – The minimum frequency under the LDAR program specified in the permit was established under BACT. Therefore, the Division has not revised the monitoring frequency in Condition 24 (proposed Condition 23). However, once Cimarex has completed at least two (2) years of monitoring the Division would be willing to discuss the possibility of revising the frequency based on monitored data.

III.2 Annual Emission Inventory – CPI commented on behalf of Cimarex requesting that the deadline for submitting the annual emission inventory be revised to March 1 instead of January 31 to be consistent with reporting requirements for major sources.

Response – Upon review of the conditions and the information required to be submitted the Division revised Condition 25 (proposed Condition 24) to require submittal of the annual emission inventory by March 1 of each year.

IV. Division

IV.1 Upon reviewing the proposed conditions it was noted that the permit did not include fugitive VOC limits. Based on the fact that the Division established VOC emission limits for the generator engines and heat medium heater the Division has included Condition 23 limiting fugitive VOC emissions to 12.2 tpy to be consistent.

IV.2 Upon reviewing the proposed conditions it was noted that the permit did not include the requirement to comply with the applicable requirements of 40 CFR part 63, subpart ZZZZ. EPA promulgated revisions to Subpart ZZZZ on January 18, 2008, which included area sources of HAPs. Therefore, the Division has included Condition 30 for compliance with Subpart ZZZZ.

V. Decision:

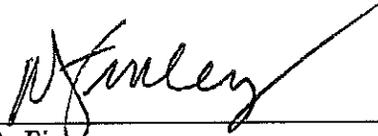
On the basis of comments received during the public comment period and at the public hearing, an analysis of those comments, and representations made by Cimarex Energy Company in the application, the Department of Environmental Quality has determined that the permit application filed by Cimarex Energy Company complies with all applicable Wyoming Air Quality Standards and Regulations and that a permit will be issued to Cimarex Energy Company allowing construction of Riley Ridge Plant as described in the application. All of the conditions proposed in the Division's analysis will be included in the permit with the following changes and additions:

1. The Division has included as a condition of the permit (Condition 23) a limit on fugitive VOC emissions. (See response to Division Comment IV.1)
2. The Division has included as a condition of the permit (Condition 30) a requirement to comply with the applicable requirements of 40 CFR part 63, subpart ZZZZ. (See response to Division Comment IV.2)
3. The Division has revised Condition 25 (proposed Condition 24) to change the submittal date of the annual emissions inventory from January 31 to March 1 of each year. (See response to Cimarex Comment III.2)

Cimarex Energy Company
Decision Document, Permit Application AP-8093
Page 5

4. The Division has revised Condition 32 (proposed Condition 30) to include a notification within 15 days of replacement of the Tier 0 engine. (See Public Comment II.1)
5. The Division has revised Condition 33 (proposed Condition 31) to indicate the equipment to be replaced at the respective facilities and permits which are to be modified prior to startup of the Riley Ridge Plant. The Division has also included a requirement for notification of replacement of the respective equipment at each facility within 15 days of replacement. (See Public Comment II.1)

Dated this 18th day of June, 2009



David A. Finley
Administrator
Wyoming Air Quality Division



John V. Corra
Director
Wyoming Department of Environmental Quality

Attachment A
Cimarex Letter

15 East 5th Street
Suite 1000

Tulsa, Oklahoma 74103-4346

PHONE 918.585.1100

FAX 918.585.1133

June 2, 2009



Mr. Chad Schlichtemeier
Wyoming Department of Environmental Quality
Division of Air Quality
122 W. 25th Street
Herschler Bldg 2E
Cheyenne, WY 82002



RE: Riley Ridge Air Permit (AP-8093) Discussion

Mr. Schlichtemeier,
Cimarex Energy Co. is responding to your request for additional information since our public hearing on May 18, 2009. This letter addresses emissions offsets and public comments for permit approval.

Emissions Offsets

Cimarex Energy Co. has completed additional work with Chevron U.S.A. Inc and identified specific sources to be used to offset VOC emissions for the Riley Ridge plant. The VOC offsets will be gained by converting 17 pneumatic pumps at Chevron's Birch Creek and Labarge Units to electric driven pumps. The attached documents provide facility identification, pump model, pump use description, applicable WDEQ permit number, and the VOC emissions gained by each pump. Gas compositions are also attached for each pneumatic pump currently in use and these compositions provide the data used in the calculations to determine the VOC's being emitted.

The NOx Offsets with Teletractors Incorporated are specified with previous documentation.

All NOx and VOC emissions offsets will be in place prior to plant startup.

Public Comments

Cimarex Energy Co. understands air quality in Sublette County is very important and our Riley Ridge plant design demonstrates our commitment to minimize environmental impacts. Cimarex is not aware of any negative concerns related to air emissions that we have not addressed.

Permit Approval

Cimarex has work restrictions imposed between the winter months of November through May of each year. One month in our current work season has passed and Cimarex is eager to begin earthwork as soon as possible. Please advise if any additional data is required. Otherwise, we respectfully request permit approval as soon as possible.

Please contact me with any questions @ (918) 295-1667.

Sincerely,



Clay Duellman
Special Projects Manager

CC: Mr. Gary McFadden, Compliance Partners
Mr. Patrick Shevlin, Chevron U.S.A. Inc.

CIMAREX-Offsets: Pneumatic Pump Replacement Schedule

No#	Facility ID	Date	TPY	Permit	Description
1	BCU 98		0.54	AP-KX9	Texsteam 3701 methanol pump
2	BCU 108		0.54	AP-KX9	Texsteam 3701 methanol pump
3	BCU 116		0.54	AP-KX9	Texsteam 3701 methanol pump
4	BCU 117		0.54	AP-ZQ1	Texsteam 3701 methanol pump
5	BCU 129		1.1	AP-KX9	Wilden Heat Trace Pump
6	BCU 130		0.54	AP-KX9	Texsteam 3701 methanol pump
7	BCU 133		0.54	AP-KX9	Texsteam 3701 methanol pump
8	BCU 138		1.1	WV-UT2	Wilden Heat Trace Pump
9	BCU 140		0.54	AP-KX9	Texsteam 3701 methanol pump
10	BCU 141		0.54	AP-KX9	Texsteam 3701 methanol pump
11	BCU 149		0.54	WV-YU2	Texsteam 3701 methanol pump
12	BCU 191		1.1	WV-1885	Wilden Heat Trace Pump
13	BCU 192		1.1	WV-1855	Wilden Heat Trace Pump
14	LBU 27		1.1	AP-8E2	Wilden Heat Trace Pump
15	LBU 28A		1.1	AP0-401	Wilden Heat Trace Pump
16	LBU 35		1.1	WV-4566	Wilden Heat Trace Pump
17	LBU 38		1.1	WV-3404	Wilden Heat Trace Pump
		Total	13.86		

BCU = Birch Creek Unit
 LBU = Labarge Unit

Pneumatic Calculations
Birch Creek 149 Sample

carbon dioxide
 nitrogen
 methane
 ethane
 propane
 isobutane
 butane
 isopentane
 pentane
 n-hexanes
 other hexanos
 heptanes
 C8+ heavies
 benzene
 toluene
 ethylbenzene
 xylenes
 Trimethyl
 Totals

Mol %	mw	Mol % x MW	Wt %
0.59%	44.01	0.2606913	1.4164%
0.67%	28.01	0.1878631	1.0199%
89.47%	16.04	14.350796	77.9104%
5.69%	30.07	1.7102613	9.2850%
2.19%	44.1	0.9653931	5.2411%
0.35%	58.12	0.2032456	1.1034%
0.50%	72.15	0.361299	1.9729%
0.14%	72.15	0.1014429	0.5507%
0.12%	72.15	0.0847041	0.4599%
0.04%	86.16	0.0337747	0.1834%
0.10%	86.16	0.084523	0.4589%
0.10%	100.2	0.1011018	0.5489%
0.01%	114.23	0.014393	0.0781%
0.01%	78.11	0.0067175	0.0365%
0.02%	92.13	0.016307	0.0865%
0.00%	106.17	0.000697	0.0035%
0.00%	106.17	0.003716	0.0202%
0.00%	114.24	0.0041126	0.0223%
100.00%			100.00%
3.58%			10.3683%
0.07%			0.35%

VOC (C3+)
 HAPs (Total)

Stream Mol Wt = 18.419808

Wilden Pump (PX200 spec sheet)
 X Factor setting, based on Ops input
 "X Factor", air @ 48 psig
 "X Factor", flow @ 48 psig
 Actual Flow rate
 Equivalent Flow Rate at Setting 4
 Air Consumption, Setting 4 Performance Curve
 Air Consumption, Setting 1
 Vented SCF / year (8760 hr) =
 Vented lb-mol/yr (@379.7 SCF/lb-mol) =
 Total emissions, lb-mol x lb/lb-mol (lb/yr) =
 VOC, total x wt% VOC (lbs/yr) =
 HAPs, total x wt% HAP (lbs/yr) =

1
 0.08
 0.12
 1 gpm
 8.3 gpm
 10 SCFM
 0.8 SCFM
 420,480
 1107.40
 20,398
 2,115 or
 72.27 or
 1.06 TPY
 0.04 TPY

Texsteam Pump Calculator
Birch Creek 149 Sample

carbon dioxide
 nitrogen
 methane
 ethane
 propane
 isobutane
 butane
 isopentane
 pentane
 n-hexanes
 other hexanes
 heptanes
 C8+ heavies
 benzene
 toluene
 ethylbenzene
 xylenes
 Trimethyl
 Totals
 VOC (C3+)
 HAPs (Total)

Mol %	MMW	Mol % x MMW
0.59%	44.01	0.2608913
0.67%	28.01	0.1878631
89.47%	16.04	14.350796
5.69%	30.07	1.7102613
2.19%	44.1	0.9653931
0.35%	58.12	0.2032456
0.50%	58.12	0.2897282
0.14%	72.15	0.1014429
0.12%	72.15	0.0847041
0.04%	86.16	0.0337747
0.10%	86.16	0.084523
0.10%	100.2	0.1011018
0.01%	114.23	0.014393
0.01%	78.11	0.0067175
0.02%	92.13	0.016307
0.00%	106.17	0.000637
0.00%	106.17	0.003716
100.00%	114.24	0.0041126
3.58%		
0.07%		

Stream Mol Wt = 18.419608

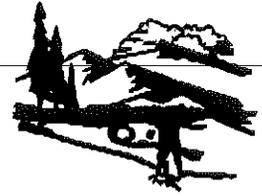
WT %	100 psig
1.4164%	550 gal
1.0199%	390
77.9104%	214,500
9.2850%	564.92
5.2411%	10,406
1.1034%	1,079 or
1.5729%	36.87 or
0.5507%	
0.4599%	
0.1834%	
0.4589%	
0.5489%	
0.0781%	
0.0365%	
0.0685%	
0.0035%	
0.0202%	
0.0223%	
100.00%	
10.3683%	
0.35%	

Texsteam 3701 Series Pumps
 Discharge Pressure, typical -85 psig
 Gallons of methanol pumped per year
 SCF gas consumption per gallon (spec sheet)
 Vented SCF / year (8760 hr) =
 Vented lb-mol/yr (@379.7 SCF/lb-mol) =
 Total emissions, lb-mol x lb/lb-mol (lb/yr) =
 VOC, total x wt% VOC (lbs/yr) =
 HAPs, total x wt% HAP (lbs/yr) =

0.54 TPY
 0.02 TPY



Department of Environmental Quality



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

Dave Freudenthal, Governor

John Corra, Director

June 18, 2009

Re: Air Quality Permit CT-8093
Cimarex Energy Company
Permit Application AP-8093

Dear Commenter:

Enclosed is a copy of the air quality permit referenced above to construct the Riley Ridge Plant for methane and helium recovery. The facility will be capable of processing 200 MMscfd of gas produced from wells comprised primarily of carbon dioxide (CO₂), nitrogen (N₂), methane (CH₄), helium (He), and hydrogen sulfide (H₂S). Nearly all of the CO₂ and H₂S will be extracted and injected back into the producing reservoir, the nitrogen will be extracted and vented to the atmosphere, and the helium and methane will be recovered and sold. Facility equipment will include a heat medium heater, electrical compression, propane refrigerant, a diesel or propane fired auxiliary electrical generator and an emergency flare. The Riley Ridge Plant is located in Section 16, T29N, R114W, approximately sixteen (16) miles west-southwest of Big Piney, in Sublette County, Wyoming.

Comments received during the public comment period and hearing were considered in the final permit. A copy of the decision document for this permit is included. A new condition has been added and proposed conditions have been modified in the final permit. Below is a summary of the changes.

- Condition 23 (new) establishing a VOC limit for fugitive emissions.
- Condition 25 (revised) changed to the submittal of the annual emissions inventory from January 31 to March 1 of each year.
- Condition 30 (new) to comply with applicable requirements of 40 CFR part 63, Subpart ZZZZ.
- Condition 32 (revised) to include a notification within 15 days of replacement of the Tier 0 engine.
- Condition 33 (revised) to indicate the equipment to be replaced at the respective facilities and permits which are to be modified prior to startup of the Riley Ridge Plant. The Division has also included a requirement for notification of replacement of the respective equipment at each facility within 15 days of replacement.

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

Sincerely,

David A. Finley
Administrator
Air Quality Division

cc: Tony Hoyt
Clay Duellman, Cimarex Energy Company

Enclosures

Herschler Building • 122 West 25th Street • Cheyenne, WY 82002 • <http://deq.state.wy.us>

ADMIN/OUTREACH (307) 777-7937 FAX 777-3610	ABANDONED MINES (307) 777-6145 FAX 777-6462	AIR QUALITY (307) 777-7391 FAX 777-5616	INDUSTRIAL SITING (307) 777-7369 FAX 777-5973	LAND QUALITY (307) 777-7756 FAX 777-5864	SOLID & HAZ. WASTE (307) 777-7752 FAX 777-5973	WATER QUALITY (307) 777-7781 FAX 777-5973
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