



October 18, 2019

Stephen Rodriguez, Planning Supervisor
City of Aurora Planning Department
15151 E. Alameda Parkway, Ste. 2300
Aurora, CO 80012

RE: Second Submission Review – Rush South (Phase 2) – Oil and Gas Permit
Application Number: DA-2012-03
Case Number: 2017-6005-04

Dear Mr. Rodriguez:

CVL Consultants of Colorado, Inc. has considered comments from City of Aurora Planning Department and other City of Aurora Departments and Agencies for the referenced project. We have restated the comments below and addressed them per the italicized responses.

SITE PLAN COMMENTS

1. Site Plan (Multiple departments)

1A. Address why the five specific BMP's are listed on sheet 2 of the Site Plan set. (Planning)

RESPONSE: The BMPs are remaining from pre-Operator Agreement notes and have been removed as they are addressed in other areas of the application.

1B. The Jewell Avenue segment of the proposed Haul Route needs to be included in the recent RMA amendment. (Planning)

RESPONSE: An Amendment to the Road Maintenance Agreement was sent to Victor Rachael on September 18, 2019. He requested additional materials for internal review, and those were provided on October 7, 2019. The Jewell Ave. segment is part of the amendment. Applicant believes this to be the final version of the Amendment and is waiting on City's execution.

1C. Delete note 5 on the cover sheet as this application is not subject to a public hearing. (Planning)

RESPONSE: Note 5 has been deleted from the application.

1D. Clearly show Powhaton Road on the Site Plan. (Real Property)

RESPONSE: Powhaton Road has been added to the Site Plan throughout the plans.

1E. Is there a culvert in your access road at Jewell? Please show clearly on the site plan (Real Property)

RESPONSE: Yes, this is a previously approved and constructed access road. The culvert is reflected on the site plan.

1F. Show other building on the site plan such as LACT building, sand towers, etc. (Real Property)

RESPONSE: The LACT (Lease Asset Custody Transfer unit) is shown on the Production/Operations drawing. The LACT unit and structure are one unit and do not exist until the well goes into production. The Sand Tower is temporary and only in place during completions. The additional structures on the Site Plan are also part of their own respective units (i.e., the Gas Meter/Buy Back Gas Meter unit and structure are on a skid and considered all one unit, the Combustor Knock Out ("K.O") Drum unit and

structure are on a skid and considered one unit, and the Vapor Recovery Unit and structure are on a skid and considered one unit. These units and structures have been added to the Site Plan.

1G. Please revise Note 7 by adding the following: Maintenance of the road will be in good repair at all times, clear of any structures or obstructions, and an all-weather surface allowing for an unobstructed path for emergency apparatus use. (Building/Life Safety)

RESPONSE: *The note has been revised.*

1H. Replace "Hardware" with "Box" (Building/Life Safety)

RESPONSE: *The labels have been revised.*

1I. Replace Fire Lane with Access Road (Building/Life Safety)

RESPONSE: *The labels have been revised.*

1J. Identify and Include the proposed location of the down gradient ground water sampling well to be used on the context map within the required distance for each proposed well pad site plan. (Water)

RESPONSE: *The location of the downgradient well is currently being requested from the surface owner. The proposed locations are shown; however, this has not been approved by the surface owner. Applicant will notify the City if and when the locations are secured.*

1K. Label all pipe sizes for gathering lines. (Water)

RESPONSE: *The pipeline sizes have been added to the Visual improvements sheet.*

1L. All ground water sampling wells to be located down gradient of the well pad site. (Water)

RESPONSE: *Acknowledged and will comply.*

1M. Please see the repeat redline comments on Sheets 1 and 13 (Public Works)

RESPONSE: *An Amendment to the Road Maintenance Agreement was sent to Victor Rachael on September 18, 2019. He requested additional materials for internal review, and those were provided on October 7, 2019. The Jewell Ave. segment is part of the amendment. Applicant believes this to be the final version of the Amendment and is waiting on City's execution.*

2. Vicinity / Context Map (Planning)

2A. Show location of ground water sampling well. (Water)

RESPONSE: *The location of the downgradient well is currently being requested from the surface owner. The proposed locations are shown; however, this has not been approved by the surface owner. Applicant will notify the City if and when the locations are secured.*

3. Interim Reclamation Plan (Planning)

3A. No further comments.

4. Visual Mitigation Plan

4A. N/A

5. Landscape Plan (Planning)

5A. This is acceptable as submitted.

6. Lighting Plan (Planning)

6A. Field-Wide - Exhibit C of the COP OA states specifically that the lighting must be downcast and NOT shine beyond the boundaries of the well site. Please modify your fieldwide Lighting Plan Narrative (Exhibit 11) to eliminate this language and comply with the BMP in the OA.

RESPONSE: *The Lighting Plan Narrative has been revised. As shown on the Photometric Plan, light does not shine beyond the boundaries of the oil and gas operations area.*

7. Building and Structure Elevations (Planning)

7A. Whether the buildings are habitable or not, elevations still are required to be provided in the plan set.

RESPONSE: *Elevation Drawings are included for the four following structures on the Site Plan:*

- *GAS METER/BUY BACK GAS METER (includes structure)*
- *COMBUSTOR K.O. DRUM (includes structure)*
- *VAPOR RECOVERY UNIT (includes structure)*
- *LACT (includes structure)*

LETTER OF INTRODUCTION COMMENTS

8. Project Summary (Planning)

8A. Detail the permanent equipment as identified in the PHA-HAZOP analysis. (Previous comment)

RESPONSE: *The list of Facility Equipment is detailed on the Site Plan. In accordance with Section 19 of the Operator Agreement, Operator may make minor changes to equipment size, type, layout, location, configuration of equipment and will provide notice to the City of such minor changes at the time of those changes.*

9. Applicable BMPs Addressed (Narrative List) (Planning)

9A. Please provide site-specific details in your resubmittal. Include this as a separate document. Do not just refer to plan notes. *This is a previous comment.*

RESPONSE: *The Letter of Introduction as well as the Operating Plan have been updated to provide the detail requested for the narrative BMP list.*

10. Neighborhood Meeting Schedule / Results / Comments (Planning)

10A. *Cindy and Don Hull* – We are sending our vote as NO to this gas permit. we don't feel fracking belongs in areas that are primarily populated as residential. We don't want the environmental impact and upheaval to our places of refuge...our homes. Those of us with wells don't want to take the chance of chemicals leaching into our water source. And we'd be willing to bet if any of you lived in this area, you wouldn't want it either. *Please respond to their concerns in your resubmittal response letter.*

RESPONSE: *The address listed above is approximately three miles from the Rush South project. Nevertheless, safety and environmental stewardship is fundamental to everything we do, and we have a very strong track record.*

ENVIRONMENTAL OVERSIGHT AND MANAGEMENT:

Local, state and federal government agencies set robust regulations for oil and natural gas activities. These rules include well permitting, well materials and construction, air emissions, flowback and produced water disposal, storm water management, and chemical record keeping and reporting. Existing statewide legislation and regulation already provide oversight of oil and gas operations, and Colorado has some of the most stringent laws and environmental regulations in the country.

At ConocoPhillips, safety and environmental stewardship are fundamental to everything we do. We comply with – and in many cases, go beyond – regulations, by utilizing Best Management Practices (BMPs), which are designed to prevent and/ or reduce impacts caused by oil and gas operations to air, water, soil, biological resources, and to minimize adverse impacts to public health, safety and welfare, including the environment and wildlife resources.

ConocoPhillips implements high environmental standards by carefully managing and working to minimize any impact on the environment and the people who live near our operations. For example:

- *Operations staff routinely conduct site inspections, including infrared camera surveys (LDAR,) to ensure the safe and proper operation of equipment to prevent emissions and leaks.*
- *To minimize emissions, CDPHE air regulations require all combustion devices to meet 95% destruction efficiency. The devices used in Niobrara are rated at 98% destruction efficiency.*
- *Water well sampling is conducted prior to drilling to provide a baseline for water quality surrounding a potential well site. (COGCC Rule 609)*
- *To protect the soils, an active storm water management program is in place to prevent erosion of land and transport of soils offsite.*

11. Response to Second Review Comments (Planning)

11A. Include this as a separate document in your resubmittal.

OPERATIONS PLAN COMMENTS

12. Operations Plan (Planning)

12A. Add the details from the initial submittal Operations Plan regarding surface holes, casing, water sampling, depth/dimensions/grade/psi, fracture stages, and add details from the anchoring BMP.

RESPONSE: Detail added. Surface hole location details for the Rush South can be found on the Site Plan and within the Letter of Introduction.

12B. Provide description of the secondary containment for above-ground storage during drilling, completion, flowback, and other produced fluids per the Closed-Loop Pitless Systems for the Containment and/or Recycling of Drilling Fluids BMP and per the initial submittal comments.

RESPONSE: Detail has been added to the Drilling and Completion sections of the Operations Plan.

12C. Elaborate on conformance with the Wellbore Integrity and Aquifer Protection BMP (regarding continuous column of surface casing cement, production casing, and integrity testing and monitoring) per the initial review comments.

RESPONSE: Detail has been added to the Drilling section of the Operations Plan.

12D. Elaborate on conformance with the Transportation and Storage of Fluids BMP (regarding non-potable water for hydraulic fracturing transported by temporary above-ground water lines, the number/construction of permanent tanks and associated shutdown devices, valves/drip buckets and direction of vapor, and third-party trucking contractors' HSE policies/ training/ environmental program/ incident notification/ reporting/ investigations/ bonding/ vapor return lines/transfer trucks) per the initial review comments.

RESPONSE: Detail has been added to the Completion section of the Operations Plan.

12E. Elaborate on the Combustion Devices BMP/Air Quality Plan per the initial review comments.

RESPONSE: Detail added to the Production Phase section of the Operations Plan. This has also been discussed with Juliana Berry and the Environmental Team and the results of those conversations have been incorporated into the Air Quality Plan.

12F. Elaborate on the Cultural and Historical Resource Protection BMP to prove conformance.

RESPONSE: Detail added to Well Site Construction section of the Operations Plan.

12G. Identify whether a trailer is "construction" versus "temporary residential or security" wherever mentioned, per the Trailer BMP.

RESPONSE: All trailers are temporary and used for office, residential and security. This detail has been added to the Operations Plan.

12H. Ensure that the locking gate and cattle guards at the site entrance are shown and labeled on the plans,

along with dimensions.

RESPONSE: *Those comments are made on the Site Plans.*

12I. Elaborate on the Electric Equipment BMP to prove conformance.

RESPONSE: *Applicant is currently working with Xcel Energy to build out electric capacity and infrastructure to power drilling equipment starting June 1, 2020. Applicant will continue to work with Xcel in good faith to secure electric power six months prior to the projected spud date for New Wells at the Rush South Well Site. The operator will continue reasonable efforts to expedite use of electrical line power to operate production equipment (See Operator Agreement, Exhibit C, BMP No. 13 and Operations Plan).*

12J. Elaborate on the Plugged and Decommissioned Well Testing BMP regarding reporting, notice, and soil gas survey to prove conformance.

RESPONSE: *Detail added.*

12K. Elaborate on the Containment Berms and Automatic Safety Protective Systems BMPs to prove conformance.

RESPONSE: *Detail added to the Production Phase section of the Operations Plan.*

12L. Reference that the PHA-HAZOP Analysis must be prepared by the Engineer of Record and stamped/signed by a Professional Engineer per the BMP and Building/Life Safety comments.

RESPONSE: *The Applicant has provided a letter that the engineer of record has incorporated all applicable PHA-HAZOP recommendations into the design. Building/Life Safety has reviewed the letter and that pursuant to an email received from Laura Rickhoff on October 11, 2019, Mike Dean "...does agree that the letter does not need to be signed & stamped, but only requested Cyndee's credentials." Cyndee Clouse is the PHA-HAZOP facilitator, and Applicant has provided her credentials with this submittal.*

13. Project Development Schedule (Planning)

13A. This requirement was satisfied at first submittal.

RESPONSE: *Updated schedule has been provided with this submittal.*

14. Security Plan (Planning)

14A. No further comments.

15. Decommissioning / Final Reclamation Plan (Planning)

15A. This is acceptable as submitted.

EMERGENCY RESPONSE PLAN COMMENTS

16. Emergency Response Plan (Building/Life Safety)

16A. This information is required to verify that the listed local notifications are correct and up to date. Please provide the local notifications and LEPCs information. (Building/Life Safety)

RESPONSE: *Information was previously included in Emergency Response Plan. Please see yellow highlight on page 33. A site-specific ERP has been included with this resubmission.*

17. PHA-HAZOP Analysis (Building/Life Safety)

17A. The PHA-HAZOP letter shall be signed & stamped by a Professional Engineer. (Building/Life Safety)

RESPONSE: *The Applicant has provided a letter that the engineer of record has incorporated all applicable PHA-HAZOP recommendations into the design. Building/Life Safety is currently reviewing. Pursuant to an email received from Laura Rickhoff on October 11, 2019, Mike Dean "...does agree that the letter does not need to be signed & stamped, but only requested Cyndee's credentials." Cyndee*

Clouse is the PHA-HAZOP facilitator, and Applicant has provided her credentials with this submittal.

COMMENTS ON OTHER REQUIRED ITEMS

18. Traffic Letter / Plan (Traffic Engineering)

18A. See comments on Traffic Letter. Traffic Management Plan needs to be resubmitted and revised based on previous comments as well. (Traffic)

RESPONSE: Revised Traffic Management Plan is included with this submittal.

18B. The westbound left-turn threshold is believed to be met for the combined site access. Show a left-turn lane in the traffic letter and on the plans. (Traffic)

RESPONSE: Applicant agrees to build this turn lane and to work with City staff for proper permitting. This has been added to the site plan.

18C. The southbound right-turn lane threshold is met on Watkins & Jewell per the traffic letter. This lane must be built, and traffic control plans in lieu of a turn lane will not be accepted. (Traffic)

RESPONSE: Applicant agrees to build this turn lane and to work with City staff for proper permitting. This has been added to the site plan.

18D. The assumption that all water will be piped to the site is not reasonable. Assume water will also be trucked per previous traffic letter. (Traffic)

RESPONSE: Applicant has committed to use temporary water lines to transport fresh water for completions operations. Applicant does not intend to use trucks to transport fresh water. Regardless, Applicant agrees to build the requested turn lanes.

19. License Agreements (Real Property)

19A. License needed should there be a culvert at Jewell in the access road. Clearly show on the site plan. (Real Property)

RESPONSE: The access road is an existing and previously approved road.

20. Recorded Surface Use Agreement (Planning)

20A. No additional comments.

21. Property Owner Authorizations (Planning)

21A. See comment 20A. Above.

22. Water Delivery Method/Water Supply Plan (Aurora Water)

22A. This is acceptable as submitted.

23. Groundwater Quality Monitoring Plan (Aurora Water)

23A. A variance request was submitted to the City with the permit application. The variance was denied on August 29th via email and the applicant is required to drill a monitoring well. (Water)

Many of the following comments have been addressed and discussed with ConocoPhillips. Those comments will be prefaced with “(Discussed)” to illustrate the comments that have been covered. (Water)

23B. (Discussed) The “Installation of Water Monitoring Well Process” document at the end of the variance request should be included in the field-wide plan and relabeled to “Installation of Monitoring Wells” (Water)

23C. (Discussed) When existing water wells to sample, it needs to be clarified that domestic water wells are being discussed. (Water)

23D. (Discussed) Under section 2.0 paragraph 2, when discussing “Due Diligence”, it’s highly recommended that APTIM/ConocoPhillips include contacting the owners of the identified wells to sample as part of their Due Diligence prior to submitting an application to the City. If it’s found that the well(s) assumed for sampling are not available, then it could delay your schedule. (Water)

23E. (Discussed) Below is the **current** “Installation of Monitoring Wells” section of the Field-Wide submittal that is a collaborative product between COP staff and City staff:

If the City requires the installation of water monitoring well(s) (Requested Wells), the following will occur.

1. *Prior to ConocoPhillips submitting the O&G permit to the City, ConocoPhillips will attempt to obtain rights to drill water monitoring well(s) on property down gradient from the proposed O&G location.*
 - a. *APTIM will perform the preliminary surface location review and provide a downgradient map and will also coordinate with ConocoPhillips Surface Land to identify the optimal monitoring well location(s) and obtain rights to a downgradient location(s) from surface landowners. Monitoring well location options will be communicated with the City prior to finalizing the location with the surface landowner.*
2. *Once rights to drill are obtained by ConocoPhillips and after receiving notice to proceed, APTIM will submit permit application(s) to install monitoring well(s) to the SEO. It is anticipated that monitoring well(s) will be installed at least one month prior to the commencement of drilling for the O&G location.*
 - a. *Monitoring wells will be installed as either a nested well or as individual wells capable of testing all available aquifers downgradient from the O&G location and will be located on or near the location. ConocoPhillips and the City will agree on the placement, design, and installation schedule of the monitoring well(s) prior to monitoring well permit submittal to the SEO.*
3. *If ConocoPhillips is unable to obtain rights to drill a monitoring well on property down gradient from the proposed O&G location, the City may request that ConocoPhillips drill monitoring well(s) capable of testing all available aquifers on one of the City of Aurora’s existing easements (Easement Well) within ½ mile of the O&G location.*
 - a. *If an Easement Well is requested, ConocoPhillips and the City will coordinate to identify the optimal monitoring well location(s) downgradient from the O&G location. Once the location is finalized, APTIM will submit permit application(s) to install monitoring well(s) to the SEO. It is anticipated that monitoring wells will be installed at least one month prior to the commencement of drilling for the O&G location.*
 - b. *Monitoring wells will be installed as either a nested well or as individual wells capable of testing all available aquifers on one of the City of Aurora’s existing easements. ConocoPhillips and the City will agree on the placement, design, and installation schedule of the monitoring wells prior to monitoring well permit submittal to the SEO.*
 - c. *If the City has not obtained an easement prior to ConocoPhillips beginning drilling operations, the City may request the easement well be installed anytime during the drilling, completions, or production phase of the O&G well once the City has obtained a suitable easement.*
4. *The City’s request to drill a City Easement Well is outside of the O&G permit application process. The City shall not delay the O&G permit application process if the City chooses to request that Operator drill a City Easement Well. The City shall process Operator’s OGP’s once the Operator has complied with or received a variance regarding the Baseline Water Quality Testing or has agreed to drill a Requested Well.*
5. *Monitoring wells will be constructed according to industry standards as per the Well Construction Rule 2 CCR 402-2 and according to any permit requirements as directed by the SEO. Construction diagrams which are representative of typical monitoring well construction as per Rule 2 CCR 4020-2 are shown in Figure 2. Construction diagrams specific to this O&G location will be*

provided as part of continued discussions with the City regarding monitoring well construction, placement, and approval for this O&G location.

6. *Testing of these monitoring wells will be conducted using standard industry procedures, consistent with the COGCC Rule 609 Model Sampling and Analysis plan and will include the intervals and analytes as listed in Section 3.2 and 4.0 below for baseline and subsequent sampling.*
7. *The anticipated monitoring well permitting and installation schedule is included in Appendix C.*
8. *Any timelines listed herein will be subject to change based on City requirements and O&G location specific issues which may be outside of ConocoPhillips' control.(water)*

23F. (Discussed) Under the section titled “Well Owner Communication”, add a paragraph that includes what steps the operator will take if the wells to sample become unavailable, both prior to drilling as well as after the SPUD date. (Water)

23G. (Discussed) In figure 1, “permitted wells within a ½ mile radius”, include “expected” down gradient zones for both the Denver Basin and the Alluvial aquifers. (Water)

23H. (Discussed) If a drilling a monitoring well (“requested well” or “city easement well”) is anticipated, then include the schedule, location, and design to install the well in the site-specific submittal. These are required for a conditional permit. An anticipated “city easement well” timeline of events is needed in the “Installation of Monitoring Well” section. (Water)

RESPONSE to 23A-23H: As noted in the Second Submission Review letter for Rush South, these comments have been previously addressed and resolved with Joshua Godwin, City of Aurora Water, and reflected in the Plan.

23I. (Discussed) Because of the possibility that the applicant may not fulfill all obligations prior to obtaining a permit and has expressed a desire to not impede their intended schedule, a conditional permit may be issued. Conditions set in the conditional permit are such that if the requirements listed are not met by listed dates, then the permit can be revoked until requirements are met. (Water)

RESPONSE: Acknowledged.

24. Fugitive Dust Suppression Plan (Aurora Water)

24A. This is acceptable as submitted.

25. Fluid Disposal Plan (Aurora Water)

25A. This is acceptable as submitted.

26. Water Use Plan CDPHE Reg. 84

26A. N/A

27. Weed Control Plan (Aurora Water and PROS)

27A. This is acceptable as submitted.

28. Wildlife Impact Mitigation Plan (PROS)

28A. This is acceptable as submitted.

29. Stormwater Management Plan (Public Works)

29A. This document will be reviewed and commented on by the standard SWMP Review team via upload through the separate Public Works portal; please coordinate with Public Works to utilize that portal if you haven't already.

RESPONSE: The Stormwater Management Plan has been approved by Public Works.

30. Preliminary Drainage Report / Letter (Public Works)

30A. This document will be reviewed and commented on by the standard SWMP Review team via upload through the separate Public Works portal; please coordinate with Public Works to utilize that portal if you haven't already.

RESPONSE: The Drainage Letter Report has been approved.

31. Road Maintenance (Planning/Public Works)

31A. An amendment to the Road Maintenance Agreement is required before the proposed haul route can be utilized; the amendment is in process but not yet complete. Please see the redline comment on page 1.

31B. The amendment should include the segment of Jewell Avenue proposed for part of the Haul Route for this site.

RESPONSE to 31A-31B: An Amendment to the Road Maintenance Agreement was sent to Victor Rachael on September 18, 2019. He requested additional materials for internal review, and those were provided on October 7, 2019. Applicant believes this to be the final version of the Amendment and is waiting on City's execution.

32. Air Quality Plan (Planning)

Field-Wide Plan

Previous Comments:

32A. Add in the Odor BMP (routing to close-loop systems)

32B. Tie the air pollutant data to health-based criteria for exposure limits and exceedances of National Ambient Air Quality Standards (NAAQS) or Agency for Toxic Substances and Disease Registry (ATSDR) acute or chronic exposure levels.

Explain how you will use this data to evaluate the adequacy of any air pollution control devices and emission reduction measures.

32C. Data communication should include trend identification related to increases/ decreases/spikes in concentration or emissions.

32D. See redline comments.

Site-Specific Plan

32E. Add in the site-specific power source (electric power part of BMP).

32F. Add in the Tier 2 and Tier 4 fracturing pump utilization from the Field-Wide Plan.

32G. See redline comments.

RESPONSE to 32A-32G: All comments and redlines to the Field-Wide Plan and Site-Specific Plan were discussed with Juliana Berry on September 18, 2019. Based on these discussions and clarifications, revisions were made to the Air Quality Plan.

33. Noise Management Plan (Planning)

33A. No further comments. Please combine this latest 4 page document with the site specific noise report for Rush South and include in your resubmittal.

RESPONSE: Plans have been combined and included.

34. Application Form (Planning)

34A. Staff is in receipt of the updated checklist.

35. 1-Mile Radius Abutters List (Planning)

35A. This requirement was satisfied at first submittal.

36. COGCC Forms / 2A (Planning)

36A. Please clarify where this Form 2A is located and if it has been recently amended. It cannot be found in the most recent resubmittal.

RESPONSE: We have provided the current Form 2A that is in process with the COGCC. We are currently working with COGCC staff to advance this project; however, they will not approve our Form 2A until they receive a disposition on the OGP. Upon approval by the City of the OGP, we will engage with COGCC staff to ensure that the Form 2A conforms to the details of the OGP. Applicant will provide the final Form 2A to the City when it becomes available.

If you have any additional questions, please do not hesitate to contact me directly at 720.249.3539.

Sincerely,
CVL Consultants of Colorado, Inc.



Melinda Lundquist, PE
Senior Vice President