

February 4, 2020

Juliana Berry
Planner II, City of Aurora Planning Department
15151 E. Alameda Parkway, Suite 2300
Aurora, CO 80012

Re: Second Submission Review– Eastern Hills South – Oil and Gas Permit
Application Number: DA-2155-01
Case Numbers: 2019-6057-00

Dear Ms. Berry:

Thank you for the review comments.

Ascent Geomatics Solutions has considered comments from City of Aurora Planning Department, other City of Aurora Departments and Agencies, Xcel Energy, and community members for the referenced project. We have restated the comments below and addressed them per the italicized responses in black.

PLAN SET COMMENTS

1. Plan Set

1A. Ensure that the well pad acreage, total disturbed area acreage, and size of the site after reclamation match across the Plan Set Sheet 1 Data Block, Letter of Introduction, and Form 2A (Planning)

RESPONSE: The Sheet 1 Data Block, Letter of Introduction, and the Form 2A now reflect the same acreages.

1B. Sheet 1 (Planning)

- Fix or address the discrepancy in the Cultural Features Distances table regarding the Building Unit distance from the well- the Noise Management Plan indicates that there are >5 RBUs within 2,640', and yet this table shows 3,868'

RESPONSE: The cultural distances listed on sheet 1 are accurate. The Noise Management Plan incorrectly states that there are 5 RBUs within 2,640' of the New Wells planned for this location. The baseline noise study was a combined study performed for the Eastern Hills North and Eastern Hills South, but the Eastern Hills South was done out of an abundance of caution, and not required under the terms of the OA. The Noise management plan has been revised and provided as a part of this submittal.

- Revise the language of Site Plan Note #5 to reflect the now-executed Agreement

RESPONSE: Completed

1C. Sheet 2 (Planning)

The line for the Post-Oil Pipeline Haul Route is hard to distinguish- please use a more prominent symbol such as a thicker line

RESPONSE: Completed

1D. Sheet 4 (Planning)

Add dimensions to the Noise Mitigation Berm, including height

RESPONSE: Completed

1E. Sheet 5 (Planning)

Add dimensions to the Noise Mitigation Berm, including height

RESPONSE: Completed

1F. Sheet 6 (Planning)

The Context Map is still missing the 500-year floodplain limits

RESPONSE: Completed

1G. Sheet 10 (Planning)

Revise the language of Note #1 to reflect the now-executed Agreement

RESPONSE: Completed

1H. Sheet 12 (Planning)

- The Context Map is still missing the 500-year floodplain limits as well as the proposed air and well monitoring sites

RESPONSE: Completed

- Fix the Sheet Number to just "12"

RESPONSE: Completed

1I. Sheet 13 (Planning)

Fix the Sheet Number to just "13"

RESPONSE: Completed

1J. Sheet 4 (Water)

FYI: An I&M plan for maintenance of all sediment and detention basins, as well as other water quality appurtenances is required to be submitted with SWMP plans.

RESPONSE: I & M Plan is currently being reviewed by Vern Adam and Steve Dekoski and once approved and fully executed will be submitted to the Water Department. The Storm Water Management Plan for this project has already been approved, but has been revised to include the permanent outlet structure.

1K. Please ensure that physical drainage-related features, including noise mitigation berms and sediment basin dimensions, are reflected on the plan set. (Public Works and Planning)

RESPONSE: Completed

2. Vicinity / Context Map (Planning)

2A. Please continue to incorporate into the overall Plan Set.

RESPONSE: Acknowledged.

3. Interim Reclamation Plan (Planning)

3A. Please continue to incorporate into the overall Plan Set.

RESPONSE: Acknowledged.

4. **Visual Mitigation Plan (Planning)**

4A. N/A

RESPONSE: Acknowledged.

5. **Landscape Plan (Planning/Landscape)**

5a. **Sheet 7 Landscape Plan**

- Label the proposed well heads.

RESPONSE: Completed

- Adjust the location of the proposed privacy fence to correspond with the location shown on other sheets in the plan set. It should be on the outside or along the perimeter of the proposed swale/drainage channel.

RESPONSE: Completed

- Adjust the locations of the proposed viewports on the sheet to be able to include the street.

RESPONSE: Completed

- Show the edger as a dashed line type and add to the legend this sheet.

RESPONSE: Completed

5B. **Sheet 8 Plant Schedule and Details**

- Update the Planting Note where indicated.

RESPONSE: Completed

- Update the note at the bottom of the Landscape Buffer Requirement Table.

RESPONSE: Completed

6. **Lighting Plan (Planning)**

6A. Please continue to incorporate into the overall Plan Set.

RESPONSE: Acknowledged.

7. **Building and Structure Elevations (Planning)**

7A. Please continue to incorporate into the overall Plan Set.

RESPONSE: Acknowledged.

LETTER OF INTRODUCTION COMMENTS

8. **Project Summary (Planning)**

8A. Ensure that the well pad acreage, total disturbed area acreage, and size of the site after reclamation match across the Letter of Introduction, Plan Set Sheet 1 Data Block, and Form 2A.

RESPONSE: The Sheet 1 Data Block, Letter of Introduction, and the Form 2A now reflect the same acreages.

8B. Reference the proposed cattle guards in the paragraph including the wildlife fence under Purpose, Pad and Access Road as described in previous applications.

RESPONSE: Completed

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

9A. **Reclamation**- Refine "cropland" to "cropland (dry land)" to match the Form 2A.

9B. Transportation and Circulation- List the haul routes, as per previous applications.

RESPONSE: Completed

10. Neighborhood Meeting Schedule & Results / Response to Public Comments (Planning)

10A. This is acceptable as submitted.

RESPONSE: Acknowledged.

10B. Additional Electronic Comments received by the City:

- Name: M. Jennifer Kim

Organization: 26252 E. Archer Avenue, Aurora CO 80018 (mjenniferkim@gmail.com)

Comment: "My name is Jennifer Kim and I recently moved in the Adonea community. I just received the memorandum regarding the project number 1405164.

Are they planning to drill for oil and gas in the 10 acres and how is that going to affect my house in my community. I am terribly concerned.

M. Jennifer Kim 303-739-7209."

Response: ConocoPhillips understands that real estate valuation companies and insurance companies utilize complex, multi-faceted, and highly fact dependent processes that are done on a property by property basis but cannot offer insight into the rating policies for specific insurers. Of the validated studies we are aware of, oil and gas production show little or no impact on housing values.

- Name: Jose Granda

Organization: Adonea subdivision, Aurora CO 80016 (grandaj@gmail.com)

Comment: "I do not want this project to be approved. I do not want an oil and gas wells to be done near my home. This project will cause risk and pollute the area near my home. Please take this into consideration as there are many new housing developments being constructed near the location of this project.

Thank you"

Response: A 2017 analysis by the Colorado Department of Public Health and Environment (CDPHE) found no conclusive evidence that oil and natural gas development in nearby communities pose any significant public health risk. The study had three key findings:

- **Based on currently available air monitoring data, the risk of harmful health effects is low for residents living near oil and gas operations.**
- **Studies of populations living near oil and gas operations provide limited evidence of the possibility for harmful health effects. This needs to be confirmed or disputed with higher quality studies.**
- **At this time, results from exposure and health effect studies do not indicate the need for immediate public health action, but rather indicate the need for more detailed exposure monitoring and systematic analyses of health effects of residents living near oil and gas operations.**

In fact, the state's Chief Medical Office Dr. Larry Wolk has said the data collected demonstrates no correlation between oil and natural gas development and detrimental health effects.

The company also conducts industrial hygiene surveys of our employees during maintenance and operations activities. All survey results have been well below the threshold limits set by OSHA and don't indicate a higher potential for health impacts to our workers.

- Name: Terri Maulik
Organization: Arapahoe County Planning Division, 6924 South Lima Street, Centennial CO 80112
(referrals@arapahoegov.com)

Comment: "If the planned access route changes and Arapahoe County roads will be used for any phase, a road impact fee must be paid to Arapahoe County."

Response: Acknowledged.

- Name: Lawna Cline
Organization: lilred66@ymail.com

Comment: "Please stop approving wells near our community and homes!! Our health and safety are way more important!! Remember 181 that the governor signed!! STOP APPROVING PERMITS FOR DRILLING!!"

Response: This is directed to the City and not the Applicant.

- Name: Craig Moore
Organization: 26977 E. Otero Place, Aurora CO 80016 (craig.d.moore@comcast.net)

Comment: "I support this project."

Response: Thank you for your support!

- Name: Lauren Marroquin
Organization: 212 S. Jamestown Way, Aurora CO 80018 (laurenmarroquin@gmail.com)

Comment: "I do support the efforts to drill for oil. However, when you drill so close to homes and communities that's when it becomes a concern. I know there are certain precautions taken to avoid any mishaps, but mistakes do happen. I would hate for that to be at the cost of families' health. Please reference this article: <https://pubs.acs.org/doi/10.1021/acs.est.7b05983> and here are some more studies: <https://www.colorado.gov/pacific/cdphe/categories/services-and-information/environment/oil-and-gas/oil-and-gas-and-your-health>.

A list of other issues that can be caused:

- De-value home by about \$3,000
- Contamination of groundwater.
- Methane pollution and its impact on climate change.
- Air pollution impacts.
- Exposure to toxic chemicals. Increase in rare cancer in humans.
- Blowouts due to gas explosion.
- Waste disposal.
- Large volume water use in water-deficient regions.
- Fracking-induced earthquakes.
- Trucking TRAFFIC

Me and my family do not agree with you drilling at this proposed location or anywhere within such close proximity to our home. Please consider drilling further east where there are no homes.

Please feel free to contact me if you have any questions. Thanks,

Lauren Marroquin 303.842.6834"

Response:

Real Estate

ConocoPhillips understands that real estate valuation companies and insurance companies utilize complex, multi-faceted, and highly fact dependent processes that are done on a property by property basis but cannot offer insight into the rating policies for specific insurers. Of the validated studies we are aware of, oil and gas production show little or no impact on housing values.

Health Safety and Environment (including air)

ConocoPhillips is committed to be an environmentally prudent operator and to protecting the health and safety of all people living and working around our locations. In addition to the Colorado Department of Public Health and Environment (CDPHE) and COGCC regulations, Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA) have requirements regarding these constituents. OSHA's emphasis on worker safety helps to not only protect onsite workers, but also helps to ensure exposure to offsite persons is also minimized.

Vapor from tanks on all sites will be directed to a vapor recovery compressor unit as needed to meet CDPHE air permit requirements.

All our staff wear 4 gas monitors, which monitor H₂S, oxygen, carbon monoxide, and lower explosive limits (LELs). LELs are listed on our safety data sheets for every chemical we work with.

The company will conduct continuous air monitoring, beginning with a baseline study and continuing through drilling, completion and the life of the well.

Onsite sensors will detect any spikes in hydrocarbons and immediately trigger an alert to our 24/7 integrated operations center that will allow us to investigate and report to the City.

We will obtain an air sample in the event of an increase in hydrocarbon levels.

Safety

We share stakeholders' concerns about safety and that is why our focus on personal and process safety is always our highest priority. It is core to how we operate.

Our primary concern is for the safety and well-being of our employees, contractors, neighbors and communities in which we operate. We believe that our work is never so urgent or important that we cannot take the time to do it safely and in an environmentally responsible manner.

We are proud of our strong safety record in the Niobrara. Our operations group has worked without a recordable injury since we began operating in the area.

Water

ConocoPhillips is committed to groundwater safety and follows all required rules and regulations, including compliance with applicable COGCC regulations regarding well bore integrity and testing.

Groundwater protection begins with quality planning, and engineering design. Well bore integrity is established and maintained using steel surface casing and cement to physically isolate the production from the surrounding rock and aquifers. These barriers are monitored for integrity throughout the life of the well to prevent environmental impacts.

For each new well, the company has agreed to implement a water monitoring and well testing plan based on proximity to available water sources.

In the event sampling were to show degradation of water quality, additional measures may be required, as noted in the terms of the operator agreement.

Earthquake

More than two million wells have been hydraulically fractured worldwide during the past 65 years. Over this period, it has been rare for hydraulic fracturing to trigger a seismic event that can be felt at the Earth's surface.

Studies have indicated that produced water disposal wells can be related to minor seismic activity. Insofar as underground wastewater injection has any relationship to seismic events, ConocoPhillips does not own, operate or utilize any injection wells within the City of Aurora.

Hydraulic Fracturing

Hydraulic fracturing, also known as fracing, is a completion method that occurs after a well is constructed and well integrity is confirmed. It is not a method for drilling or constructing a well. Fracing is a safe and proven technique that has helped develop oil and natural gas resources safely since the late 1940s. Many studies – and decades of history – indicate that oil and natural gas operations, including fracing, are safe when wells are properly designed, constructed and operated. Well operations, including those involving horizontal drilling and fracing, are low risk activities that we manage responsibly. We are confident in our ability to safely and responsibly develop oil and natural gas resources by using proven practices. We follow a set of principles that incorporate established industry standards and are designed to meet or exceed regulatory requirements.

Chemical Disclosure of Fracing Fluid

ConocoPhillips supports disclosure of the chemical ingredients used in fracing fluids in a way that informs the public and protects proprietary company information. Disclosure of these chemicals is required under the terms of the operator agreement. Fracing fluid is comprised of up to 99.5% water and sand. Small amounts of chemical additives are necessary to reduce fluid friction, kill bacteria that are present in the formation and enhance the fluid's ability to transport the propping agent. Many of these chemical additives are commonly used in everyday consumer products, such as toothpaste, ice cream, cosmetics, household cleaners, table salt substitutes and antiperspirant. As part of the operator agreement, ConocoPhillips has agreed to an extensive list of chemicals we will not use on site.

Trucking

ConocoPhillips has a Road Maintenance Agreement with the City with designated Haul Routes and works to minimize the truck traffic by using pipeline for oil and gas and above ground temporary water lines to eliminate traffic.

11. Response to First Review

Letter Comments (Planning)

11A. This is acceptable as submitted.

RESPONSE: Acknowledged.

OPERATIONS PLAN COMMENTS

12. Operations Plan (Planning)

12A. The field-wide Operations Plan has been previously accepted by the City.

RESPONSE: Acknowledged.

13. Project Development Schedule (Planning)

13A. Upload the Project Development Schedule for Eastern Hills South at the next submission; the document uploaded at this second submission is for Lone Tree North.

RESPONSE: The Project Development Schedule for Eastern Hills South was uploaded with this submission.

14. Security Plan (Planning)

14A. The field-wide Operations Plan has been previously accepted by the City.

RESPONSE: Acknowledged

15. Decommissioning / Final Reclamation Plan (Planning)

15A. The field-wide Operations Plan has been previously accepted by the City.

RESPONSE: Acknowledged

EMERGENCY RESPONSE PLAN COMMENTS

16. Emergency

Response Plan

(Building/Life Safety)

Field-Wide Plan

16A. The field-wide Emergency Response Plan has been previously accepted by the City.

RESPONSE: Acknowledged

Site-Specific Plan

16B. This requirement was satisfied at initial submittal.

RESPONSE: Acknowledged

17. PHA-HAZOP

Analysis

(Building/Life

Safety) Field-Wide

17A. The field-wide PHA-HAZOP Analysis has been previously accepted by the City.

RESPONSE: Acknowledged

Site-Specific

17B. This requirement was satisfied at initial submittal.

RESPONSE: Acknowledged

COMMENTS ON OTHER REQUIRED ITEMS

18. Traffic Letter / Plan (Traffic)

18A. This requirement was satisfied at initial submittal.

RESPONSE: Acknowledged

License Agreements (Real Property)

19A. Work with Real Property to obtain License Agreements related to lay-flat lines.

RESPONSE: Acknowledged

19B. Should a proposed culvert encroach into City ROW's or easements, a License will be required.

RESPONSE: Acknowledged, however, there are no culverts encroaching into City ROW's or easements.

19C. If a drainage easement is required for outlet structures, then a License Agreement will be required. **RESPONSE: It was established through negotiation between the City and Applicant that a drainage easement would not be required for outlet structures.**

19. Recorded Surface Use Agreement (Real

Property) 20A. This requirement was satisfied at initial submittal.

RESPONSE: Acknowledged

20. Property Owner Authorizations (Real

Property) 21A. This requirement was satisfied at initial submittal.

RESPONSE: Acknowledged

21. Water Delivery Method/Water Supply Plan (Water

Water Delivery Agreement

22A. The field-wide Water Delivery Agreement has been previously accepted by the City.

RESPONSE: Acknowledged

Water Supply Plan

22B. This requirement was satisfied at initial submittal.

RESPONSE: Acknowledged

22. Groundwater Quality Monitoring Plan (Water)

23A. As noted in the first review letter, the variance requested included in the initial submittal was denied.

RESPONSE: Acknowledged.

23B. Until initial sampling, City staff and COPC environmental staff will have a standing call every other week to provide an update on the sampling and/or (if applicable) status update of the “requested well” or “easement well” installation schedule.

RESPONSE: City staff and COPC environmental staff have a standing call every other week to provide updates.

23C. If applicable and as noted in the field-wide submittal, COPC will notify, in writing, the City at least 40 weeks prior to drilling if the “requested well” is not possible and that parties (City and COPC) will have to pursue the “easement well” protocol in order to comply with the monitoring well requirement.

RESPONSE: Acknowledged.

23D. If applicable and as noted in this second submittal, COPC will notify the City immediately of any delays outside of COPC’s control in email specifically addressing the cause of the delays.

RESPONSE: Acknowledged.

23. Fugitive Dust Suppression Plan (Water)

24A. The field-wide Fugitive Dust Suppression Plan has been previously accepted by the City.

RESPONSE: Acknowledged.

24. Fluid Disposal Plan (Water)

25A. The field-wide Fluid Disposal / Waste Management Plan has been previously accepted by the City.

RESPONSE: Acknowledged.

25. Water Use Plan CDPHE Reg. 84

26A. N/A

RESPONSE: Acknowledged.

26. Weed Control Plan (Water and PROS)

27A. The field-wide Weed Control Plan has been previously accepted by the City.

RESPONSE: Acknowledged.

27. Wildlife Impact Mitigation Plan (PROS)

28A. This requirement was satisfied at initial submittal.

RESPONSE: Acknowledged.

28. Stormwater Management Plan

29A. These Civil documents will be reviewed and commented on by the standard SWMP Review team via upload through the separate Public Works portal; please contact Public Works at 303-739-7457 to set up a Pre-Submittal meeting.

RESPONSE: Based on recent correspondence with the City of Aurora Water Department the Applicant will be filing an Authorization to Revise Plans, a Preliminary Drainage Letter, and revised SWMP Plans reflecting the detail of a permanent outlet structure from our sediment basin to Public Works. These items have been included with this planning submittal for reference as well. The site plan reflecting the permanent outlet structure is also included with this submittal.

29B. FYI: Profiles for gathering lateral pipelines crossing any Aurora Water utilities, ROWs, and floodplains will be required as part of the SWMP plan. (Water)

RESPONSE: Bronco Pipeline met with COA planning and water and will be following the same permitting process outlined in the Access operating agreement executed with the city.

29C. FYI: Outlet structures will be required on detention basins- detail required (Water)

RESPONSE: Completed. The outlet structure has been inserted into the Site Plan and SWMP. It has been determined that for these projects sediment basins not extended detention basins will be installed under current plans.

29. Preliminary Drainage Report / Letter

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: Acknowledged.

30B. If there was a previously-approved Preliminary Drainage Letter (PDL), and there have been no changes to the Site, please submit a drainage conformance letter asserting such and attach the previously-approved PDL to it. If there have been changes to the Site since the previously-approved PDL, explain those changes in a conformance letter and any impact on drainage patterns, flows, or drainage features and attached the previously-approved PDL to it.

RESPONSE: The Applicant will be filing an Authorization to Revise Plans, a Preliminary Drainage Letter, and revised SWMP Plans reflecting the detail of a permanent outlet structure from our sediment basin to Public Works.

30. Road Maintenance / Construction (Public Works)

31A. Please upload the revised executed Road Maintenance Agreement at the next submission.

RESPONSE: Completed.

31. Air Quality Plan (Planning)

Field-Wide Plan

32A. The field-wide Air Quality Plan has been previously accepted by the City.

RESPONSE: Acknowledged.

Site-Specific Plan

32B. Submit a complete Plan, including confirmed monitoring locations, pre-construction baseline air monitoring results, established alert level thresholds, all pre-activity information, all location-specific considerations, any anticipated location modifications and timeline, and location data plan.

RESPONSE: Completed.

32C. The Plan should reference how the reports will include trend identification related to increases / decreases /spikes in concentration or emissions as related to the health-based criteria.

RESPONSE: Completed.

32D. Pre-construction baseline air monitoring (under Monitoring Strategy) is still missing language about prior notification to the City (please reference Rush North's final submission for the preferred language, as previously agreed-upon between the City and the applicant).

RESPONSE: Completed.

32E. #5 on page 3 is meant to be an asterisk instead- please amend.

RESPONSE: Completed.

32. Noise Management Plan (Planning)

33A. The Plan is still missing a Mitigated Noise Modeling Scenarios section, a Mitigated Noise Modeling Results section, and a corrected Conclusion section that notes exceedance of the C-weighted COGCC and OA noise limited during fracing operations at multiple modeled receiver locations.

RESPONSE: Based on the conclusion of the Noise Mitigation Plan no noise mitigation is required for this site. However, based on the site's location pursuant to Exhibit A-2 of the OA the applicant is required to mitigate noise during the drilling and completions phase of development using berming, bales, or sound walls. The Applicant has chosen to use the sound mitigation berms and has labeled them appropriately on the site plan.

33B. When adding in the Modeled Mitigation Scenario table, please expressly list the measures chosen.

RESPONSE: The applicant will use sound mitigation berms during the drilling and completions phase of development to mitigate noise.

33C. For the above two comments, please refer to Eastern Hills North Phase 2 final submission to compare.

RESPONSE: Acknowledged.

33. Application Form (Planning)

Checklist

34A. License Agreements will be required for the lay-flat lines; delete the "N/A" accordingly.

RESPONSE: Acknowledged and completed.

34B. There has been no field-wide Wildlife Impact Mitigation Plan submitted or accepted by the City previously; delete reference to a field-wide acceptance accordingly.

RESPONSE: Completed.

34C. The final version of the COGCC Form 2A must be uploaded at the next submission.

Response: The final version has not yet been submitted and will be provide once filed.

34. 1-Mile Radius Abutters List (Planning)

35A. This requirement is acceptable as submitted.

RESPONSE: Acknowledged.

35. COGCC Forms / 2A (Planning)

36A. Revise the Construction timeline dates to match the updated Project Development Schedule.

RESPONSE: Completed.

36B. Ensure that the total disturbed area acreage and size of the site after reclamation match across the Form 2A, Plan Set Sheet 1 Data Block, and Letter of Introduction.

RESPONSE: The Sheet 1 Data Block, Letter of Introduction, and the Form 2A now reflect the same acreages.

36C. Upload the final version at the next submission.

RESPONSE: The final version of the 2A form has not been submitted but will be provided to the City as soon as the submission is complete.

If you should have any questions or require additional information, please do not hesitate to contact me at 303.928.7128 or via email at regulatory@ascentgeomatics.com. Thank you for your consideration of this matter.

Respectfully,



Justin Garrett
Regulatory Analyst