

Planning Division
15151 E. Alameda Parkway, Ste. 2300
Aurora, Colorado 80012
303.739.7250



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August 9, 2019

Kathy Denzer
Conoco Phillips Company
34501 E. Quincy Ave, Bldg
Watkins, CO 80137

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

Dear Ms. Denzer:

Thank you for your initial submission, which we started to process on Monday, July 29, 2019. We reviewed it and attached our comments along with this cover letter. The first section of our review highlights our major comments. The following sections contain more specific comments, including those received from other city departments and community members.

Since several important issues still remain, you will need to make another submission. Please revise your previous work and send us a new submission on or before Friday, August 23, 2019.

Note that all our comments are numbered. When you resubmit, include a cover letter specifically responding to each item. The Planning Department reserves the right to reject any resubmissions that fail to address these items. If you have made any other changes to your documents other than those requested, be sure to also specifically list them in your letter.

As always, if you have any comments or concerns, please give me a call. I may be reached at 303-739-7209.

Sincerely,

Stephen Rodriguez, Planning Supervisor
City of Aurora Planning Department

cc: Melinda Lundquist, CVL Consultants, 10333 E. Dry Creek Rd. Ste. #240 Englewood CO 80112
Scott Campbell, Neighborhood Liaison
Mark Geyer, ODA
Filed: K:\\$DA\2012-03rev1.rtf



RUSH SOUTH OIL AND GAS PERMIT REVIEW

Initial Submission Review

SUMMARY OF KEY COMMENTS FROM ALL DEPARTMENTS

- See the comment redlines from Planning on the Site Plan, Operations Plan and Executive Summary.
- A license agreement is required for Access; please contact Grace Gray in Real Property to begin the procedure. (See Item 19)
- See the comment redlines for the Traffic letter and Site Plan regarding left turn auxiliary turn lane on Jewell Ave. (See Item 18)
- See the comment redlines on the Site Plan regarding from Engineering. No comment summary was provided. Contact Kristin Tanabe directly with questions.
- See comment redlines from Water regarding Water Delivery, Groundwater Quality Monitoring, Fugitive Dust, Fluid Disposal and Weed Control. (See Items 23-27)
- See comment redlines from Parks (PROS) regarding Weed Control and Wildlife Impact. (See Item 27 and 28)
- See the various comment redlines on the Site Plan, Emergency Response Plan and PHA-HAZOP.
- See comments at the end of the letter from external agencies, Xcel Energy, Tri-County Health and UDFCD.
- As a reminder, the City has developed CAD Data Submittal Standards for internal and external use to streamline the process of importing AutoCAD information into the city's Enterprise GIS. Please note that a digital submission meeting the CAD Data Submittal Standards is required before your final Site Plan mylars can be routed for signatures or recorded. Please review the CAD Data Submittal Standards, including templates and required layer file labeling, at <http://tinyurl.com/AuroraCAD>. Email your Case Manager the appropriate Site Plan file before submitting your final Site Plan mylars. Once received, the City's AutoCAD Operator will run an audit report and your Case Manager will let you know whether the file meets or does not meet the City's CAD Data Submittal Standards. Please email CADGIS@auroragov.org for questions or more detailed instructions.
- Respond to all additional redline comments.
- Respond in your resubmittal to all summary comments and redlines in a separate comment response letter.

REVIEWERS

- Planning – Stephen Rodriguez 303-739-7186 / srodrigu@auroragov.org / Comments in dark teal
- Planning/Landscape – Kelly Bish / 303-739-7189 / kbish@auroragov.org / Comments in bright teal
- Public Works – Kristin Tanabe / 303-739-7306 / ktanabe@auroragov.org / Comments in green
- Building/Life Safety – Will Polk / 303-739-7371 / wpolk@auroragov.org / Comments in blue
- Traffic – Brianna Medema / 303-739-7336 / bmedema@auroragov.org / Comments in orange
- Real Property – Grace Gray / 303-739-7277 / ggray@auroragov.org / Comments in magenta
- Water – Steve Dekoskie and Joshua Godwin / 303-739-7490 and 720-859-4307 / sdekoski@auroragov.org and jgodwin@auroragov.org / Comments in red
- Parks, Recreation, and Open Space (PROS) – Chris Ricciardiello and Curtis Bish / 303-739-7154 and 303-739-7131 / cricciar@auroragov.org and cbish@auroragov.org / Comments in purple

Reviewers: Please list your comments, including summarization of PDF red-lines, under each pertinent document category below. This will be the only comment document provided, and must be utilized to encapsulate all substantive review remarks from each individual department.

**SITE PLAN COMMENTS****1. Site Plan** (Multiple departments)

1A. Delete the Conditional Use in the title block. Show the location of any future LACT building on the appropriate phase sheet. (Planning)

1B. Include the Landscape Plan as part of the Site Plan set. Please verify that there is not a residential building unit constructed within 1,500 feet of the Rush South well pad site. (Planning)

1C. List the quarter-section in the title block. (Real Property)

1D. Show all easements on site. (Real Property)

1E. Clearly show all lot lines of your pad site with measurements. (Real Property)

1F. Show the location of any potential buildings, I.E. LACT Building, etc. (Real Property)

1G. Left turn auxiliary lane is required on Jewell Ave into the Site Access. (Traffic)

1H. Show the 500' setback to the Prairie Water's 60" transmission line. If setbacks can't be met, then a vibration analysis is required to ensure drilling will not impact Aurora Water's existing infrastructure. (Aurora Water)

1I. A profile is required for the site access roadway showing clearances to Aurora Water's utilities. (Water)

1J. Multiple comments on turning templates, which may result in additional pavement needed at Site access to Jewell Ave, intersection of Jewell Ave & Watkins Rd. (Traffic)

Sheet 1

- Advisory Comment: As part of an initial evaluation of Item 14 of the OA, specifically the Emergency Response Plan, the Operator will provide needed funds to Aurora Fire Rescue for the purchase of firefighting foam, fire apparatus and firefighting equipment as needed. It is the City's intent to have this cost analysis you as soon as possible. Please work with the City of Aurora Fire Rescue Office of Emergency Management to ensure that site firefighting needs and requirements are addressed and memorialized during this site review process. Please contact your assigned COA ODA project coordinator initiate this process by scheduling a meeting with Aurora Fire/OEM and the Planning Division. The Office of Emergency Management contact: 303-739-7636 (phone), 303-326-8986 (fax), or (email) afd_oem@auroragov.org, Attn. Chief Chapman.

- Provide an additional site plan note stating the Operators understanding and acceptance of the previously stated requirements.

- Add the following note to satisfy the current requirements: The Operator will provide all maintenance associated to the access road and pad site in order to maintain emergency access for the life of this well site, Sheet 2.

Sheet 3

- Are you intending on dedicating this access road as a fire lane easement? If not, please label as a fire access road.

Sheet 5

- Please show and label the gating systems. Make sure to include width, operating mechanism and Knox hardware in the label.

- Please provide additional information regarding this tank. Identify gallonage, tank, etc.

- Please provide additional information regarding the portable water tanks. For example, Pumping capacity/GPM, Type, Elevated, Feed discharge connection, etc.

Sheet 6

- Please label gating system.

2. Vicinity / Context Map (Planning)

2A. In addition to the Cover Sheet, please show these on a separate sheet as part of the Site Plan set.

3. Interim Reclamation Plan (Planning)

3A. Include this sheet into your Site Plan set.

4. Visual Mitigation Plan

4A. N/A



5. Landscape Plan

5A. Sheet 1 of 5 Landscape Plan (Phase 1) (Planning/Landscape)

- Remove the signature and seal as the city does not review landscape construction drawings and therefore does not require nor need a stamped set of plans.
- Add "Phase 1" to the Landscape Plan title.
- Include the oil and gas structures in the landscape plan.

5B. Sheet 2 of 5 Plant Schedule and Details (Planning/Landscape)

- Add additional language to note 16 as shown on the plan sheet.
- Update the tree size to 2.5".
- Change planting note number 9 to incorporate the following language "but shall be in general conformance with the approved landscape plan".
- Change planting note number 16 to read as follows: Pursuant to the operator agreement, the operator shall implement the landscape plan when a residential building unit is constructed within 1,500' of a well site and once the operator has reasonable access to City main water source that is within 400' of the well site.

5C. Sheet 3 of 5 Landscape Plan (Phase 1 and 2 Reclamation) (Planning/Landscape)

- Include the oil and gas structures.

5D. Sheet 4 of 5 Landscape Plan (Phase 1 and 2 Reclamation) (Planning/Landscape)

- Include the oil and gas structures.

5E. Sheet 5 of 5 Plant Schedule and Details (Planning/Landscape)

- Add additional language to note 16 as shown on the plan sheet.

5F. Use COA PROS seed mix – Diverse Mixed Grass Prairie Mix for all reclamation and native seeding. (PROS)

5G. Install opaque fence where well pad site is adjacent to Triple Creek regional trail corridor. (PROS)

5H. Work with PROS to refine plant palette where adjacent to Regional Trail corridor (PROS)

4. Lighting Plan (Planning)

6A. *All lighting must be full cut-off and downcast.*

6B. Provide a cut sheet detail of the proposed fixture, and add the associated details to the Lighting Fixture Schedule box on Sheet PH-1 (Planning)

6C. Combine as a separate sheet to the Site Plan set.

7. Building and Structure Elevations (Planning)

7A. Add elevation sheet(s) for all structures, LACT building / living quarters and offices, with dimensions and keyed material, as applicable, to the overall Site Plan set. (Planning)

LETTER OF INTRODUCTION COMMENTS

8. Project Summary (Planning)

8A. Detail the permanent equipment as identified in the PHA-HAZOP analysis.

8B. See comment 14A below.

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

9A. Please provide *site-specific* details in the resubmittal. Include this as a separate document. *Do not* just refer to plan notes. Overlooked BMPs include, but are not limited to (Planning):

- Burning
- Class II Underground Injection Control Wells
- Cultural and Historical Research Protection
- Discharge Valves
- Electric Equipment
- Flowlines
- General Maintenance
- Low Profile Tanks



- Notifications to the City (Steve Rodriguez at srodrigu@auroragov.org is preferred)
- Reduced Emission Completions
- Tree Mitigation
- Water Supply
- Wellbore Integrity and Aquifer Protection

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

10A. Neighborhood comment: *Aimee Potter (resident) - This is irresponsible of Aurora to approve more wells in this community. There will be lasting policy ramifications and these wells interfere and affect the health and safety of residents, communities, and animals. Additional studies need to be completed before any additional wells are approved. This is not a democratic process and community members are excluded from the decision-making process.*

10B. Please provide the results of your August 6, 2019 meeting that included the Rush South well pad proposal. (Planning)

11. Response to Pre-Application Notes (Planning)

11A. Provide an Initial Review Comment Response letter with your resubmittal. (Planning)

OPERATIONS PLAN COMMENTS

12. Operations Plan (Planning)

12A. Add the Reduced Emissions Completion rules to the Operations Plan, and list them (Planning)

12B. Add the section on Combustion Devices from the Air Quality Plan to the Operations Plan too (Planning)

12C. Address the following BMPs in the Operations Plan. If some of this information is provided in the Executive Summary then pull it out of the Summary and include it in the Operations Plan. (Planning):

- Automatic Safety Protective Systems and Surface Safety Valve
- Burning
- Containment Berms
- Cultural and Historical Resource Protection
- Discharge Valves
- Electric Equipment (Production Phase)
- Maintenance of Machinery
- Mud Tracking
- Odor
- Removal of Debris
- Trailers
- Low Profile Tanks
- Plugged and Decommissioned Well Testing
- Reclamation (regarding concurrent submission to the City of a final reclamation plan)
- Removal of Equipment (regarding removal within 30 days, and no permanent storage of removable equipment)
- Wellbore Integrity and Aquifer Protection (regarding continuous column of surface casing cement, production casing, and integrity testing and monitoring)
- Transportation and Storage of Fluids (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)

13. Project Development Schedule (Planning)

13A. This is acceptable as submitted.



14. Security Plan (Planning)

14A. List any security plan features other than fencing and gating. You can submit this in your Executive Summary or the Operations Plan.

15. Decommissioning / Final Reclamation Plan (Planning)

15A. Please combine this into your Site Plan set.

EMERGENCY RESPONSE PLAN COMMENTS

16. Emergency Response Plan (Building/Life Safety)

16A. Page 7

- Question: Does the level of tiered response directly correlate to the plan development?
- Question: Will Tier II and III individualized be submitted?
- Advisory note: The provided links are inaccessible by COA staff.

Page 18

- Advisory Comment: Advisory Comment: As part of an initial evaluation of Item 14 of the OA, specifically the Emergency Response Plan, the the Operator will provided needed funds to Aurora Fire Rescue for the purchase of firefighting foam, fire apparatus and firefighting equipment as needed. It is the City's intent to have this cost analysis you as soon as possible. Please work with the City of Aurora Fire Rescue Office of Emergency Management to ensure that site firefighting needs and requirements are addressed and memorialized during this site review process. Please contact your assigned COA ODA project coordinator initiate this process by scheduling a meeting with Aurora Fire/OEM and the Planning Division. The Office of Emergency Management contact: 303-739-7636 (phone), 303-326-8986 (fax), or (email) afd_oem@auroragov.org, Attn. Chief Chapman. Provide an additional site plan note stating the Operators understanding and acceptance of the previously stated requirements.
- 2.8 Wildfire/Forest Fire Checklist is missing the activation of 911 emergency services. Is there reason why the activation of 911 has been omitted from some of the emergency checklists?

Page 31

- Aurora LEPC will need to be added to the local contacts. Heather McDermott is no longer the Adams County LEPC point of contact. Provide updated and verified contact information.

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

17A. Page 1

- The PHA-HAZOP portion of the site plan submittal shall be signed & stamped by a Professional Engineer.

COMMENTS ON OTHER REQUIRED ITEMS

18. Traffic Letter / Plan (Traffic)

18A. See comments on Traffic Letter. Multiple items identified in BMP 27 were missing. (Traffic)

18B. Eastbound Left turn auxiliary lane on Jewel Ave into Site Access is a requirement. Tapers shall comply with City Standards and the CDOT SHAC. (Traffic)

19. License Agreements (Real Property)

19A. *License Agreement required for access.*

20. Recorded Surface Use Agreement (Planning)

20A. Staff is in receipt of the Amended and Restated Surface Use Agreement which shows the subject property well pad site in the *Coal Creek Reserve Parcel A* exhibit.

21. Property Owner Authorizations

21A. See comment 20A above.

**22. Water Delivery Method (Aurora Water)**

22A. Include a plan showing the lay-flat water pipe sizes and alignments.

23. Groundwater Quality Monitoring Plan (Aurora Water)

23A. This is not a complete plan. We require a stand alone document that contains site specific data and includes, at least, a map of the site with identified viable wells for sampling, distances to identified wells, WDIDs, aquifers the wells are screened in, well owners, the priority order given to the wells selected for sampling, the rationale on how priority was assigned, the status of well on file, and a Professional Engineer or Professional Geologist signing off on the plan as acceptable and sufficient for monitoring the adjacent O&G operations, in addition to what was provided in the recent Rush South Submittal. (Water)

23B. Having reviewed the one well recommended to monitor the Rush South site, Well Permit No. 251833 is an unsuitable well to monitoring groundwater quality around the Rush South Pad site. A single landfill monitoring well at alluvial depth, 1990 feet away upgradient of the pad site is not an appropriate place to measure groundwater quality and would not allow ConocoPhillips to collect a representative sample. (Water)

24. Fugitive Dust Suppression Plan (Aurora Water)

24A. If possible, please describe what “reasonably available control technology” you would employ as expressed within paragraph 2. Would this be spraying with water or magnesium chloride, etc.? (Water)

24B. Please include other best management practices that will be used on site to control fugitive dust (i.e., speed controls, construction curtailment during a specific high-wind scenario, etc.) (Water)

25. Fluid Disposal Plan (Aurora Water)

25A. This plan is lacking significant detail. For instance, at which approved facility will the produced water be disposed? How many tanker trucks do you anticipate being necessary to remove the produced water from the site and how often would they be on site. What about handling of the water used within the hydraulic fracturing process? Where and how will it be disposed? How will the drilling mud be disposed and by what means? How is the drilling mud captured on-site? How will spills be managed and disposed (in accordance with the SPCC plan)? Has the site developed an SPCC plan? If so, that should be included in the disposal plan. Are there any other fluids stored on site? If so, how are they managed and disposed? Again, the plan needs to have sufficient detail to address who, what, when, where and how. (Water)

Include facility names, addresses and volumes for the waste water disposal locations. Identify deep water injection well locations to be used for disposal. (Water)

26. Water Use Plan CDPHE Reg. 84

26A. N/A

27. Weed Control Plan (Aurora Water and PROS)

27A. This plan is still lacking in detail and should minimally address the four W’s.....who, what, when and where and if necessary, how it is being applied. For instance, how often will the bare ground weed control be applied (i.e., once per year, twice per year, etc.)? Depending upon frequency what time of year will it be applied? At the beginning of the growing season? In addition, how often will the selective weed control be applied or will it merely be applied as needed? Finally, who will be applying the weed control? Will it be done by the contractor or by on-site personnel? Will it be applied by a certified pesticide/herbicide applicator?

27B. PROS - The Weed Control Plan is primarily a listing of products and materials with applicable data sheets. What's missing is an actual weed control plan detailing dates, times, frequencies of application, etc for the purpose of actually managing weeds for the well pad site in question. Provide more detailed information that may be reviewed by COA PROS as an actual plan. PROS will provide comment following revisions.

27C. Please address the Flammable Material BMP in the Plan. (Planning)

28. Wildlife Impact Mitigation Plan (PROS)

28A. Show the ½ mile buffer radius around the well pad sites.

**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.

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.

31. Road Maintenance / Construction (Planning and Public Works)

31A. Please follow the approved Road Maintenance Agreement which is specific for this site. It references in part visual surveys, repair obligations and bonds.

32. Air Quality Plan (Staff)**32A. First Submission as a Generic Field-Wide Plan**

- Double-check all wording and sentence structure for clarity and completeness
- Provide a table of targeted compounds and include methane
- List applicable federal, state, and local laws and regulations with which you must comply, and which you reference throughout the document
- Provide the contact information of your third-party emissions monitoring company, and provide the name of the company that will audit the Plan (or list as an internal audit if applicable)
- Indicate how often the audits will occur (what is "regular basis"?), and ensure that the City will be given copies of audit reports
- Be clear as to where the electric line power is coming from, note where the pad for the rig and diesel engines will be located on the site, and correct the contradiction between the first two bullet points under 6.1 (the first bullet states that electric power is available, while the second bullet point makes it sound as though electrical infrastructure is not available yet)
- List a City point of contact for all Air Quality Plan communications; Steve Rodriguez at srodrigu@auroragov.org is preferred
- How often will operational staff visit the site with a personal gas detection monitor for informal leak detection? What is the trigger? Is this different than the weekly field inspections per CDPHE compliance?
- Be precise about which air emission reduction measures will be utilized during Ozone Air Quality Action Days, and who determines the feasibility of the implementation
- What is the alert level threshold for pollutant concentrations? The City should be added as a recipient of alerts when targeted/monitored compounds exceed pre-determined, acceptable levels
- Provide your internal action plans with tasks at second submission

32B. Second Submission to Add a Site-Specific Section

- Provide a table of targeted compounds and include methane
- Detail the establishment of baseline air quality testing within 500 feet of the pad site
- Describe the methods to locate the sampling sites and deploy the sampling technology- rationale and data should include wind direction prevalence, comparative location of site operations, proximity to residential uses, proximity to off-site fueling stations, and possible nearby mobile source activity such as traffic. Upwind and downwind sampling near the well source should be considered and noted
- Describe the location of the sampling sites
- Provide information on the sampling technology- limits of detection, sensitivity, calibration, and other operational parameters
- Outline the frequency and duration of monitoring during all phases of the operation (pad construction, drilling, completion, production, reclamation) and account for seasonal and operational conditions such as wind speed, wind direction, and temperature. Explain how the ambient background data will be distinguished from local pad impacts
- Address continuous monitoring versus periodic monitoring (how often? trigger?), and the duration of sampling events
- Detail the intended quality assurance and quality control procedures for the equipment and data collection that are recognized by the EPA as standard (including data checks or validation, and maintenance)



- Explain the method of data communication to the City, including frequency and threshold limits that could require immediate notification
- Data communication should include any elevated concentrations of air pollutants that may pose public health risks, and trend identification related to increases/decreases/spikes in concentration or emissions
- 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
- State your compliance with EPA and CDPHE standards for emissions, as those standards apply now or future standards
- Address the “Odor” BMP in the Air Quality Plan

33. Noise Management Plan (Planning)

33A. Address the Noise Mitigation BMP with respect to adjacency to residential building units (1,320 feet) or high occupancy buildings (1,500 feet) and associated noise mitigation based on site-specific characteristics such as the nature and proximity to nearby development, prevailing weather patterns and vegetative cover and topography.

33B. Address the third-party contractor, standard equipment and measurement procedure and schedule details per BMP requirements.

33C. Address the C-Scale noise/vibration measurements and mitigation requirements per the BMP.

34. Application Form

34A. Staff is in receipt of your customized checklist. We are attaching a new checklist for you to utilize with future submittals.

35. 1-Mile Radius Abutters List

35A. Staff is in receipt of this information

36. COGCC Forms / 2A

36A. Please provide this with your next submission.

37. Xcel Energy

37A. Public Service Company of Colorado’s (PSCo) Right of Way & Permits Referral Desk has reviewed the documentation for **Rush South Phase Two**. Please be aware PSCo owns and operates existing underground electric distribution facilities including transformer within the subject property and requests that they are shown on the plans.

The property owner/developer/contractor must complete the application process for any new electric service, or *modification* to existing facilities including relocation and/or removal via xcelenergy.com/InstallAndConnect. The Builder’s Call Line is 1-800-628-2121. It is then the responsibility of the developer to contact the Designer assigned to the project for approval of design details. Additional easements may need to be acquired by separate document for new facilities.

As a safety precaution, PSCo would like to remind the developer to call the Utility Notification Center by dialing 811 for utility locates prior to construction. If you have questions, call Donna George - Right of Way and Permits, Public Service Company of Colorado / Xcel Energy Office: 303-571-3306 – Email: donna.l.george@xcelenergy.com.

38. Tri-County Health Department

38A. See the attached letter.

39. Urban Drainage and Flood Control District

39A. We have no comments on this project as it is not eligible for UDFCD maintenance. The site is under 130 acres, not adjacent to a major drainage way and does not include any master planned improvements.



August 9, 2019

Stephen Rodriguez
City of Aurora Planning and Development Services
15151 E. Alameda Parkway
Aurora, CO 80012

RE: Rush South Phase Two Oil and Gas Permit Amendment and Conditional Use, DA-2012-02
TCHD Case No. 5764

Dear Mr. Rodriguez,

Thank you for the opportunity to review and comment on the Phase Two Oil and Gas Permit Amendment for the approval of a multi-well oil and gas pad site proposing an additional seven (7) wells and a Conditional Use Permit for the expansion of an Oil and Gas well site within 1,000 feet of an undeveloped platted residential lot located approximately 3,750 feet south of E. Jewell Avenue and 422 feet east of S. Powhaton Road. Tri-County Health Department (TCHD) staff previously reviewed the application for the Phase Two Oil and Gas Permit Amendment and Conditional Use and in a letter dated November 9, 2018 responded with the comments included below. TCHD has no further comments.

Domestic Wastewater Management

Proper wastewater management promotes effective and responsible water use, protects potable water from contaminants, and provides appropriate collection, treatment, and disposal of waste that protects public health and the environment. TCHD, as the local public health agency, plays a role in reviewing whether a new proposed land use has addressed the domestic water and wastewater needs and is the regulating agency for On-Site Wastewater Treatment Systems (OWTS). Because of the nature of oil and gas operations and the typical location of this land use, not in close proximity to existing wastewater facilities, many of the oil and gas sites utilize portable above-ground wastewater storage systems.

To ensure public health is protected, the system utilized for collecting and storing domestic wastewater shall be operated and maintained in a sanitary manner, to include pumping and hauling of the wastewater by a Systems Cleaner licensed by TCHD. TCHD maintains a list of licensed System Cleaners which can be found here <http://www.tchd.org/745/Finding-Certified-Septic-Professionals>. If you have any questions regarding installation or operation of a portable above-ground wastewater storage system, or the process to obtain a Systems Cleaner license, please contact Mike Weakley at 720-200-1593 or mweakley@tchd.org.

Baseline Water Quality Testing

Water quality is unregulated in domestic and irrigation wells in Colorado and monitored in a limited manner for commercial wells. This means water quality testing is typically not required, and the water quality is often unknown. In general, TCHD supports baseline water

quality testing to establish the existing water quality relative to the water well's permitted use and to identify water quality issues that should be known and addressed by the well's owner. Baseline water quality testing can also provide an understanding of pre-existing conditions should the water quality change in the future. Baseline and subsequent water quality testing data can support a determination of whether water treatment may be needed to protect the health of well water users and the health of the environment.

Specific Recommendations for Water Wells within ½ mile:

TCHD believes that any owner of a well within one-half mile of the proposed oil and gas operation should have the opportunity to obtain a baseline water quality test prior to the change in land use. One-half mile is the area of influence established by the Colorado Oil and Gas Conservation Commission's Final Rule 609 Statewide Groundwater Baseline Sampling and Monitoring.

TCHD recommends the following for well permits and water rights holders located within one-half mile of the proposed oil and gas well as they are likely used or will be used for drinking water for humans or animals.

- That the City or applicant notify owners of the wells or groundwater rights owners of the proposed application;
- That the City refer well owners who want to test their wells to TCHD for guidance on recommended testing parameters, procedures for selection of qualified sampling professionals and laboratories, and sharing of data; and
- That the City refers well owners desiring guidance for wellhead protection to TCHD.

Water Supply for Use by Workers

Providing clean and safe water for use by workers for ware washing, food preparation, hand washing, and showering is important. The majority of foodborne illnesses can be traced to improper food handling procedures in home, retail, or office kitchens. Improper transport, storage, cross-connections, and backflow also pose dangers to potable water quality.

TCHD will need to review information regarding the source of water for workers as well as any proposed potable water system used by workers. If the drinking water is to be hauled, a public water system identification number for the water hauler must be provided to TCHD.

Potential Temporary Water Storage

Non-potable water is often used onsite at oil and gas sites. The storage tank should be marked with a sign indicating the water is non-potable. In addition, these very large water storage tanks have the potential to collapse if not properly constructed with appropriate quality controls. A collapse can result in significant damage to the environment, property, and individuals that may be nearby. TCHD recommends the applicant employ proper quality control techniques when constructing the water storage tank.

Above Ground Storage Tanks

Fuel is often stored onsite at oil and gas sites. All storage tanks must have a secondary containment area, a routine monitoring system to check for leaks, and best management

practices implemented in order to prevent the release of contaminants into the soil and water supplies.

Emergency Response Plan/Spill Reporting

One of the most common environmental releases associated with oil and gas drilling operations is the inadvertent surface spill of chemicals, produced water, or flowback water. Thank you for including an Emergency Response Plan with the application materials.

Specific information related directly to a potential leak or spill from the domestic wastewater system should also be addressed. In the event there is a domestic wastewater spill or leak, TCHD should be contacted immediately.

Air Quality Permitting

Air pollutant emissions including flares are regulated by the Colorado Department of Public Health and Environment. Vapor recovery equipment should be used to control the release of vapors into the environment. The use of green completion technology is strongly encouraged at every site. If the site is to use multiple flares and combustors, the oil and gas industry permits should include a regulatory analysis determining the applicability of state and federal air quality permitting requirements and air pollution control regulations for the proposed emissions source(s). More information as well as all forms can be found online at <https://www.colorado.gov/pacific/cdphe/all-permits>.

Dust Control and Mitigation

TCHD encourages the applicant to follow best management practices for erosion control on the site, specifically to minimize excessive dust from land disturbance. This will help minimize the environmental impact resulting from any construction and land disturbance on the site. TCHD encourages any reclamation, including site pad minimization, and reseeding activities to occur as early as possible. This prevents erosion, helps control excessive weeds, and can provide some benefit to air quality.

Traffic Safety

Oil and gas production and monitoring wells involve significant truck traffic to and from a site during the construction and drilling process. TCHD encourages the City to designate a primary traffic route for all construction traffic and deliveries. If the trucks servicing the site will be traveling on a local school bus route, we encourage the City to work with the applicant to minimize traffic during hours when school buses are in operation.

Please feel free to contact me at 720-200-1585 or aheinrich@tchd.org if you have any questions on TCHD's comments.

Sincerely,



Annemarie Heinrich, MPH/MURP
Land Use and Built Environment Specialist

cc: Sheila Lynch, Dylan Garrison, TCHD



Oil and Gas Submittal Documents

This template should be used as a checklist for required documents for Oil & Gas application submittals. Those items marked with an * must also be submitted separately to Real Property, and those with an † to Public Works.

<input type="checkbox"/> Notated checklist
<input type="checkbox"/> Site Plan (including all standard City of Aurora site plan requirements) <ul style="list-style-type: none"><input type="checkbox"/> Vicinity / Context Map<input type="checkbox"/> Interim Reclamation Plan<input type="checkbox"/> Visual Mitigation Plan<input type="checkbox"/> Landscape Plan<input type="checkbox"/> Lighting Plan<input type="checkbox"/> Building and Structure Elevations
<input type="checkbox"/> Letter of Introduction <ul style="list-style-type: none"><input type="checkbox"/> Project Summary<input type="checkbox"/> Applicable BMPs Addressed (Narrative List)<input type="checkbox"/> Neighborhood Meeting Schedule / Results<input type="checkbox"/> Response to Pre-Application Notes
<input type="checkbox"/> Operations Plan <ul style="list-style-type: none"><input type="checkbox"/> Project Development Schedule<input type="checkbox"/> Security Plan<input type="checkbox"/> Decommissioning / Final Reclamation Plan
<input type="checkbox"/> Emergency Response Plan (ERP) <ul style="list-style-type: none"><input type="checkbox"/> PHA-HAZOP Analysis Letter
<input type="checkbox"/> Traffic Letter/ Plan
<input type="checkbox"/> License Agreements*
<input type="checkbox"/> Recorded Surface Use Agreement*
<input type="checkbox"/> Property Owner Authorizations
<input type="checkbox"/> Water Delivery Method
<input type="checkbox"/> Groundwater Quality Monitoring Plan
<input type="checkbox"/> Fugitive Dust Suppression Plan
<input type="checkbox"/> Fluid Disposal Plan
<input type="checkbox"/> Water Use Plan CDPHE Reg. 84
<input type="checkbox"/> Weed Control Plan
<input type="checkbox"/> Wildlife Impact Mitigation Plan
<input type="checkbox"/> Stormwater Management Plan†
<input type="checkbox"/> Preliminary Drainage Report†
<input type="checkbox"/> Road Maintenance/ Construction
<input type="checkbox"/> Air Quality Plan
<input type="checkbox"/> Noise Management Plan
<input type="checkbox"/> Application Form
<input type="checkbox"/> 1-Mile Radius Abutters List
<input type="checkbox"/> COGCC Forms/ 2A
<input type="checkbox"/> FEE PAYMENT