Public Comments

The following comments were provided by members of the public and were considered during the technical review of this application.

No.	Comment	Comment Date
1	Please slow Extraction down. Their drilling plan is poorly put together and inaccurate, e.g., citing that they can inject wastewater and deposit cuttings in Broomfield and using studies on air quality that lack scientific vigor. We don't trust them to follow through on promises made in their so-called cooperation with the city. We need your help in holding them to the highest standards in protecting our health and safety.	02/18/2018
2	This permit is not meeting the requirements that Broomfield has agreed upon with Extraction. Broomfield is not delaying Extraction but trying to assure its citizens that the MOU agreement is honored. Broomfield has identified 220 items in an eighteen page letter to Extraction. Extraction is tired of waiting to begin this project, but they have submitted in many areas in the CDP generic information. Please delay the approval of the current permits that Extraction has given in regards to Broomfield Pads.	02/18/2018
3	After months of working with Broomfield, Extraction has submitted a CDP that is basically an insult. They have section after section that does not address the requirements set forth in the MOU. COGCC has an obligation to not only have Extraction meet COGCC requirements but the the MOU they agreed on. Please do not rush to approve their permits, instead give a clear message that they must follow the MOU that they agreed on. They want to adjust these permits at a later date; this is a waste of your time, Do it right the first time.	02/18/2018
4	After months of working with Broomfield, Extraction has submitted a CDP that is basically an insult. They have section after section that does not address the requirements set forth in the MOU. COGCC has an obligation to not only have Extraction meet COGCC requirements but the the MOU they agreed on. Please do not rush to approve their permits, instead give a clear message that they must follow the MOU that they agreed on. They want to adjust these permits at a later date; this is a waste of your time, Do it right the first time.	02/18/2018
5	The City of Broomfield has concluded that Extraction should be prohibited from submitting its Form 2 and 2A (drilling) permits to the State (COGCC), until Extraction submits to the City a complete Comprehensive Drilling Plan for all of the proposed wells in compliance with the Operator Agreement. The CDP submitted to the city is not approved by the city.	02/19/2018
6	Over the Martin Luther King holiday weekend, I was one of the numerous Broomfield residents who reviewed thoroughly the 700-page "Comprehensive Drilling Plan" submitted by EXTRACTION Oil&Gas (XOG). We found the document to be non-compliant with the requirements as agreed to by XOG and the city of Broomfield. Furthermore, there are numerous unresolved issues that have been ignored by XOG. I know the city has its list of unresolved issues that will be forwarded to COGCC. I also know that other residents have given you the list of non-compliant details and unresolved issues. On this President's Day weekend, it will be appropriate for the COGCC to let the Oil & Gas Industry know that if it insists on drilling in highly populated residential areas, then the old way of doing things will not be accepted. With homes, schools and churches in close proximity, the cost is simply too high to be shoddy. If the Industry can't even take the time to submit proper documentation, it is also a harbinger of the kind of field work they will embark on. The COGCC cannot overlook this. It is time for the COGCC to take a tough stand.	02/19/2018

7	The CDP submitted to the city is not approved by the City of Broomfield. The City of Broomfield has concluded that Extraction should be prohibited from submitting its Form 2 and 2A (drilling) permits to the State (COGCC), until Extraction submits to the City a complete Comprehensive Drilling Plan for all of the proposed wells in compliance with the Operator Agreement. It is the duty of COGCC to abide by Broomfield's 301 and the Martinez decision. And, per the COGCC's own mission statement, this (tax-payer funded organization) is charged with fostering the RESPONSIBLE development of Colorado's oil and gas natural resources in a manner consistent with the protection of PUBLIC HEALTH, SAFETY, and welfare, including the ENVIRONMENT and wildlife resources. Fracking and oil/gas production have no place in urban environments like this. This is an established family home, school, church, and recreational area with city drinking water reservoirs nearby. I object to any further permitting on this site. Approving this site would NOT be consistent with the COGCC's own mission to protect health, safety and the environment.	02/22/2018
8	I. Request to disapprove Extraction Forms 2 and 2A Presently, there are unresolved issues, problems with the Extraction's plan to drill for oil and gas - detailed in their latest "Comprehensive Drilling Plan", dated January 26, 2018 within densely-populated neighborhoods in Broomfield, Colorado. This latest document does not address the concerns, questions, problems identified by Broomfield citizens, city/county staffs per the "Broomfield City and County Manager" letter, dated January 22, 2018 to Mr. Chandler Newhall of Extraction Oil and Gas. Additionally, there have been several serious accidents including that of the Windsor explosion in December 2017. We urge you, the COGCC to delay the approval of Extraction's Forms 2 and 2A for all well sites in Broomfield until these issues are resolved. II. High Isoprene levels measured by CDPHE The report from the Colorado Department of Public Health and Environment (CDPHE), dated May 26, 2017 titled “Health Risk Evaluations of VOCs in Ambient Air was in response to Health Concerns at Triple Creek Oil and Gas Site”. The report was done in response to numerous and continuous odor complaints of citizens living near the wells. The report measurements and the current setback requirements at both the State and local Broomfield levels are cause for concern and are inadequate to protect the health and safety of the citizens. The Triple Creek Oil and Gas VOC data from the above report were measured at 4900 feet from the well site. The measured level of isoprene exceeds many times the ambient air. Isoprene is an isotropic gas and extremely flammable. It is suspected to cause generic defects and cancer. It does have long lasting	02/23/2018

negative effects.

The annual average of isoprene in ambient air along the Front Range is 0.1ppb.

The reported air concentration of isoprene at the Triple Creek Oil and Gas

well site was 2.8ppb or equal to 28 times the annual average.

a. At 1320', the distance ratio is (4900/1320) = 3.71. The exposure

(to humans) at 1320' is = (3.71)(3.71) * 28 = 385.6 times the annual

average exposure.

2. At 500', the distance ratio is (4900/500) = 9.8. The exposure

(to humans) at 500' is = (9.8)(9.8) * 28 = 2,689.1 times the annual

average exposure.

III. Review of Extraction "Comprehensive Drilling Plan"

1.0Summary:

The "Comprehensive Drilling Plan" for the Broomfield Project" (CDP) submitted to the City and County of Broomfield, dated January 26, 2018 is 942 pages long and is nearly identical to that of the December 15, 2017, 734 pages. It has the addition of the Forms 2 and 2A pages by Extraction Oil & Gas company.

2.0 Review comments of the original Dec 15, 2017 CDP.

a. Uneven detailed data reporting for different sections:

The Traffic reports are from page 151 to page 394 (243 pages) and contain many superfluous data spreadsheets. The report fails to recommend a traffic control light or stop sign at the corner of 160th and Sheridan.

b. The Noise reports have data sheets of the sound power meter used to measure ambient noise level but do not have explanations regarding the mathematical modeling of drilling engine noises (pp 96-98 of CDP).

c. The important air monitoring section is from page 398 to 410 (only 12 pages).

d. Incorrect or missing data: A number of data values in the Extraction CDP do not dove-tail with requirements set out in the Broomfield Resolution 2017-186.

e. Page 15 of the CDP asserts that "…Extraction's operations shall remain under the COGCC Rule 802 ... which is 55dBA from 7:00am to 7:00pm, and 50dBA from 7:00pm to 7:00am." Data shown by Extraction in section "Background Ambient Survey Mitigated Sound Impact Report", page 99 of the CDP exceed these limits.

f. CDP refers to "EPA Natural Gas Star Program", page 400. Page 409 has a typo "… Start Program" instead of "… Star Program."

g. CDP page 401, 2.1.3 Completions: “Extraction will provide safety data sheets for all chemicals that are brought on site…” It is necessary to require the disclosure the quantity of these chemicals brought in and out of the site on each date.

h. CDP page 401, 2.1.3 Completions: “All gas encountered will be … combusted with 98% destruction efficiency.” CDP page 497 refers to >99%.

i. CDP page 402, 2.1.4 Production: “Oil not meeting pipeline specifications, may be stored on site in pressure vessels…” How long will they be stored there?

j. CDP page 403, 3.2 Air Pollution Emission Notices: “Extraction predicts fugitive emissions to be below permitting thresholds…” How will Extraction know that?

k. CDP page 405, 4.4.2 LDAR Program: “In addition to the quarterly FLIR inspection … leaks will be monitored using equipment automation…” What is the accuracy and responsiveness of the detection system? Is the FLIR an “Infrared open-path gas detectors” used in petrochemical industries? Could a small but continuous leak escape detection?

l. CDP page 441, Table 3-1: The entire Livingston data is missing.

m. CDP pages 488-538, Emissions Inventory and Impact Analysis: The mathematical model was for the original two well pads, Sheridan and Lowell. The results of the Livingston well pad with 19 wells ought to be different. A new analysis is necessary.

n. The air quality section (pp 398-410) does not have information regarding the following:

. What are the VOCs monitored? It should be noted that the CDPHE report “Screening Level Health Risk Evaluation from Inhalation of VOCs in Ambient Air…”, dated May 26, 2017 lists 60 different VOCs being monitored. The isoprene level, a carcinogenic VOC exceeded EPA safe level. In addition, will the Hydrogen Sulfide (H2S) emission be monitored continuously?

. How the VOCs are monitored?

. What instruments and/or sensors are used? See CDP page 405.

. Are the VOCs monitored continuously or sampled? How often?

. What are the quantities of hazardous materials to be brought on site and removed?

. How are instruments and/or sensors calibrated? How often?

. Page 402. 2.1.4 Production: Last paragraph states the “… well pad monitoring will be conducted continuously… to monitor pressures, temperature, flow, and production information.” Does it not monitor leaks? Why is this monitoring system not available

	during the other 2 phases (Drilling and Completions) of the energy development?	
9	Please deny the permits for this site until the following have been completed. 1. Until the investigation of the Windsor explosion has been completed and the necessary steps have been taken by Extraction to keep this from happening again. My house would have been in the evacuation zone along with countless neighbors homes. How many people would have been hurt or killed had this happened at this site? There is no report as to why this happened and what steps are being taken to prevent this from happening again. 2.I'm not sure how a permit can be given when the ownership of the minerals is in question. You cant give a permit to a company who does not own the minerals. 3.Extraction Oil and Gas drilling plan has not been approved by Bloomfield. As per its MOU with the city this needs to be in place before drilling can begin. Please do your job and protect the citizens of Colorado. Its the law.	02/23/2018
10	Regarding the drilling permits, form 2, for the Livingston Pad in Broomfield, I urge you to not approve them. The City of Broomfield negotiated an MOU with Extraction in October 2017. Part of that MOU is that the city must approve Extraction's drilling plan prior to them submitting permit applications to the COGCC. The city has not approved the drilling plan due to many errors and omissions in the plan. Extraction submitted their permit applications anyway, in violation of the MOU. The COGCC spacing orders for this spacing unit indicated that any wells permitted for this spacing unit must comply with the MOU. Since Extraction is not complying with the MOU the COGCC must not approve any related drilling permits if you are following the direction of your own spacing orders. In addition, the COGCC will have no money in their budget very soon. How can a regulator with no funds to pay their costs effectively do their job? If you have no funding regulate current oil and gas developments, then you certainly should not be approving any new permits for drilling until you have the funding. Finally, the COGCC is currently operating outside of the law based on the Martinez court decision. That decision states you must ensure health and safety first, before approving permits for drilling. Since you have taken no actions to determine if these drilling activities are safe in close proximity to homes, then no permits should be approved until they are proven safe.	02/23/2018
11	Regarding the drilling permits, form 2, for the Livingston Pad in Broomfield, I urge you to not approve them. The City of Broomfield negotiated an MOU with Extraction in October 2017. Part of that MOU is that the city must approve Extraction's drilling plan prior to them submitting permit applications to the COGCC. The city has not approved the drilling plan due to many errors and omissions in the plan. Extraction submitted their permit applications anyway, in violation of the MOU. The COGCC spacing orders for this spacing unit indicated that any wells permitted for this spacing unit must comply with the MOU. Since Extraction is not complying with the MOU the COGCC must not approve any related drilling permits if you are following the direction of your own spacing orders. In addition, the COGCC will have no money in their budget very soon. How can a regulator with no funds to pay their costs effectively do their job? If you have no funding regulate current oil and gas developments, then you certainly should not be approving any new permits for drilling until you have the funding. Finally, the COGCC is currently operating outside of the law based on the Martinez court decision. That decision states you must ensure health and safety first, before approving permits for drilling. Since you have taken no actions to determine if these drilling activities are safe in close proximity to homes, then no permits should be approved until they are proven safe.	02/23/2018

Total: 11 comment(s)