

## Public Comments

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

<b>No.</b>	<b>Comment</b>	<b>Comment Date</b>
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	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
3	<p>Concerning document 401514976, I respectfully request the COGCC deny the request of Extraction Oil &amp; Gas, Inc (Extraction) for an exception to COGCC rules 318A.a and 318A.c. Their stated reason for the exception is "This is the best location for the wells since the wells are outside of the buffer zone". The buffer zone, the setback proposed, is 1000 feet.</p> <p>The proposed system is Extraction's new closed-loop system. An identical system was installed in Windsor, CO. On 22 December, 2017, the Windsor facility exploded and burned out of control for 16 hours. 2,500 feet away, over twice the proposed setback, Colorado 392 had to be closed.</p> <p>Here is video footage of this explosion from 3,500 feet away (three times the setback):</p> <p><a href="http://www.coloradoan.com/videos/news/2017/12/23/footage-explosion-near-windsor/108867614/">http://www.coloradoan.com/videos/news/2017/12/23/footage-explosion-near-windsor/108867614/</a></p> <p>Video and photos of the disaster and emergency response:</p> <p><a href="https://www.denverpost.com/2017/12/22/weld-county-oil-site-fire/">https://www.denverpost.com/2017/12/22/weld-county-oil-site-fire/</a></p> <p><a href="http://www.ibtimes.com/weld-county-oil-explosion-fire-shown-pictures-videos-2632482">http://www.ibtimes.com/weld-county-oil-explosion-fire-shown-pictures-videos-2632482</a></p> <p>Extraction has demonstrated that, even employing best practices, there exists failure modes for this equipment that will result in an explosion and uncontrolled fire.</p> <p>They have not determined the cause of the explosion. They have not determined if the nature of the failure is systemic to such closed-loop systems. They have not submitted their conclusions for independent review. Without independent review, we cannot conclude that the alleged cause demonstrates proper fail-safe or is merely a band-aid over an inherent and repeatable problem.</p> <p>Equipment fails. This equipment in particular has been demonstrated to fail, catastrophically so.</p> <p>There is an existing, fifty year old community exactly 1001 feet from the edge of this development. Considering the demonstrated danger of catastrophic failure of this equipment, no development of this nature should be permitted so close to residential neighborhoods.</p> <p>If COGCC is committed to a goal of sustainable oil and gas development while respecting the health and safety of citizens, it cannot allow this development to proceed. In particular, it should not grant an exception to Extraction that would permit it to put known faulty equipment so close to human lives.</p>	02/19/2018
4	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
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	02/19/2018

	<p>reviewed thoroughly the 700-page "Comprehensive Drilling Plan" submitted by EXTRACTION Oil&amp;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.</p> <p>On this President's Day weekend, it will be appropriate for the COGCC to let the Oil &amp; 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.</p>	
7	<p>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.</p> <p>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.</p> <p>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.</p>	02/22/2018
8	<p>Please deny the permits for this site until the following have been completed.</p> <ol style="list-style-type: none"> <li>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.</li> <li>2.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. Oil and gas operators need to hold up their end to contracts just like any other entity.</li> </ol> <p>Please do your job and protect the citizens of Colorado. Its the law.</p>	02/23/2018
9	<p>Regarding the drilling permits, form 2, for the Interchange B 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.</p> <p>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.</p> <p>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.</p>	02/23/2018

10 The Comprehensive Drilling Plan(CDP)for the permits submitted by Extraction on Dec 15, 2017 is not approved by the City of Broomfield, as required by the Oct. 24 MOU (Operator Agreement) between Extraction and the City. The City and citizen groups submitted 140 pages of deficiencies to Extraction. On January 22, the City requested that Extraction voluntarily withdraw their 2 and 2A permit applications until the City approved the Extraction plan. Extraction responded with a letter that ignored the City's request, and Extraction subsequently submitted to the City a second 900 page drilling plan on Jan 26 that contained no corrections of the original errors that the City pointed out. On February 15, Extraction finally submitted a document that it claims addresses the Dec. 15 CDP deficiencies. Both the City and citizens need more than 14 days until the March 1 comment deadline to review the Feb. 15 Extraction document to see if it corrects the Dec. 15 CDP deficiencies.

As part of a citizen team that reviewed the Dec. 15 CDP, I reviewed Section P on Water Quality. This is of particular concern to residents of Adams County who have water wells and are near the Interchange A & B Pads. I am listing the deficiencies which the City of Broomfield sent to Extraction regarding Section P:

#### SECTION P - Water Quality Plan

156.Please add a subsection (possibly Section 2.2.2) for notification to the City and County of Broomfield. This subsection should indicate that the City will be notified in advance of all sampling dates to allow the City personnel to attend the sampling events, and if desired, collect split samples from the locations for separate laboratory analysis.

157.In Subsection 3.5, it states that additional water quality sampling and monitoring may be undertaken if issues or concerns are identified through landowner complaint or inquiry, or at the request of the COGCC. Please add that additional sampling and monitoring may also be undertaken at the request of the City.

158.In Subsection 6.2, please add that GPS shapefiles will be made available to the City upon request.

159.In Subsection 7.0, please add that the City will be notified in advance of the use of any analytical methods other than those specified in the Appendices.

160.In Subsection 8.1, please add that all field quality control sample results will be made available to the City upon request.

161.In Subsection 9.0, please add that all data quality reviews will be made available to the City upon request.

0.Please provide the City as a point of contact for the Water Quality Monitoring Program.

162.Attachments 6 & 7 are the COGCC parameters that Extraction is required to test and also there are Appendices of Local Sampling and Analysis Requirements. Please address the following comments in those sections:

#### 163.1-Attachment 6 Groundwater Quality Analytical Parameters

Pages 589--591 list the parameters to be tested. This list does not include the polycyclic aromatic hydrocarbons as parameters tested in groundwater. Please include the polycyclic aromatic hydrocarbons as parameters tested in groundwater.

#### 163.2 -Attachment 7 Surface Water Quality Analytical Parameters

Pages 593-594 list the parameters to be tested in surface water. Please include the polycyclic aromatic hydrocarbons.

163.3 Please test for aromatic hydrocarbons in surface water and in groundwater. These aromatic hydrocarbons are volatile and if they are present those would be in the groundwater with maybe only traces in surface water. Most would volatilize when they hit the atmosphere.

#### 163.4 -Appendices of Local Sampling and Analysis Requirements

	<p>Pages 600-602 list the additional parameter please add the polycyclic aromatic hydrocarbons, Acrylamide and Naphthalene to groundwater testing in Attachment 6 for the reasons discussed above.</p> <p>163.5 What analytical method will be used to sample for Hydrogen Sulfide?</p>	
11	<p>Regarding the drilling permits, form 2, for the Interchange B 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.</p> <p>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.</p> <p>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.</p>	02/23/2018

Total: 11 comment(s)