

## Public Comments

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

<u>No.</u>	<u>Comment</u>	<u>Comment Date</u>
1	<p>Please do not approve this permit application.</p> <p>At one point in this process Extraction proposed about 140 wells on four pad sites (Livingston, Sheridan, United and Huron) with two of those sites located very close to existing residential development and one close to I-25). Now they are proposing 84 wells on six alternative pad sites (Livingston, Northwest A, Northwest B, United, Interchange A and Interchange B) with five being very close to existing residential developments and five straddling the Northwest Parkway and I-25, which is about a one-mile stretch. Common sense dictates there will be more (cumulative) negative environmental impacts and safety concerns with more well pads and when well pads are located closer to existing homes and so close to highways, especially when emergency conditions arise. Imagine having to close down both I-25 and the Northwest Parkway in the event of an explosion. And with the pads being so close together, will an explosion in one cause an explosion in another? Maybe a better compromise for maximum environmental integrity, psychosocial well being and the safety of all concerned would be to locate and develop two well pad sites instead of six, each with 42 wells. One pad would be located in the area of land northwest of the intersection of I-25 and the Northwest Parkway (the original Huron Pad) and the other pad would be on the northwest corner of 160th and Huron (the original United Pad). Both pads will be further away from residential development and no new roads will have to be built. Only one pad will be close to I-25 and the Fire Department is closer and has better access to both sites in case of an emergency. These sites were given the highest ratings (93 and 92 respectfully) in an alternative site analysis by McCartney Engineering, LLC. (<a href="http://broomfieldconcerned.org/wp-content/uploads/2017/06/June-7-blog-McCartney-Engineering.pdf">http://broomfieldconcerned.org/wp-content/uploads/2017/06/June-7-blog-McCartney-Engineering.pdf</a>). Extraction could still drill their 84 wells with less environmental disruption and keep within current industry standards by clustering more wells on a site rather than drilling a smaller number of wells onto more sites spread over a larger area (as this configuration also contradicts COGCC's BMPs). Unfortunately, Broomfield has negotiated an MOU with Extraction that never took into account comments or concerns of Adams County residents, the ones who are now most impacted by this change of well pad site locations. It is disingenuous for Broomfield to claim the care about the health and safety of people and the environment when not only do they move their problems into their neighbor's backyard, they increase the risk of those individuals to a greater extent than their citizens were facing with the original Huron and United well pad sites. They should be ashamed of themselves! Broomfield has not yet approved Extraction's Comprehensive Drilling Plan, so maybe there's still time for them to act like a decent neighbor to Adams County residents and adopt this compromise.</p>	05/07/2018
2	<p>am a resident directly impacted by Extraction's plans to place large scale facilities next to an established residential community in unincorporated Adams County. While the wells/pads will be in Broomfield, it has the largest impact on residents in Adams County. We have seen a dramatic shift from small, singular vertical drilling sites in predominantly remote agricultural locations to industrial scale multi-well, multi-pad facilities near neighborhoods, schools and sometimes in tax payer funded open space.</p> <p>These industrial scale facilities have a cumulative impact on property values, quality of life, transportation, emergency preparedness and response, and most importantly public health and safety.</p> <p>The industry touts that Colorado has the "best" rules on the books. That is a sad commentary. The rules are inadequate and unacceptable and the COGCC needs to follow the intent of the Martinez decision and put the health and safety of people, the environment and wildlife first. Impacts of urban drilling can be minimized by siting far from homes and neighborhoods. The original sites for these pads (Northwest and Interchange) were FURTHER from existing homes.</p> <p>The original proposed locations unveiled in 2/2017 at the Broomfield First Bank Center had the Northwest Pads and Interchange Pads NORTH of the Northwest Parkway, further from residential communities. These were moved South of the NW Parkway, adjacent to the Adams County border &amp; my neighborhood. This was done with no input from Adams County residents. As stated in the MOU signed in October 2017 between Extraction and the City and County of Broomfield, one of the benefits of moving these pads into Broomfield open space up against the Adams County border was "Further from future development". So the health and safety of my neighborhood, which has been</p>	05/27/2018

here for decades, is being sacrificed for the prosperity of a developer's future development.

This flies in the face of the COGCC's guidance which encourages fewer consolidated pads located as far from neighborhoods as possible. I reviewed Extraction's Comprehensive Drilling Plan and was appalled at the outages, discrepancies and inaccuracies. Broomfield asked Extraction to NOT submit their Form 2A(s) to the COGCC until the Drilling Plan was revised.

Extraction moved forward anyway.

In addition to the very real risk of fire/explosion (EG: Extraction Windsor facility Dec 22, 2017), there are other impacts of urban drilling so close to homes that are equally concerning.

- Oil & gas industry spills increased by 17% around Colorado last year. <http://dpo.st/2qWImF5>
- Studies are beginning to show the dangerous impacts of these sites on surrounding populations.

Hydraulic fracturing and infant health: New evidence from Pennsylvania:  
<http://advances.sciencemag.org/content/3/12/e1603021.full>

- Increased asthma-related incidents exacerbated by air inversions which slow dispersion extending exposure times.

- Exposure to chemicals, carcinogens and methane including VOCs such as benzene, toluene, ethylbenzene and xylene (BTEX). Colorado School of Public Health states "Sufficient exposures to these chemical compounds are associated with serious negative health outcomes such as lung disease in children and adults (i.e., asthma, chronic bronchitis, obstructive disease), cardiovascular disease, poor birth outcomes (premature birth, low birth weight), various cancers, and other long and short-term health issues." Witter, R etal. "Health Impacts Assessment for Battlement Mesa in Garfield County," Colorado School of Public Health, part I, page 7

- Peer reviewed study by Lisa McKenzie, a researcher at the Colorado School of Public Health Anschutz Medical Campus, found that children suffering from acute lymphocytic leukemia (ALL), the most common childhood cancer, were more than four times more likely to be living in areas with the highest density of gas wells.

- Increases in seismicity not only from injection wells but fracking itself "Tiny tremors caused by hydraulic fracturing of natural gas near the surface could be early signs of stressful conditions deep underground that could destabilize faults and trigger larger earthquakes."

<https://news.stanford.edu/2017/12/12/small-earthquakes-fracking-sites-may-indicate-bigger-tremors-come/>

The USGS National Seismic Hazard Model (NSHM) forecasts earthquake hazard & now takes into account induced earthquakes from underground fluid injection or extraction

<https://earthquake.usgs.gov/research/induced/hazards.php>

We've seen tragedy strike with the Firestone explosion & the explosion Dec. 22, 2017 at the Extraction Windsor facility which never did identify a definitive root cause. If they have no definitive root cause, why do they believe similar safety events won't happen near my home which is close to the Northwest and Interchange Pad sites.

In Extraction's own risk management section of the Comprehensive Drilling Plan submitted to Broomfield, Extraction includes a list of 12 individual catastrophic risks – each with a 3-10% chance of occurrence – among other risks. The cumulative risk is estimated to be up to 72% with an average cumulative risk of 55%. Risks include vapor cloud explosion, fire, well blowout, and more. This is not appropriate so close to existing residential communities

Please deny these permits and ask Extraction and Broomfield to go back to the original locations or other alternate locations, NORTH of the Northwest Parkway, much further from existing homes.

Thank you.

- 3 I am concerned about the 49 proposed wells in our area. I live at 1331 W. 156th Ave., I am in Adams County unincorporated. When we built our house 30 yrs. ago the ground behind our house was Adams County and was to be open space or wildlife. Some how it has got switched to Broomfield county. We have had no vote and very little say about drilling wells in this area. I can see 3 of the 4

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<p>proposed sites from my house. Still no answer for the Windsor Site explosion. When they leased my gas and oil rights no one was horizontal drilling or fracking. We are on a water well and it is our only source of water. When they did the gas and oil studies they were 5 miles or more away. Now they have moved them right in our back yard. The original sites that Extraction and Broomfield had agreed to in early 2017 were much further from existing residences. Now shoved up against Adams County homes to profit new development around the original sites.</p> <p>We would appreciate your looking into this.</p>	
<p>4 My husband &amp; I reside in unincorporated Adams county in close proximity to Extraction's proposed Northwest and Interchange sites.</p> <p>I am the victim of corporate greed taking precedence over health and safety when a gas pipeline exploded in San Bruno, CA Sept 9 2010.</p> <p>The pipe had been scheduled to be replaced after many reports of gas smells and failing pilot lights. It was buried in 1957 and through a series of false starts and pressure increases, defective welds in the pipeline, improper installation, lack of safety measures and "other projects taking priority" the pipe never was replaced and finally blew in my Mother's back yard, which killed my Mother and 7 others families and Children, destroyed 37 homes and injured many others.</p> <p>I myself was in St Francis Burn Unit in San Francisco for 6 and 1/2 months with burns over 70% of my body and more skin grafts than I can count. My Lungs were scraped and washed 7 times and I had to spend 4 months in Kaiser, Vallejo, Ca. Rehab learning to walk again. I would gladly return every dime that was paid to me by Pacific Gas and Electric, if they could just give me back the wonderful life I had before it was taken from me in the name of corporate profit.</p> <p>In 2012, an independent audit from the State of California issued a report stating that PG&amp;E had illegally diverted over \$100 million from a fund used for safety operations, and instead used it for executive compensation and bonuses.</p> <p>We see similar concerns with O&amp;G operations in Colorado where profit takes precedence over safety as noted in the Broomfield/Extraction Agreement where siting of the pads is to benefit future development dollars.</p> <p>Please reconsider the danger you are placing on the safety of individuals, and the environment before you proceed with the approval of these oil fracking locations so close to our homes. There were alternative sites, further from existing homes and those were discarded simply for corporate profit. I will happily testify before your committees and show the hundreds of documents regarding the damages I have endured. I beg of you to look in to the long term effects of what you are about to do. PLEASE think this through thoroughly before any action is taken.</p>	<p>05/27/2018</p>

Total: 4 comment(s)