



EARTHWORKS

Dedicated to protecting communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions.

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Earthworks appreciates the diligent work of the Midstream Steering Committee (MSC) in preparing these recommendations for how to achieve emissions reductions from midstream fuel combustion equipment (MFCE) but would like to raise a few important points that demand attention by the Air Pollution Control Division (APCD) as it crafts rules to be adopted by the Air Quality Control Commission (AQCC).

Earthworks is a nonprofit organization committed to working with frontline communities to address the adverse impacts of mining and energy development on public health and the environment while promoting sustainable solutions. For more than 20 years, Earthworks staff have worked on the ground with local partners across the US and the world to expose harmful pollution and to engage local, state, and federal regulators and lawmakers to reform policies and adopt stricter rules that put the lives of people before the interests of industry. Earthworks' optical gas imaging (OGI) thermographers have conducted 1573 surveys of oil and gas facilities in Colorado using FLIR G-Series OGI cameras¹ designed to detect hydrocarbon gasses and have documented numerous leaks, equipment malfunctions, and other possible compliance issues that have been reported to compliance staff at APCD as well as at the Energy and Carbon Management Commission.

Our comments will focus on how the recommendations consider additional measures for MFCE sources in disproportionately impacted (DI) communities, on the exclusive focus on MFCE sources for emissions reductions from the midstream segment, and on our concerns about a performance-based approach.

1. DI Communities

While we appreciate that the recommendations prioritize additional protections for DI communities in various ways, we do not think it is appropriate for the recommendations to focus exclusively on cumulatively impacted communities (DI communities with an EnviroScreen score over 80) when discussing possible limitations on construction of new MCFE sources.

The MSC was charged with developing a set of recommendations to reduce emissions from polluting sources, which means these measures will primarily provide benefits to air quality. Importantly, the partitioning of DI communities between cumulatively impacted and socioeconomically impacted communities is achieved by determining the overall EnviroScreen score of the census block that contains the community, but only a handful of the 35 indicators that contribute to the overall EnviroScreen score are directly related to air quality. Therefore, targeting the strictest provisions recommended by the MSC at cumulatively impacted communities necessarily means that DI communities that score highly on air quality indicators but are not cumulatively impacted communities may not be afforded the protections they

¹ <https://www.flir.com/products/flir-g-series/>

deserve. Additionally, this sort of targeting means that facilities that may impact neighboring cumulatively impacted communities but are not located in those communities would not be considered for these provisions, even though air pollution is not constrained by census block boundaries.

For instance, the census block group encompassing the area immediately to the east of Gilcrest in Weld County (081230017004) is a socioeconomically vulnerable community (EnviroScreen score of 70) that hosts a number of midstream facilities including DCP's Mewbourne gas plant, the Lambert compressor station operated by Kerr McGee, the Speer facility operated by Cureton, and an additional gas plant operated by Kerr McGee immediately to the south in a neighboring census block (081230018001). All of these facilities are within a few miles radius of one another and have an enormous impact on the health of nearby residents who we have worked with for years to conduct air quality monitoring and document emissions from these facilities using OGI². The sheer number of midstream facilities in this area is also a likely contributor to this census block being in roughly the 99th percentile for both the air toxics emissions and other air pollutants indicators that contribute to overall EnviroScreen score, as the oil and gas sector is the largest source of reported air toxics emissions in the state³. In other words, despite being a DI community with some of the highest exposures to air pollutants in the state of Colorado, this community would be excluded from considerations around limitations on new MFCE sources.

An example that highlights our second concern can be found on the eastern edge of Aurora where I-70 serves as a dividing line between a census block to the south of the freeway (080050071052) which is a cumulatively impacted community (EnviroScreen score of 83) and includes the Foxridge Farm mobile home community and the census block to the north of the freeway (080010083531) which is a socioeconomically vulnerable community that hosts multiple midstream facilities including the Wattenberg gas plant and a compressor station operated by Crestone Peak Resources (Civitas). While it is located in a different census block, the mobile home community is still within a mile of both midstream facilities and the residents are likely impacted by the air pollution from these facilities (the census block including the community is ranked in roughly the 98th percentile for air toxics and other air pollutants). However, because these facilities are not located directly in the cumulatively impacted community that includes the mobile home community, the residents would not benefit from the additional protective measures targeted at limiting new MFCE sources in cumulatively impacted communities.

These examples illustrate the problem with targeting only some DI communities for additional protections and we strongly recommend that any measures applied to a subset of DI communities should instead be applied to all DI communities.

2. Focus on MFCE

While the MSC was tasked with developing recommendations for emissions reductions based on reported emissions from fuel combustion in MFCE sources, the MSC does call attention to understudied, unreported emissions from these sources as well, such as from crankcase venting.

² Examples of OGI evidence of emissions from MFCE sources at the Mewbourne Gas Plant (<https://www.youtube.com/watch?v=ce0yOclHB9g>) and Lambert Compressor Station (<https://www.youtube.com/watch?v=ARL5OL8qVbQ>)

³ <https://cdphe.colorado.gov/air-toxics/reporting/data>

Our own research over the years has also highlighted the gaps between reported and actual emissions from midstream facilities.⁴ We believe that the APCD should take note of these known gaps and furthermore take this opportunity, in opening a space for public conversation about emissions from midstream facilities, to consider other emissions closely associated both with MFCE sources and with other sources at midstream facilities.

For instance, there is no discussion in the MSC document of emissions associated with MFCE sources related to equipment malfunctions or maintenance activities (in fact the words “malfunction” and “maintenance” do not even appear in the document) such as blowdowns even though such activities are likely to produce significant emissions with possible impacts on nearby communities.⁵

Additionally, MFCE sources are not the only sources of emissions at midstream facilities, which often also employ flares, tanks, and other equipment with potential to pollute.

For example, at the Cureton Speer facility, located in the aforementioned 081230017004 census block, we have observed significant venting from tanks on numerous occasions⁶, including from an atmospheric tank that was potentially venting gas associated with an upset condition in a fuel gas scrubber⁷. In this case, the operator made some modifications to prevent emissions like this from occurring in the future, but in other instances, such as following our observations of tank emissions from Crestone’s Mustang Booster Station located less than a mile from the Foxridge Farm mobile home community mentioned above, the operator was not able to determine a cause.⁸ Focusing the present conversation exclusively on MFCE in considering emissions reductions from the midstream sector means overlooking important additional sources of emissions from these facilities.

This is also true of emissions associated with flaring at midstream facilities and some of these facilities still employ conventional flares that have been phased out in the upstream oil and gas sector. Flares at these facilities, which are often used to control waste gas emissions from blowdowns for instance, can still be a significant source of these emissions due to incomplete or inefficient combustion. As an example, at the Parachute Creek gas plant operated by Williams, which is located in census block in Garfield County (080459521001) that is considered a socioeconomically vulnerable community, we have observed emissions due to incomplete combustion at one of the flares on the facility for years, even after changes were made to adjust flow rates to the flare.⁹

⁴ https://earthworks.org/wp-content/uploads/2021/09/PermittedToPollute_FINAL.pdf

⁵ OGI video of a blowdown at Crestone’s Mustang Booster Station (<https://www.youtube.com/watch?v=KloTldaoSYE>) located in the aforementioned 080010083531 census block directly adjacent to a cumulatively impacted community

⁶ OGI videos from July 2019 (<https://www.youtube.com/watch?v=t-uH91Pa4BY>) and from August 2020 (<https://www.youtube.com/watch?v=R3n9CcETokE>)

⁷ <https://www.youtube.com/watch?v=sJcW3xuBGAw>

⁸ <https://www.youtube.com/watch?v=YduOPG3A4JI>

⁹ OGI videos from June 2021 (https://www.youtube.com/watch?v=7xS_M2NyaGA), June 2022 (<https://www.youtube.com/watch?v=2qslE0-A6sY>), and May 20223 (<https://www.youtube.com/watch?v=t-vIGNY4vU>)

While we again note that the MSC was intentionally focused on MFCE sources, we also believe it is important to highlight that the combustion of methane fuel is only one possible source of harmful emissions at midstream facilities.

3. Performance-based Approach

Finally, while we understand the rationale for the MSC recommending a performance-based approach for achieving emissions reductions from the midstream sector, we continue to have concerns about the lack of regulatory oversight that is a persistent theme of state programs intended to offer operators flexibility in achieving program objectives. The recommendations do attempt to address some of these concerns by for instance considering how to ensure reductions with co-benefits for DI communities are prioritized, but it does not change the fact that such an approach risks uneven or ineffective implementation.

Our concerns are highlighted in our recently published report *Certified Disaster*¹⁰, which is targeted at the gas certification concept broadly but includes fieldwork data assessing the efficacy of fenceline air quality monitoring conducted by operators during pre-production activities at upstream oil and gas sites per a program adopted by the AQCC in 2020.¹¹ This program does not prescribe certain technologies or standards and instead allows operators a high degree of flexibility to design and implement monitoring plans that achieve the program objectives. The result, as indicated by our report findings, is monitoring that in many cases is failing to detect emissions from many of the primary sources of emissions during pre-production.

Much like the rationale described by the MSC in preferring a performance-based approach, the rationale in allowing operators flexibility for fenceline monitoring during pre-production was to encourage innovation and iteration, and to help expedite implementation of the program. This is all reasonable, but in practice it means that the data actually produced by the monitoring is unreliable at best. We would prefer a similar fate not befall the midstream emissions reductions program and the APCD, should it proceed with a performance-based approach as the MSC recommends, must consider how to guarantee proper oversight over program implementation.



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¹⁰ https://earthworks.org/wp-content/uploads/2023/04/certified_disaster_report_FINAL_04_14_2023.pdf

¹¹ https://drive.google.com/file/d/13rAbGwssS_YPt16zX4WuWWaWLUF9b4/view