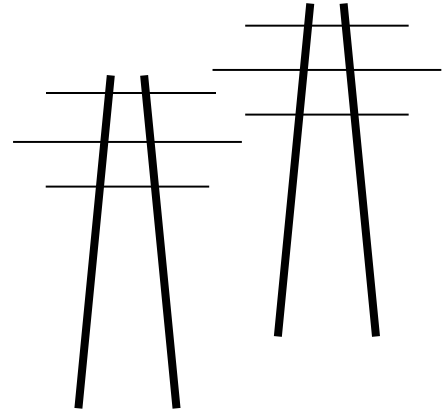


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February 23, 2024

Will Seuffert
Executive Secretary
Public Utilities Commission
121 – 7th Place East, Suite 350
St. Paul, MN 55101

via eDockets only

RE: Overland - EIS Comment
Summit Carbon Solutions Pipeline
PUC Docket IP7093/PPL-22-422

Dear Mr. Seuffert:

I'm filing these comments as an individual, and not on behalf of any client.

I'm concerned about this proposed CO2 pipeline as Minnesota and Iowa have been selected as guinea pigs in an area without regulatory or operational experience. CO2 capture and a pipeline, only to the plant gate, was proposed for the Mesaba Project, but it was nothing more than a stab at tossing out the words "CO2 capture" for traction in that boondoggle of a project. Despite that, participants in that docket did learn much about CO2 capture, particularly about feasibility, efficiency loss, and cost.

CONSTRUCTION AND LAYDOWN YARDS

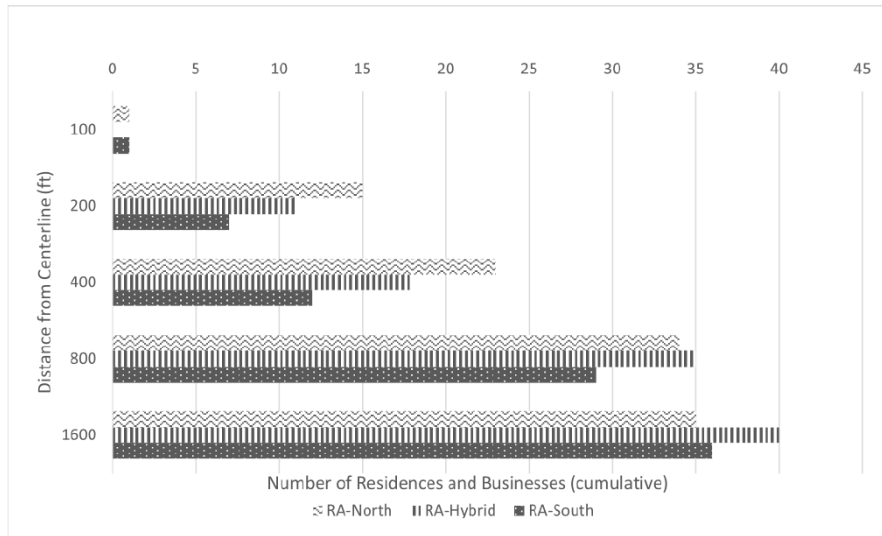
The EIS states, "The applicant is not proposing to use any construction or staging yards for the project." EIS, p. 2-3. This is absurd. Where will the materials be stored and staged? On trucks at some other location, with "on-time" delivery? That's simply not workable. The EIS must address the need for and impacts of storage and laydown yards, and the cost of such easements, which, even if temporary, and be significant. Return of these areas to prior condition must also be addressed.

NOISE & NOISE STANDARDS – MINN. R. 7030.0040

The EIS is inadequate in addressing impacts of noise, noise of construction, noise of operation, and noise of potential ruptures. For example, the EIS shows the cumulative

numbers of “sensitive receptors” in the chart label, but the description is “Number of Residences and Businesses,” and which is **NOT** the number of “noise sensitive receptors.”

Figure 5-6 Noise Sensitive Receptors by Distance from Centerline



This is misleading. The chart should be changed to show the “Number of Noise Sensitive Receptors” by taking the average number of people in a household and multiplying by the numbers shown in the X axis. The edge of the right-of-way numbers should also be displayed on Y axis, labeled as “250 – Edge of RoW” so that it can be easily determined the impacts on those outside of Right of Way.” From this chart, assuming there are additional impacts for those within 250 foot of centerline on each side of the RoW, it appears that there are more than 15 residences and businesses (and how many residentTS? Workers?). This is a serious flaw in the noise impact analysis. The EIS is inadequate as it does not address numbers of individual “receptors” in residences and businesses, and thus grossly understates impacts.

The EIS also states, “The ROI for noise is the local vicinity (area within 1,600 feet of the route width).” The terminology is unclear – is that 1,600 feet of the centerline, or 1,600 feet on each side of the centerline, or 1,600 feet of the Right of Way edge? With the ROI extending so far beyond the Right of Way, the EIS must also address the impacts beyond the Right-of-Way to 1,600 feet.

Noise does have a cumulative impact, and the EIS must address this. Instead, the EIS states: ” Noise from the operation of the capture facility is not expected to result in a perceptible increase in the sound levels experienced at NSRs near the capture facility and would not be distinguishable from the noise already produced at the ethanol plant. Operation of the pipeline facilities would not have a noticeable impact on ambient sound levels.” P. 5-28. Cumulative impact of noise has been an issue in wind projects, and EERA staff and Summit attorney who has worked on wind projects should be well aware.

The EIS is incorrect and inadequate in that it minimizes noise. There is no disclosure of ambient noise testing, and understatement of noise levels by discussing when changes in noise levels are

noticeable,” but 5.4.5.1 does NOT state the fact that a 3 dB(A) increase in noise is a DOUBLING of sound pressure levels. This is a material diminishment of noise impacts.

The EIS should state the various potential dB(A) of blowdown, and in the event of a rupture, the noise level of “sonic speed.” See e.g. 5-35; 8-2.

Another example of the inadequacy of the EIS is found after Table 5.5 on p. 5-29, which states:

Noise associated with heavy equipment can range between 80 and 90 dBA at full power 50 feet from the source.⁶⁷ Heavy equipment generally runs at full power up to 50 percent of the time.⁶⁸ Point source sounds decrease by 6 dBA at each doubling of distance;⁶⁹ therefore, a 90 dBA sound at 50 feet is perceived as a 72 dBA sound at 400 feet and a 60 dBA sound at 1,600 feet.

Following the table showing Minnesota Noise Standards, this paragraph should note that 90, 72, and 60 dBA are all above nighttime noise standards in a residential area. This is why the charts showing residents affected must be corrected, and show anticipated daytime and nighttime expected noise levels at various distances, RoW edge and beyond within the ROI.

The EIS is inadequate as it does not address that with winter construction noise travels further due to hardpacked snow and frozen ground, a ground factor of 0.0, and that noise will not lessen as fast as it would with summertime ground cover of grasses and trees.

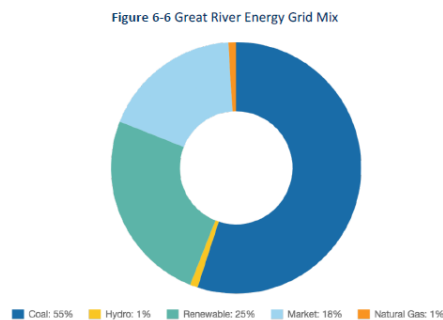
The EIS is inadequate because Tables 5.6, 5.7. and 5.8 do not list modeled (projected) noise for each of the residences shown.

The EIS is inadequate as it allows for mitigation based on landowner assertion rather than applicant compliance with noise standards – see EIS, p. 5-35:

The applicant has stated that it would coordinate with nearby landowners prior to starting HDDs and determine the need for noise mitigation and noise monitoring based on feedback received from landowners during construction.

Increased Use of Coal Generated Electricity

The CO2 capture and transport process will increase electricity use at the ethanol plants. If the idea is to capture CO2 to lessen CO2 in atmosphere, the increased use of fossil fuel to power the operation must be balanced with the level of CO2 captured and transported.



EIS is missing much information. When working on the Mesaba Project (PUC Dockets E-6472/GS-06-668; E-6472/M-05-1933), I learned that CO₂ capture was expected to be less than 1/3 of CO₂ generated from that project, generally the achievable rate of capture, and that roughly 1/3 capture would result in a marked decrease in plant efficiency. Capture of more than that is very difficult to do technically, and is very costly. I do not see information on various measures of CO₂ capture and efficiency of that process in the EIS. The percentages of CO₂ that can be, are feasible to be, captured is determinative of whether this project should be permitted – if there's nominal CO₂ capture, and a major efficiency loss, what's the point of all this cost and impact?

The EIS must disclose and analyze the following information:

- Annual total tons of CO₂ produced at each ethanol plant proposed to be connected to this project.
- Annual percentage of CO₂ captured from each plant.
- Annual tons of CO₂ captured from each plant.
- Ethanol plant efficiency loss expected with carbon capture for each plant.
- Cost of loss of efficiency for each plant.
- Quantification of production to compensate for loss of efficiency.
- MW load for capture of CO₂ at each plant.
- MW parasitic load for pressurization into pipeline.
- Transmission and transformer upgrades required at each plant.
- Total MW parasitic load (itemized by location of pressurization facility) for pressurization from collection source to point of delivery.
- MW of energy losses for each plant's ethanol production and CO₂ capture processes.

Socio-economic impacts

The EIS is inadequate because it does not address the potential harms to those many residents, businesses, and workers within the ROI.

The EIS is inadequate because it does not address the increased cost of insurance for those households, farms, and businesses living with in the 1,600 ROI.

Leaks and Ruptures

The EIS is inadequate as the operational psi is unclear. There is a range, but the likelihood of leak or rupture can be dependent on psi. The EIS should clearly state whether the operational is expected to be 1,320, and why, if the design is for 2,183 psi, and under what occasions the psi could be greater than the expected operational psi. See p. 4-4.

The EIS is misleading, inadequate, as it refers to leaks and ruptures as “accidents,” which are too common to be “accidents.”

Language should be changed and these should be labeled as incidents, or specifically labeled as leaks, ruptures, etc. The EIS states that:

However, for CO2 pipelines, between 2010 and 2021, 66 CO2 pipeline accidents were reported to PHMSA. Of these 66 accidents, 56 were leaks, 2 were ruptures, and 8 were classified as “other.”⁸ The analysis showed that leaks are the leading form of accident and rupture is the most uncommon form of accident for CO2 pipelines.

EIS p. 8-1. Acknowledgement of 66 “accidents,” including 56 leaks, of which 2 were ruptures and 8 “other,” means that some leaks, ruptures and “other” can be expected, and are not reasonably characterized as “accidents.” Please correct that linguistic mischaracterization.

The EIS is deficient because the noise expected in a leak or rupture is not addressed.

The EIS is inadequate as there is no wind rose provided. There should be a simple wind rose for the two ethanol plants, at the very least, and if the wind rose is different for other areas of this project, to include that. Commerce filed wind roses for sites across Minnesota decades ago that could be updated now.

The EIS is deficient because the word “evacuate” is not in the plan, and there is no characterization of the area to be evacuated in various scenarios of leak and rupture. The evacuation zone should be clarified, and be set at distances identified in dispersion modeling with additional distance for safety beyond the potential “toxic impact” distance of 910 feet.

The dispersion modeling conducted by Allied calculated the maximum distance at which CO₂ concentrations from a pipeline rupture could reach toxic levels. The toxic impact distance at which CO₂ concentrations could reach 40,000 ppm (the immediately dangerous to life and health level) at -22°F and a humidity level of 74.3 percent was calculated at 617 feet, as shown in Table 4 in the Aerial and Thermal Dispersion Report (AD Report) in **Appendix G**. The toxic impact distance at which CO₂ concentrations could reach 30,000 ppm (the National Institute for Occupational Safety and Health Short Term Exposure Limit, which is the maximum time-weighted average concentration to which a person could be exposed over a 15-minute period without injury) would be 701 feet. The toxic impact distance at which CO₂ concentrations could reach 15,000 ppm would be 910 feet.

EIS, p. 8-14.

RECOMMENDED SPECIAL CONDITIONS AND EDITS

Special conditions are necessary IF this project is permitted. Regarding those recommended by staff, here are comments and edits are in track changes:

8.5.3 Mitigation Recommended by EERA Staff

EERA staff believes that applicant-provided indoor CO₂ detectors for residences within 1,600 feet of the project is a reasonable mitigation measure. This distance was chosen based on the ~~most impactful scenario as described in Appendix G ROI~~ (and it depends on how that is defined, conservatively the greatest distance should be used. Is that 1,600 feet of ROI 1,600 feet of centerline? 1,600 feet of Right of Way? 1,600 feet centered on centerline – 800 feet on either side? .

EERA staff believes that a special permit condition requiring the applicant to file its Emergency Response Plan that is filed with PHMSA with the Commission is reasonable, and should be filed with the Commission via eDockets prior to any permit approval and open for public comment.

EERA staff believes that a special permit condition requiring the applicant to provide an accidental release plan, developed in coordination with local emergency responders, for Commission review 30 days prior to submittal of the Plan and Profile is reasonable. The accidental release plan could include the specific equipment, training, and reimbursement that could be provided to emergency managers. The plan could also list the names of the emergency responders and a provision to update contact information as needed. The plan could discuss the feasibility of a “reverse 911” notice that goes out to landowners’ telephones in the event of an emergency shutdown or rupture. The release plan could identify how the applicant would pay for costs of any repair to public infrastructure or private property (including crops and livestock) that might occur during an accidental release. The plan must be filed with the Commission via eDockets and a link and phone number be included in mailing to all landowners, residents, farms, businesses within one-half mile of the centerline.

EERA staff believes a special permit condition requiring the applicant to identify locations of fracture arrestors and any locations of thicker-walled pipe on the Plan and Profile filed with the Commission is reasonable.

EERA staff believes a special permit condition requiring the applicant to provide its public education plan for Commission review 30 days prior to submittal of the Plan and Profile is reasonable. The public education plan could include specific safety information for neighboring landowners within one-half mile (one mile?), including what to do in case of a rupture.

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WHERE’S THE COST/BENEFIT ANALYSIS?

The EIS is inadequate because there is no cost/benefit analysis for this project. Perhaps I’ve missed it in my quick skim, but ??? It should be front and center, addressing the claimed “benefits” in light of costs, mindful that costs are more than just the literal costs of physical pieces of the project, construction, labor, etc., and include those more difficult but quantifiable environmental, socio-economic, and human costs.

This project is the test run for the larger part of Summit Carbon Solutions CO2 pipeline dreams. It’s very important to get this right and to look at all aspects of this project. Further, state and federal CO2 policy is NOT need.

Very truly yours,



Carol A. Overland
Attorney at Law