

From [REDACTED]

Sent: Tuesday, April 4, 2023 9:03 PM

To: PUC-PUC <[PUC@state.sd.us](mailto:PUC@state.sd.us)>

Subject: [EXT] Facts from FSIS Carbon Dioxide ( CO2) Health Hazard Information

To the South Dakota PUC,

Comments for Docket HP22-001 and Docket HP22-002

My comments are intended to be both educational and informational for the good of all our citizens.

Carbon Dioxide (CO<sub>2</sub>) is a colorless, odorless, non-flammable gas that occurs in the atmosphere. CO<sub>2</sub> is produced by body metabolism and exhaled with every living creature's breath. CO<sub>2</sub> also results from burning fossil fuels, volcanic eruptions and exhaust of coal, cement, motorized vehicles and ethanol plants. Carbon dioxide spurs plants to release oxygen to the atmosphere which is good.

The CO<sub>2</sub> **outdoors** air level typically ranged from 300 to 400 ppm (**0.03% to 0.04%**) but can be as high as 600 to 900 ppm. The global average concentration of CO<sub>2</sub> as of May 2022 was 421 ppm ) 0.042%. Scientists estimate by the middle of the 21st century CO<sub>2</sub> levels could reach over 500 ppm.(0.05%). Still not a danger to man or life on earth. The planet earth has had both much higher and much lower levels. The point is changes are not something that will happen immediately but over long periods of time. The CO<sub>2</sub> pipeline is not the answer or something that we need to rush into so a few can make billions and still not solve the CO<sub>2</sub> levels. **This is all fact and what I am saying is not hype or irrational thinking.** Many of our elected leaders are acting out of pressure from those wanting to capture the 45Q credits.

Scientists say the **earth's axis changes (tilts), it wobbles as it spins** and becomes more or less oval as it spins. Over thousands of years this has caused **changes to the Earth climate**. Remember the Bad-lands once was a Ocean and under water. Have you ever been to the fossil museum in Hill City, SD to see all the fossils from the Bad-land Ocean?

Climate change is always happening and will continue for ever as the earth changes position. These changes, so slight, not recognize in my life time or my children's.

Gases of CO<sub>2</sub> can be compressed to form dry ice the solid form. It becomes very cold when this happens and can cause severe frost bit or burns to exposed tissue. CO<sub>2</sub> can also be used to quickly freeze meat products. CO<sub>2</sub> levels next to an open bin of dry ice can be as high as 11,000-13,000 ppm with proper ventilation and without ventilation 25,000 to 30,000 ppm.

Poultry and swine plants that use CO<sub>2</sub> for euthanization are usually fully contained and must be vented to the atmosphere to rid the area of CO<sub>2</sub>. This is about the limit of CO<sub>2</sub> uses at the present time.

Some have used CO<sub>2</sub> to **enhance the oil** recovery during drilling for oil in shell-limestone formations and carbonation of beverages.

### **Symptoms of exposure of various level of Carbon Dioxide.**

421 ppm (0.04%) **approximate outdoors air CO<sub>2</sub> concentration, Currently= Very good**

5000 ppm (0.5%) OSHA permissible exposure Limit 8 hrs. exposure. Large crowd gatherings

10,000 ppm (1.0%) Typically no effects, maybe some drowsiness.

15,000 ppm (1.5%) Mild respiratory stimulation for some people.

30,000 ppm (3.0%) Moderate respiratory stimulation, increase heart rate and blood pressure.

40,000 ppm (4.0%) Immediately Dangerous to life or health.

50,000 ppm (5.0%) Strong respiratory stimulation, dizziness, confusion, shortness of breath.

80,000 ppm (**8.0%**) Dimmed sight, tremor, unconsciousness and death.

The proposed pressure of 2300 psi to push liquefied Carbon Dioxide up to North Dakota would be a catastrophic disaster should the pipeline rupture.

The above chart shows the levels at which death occurs is **8 percent**, the concentration of the CO<sub>2</sub> in these pipeline is way above that percentage.

Very, **very serious to** anything living within the vicinity of a ruptured pipeline.

The **federal government has written regulations** for businesses whose employees are handling CO<sub>2</sub> for making dry ice or euthanizing poultry and swine under the FSIS (Food Safety Inspection Service Act). So why would the PUC want to provide a permit for Carbon Dioxide 2000 mile pipeline **with no regulations in place** to protect the public and the private property of those who voted them into office. Summit and Navigator are really not utilities delivering to customers. They are not a common carrier of a commodity for sale to the public. They own the CO<sub>2</sub> from the stack to the hole in the ground 2000 miles away. They want to build a high pressured Carbon Dioxide Pipeline with no Federal or county requirements or rules.

**What I am saying is unless regulations for protecting the public are in place, the PUC should not issue a permit.**

This whole project is truly the lack of common sense. It's truly about money and pressure from those with money for more power. Anyway you look at the facts which I tried to show above, there is no way this scheme is needed or can't wait until the Federal government provides PHMSA regulations to the state.

The tax payers money is funding this boondoggle and most citizens don't even know it. Currently the demand for ethanol is good and there is no reason they will suffer if the pipeline is not started. The price for corn will stay high. They are loading 100 plus

railroad tankercars of ethanol routinely at Watertown and selling to Brazil. Watertown Commissioners won't even consider zoning or requirements to protect their citizens,homes, livestock or require setbacks. **Not right**

The PUC and County Commissioners need to step up and tell the federal government and counties to get regulations passed before any permit is issued. The state and counties don't have anyone trained, or a recue plan or equipement for immediate action/help. The state needs regulations to protect the citizens from financial lost and other problems should an accident occur. Summit and Navigator need to fund an escrow account, held by the staten should they leave. Individuals could never handle an action against these big businesses. I read were the company with the CO2 pipeline in Mississippi that ruptured folded and those harmed are still waiting for help.

Thank you,

Please add to Pipeline Docket HP22-001 and HP22-002

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