Comments of Curtis Jundt

Before the ND Legislative Senate/House Natural Resources Committee

In support of HB1292 (Sponsor Rep. Lori VanWinkel, et al)
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January 30, 2025

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So trying to sell the Summit CO2 pipeline beyond its original purpose of CO2 sequestration by saying that is vital to the survival/sustenance/growth of ND's oil shale production by use of CO2 in EOR to increase recoverable reserves of oil and gas - that then equates to sustaining or growing the State's oil tax collections - does not justify a CO2 pipeline as a "Common Carrier" transporter. Nevertheless, for the first twelve (12) years, the CO2 pipeline transportation will be strictly used for permanent sequestration and DOES NOT in any way fit that definition. First, there is no "Commerce" taking place in the CCUS-CO2 pipeline

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".....a Public Use or a Public Purpose does not include benefits of Economic Development, including and increase in tax base, tax revenues, employment, or general economic health" and continues "Private Property Shall Not be taken for the use of, or ownership by, any private individual or entity, unless that Property is necessary for conducting a common carrier or utility business (emphasis supplied)"

So trying to sell the Summit CO2 pipeline beyond its original purpose of CO2 sequestration by saying that is vital to the survival/sustenance/growth of ND's oil shale production by use of CO2 in EOR to increase recoverable reserves of oil and gas - that then equates to sustaining or growing the State's oil tax collections - does not justify a CO2 pipeline as a "Common Carrier" transporter. Nevertheless, for the first twelve (12) years, the CO2 pipeline transportation will be strictly used for permanent sequestration and DOES NOT in any way fit that definition. First, there is no "Commerce" taking place in the CCUS-CO2 pipeline

transportation. Secondly, there is NO GOOD or "Public Convenience and Necessity" benefiting the Public, the citizens of North Dakota. In fact, it's quite the opposite. Any CO2 pipeline, like Summit CS, seeking to take advantage of the Inflation Reduction Act's 45Q/Z/V/etc. CCUS tax subsidies and/or credits are proposed to **happen at a Public Cost**. No citizen, landowner, commercial or residential customer will ever be able to tap into Summit's CO2 pipeline for any purpose except, possibly in the future, a mega-Meat Processing/Packing Plant using CO2 to euthanize the livestock. Safety is a much greater justified citizen concern. In addition to CO2 being used to euthanize animals (Hitler used it to do the same to humans), there are CO2 weapons of mass destruction that exist in military arsenals around the world that once dropped, turn the landscape into a total realm of euthanizing every living breathing bug, rodent, wildlife, livestock and humans as the heavier than air CO2 spreads overland as an asphyxiant.

So here now we have the taxpayers paying for the CO2 pipeline ROI (Summit CS will generate $1.6 billion per year totally $19.4 billion (or more) in 12 years in taxpayer subsidies/credits) the CO2 pipeline comes with a very different set of operational and safety risks to landowners, towns, cities and Counties along its route that are substantially greater due to the more complex thermophysical properties of CO2 and thermodynamic challenges of transporting CO2 in a high pressure supercritical state. When released from a CO2 pipeline rupture, dense-phase CO2 at 60 lbs/cubic feet (or more) in a 24-inch CO2 2,183PSIG/50 degrees Fahrenheit goes through multiple phase changes eventually becoming an odorless, colorless gas spreading along the ground at 1.53X the weight of air. At concentrations of 3 to 4% CO2 by volume in our breathable air exposure in minutes can begin to cause problems for humans while at concentrations of 8% and higher you have minutes, not hours, to save yourself and your family or be rescued.

In a Natural Gas pipeline, a rupture from the same pipeline conditions has a density of less than 9lbs/cubic feet and when venting to the atmosphere in a

single-phase gas that is 1/2 the weight of air tends to disperse more easily. Believing that CO2 pipelines are safer than a Natural Gas pipeline - or any other pipeline running through ND is - in my experience and belief - patently false! For this and other reasons, it has been an unintended consequence for ND's Legislators to have treated CO2 as though it were in the same category as crude oil, refined petroleum products or Natural Gas while inserting CO2 throughout our Century Code to receive the same treatment as the other energy hazardous fluid and gases. To further support how different CO2 transportation is from Natural Gas pipeline transportation, I have provided below **USDOT's PHMSA's January 15, 2025, release of its 346-Page DRAFT Proposed Rulemaking "To Strengthen Safety Requirements for Carbon Dioxide Pipelines"**

(End Direct Testimony – Due to 5-Minute Time Limit)

<u>Supplemental Testimony/information for reading at your leisure:</u>

The NDCC additions over the last dozen or more years were done somewhat under the radar and before an unwitting Public. I firmly believe this was not intentional. No one ever told any of you, or the Public, or our federal elected delegation or the employees of the Department of Mineral Resources or Geological Survey or even the Governor's office, what the risks to health and safety would be for those landowners and citizens living in X-mile proximity of a 2,100+PSIG carbon steel CO2 pipeline or what the risks are associated with injecting 19 million metric tons of high pressure CO2 1-1/2 miles below ground. While tens-of-millions of dollars of federal and state grant money have been spent on the R & D of sequestering CO2 in the Broom Creek formation of North Dakota, I cannot find ANY additional research that has been done on addressing the increased safety risks (like enhanced Public Alert Systems) or heightened Emergency Response procedures and equipment needed that comes with the whole CCUS and high-pressure CO2 pipeline transportation. From POV, I believe that Safety has previously been minimized and taken for granted and completely deflected to the USDOT PHMSA as was done by our NDPSC throughout the Summit Application proceedings. The Narrative by the litany of

proponents of the CO2 pipeline is “it will be the safest ever built in ND and even safer than a Natural Gas pipeline.” In fact, through the entire 24-month NDPSC Hearing process on the Summit CS Application, the Public STILL has not been told what the risks may be in the event of a CO2 pipeline rupture and therefore have little to no idea how to respond to save themselves and their families. Weve been left to figure it out on our own with Summit basically saying, “just trust us.” The last time we did that was five years ago listening to Dr. Anthony Fauci and we all now see how well that turned out!

Summit’s justification for not providing “Plume Dispersion Modeling/Analysis” and a credible Modeling Tool to Emergency Responders to use in real time, is because we were told “we cannot provide this to the Public at the risk it could end up in the hands of a Terrorist(s)”. That pretty says it all. One can only conclude that “well isn’t that just great, it is by our default conclusion that Summit is building a “weapon-of-mass-destruction!” Yes, a CO2 pipeline rupture when compared to an oil or natural gas pipeline rupture is a very different animal - a very dark horse of a different color! Another reason why treating CO2 in our Century Code on par with our “true” energy transporting Commodities has been a grave injustice to the citizens of ND and that is loaded with a litany of unintended consequences to any citizen living within a lethal proximity of a 24-inch 2,183PSIG 19+ million metric tons a year CO2 pipeline that is part of the longest haul, greatest capacity CO2 pipeline ever built in the lower-48 states by a newly formed LLC pipeline company assembled by group of AG executives. But you do not have to take my word on the part of a CO2 Pipeline being more technically challenging when it comes to operations, safety protocols, Plume Dispersion Modeling/Analysis of the numerous variables that can occur at the time of a CO2 release to the air we breathe, you can read it for yourself in the **USDOT’s PHMSA’s January 15, 2025 release of its 346-Page DRAFT Proposed Rulemaking “To Strengthen Safety Requirements for Carbon Dioxide Pipelines”**. Per PHMSA’s Draft Rulemaking Pages 101-102:

PHMAS DRAFT Rulemaking Pages 101-102: Continued

"In contrast, carbon dioxide behaves differently when released to the atmosphere compared to flammable gases and hazardous liquids. Specifically, when modeling the failure and subsequent release of carbon dioxide from a pipeline compared to a failure and release of (flammable) natural gas, release simulations indicate that a significantly larger percentage of the initial mass in the pipeline will be immediately released from a rupture on a carbon dioxide pipeline than the percentage of the initial mass in the pipeline that would be released from a natural gas pipeline. [Insert by CJundt: This is due to the density in a CO2 24-inch pipeline being more than 6X the density of Natural Gas at the same pressure and temperature conditions] This increased amount of released carbon dioxide, combined with a density greater than air, can quickly lead to asphyxiating concentrations of carbon dioxide at or near the ground level. Further, these hazardous plumes of carbon dioxide can settle into low-lying areas and flow downhill into areas that are distant from the release site, before ultimately dissipating into the atmosphere. Unlike other gases (e.g. natural gas and certain other Part192-regulated gases) whose release could result in ignition or combustion in the immediate vicinity of the release point (thereby potentially limiting the geographic scope of public safety and environmental harm), carbon dioxide is not a flammable gas. Combustion or ignition would not reduce the potential for carbon dioxide asphyxiation hazards distant from the release site, nor would the asphyxiation hazard posed by released carbon dioxide persist in the environment as long as other Part195-regulated commodities (e.g., crude oil); released carbon dioxide eventually dissipates to atmosphere. Reliance on either of the above approaches currently used by PHMSA's parts 192 and 195 regulations may not, therefore, be appropriate to address the asphyxiation and other risks specific to carbon dioxide pipelines. The risks carbon dioxide pipelines pose to the public and the environment are not adequately addressed in existing location-based part 195 requirements"

Newsworthy Items to be aware of while dealing with Bills related to CCUS and CO2 pipeline transportation:

- Summer 2024 it was announced by the EPA that ADM CCUS at Decatur Illinois had halted its CO2 injections due to migration of saline/brine water to unintended formations. They injected about 1 million metric tons of CO2 annually for about 7 years. Summit is planning on injecting 19 million metric tons PER YEAR into the ND Broom Creek formation.

- Satartia MS CO2 Denbury Gulf Coast February 22, 2020 pipeline rupture resulted in PHMSA's May 26, 2022, 269-page Investigation Report, with an announcement that PHMSA would be initiated a Rulemaking Process to enhance Safety Regulations in CO2 Pipeline Transportation and an assessment of $3+ million fines against the company. Numerous victim lawsuits followed with substantial liabilities against Denbury Gulf Coast. The company filed for Bankruptcy and opened the next day as Denbury Energy LLC. Months later they are acquired by ExxonMobil Corporation. Is this how an entity can get out of paying for liabilities?

(END)