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Submitted via Email and Alaska ZendTo

November 6, 2024

Jessie L. Chmielowski, Commissioner
Alaska Oil and Gas Conservation Commission
333 West 7th Avenue
Anchorage, AK 99501

Re: Notice of Public Scoping
Docket Number: R-24-002
Carbon Storage Facility Regulations
Class VI Primacy Application

Dear Ms. Chmielowski:

The Alaska Center, Alaska Community Action on Toxics, Center for Biological Diversity, Cook Inletkeeper, Native Movement, Northern Alaska Environmental Center and Soverign Iñupiat for a Living Arctic provide the following comments to Docket R-24-002, the Alaska Oil and Gas Conservation Commission's scoping period regarding its intent to pursue Class VI primacy for carbon dioxide (CO_2) injection wells and the development of regulations related to CO_2 storage facilities.

We are writing to express our concern regarding the Commission's intent to apply for Class VI primacy from the Environmental Protection Agency (EPA). As a threshold matter, we reject the premise that carbon capture and storage (CCS) is a necessary—or even appropriate—approach to addressing the climate crisis and Alaska's pollution burdens. After billions of dollars of investment and decades of development, deployment of CCS has consistently proven to be ineffective, uneconomic, and unnecessary.[1] To that end, obtaining Class VI primacy would only needlessly burden the state's agencies and resources.

[1] The Intergovernmental Panel on Climate Change (IPCC) cautions against overreliance on CCS and related technologies, noting that their future deployment is uncertain and they face multiple feasibility constraints and could have adverse impacts on human rights and ecosystems. The modeled pathways that provide the greatest chance of staying below 1.5ºC (2.7°F) without overshoot (experiencing global temperature increases beyond 1.5°C) avoid reliance on CCS and bioenergy with carbon capture and storage and instead focus on rapid and dramatic phaseout of fossil fuels. See Center for International Environmental Law, IPCC Unsummarized: Unmasked Clear Warnings on Overshoot, Techno-fixes and the Urgency of Climate Justice 1 (2022), https://www.ciel.org/wp-content/uploads/2022/04/IPCC-Unsummarized_Unmasking-Clear-Warnings-on-Overshoot-Techno-fixes-and-the-Urgency-of-Climate-Justice.pdf.

CCS projects and the assumption of Class VI primacy responsibility are an especially poor fit for our state for many reasons. Alaska's unique environment, climate, and geology make it particularly ill-suited to host CCS projects, as our numerous wetlands, underlain permafrost, arctic conditions, and seismic activity all compound the risks of CO_2 injection that are present in more stable conditions. Just as concerning is the Commission's poor track record of environmental enforcement and its lack of adequate resources and expertise to assume the responsibility of Class VI primacy. Focusing on a false climate solution like CCS will only divert the state's resources from what is actually needed at this critical juncture: an equitable fossil fuel phaseout. As called for by an overwhelming scientific consensus, we must focus on a rapid phaseout of fossil fuels to reduce catastrophic climate harms and stem the resulting public health, environmental justice, and biodiversity extinction crises.

For these reasons, we urge the Commission not to move forward with a Class VI primacy application and forego the development of regulations that would encourage the exploration and development of CCS projects on state lands.

I. CCS projects are expensive, dangerous, ineffective, and an especially poor fit for Alaska

A. CCS is not an effective climate solution

The science is clear that renewable energy and energy storage projects are needed to avert a climate catastrophe.[2] CCS diverts resources from that goal. After billions of dollars of investment and decades of development, CCS projects around the world have failed to meet their greenhouse gas emission reduction promises.[3] The projects themselves also have substantial greenhouse gas impacts. In one instance, plans for a CCS project show that the *construction emissions alone* will be the equivalent of burning nearly 31 million pounds of coal;[4] once the project is operational it will remain net-positive for greenhouse gases for at least seven years.[5]

Alaska's diverse, dynamic, and unique environment is warming at least two to three times faster than the global average and nearly four times faster in the arctic region of the state.[6] Public health and safety, plants, fish and wildlife, and critical infrastructure throughout Alaska are

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[2] The Department of Energy's research shows that there are enough renewable energy and storage projects proposed across the country to hit 80% of President Biden's 100% non-fossil energy goal years ahead of schedule. Dep't of Energy, Queued Up… But in Need of Transmission 1 (2022), https://www.energy.gov/sites/default/files/2022-04/Queued%20Up%E2%80%A6But%20in%20Need%20of%20Transmission.pdf.

[3] Robertson, B. & Mousavian, M., The Carbon Capture Crux: Lessons Learned 71-76 (2022), https://ieefa.org/sites/default/files/2022-09/The%20Carbon%20Capture%20Crux.pdf.

[4] Kern County Planning and Natural Resources Department, Draft Environmental Impact Report – CarbonFrontier CCS Project 4.8-24 (2024), https://psbweb.kerncounty.com/planning/pdfs/eirs/carbonfrontier/carbonfrontier_deir_vol1.pdf [hereinafter Kern County].

[5] *Id.* at 4.8-25.

[6] Huntington, H., et al., Fifth National Climate Assessment: Chapter 29 Alaska 29-5 (2023); Rantanen, M., et al., The Arctic has Warmed Nearly Four Times Faster than the Globe Since 1979, 3 Communications Earth & Env't 168, 2 (2022).

already being damaged by and facing increasing risks from flooding, erosion, and permafrost degradation.[7] There is no doubt that our state is facing significant climate-related challenges, but focusing on false solutions will only cause further harm to Alaskans and the environment.

B. CCS is highly energy-intensive

CCS operations are energy-intensive, meaning CCS could strain Alaska's utilities and drive up energy prices for residents. CCS projects often result in an "energy penalty" from the extra energy required to run a capture process, i.e., the amount of energy spent when compared to the energy generated.[8] A Stanford study showed the energy penalty of CCS increases the fuel requirement for electricity generation by 11-40%.[9] In a real-world example, one CCS project proposed building its own 23MW gas-fired powerplant just to compress the CO_2 for injection.[10] Another project, in Kern County, California, estimated its energy demands to be 49 MW/year—or 3% of the county's total—which it would draw off the grid.[11]

According to a 2021 report from one think tank, widespread adoption of CCS would raise the retail price of electricity in Alaska by 10.5% or $148.75 per year.[12] The Railbelt is the largest regional electric grid in Alaska and is already facing growing challenges, including substantial future price increases for consumers.[13] Outside of the area covered by the Railbelt, in regions like the North Slope, there is no electric grid and the vast majority of energy currently comes from diesel generators. As such, the only way to generate the excessive power needed to operate a CCS project in the North Slope would be more fossil fuel extraction, highlighting the absurdity of increasing CO_2 emissions in furtherance of a project to inject CO_2 back into the ground under the guise of reducing CO_2 emissions.

Alaska's residents already "face energy disruptions, natural disasters, and the harmful effects of climate change while paying some of the nation's highest energy costs."[14] Increased fossil fuel extraction, additional strain on our state's utilities, and increased consumer prices is the last thing the people of Alaska want or need.

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[7] Huntington (2023) at 29-5.
[8] Jacobson, M., The Health and Climate Impacts of Carbon Capture and Direct Air Capture, 12 Energy & Env't Sci. 3567 (2019).
[9] House, K., et al., The Energy Penalty of Post-Combustion CO_2 Capture & Storage and its Implications for Retrofitting the U.S. Installed Base, Energy & Env't Sci. (2009).
[10] Email from Frederick Tornatore, San Joaquin Renewables, to Leonard Scandura, San Joaquin Valley Air Pollution Control District (Mar. 2, 2021 09:10:22 PT) (on file with the Center for Biological Diversity).
[11] Kern County at 4.1-15.
[12] O'Leary, S., & Hunkler, B., Ohio River Valley Institute, Carbon Capture, Use, and Sequestration Would Decarbonize the Electric System…in the Worst Possible Way 1, 7 (2021), https://ohiorivervalleyinstitute.org/wp-content/uploads/2021/10/CCUS-Report-FINAL-3.pdf.
[13] Denholm, P., et al., National Renewable Energy Laboratory, Achieving an 80% Renewable Portfolio in Alaska's Railbelt: Cost Analysis (2024).
[14] Dep't of Energy, Office of Energy Efficiency & Renewable Energy, 100% Clean Electricity: North to the Clean Energy Future (Aug. 9, 2023), https://www.energy.gov/eere/articles/100-clean-electricity-north-clean-energy-future.

C. CCS projects endanger public safety and perpetuate environmental injustice

Transporting and storing CO_2 will require a massive network of perilous pipelines connected to underground injection sites, which can leak or rupture. Existing CCS infrastructure has already harmed people and the environment, including the February 2020 CO_2 pipeline rupture in Satartia, Mississippi.[15] In that incident, individuals miles away from the leak began foaming at the mouth and suffocating, not knowing that they were in a potentially deadly CO_2 cloud.[16] Combustion-engine cars stopped working because of the oxygen displacement, hindering evacuation and emergency response.[17] An environmental assessment document for one recently proposed CCS project acknowledged that "fatalities" of workers at a nearby farm could result from a CO_2 leak at the project site.[18]

The White House Environmental Justice Advisory Council (WHEJAC),[19] more than 500 organizations nationwide,[20] and the 1,500-group Climate Action Network[21] have raised alarm about CCS for its impacts named above and for perpetuating harms in frontline and environmental justice communities, including Tribes. As recently as October 2024, the WHEJAC asked EPA to "suspend delegation of primary enforcement authority for UIC Class VI programs until it has made a determination that each state has achieved full compliance with applicable rules and authorities, including public participation requirements."[22]

Remote Alaska Native communities have been particularly affected by environmental injustices, including the conveyance of contaminated Alaska Native Claims Settlement Act lands, struggling fish stocks, as well as climate-induced storms, erosion, flooding, and thawing permafrost. Inviting CCS projects into the state would threaten the health and safety of all residents, but remote Alaska Native villages that are at the forefront of climate change and rely on a healthy environment for their food security are most vulnerable.

Many of the concerns regarding CCS and CO_2 storage are inherent to such projects regardless of jurisdiction, but they are significantly elevated by the possibility of state regulators obtaining Class VI primacy under the Safe Drinking Water Act (SDWA). As outlined further below, there

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[15] Dan Zegart, The Gassing of Satartia, Huffington Post (Aug. 26, 2021), https://www.huffpost.com/entry/gassing-satartia-mississippi-co2-pipeline_n_60ddea9fe4b0ddef8b0ddc8f.
[16] *Id.*
[17] *Id.*
[18] Kern County at 4.9-54.
[19] White House Environmental Justice Advisory Council, Final Recommendations: Justice40 Climate and Economic Justice Screening Tool & Executive Order 12898 Revisions 59 (2021), https://www.epa.gov/sites/default/files/2021-05/documents/whiteh2.pdf (listing CCS and CCUS as examples of projects that will not benefit communities).
[20] Letter from 350.org, et al., to President Joseph R. Biden, Jr., House Speaker Nancy Pelosi, & Senator Charles Schumer (July 19, 2021), https://www.ciel.org/wp-content/uploads/2021/07/CCS-Letter_FINAL_US-1.pdf.
[21] Climate Action Network, Position: Carbon Capture, Storage and Utilisation (2021), https://climatenetwork.org/wp-content/uploads/2021/01/can_position_carbon_capture_storage_and_utilisation_january_2021.pdf.
[22] White House Environmental Justice Advisory Council, Carbon Management Recommendations, Report 2 16 (2024), https://www.epa.gov/system/files/documents/2024-10/whejac-carbon-management-recommendations-october-2024.pdf [hereinafter WHEJAC Report 2].

are significant concerns regarding the technical expertise and capacity of the Commission to permit Class VI wells while ensuring that our drinking water is protected.

D. CO_2 leaks endanger plants, animals, and ecosystems

Just as CO_2 can harm and cause fatalities with people, the same is true with animals. For example, in 1986, a sudden, catastrophic release of CO_2 from Lake Nyos in Cameroon killed 1,700 people and 3,000 cattle. [23] The CO_2 spread 10 km from the lake and bird, insect, and small mammal populations were not seen in the area for at least 48 hours after the event.[24] Additionally, experiments with controlled injections of CO_2 into soil showed adverse effects on plants in response to CO_2 exposure.[25] Biomass changes were seen in all plants studied; for example, clover plants decreased by 79% while grass decreased by 42%.[26] The researchers' overarching conclusion was that elevated concentrations of soil CO_2 damages both soil microbiology and growing vegetation.[27]

Other research on CO_2 and plants showed reduced plant growth and extensive mortality at the point where CO_2 concentrations were greatest in the soil.[28] For the plants that survived, root and shoot growth was significantly lower than in controls.[29] Reproductive variables such as number of seeds per plant and seed dry weight per plant were also reduced compared to controls.[30]

Alaska is home to a variety of plants, fish, and wildlife, each of which contribute to rich, biodiverse ecosystems. Many of the species that call our state home are already struggling with the effects of climate change, human disturbances, overfishing, oil spills, and habitat fragmentation. Protecting the species that call Alaska home is inherently important and critical to the wellbeing of our state. The wellbeing of Alaska's fish, wildlife, lands, and waters is also critically important for the social, cultural, spiritual, and economic and wellbeing and survival of Alaska Native people, who have relied on subsistence practices to sustain customary and traditional ways of life since time immemorial.[31] Hunting and fishing is also important for many residents and visitors to Alaska who are not Native, and the ability to carry out those activities requires healthy fish and wildlife populations. As the Department of Fish and Game notes on its website, "[w]ildlife is one reason why people live in Alaska, and a big reason why visitors come

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[23] Kling, G., et al., The 1986 Lake Nyos Gas Disaster in Cameroon, West Africa, 236 Science 169 (1987).
[24] *Id.*
[25] Smith, K., et al., Environmental Impacts of CO_2 Leakage: Recent Results from the ASGARD Facility, UK, 37 Energy Procedia 791 (2013).
[26] *Id.*
[27] *Id.*
[28] Al-Traboulsi, M., et al., Potential Impact of CO_2 Leakage From Carbon Capture and Storage (CCS) Systems on Growth and Yield in Spring Field Bean, 80 Env't & Experimental Botany 43 (2012).
[29] *Id.*
[30] *Id.*
[31] Alaska Federation of Natives, Resolution 23-01: A Resolution in Support of Alaska Native Aboriginal Hunting and Fishing Rights and Congressional Action to take Immediate Action to Permanently Protect the Right of Alaska Native People to Engage in Subsistence Fishing in Alaska's Navigable Waters (Oct. 1, 2023).

to Alaska."[32] The state must not risk damage to the precious and fragile ecosystems of the state, which so many Alaskans rely on, by encouraging dangerous CCS projects.

E. CO_2 is highly corrosive to steel, making leaks possible, and compounding other environmental hazards presented by Alaska's unique environment

There remains tremendous uncertainty about whether CO_2 can be reliably injected and stored without leaks and corrosion. In September 2024, EPA released information that the nation's first-ever Class VI injection well, issued to Archer Daniels Midland (ADM), had been leaking CO_2 for years.[33] In response to the ADM leak and EPA investigation, EPA alerted CCS companies that the type of steel used by ADM, 13 Chrome, and a type of cement commonly used by the industry to secure those pipes, "are NOT suitable for construction of these wells in most instances, particularly under potentially corrosive conditions when both water and CO_2 are present."[34] CO_2 is especially corrosive when it is pumped into a saline aquifer—which is common practice for CCS projects—because of a chemical reaction that leads to the formation of carbonic acid, an extremely corrosive liquid.[35] Carbonic acid can form whenever compressed CO_2 comes into contact with water and there has been very little research into which, if any, metals can withstand carbonic acid corrosion.[36]

Due to these issues, CO_2 pipelines and injection wells located in wetlands may be at increased risk of leaks or breaks due to pipeline corrosion from coastal saltwater, the erosion of the wetlands themselves, and coastal flooding and storms.[37] Wetlands cover approximately 43% of Alaska's surface area, including many areas along the coast.[38] The proposed CCS project on the northern shore of the Cook Inlet, for example, is not a good fit for the wetlands in the area and places the community and ecosystem at great risk.

In addition to the baseline uncertainty about whether any metals can withstand CO_2 corrosion in the best of conditions, Alaska's extreme and changing climate adds a level of uncertainty that compounds the risk. Engineering construction that has been designed and tested in climatic conditions outside of Alaska should be presumed unsafe to use in arctic temperatures without

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[32] Alaska Department of Fish and Game, Division of Wildlife Conservation – Division Overview, https://www.adfg.alaska.gov/index.cfm?adfg=divisions.wcoverview.
[33] Press Release, Environmental Protection Agency, EPA Announces Proposed Order Requiring Archer Daniels Midland Co. to Take Actions to Ensure Safe Operation of its Carbon Sequestration Well in Decatur, Illinois (Sept. 19, 2024), https://www.epa.gov/newsreleases/epa-announces-proposed-order-requiring-archer-daniels-midland-co-take-actions-ensure.
[34] Annie Snider & Ben Lefebvre, Carbon Storage Projects Hit a Hurdle: Corroding Steel, E&E News (Oct. 9, 2024), https://subscriber.politicopro.com/article/eenews/2024/10/09/carbon-storage-projects-hit-a-hurdle-corroding-steel-ee-00182889 [hereinafter Snider & Lefebvre].
[35] *Id.*
[36] *Id.*
[37] Center for International Environmental Law, Confronting the Myth of Carbon-Free Fossil Fuels: Why Carbon Capture is Not a Climate Solution 2, 4, 24 (2021), https://www.ciel.org/wp-content/uploads/2021/07/Confronting-the-Myth-of-Carbon-Free-Fossil-Fuels.pdf.
[38] Alaska Department of Environmental Conservation Division of Water, Alaska's CWA Sec. 404 Dredge and Fill Permitting Program Development, https://dec.alaska.gov/water/wetlands-404/.

first ensuring their reliability.[39] Swift temperature drops in particular can alter the mechanical properties of steel, leading to low-temperature induced brittleness.[40] About 85% of Alaska is underlain by permafrost[41] and degradation of permafrost due to climate change has already resulted in extensive damage to built infrastructure, including the Trans-Alaska Pipeline System.[42] "[I]t is believed that thawing of near surface permafrost will negatively affect up to 70% of current arctic infrastructures," as projected climate warming will further reduce the capacity of permafrost to support infrastructure.[43] Intensifying the uncertainty is the current widespread lack of assessments of permafrost presence in the state.[44]

F. Injected CO_2 can lead to, and be impacted by, seismicity

Science shows that CO_2 injection can be impacted by seismic events and itself induce seismicity.[45] In one example, CO_2 injection as part of a CCS project in Decatur, Illinois was followed by roughly 180 earthquakes across a two-year span, near and at the approximate depth of the CO_2 injection.[46] At Texas's Cogdell Oilfield, there were 18 seismic events over M3.0 and one over M4.0 over the five years following CO_2 injection.[47]

As the Alaska Seismic Hazards Safety Commission website notes, "[s]cientists have long recognized that Alaska has more earthquakes than any other region of the United States and is, in fact, one of the most seismically active areas of the world."[48] The Alaska Division of Geological and Geophysical Surveys has outlined the seismic risks of three proposed CCS sites, recognizing that the seismology of the North Slope is not well studied, a moderately high seismic hazard exists at the proposed Healy site, and that the proposed Cook Inlet site has an extreme seismic hazard risk.[49] Injecting CO_2 into Alaska's active geology is a recipe for disaster and risks public safety and destabilizing our environment.

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[39] Ohaeri, E., & Szpunar, J., An Overview on Pipeline Steel Development for Cold Climate Applications, 2 J. Pipeline Sci. & Eng'g 1, 2 (2022).
[40] Nnoka, M., et al., Effects of Different Parameters on Initiation and Propagation of Stress Corrosion Cracks in Pipeline Steels: A Review, 159 Eng'g Failure Analysis 1, 30 (2024).
[41] Alaska Department of Fish and Game, Permafrost, https://www.adfg.alaska.gov/index.cfm?adfg=ecosystems.permafrost.
[42] Alaska Department of Natural Resources, Analysis and Proposed Decision: Trans-Alaska Pipeline Right-Of-Way Lease Amendment, ADL 63574; Thermal Improvements at Lost Creek Hill, Pipeline Milepost 392 (2020), https://aws.state.ak.us/OnlinePublicNotices/Notices/Attachment.aspx?id=125562.
[43] Ohaeri (2022) at 2.
[44] Huntington (2023) at 29-23.
[45] Verdon, J., & Stork, A., Carbon Capture and Storage, Geomechanics and Induced Seismic Activity, 8 J. Rock Mechanics & Geotechnical Eng'g 928 (2016); Zoback, M., & Gorelick, S., Earthquake Triggering and Large-Scale Geologic Storage of Carbon Dioxide, 109 Proceedings Nat'l Academy Sci. 10164 (2012).
[46] Foulger, G., et al., Global Review of Human-Induced Earthquakes, 178 Earth-Sci. Reviews 438 (2018).
[47] *Id.*
[48] Alaska Seismic Hazards Safety Commission, Earthquake Risk in Alaska, https://seismic.alaska.gov/earthquake-risk.html.
[49] Alaska Department of Natural Resources Division of Geological and Geophysical Studies, Seismic Hazard Considerations for Carbon Sequestration in Alaska 9 (2022), https://ine.uaf.edu/media/327110/ak-ccs_seismichazards_dggs_20220929.pdf.

II. Alaska's fiscal and administrative struggles and its poor history of oil and gas oversight cautions against its assumption of Class VI primacy

A. The state lacks adequate resources and funding

Class VI primacy would require the Commission to hire new staff with high levels of technical expertise, expend significant funds, and commit to ongoing monitoring and enforcement. HB 50's one-page summary nods to this resource intensity, noting that "[p]rogram setup and Class VI primacy requires general fund appropriations for legal support and contractual services."[50]

Alaska does not have the financial or staffing resources to successfully carry out a Class VI injection well permitting program. As described in a 2024 report from the Alaska Legislature's Finance Division, "the State's fiscal situation is unsettled. Alaska still has a structural budget deficit: if all spending statutes are followed, the State would have a substantial budget deficit at expected long-term revenue. This has led to a widespread perception that Alaska is in the midst of an ongoing fiscal crisis."[51] The report projects that Alaska will exhaust its "rainy day fund," the Constitutional Budget Reserve, by 2027.[52] Such fiscal irresponsibility does not bode well for the state to assume the requirements of such a technically complex program.

Should the state decide to proceed with its Class VI primacy application, there must be a full disclosure of the funding and staffing demands that will be required to permit projects, including monitoring and enforcement. There must also be disclosure of where those funds will come from, i.e., whether they will be diverted from other activities or if additional funding measures must be passed. Relatedly, the state must analyze and disclose to the public what the expense burden will be to Alaskans of pursuing CCS projects in general and of any specific proposed CCS project. If the state were to obtain Class VI primacy, deployment of CCS projects in the state could be sped up, and the increased energy demand and potential costs to residents must be taken into account and disclosed to the public.

B. The state has a poor history of oil and gas oversight.

Safe delegation of Class VI primacy to the state would require the Commission to uphold the SDWA and maintain effective oversight to protect underground sources of drinking water. In the context of oil and gas, the Commission has shown that it is unable to deter environmental and safety violations: Hilcorp, for example, had more than two dozen violations over a 3.5-year period—so many that the Commission concluded that "disregard for regulatory compliance is endemic to Hilcorp's approach to its Alaska operations."[53] While the Commission has taken anemic enforcement actions against Hilcorp for some violations, the agency was unwilling to

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[50] Alaska Division of Oil and Gas, Carbon Capture, Utilization & Storage Act (CCUS) HB 50 One-Pager (2023), https://www.akleg.gov/basis/get_documents.asp?session=33&docid=567.
[51] Alaska Legislative Finance Division, The Fiscal Year 2025 Budget: Legislative Fiscal Analyst's Overview of the Governor's Request 7 (2023), https://www.legfin.akleg.gov/Overview/Overview2025.pdf.
[52] *Id.* at 14.
[53] Alaska Oil and Gas Conservation Commission, Decision and Order Re: Failure to Test BOPE After Use, Milne Point Unit I-03, PTD 1900920, Other Order 109, Docket No. OTH-15-029 3 (May 3, 2016).

hold Hilcorp accountable for the 2016 gas pipeline burst in Cook Inlet, even when the Alaska Supreme Court agreed with the former commissioner that the leak was under the Commission's jurisdiction.[54]

In the case of a gas leak at a ConocoPhillips' oil field on the North Slope, the Commission waited over a year before even holding a hearing on the issue.[55] The leak had gone undetected for three weeks, with up to 7.2 million cubic feet of natural gas streaming into the air during that period.[56] Residents of the local village, Nuiqsut, watched with concern as "busloads of people" left from the oil field, but received no information from the Commission or any entity about the leak or the risks to their health.[57]

The Commission's decision in 2022 to cancel its long-running practice of holding monthly public meetings is also troubling and does not paint a picture of an agency that will make Class VI permit decisions with full public transparency and accountability.[58] The Commission has been plagued by other issues that further strain its credibility, including the conflicts of interest and subsequent resignation of former commissioner Randy Ruedrich.[59] Before it attempts to assume Class VI primacy, the Commission must establish a reliable track record of integrity and strong environmental enforcement and a commitment to protect Alaska's people and environment.

C. The state lacks the requisite technical expertise and struggles with staffing and implementation of much simpler programs

Class VI permits are complex and highly technical, covering activities spanning decades, including pre-injection, injection, and post-injection. Generally, EPA takes nearly two years to review and issue a draft Class VI permit.[60] EPA's Class VI permit dashboard reflexes this reality, showing that the agency has only issued four permits since the federal Class VI regulations became effective in 2011.[61]

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[54] Sabine Poux, Alaska State Agency Again Rejects Hollis French's Petition to Investigate Cook Inlet Leak, Alaska Public Media (Jan. 21, 2022), https://alaskapublic.org/2022/01/21/alaska-state-agency-again-rejects-petition-to-investigate-cook-inlet-leak/.

[55] Yereth Rosen, Gas Leak at ConocoPhillips Field Reviewed a Year Later, with Enforcement Action Possible, Alaska Beacon (Mar. 24, 2024), https://alaskabeacon.com/2023/03/24/gas-leak-at-conocophillips-field-reviewed-a-year-later-with-enforcement-action-possible/.

[56] *Id.*

[57] *Id.*

[58] Alex DeMarban, Alaska Oil and Gas Commission Cancels Monthly Public Meetings, Alaska Daily News (June 20, 2022), https://www.adn.com/business-economy/energy/2022/06/20/alaska-oil-and-gas-commission-cancels-monthly-public-meetings/.

[59] Sean Cockerham, Ruedrich Resigns Post as Regulator on State Oil and Gas Commission, Anchorage Daily News (Sept. 2, 2008), https://www.adn.com/politics/article/ruedrich-resigns-post-regulator-state-oil-and-gas-commission/2008/09/02/.

[60] WHEJAC Report 2 at 40.

[61] Environmental Protection Agency, Current Class VI Projects Under Review at EPA, https://www.epa.gov/uic/current-class-vi-projects-under-review-epa (last accessed Oct. 25, 2024).

In EPA's own words to Congress, "[geologic storage] is a complex process that is highly dependent on site-specific conditions; therefore, *a robust and comprehensive permit application and permit review process is fundamental* to preventing endangerment of [underground sources of drinking water] from these activities."[62] EPA Region 9, for example, hires outside consultants and works with the U.S. Department of Energy's National Energy Technology Lab to assist with its Class VI permit application review process.

The technical expertise to permit Class VI wells is distinct from oil and gas permitting. Compressed CO_2 is highly dangerous and has high corrosive potential. As noted by the Pipeline Safety Trust:

> CO_2 pipelines are susceptible to ductile fractures, which can, like a zipper, open up and run down a significant length of the pipe, they can release immense amounts of CO_2, hurl large sections of pipe, expel pipe shrapnel, and generate enormous craters. Water, notoriously difficult to eliminate from CO_2 pipelines, allows the formation of carbonic acid in the pipeline which has a ferocious appetite for carbon steel. [63]

The risks of corrosion and CO_2 leaks extend beyond pipelines to include injection wells. As noted earlier in this comment, the nation's first-ever Class VI injection well was recently found to have been leaking CO_2 for years due to the corrosion of steel in the well.[64] The company had been using a type of steel called 13 Chrome; EPA has since warned project operators and the three states that have Class VI primacy about 13 Chrome.[65] EPA is now recommending that CCS companies use the more corrosion-resistant Super 25 Chrome, but 25 Chrome is both significantly more expensive and harder to obtain than 13 Chrome.[66] EPA regulations governing Class VI wells require that the CO_2 injection materials last for the lifetime of the project and be compatible with all fluids that they are likely to come into contact with.[67]

The need for technical expertise in order to responsibly assume the review of Class VI permits is a huge barrier for the state. The state government is experiencing significant issues hiring and retaining employees, including in its payroll division, causing many of the state's employees to

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[62] Environmental Protection Agency, EPA Report to Congress: Class VI Permitting 19 (2022) (emphasis added), https://www.epa.gov/system/files/documents/2022-11/EPA%20Class%20VI%20Permitting%20Report%20to%20Congress.pdf.

[63] Richard B. Kuprewicz, Accufacts' Perspectives on the State of Federal Carbon Dioxide Transmission Pipeline Safety Regulations as it Relates to Carbon Capture, Utilization, and Sequestration within the U.S., prepared for the Pipeline Safety Trust (2022), https://pstrust.org/wp-content/uploads/2022/03/3-23-22-Final-Accufacts-CO2-Pipeline-Report2.pdf.

[64] Snider & Lefebvre.

[65] *Id.*

[66] *Id.* One ton of 25 Chrome can cost $40 compared to $7 a ton for 13 Chrome. Further, only one steel mill in the U.S. makes 25 Chrome, so the vast majority of the material is imported from mills in Asia, and lead times can be up to a year. Id.

[67] 40 C.F.R. §144.83; §144.84; §144.86.

be paid late or incorrectly.[68] This payroll issue has compounded other hiring difficulties, including causing the already-understaffed state ferry system to lose workers.[69] Another example of the state's inability to effectively implement and carry out a relatively simple program is the recent fine of $11.9 million imposed by the U.S. Department of Agriculture's Food and Nutrition Service for the state's failure to properly verify eligibility.[70] The state has also repeatedly struggled with backlogs in the Supplemental Nutrition Assistance Program and Heating Assistance Program applications, which have recently had backlogs of 12,000 and 2,000 applications, respectively.[71] While each of these examples relates to programs that are very different than reviewing Class VI permit applications, they demonstrate a pattern of inability to adequately administer relatively simple, albeit high volume, functions. It is irresponsible for the state to pursue the authority to administer Class VI permitting decisions and to take on that responsibility would jeopardize the health and safety of Alaska's residents.

D. The state lacks the requisite environmental justice expertise

The state would also need to develop and deploy environmental justice expertise in order to comply with EPA's requirements for administering Class VI permitting, as outlined in EPA's guidance document: *Environmental Justice Guidance for UIC Class VI Permitting and Primacy*.[72] The Commission would be required to identify, analyze, and address environmental justice concerns in the context of implementing and overseeing Class VI permitting and must show how it will do so in its Class VI primacy application.[73]

To meet this requirement, the Commission must develop and be prepared to enforce an environmental justice framework as part of the permitting process. This framework must include a mechanism to review a project's cumulative impacts and for refusing a permit on environmental justice grounds.[74] Other requirements include:

- Identifying communities with potential environmental justice concerns;
- Enhancing public involvement, including public outreach and meaningful engagement;

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[68] *See, e.g.,* James Brooks, Understaffing at Alaska State Payroll Department Causing Widespread Problems, Alaska Beacon (Aug. 22, 2023), https://alaskabeacon.com/2023/08/22/alaska-state-payroll-department-one-crisis-away-from-workers-going-unpaid/.
[69] *Id.*
[70] Eric Stone, USDA Fines Alaska $11.9M for Failing to Ensure SNAP Recipients are Eligible, Alaska Public Media (Jun. 28, 2024), https://alaskapublic.org/2024/06/28/usda-fines-alaska-11-9-million-for-failing-to-ensure-snap-recipients-are-eligible/.
[71] Claire Stremple, State Lags in Heating Assistance Payments to Alaskans with Low Incomes, Catches up on Food Stamps, Alaska Beacon (Mar. 5, 2024), https://alaskabeacon.com/briefs/state-lags-in-heating-assistance-payments-to-alaskans-with-low-incomes-catches-up-on-food-stamps/.
[72] Memorandum from EPA Administrator Radhika Fox, Re: Environmental Justice Guidance for UIC Class VI Permitting and Primacy (Aug. 17, 2023), https://www.epa.gov/system/files/documents/2023-08/Memo%20and%20EJ%20Guidance%20for%20UIC%20Class%20VI_August%202023.pdf [hereinafter EPA EJ Guidance].
[73] *Id.* ("Additionally, UIC well owners/operators should consider this guidance when developing permit applications. EPA Regions are encouraged to work collaboratively and proactively with state, tribal, and local partners to facilitate their consideration and application of this guidance in their UIC permitting actions.").
[74] WHEJAC Report 2 at 16.

- Conducting environmental justice assessments, such as whether a Class VI project may create new risks or exacerbate existing impacts on affected communities;
- Enhancing transparency throughout the permitting process, such as making compliance monitoring, test results, records, and reports available, understandable, and readily accessible to the public;
- Protecting underground sources of drinking water and the communities that rely on them.[75]

Further, the WHEJAC recommends that all CCS projects "analyze and publicly disclose the ecological and environmental impacts (air, water, soil), human and public health risks and impacts, cumulative impacts, explosion and seismic risks, full life cycle assessments of greenhouse gas emissions outcomes, and co-pollutant emissions related to these projects."[76] This analysis must be done "in the early phases of scoping of projects."[77] If the state elects to pursue primacy it must incorporate this level of analysis and disclosure into its Class VI permit requirements.

Finally, the WHEJAC recommends that the public be given a comment period of at least 90 days, given the novelty and complexity of Class VI permits.[78] This public comment period should be accompanied by hearings (both in-person and virtual) as well as translations for any languages commonly spoken in the region.

EPA adheres to its own environmental justice guidance when evaluating a state's application for Class VI primacy.[79] For example, EPA regions must evaluate whether a state application for primacy incorporates environmental justice and equity planning and controls into its proposed program.[80] Once EPA receives a primacy application, it must develop and implement a plan to engage with community-based organizations in the requesting state, in order to understand perspectives on and inform the evaluation of the application. [81] EPA must also consult with federally recognized Tribes for any action, including a Class VI primacy application, that may affect tribal interests.[82]

There are many reasons that environmental justice compliance will be different and more challenging in Alaska than in other states, including the presence of 229 federally-recognized Alaska Native Tribes and the multitude of remote off-the-road-system communities, including many where an Indigenous language like Yup'ik or Iñupiaq, rather than English, is primarily spoken (requiring the presence of translators for public meetings as required by Executive Order

[75] EPA EJ Guidance at 3-4.
[76] WHEJAC Report 2 at 2.
[77] *Id.* at 15.
[78] *Id.* at 40.
[79] EPA EJ Guidance at 2 ("EPA Regional UIC staff are expected to immediately apply these practices for Class VI permitting.").
[80] *Id.*
[81] *Id.*
[82] *Id.*

13166 and Title VI of the Civil Rights Act, as well as EPA's environmental justice guidance). Showing that it can meet EPA's environmental justice requirements will be even more substantial of a hurdle for Alaska than many other states and one that the state cannot legitimately hope to overcome without a radical shift in its practices and priorities.

These are only a few examples illustrating the complex and technical nature of Class VI permitting. Due to these complexities and the accompanying resource demands, as well as the still-unfolding regulatory and technical landscape around CCS projects, it is preferable and in the interest of Alaskans that the Commission decide against pursuing Class VI primacy.

III. The Commission may—and must—choose not to pursue Class VI primacy

The Commission is not required to submit an application for Class VI primacy to the EPA and may choose not to do so. AS 31.05.030(h), enacted by the Alaska Legislature via HB 48 in 2023, states that the Commission *may* take the necessary actions to acquire primary enforcement responsibility under the SDWA for the control of underground injection in Class VI wells. The provision does not require the Commission to pursue Class VI primacy and the Commission would not be in violation of any mandate from the Alaska Legislature by choosing to forego or delay pursuit of Class VI primacy due to the reasons outlined in this letter.

Likewise, the text of House Bill 50 is permissive and not mandatory, stating that the Commission "may adopt regulations necessary to implement AS 38.05.700 – 38.05.795 [the provisions of HB 50 relating to the licensing of state land for carbon storage exploration and the leasing of state land for CO_2 storage]."[83] This verbiage does not require the Commission to adopt regulations providing for the exploration and leasing of state land and it may choose not to. As described in detail above, it is not in the best interest of Alaskans for the Commission to encourage CCS project development in the state.

Alternatively, the Commission could develop implementing regulations for AS 38.05.700 – 38.05.795, but not choose not to pursue Class VI primacy. In doing so, the Commission can exercise the authority it received under HB 50 and develop regulations for land use activities related to CCS storage projects, but leave the Class VI injection well permitting responsibility (and the accompanying liability) to the EPA. The Commission should seriously consider this option due to the complex and arduous application process for Class VI primacy, which the EPA may choose not to grant, and the risk to Alaska's residents and environment if the state does receive Class VI primacy but fails to responsibility administer the permitting program.[84]

[83] H.B. 50, 33rd Leg. Sess. 8 (Alaska 2023-2024), https://www.akleg.gov/PDF/33/Bills/HB0050Z.PDF.
[84] 40 C.F.R. § 145.31(e).

IV. The "loser pays" fee shifting rule in Alaska's state courts are incompatible with the SDWA

The SDWA allows for citizen suits against EPA if it violates any provisions of the statute.[85] Citizen suits have been an essential tool in furthering the purposes of the SDWA and other environmental statutes.[86] In such suits, courts may award any prevailing or substantially prevailing party fees as it deems appropriate.[87] However, federal courts only award attorney's fees to defendants in rare circumstances.[88] This practice has made it financially feasible for citizens to act in the public interest, including bringing actions to protect drinking water.

Under Alaska law, unsuccessful plaintiffs may be required to pay not only their own fees but also the prevailing party's fees.[89] Alaska is the only state in the country with a "loser pays" rule that does not fully insulate public interest litigants from having to pay the opposing party's fees if they lose. While Alaskan courts have the discretion to ameliorate the fees public interest plaintiffs may be subject to, those results are unpredictable and unreliable for plaintiffs and provide no up-front assurance that plaintiffs will be insulated from having to pay defendants' fees.

Alaska's fee shifting rule chills public interest litigation and is incompatible with the citizen enforcement provisions of the SDWA. While EPA may delegate primary enforcement authority, including for Class VI injection wells, to a state, the agency must ensure that the state's program "contain[s] minimum requirements for effective programs to prevent underground injection which endangers drinking water sources."[90] If the state of Alaska does pursue Class VI primacy, this issue could also lead to litigation over the state's application, which would, at best, slow down and complicate the process; for example, litigation related to the SDWA and the enforcement provisions in Louisiana's Class VI primacy framework is ongoing.[91]

V. Conclusion

CCS projects have a track record of failure and are not a solution to the climate-related challenges that Alaska faces. On the contrary, CCS projects are more likely to raise energy costs for Alaskans, cause public health issues, perpetuate environmental injustice, and harm plants, wildlife, and fish. Even if the state is unwilling to completely reject CCS projects, it must not

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[85] 42 U.S.C. § 300j-8.
[86] Florio, K.D., Attorney's Fees in Environmental Citizen's Suits: Should Prevailing Defendants Recover?, 27 Boston College Env. Affairs L. Rev. 707, 709 (2000).
[87] 42 U.S.C. § 300j-8(d).
[88] C. Kinley, The Water is on Fire: Current Circuit Approaches to Fee-Shifting in Citizen-Suits Under the Clean Water Act and the Need for Clearer and More Uniform Standards, 46 Wm. & Mary Env't L. & Pol'y Rev. 521 (2022).
[89] AS 09.60.010; Alaska Rule of Civil Procedure 82(a) (requiring partial fee shifting against the losing party in civil cases); Alaska Rule of Appellate Procedure 508(e)(4) (requiring partial fee shifting against the losing party in appeals from agency action). The only exception is where a plaintiff brings a claim in the public interest under the Alaska or U.S. Constitution. AS 09.60.010(c).
[90] 42 U.S.C. § 300h(b)(1).
[91] *Deep South Center for Environmental. Justice et al v. E.P.A.*, Case No. 24-60084 (5th Cir.) (pending).

seek Class VI primacy, instead leaving that authority in the hands of the EPA. The state's recent and ongoing fiscal struggles, staffing shortages, difficulties implementing and carrying out basic functions and programs, and a poor track record with regard to oil and gas industry violations demonstrate that it cannot be trusted with the responsibility of reviewing Class VI permits and upholding the SDWA. Further, Alaska's "loser pays" rule for civil suits is incompatible with the SDWA's provisions ensuring the ability of citizens to file citizen actions against regulators that violate the statute.

There is no requirement that the Commission draft regulations that would encourage the exploration and development of CCS projects on state lands nor is the agency required to pursue Class VI primacy. In the interest of the people of Alaska and our environment the Commission must do neither.

Sincerely,

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