

EPA Must Immediately Stop CO2 Injection Wells to Protect Public Safety and Drinking Water

The Honorable Michael Regan
Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460

October 22, 2024

Dear Administrator Regan,

We, the undersigned organizations dedicated to environmental justice, public health, scientific integrity, and sustainable climate policy, are writing to ask you to suspend permits for injecting carbon dioxide (CO₂) underground, permitting of new CO₂ injection wells, approval of primacy applications for CO₂ injection wells, and to direct states with primacy over injection wells to halt injections and permitting of wells. The Environmental Protection Agency (EPA) must exercise its broad authority to protect sources of drinking water from “imminent and substantial endangerment” under the Safe Drinking Water Act, 42 U.S.C. § 300i, which has been revealed by the multiple recent leaks of carbon dioxide from underground injection control wells.

These demands stem from 1) multiple leaks of CO₂ and equipment failures at the Archer Daniels Midland (ADM) facility in Decatur, Illinois; 2) new [information](#) about an increase in non-compliance violations in Texas Class II wells starting in 2011; 3) a higher percentage of Class II Texas CO₂ injection wells that have failed one or more mechanical integrity tests when these wells are compared to other Class II wells; and 4) [findings](#) at EPA that steel used for well construction at the ADM site, and others around the country, is prone to corrosion in CO₂ injection wells. Our demands also align with October 2024 [recommendations](#) from the White House Environmental Justice Advisory Council. The disproportionate development of [injection wells](#) and other carbon capture infrastructure on environmental justice communities will increase the risk of harm to communities already overburdened by pollution and is inconsistent with the administration's climate justice [goals](#).

This June, EPA specifically communicated its concerns in an [email](#) to injection well applicants with pending permits that steel and cement used in wells “are NOT suitable for construction of these wells in most instances, particularly under potentially corrosive conditions when both water and CO₂ are present.” Yet, EPA continues to allow injections at wells with unsuitable conditions. While ADM has, after two leaks, temporarily ceased injection, EPA should proactively exercise its authority to protect the public from leaks before more occur, rather than rely on profit driven corporations to decide when they will stop putting the public at risk.

These leaks, as well as the new findings in Texas, highlight the broader risks posed to drinking water, public health, and our climate by both Class VI and Class II injection wells used for CO₂

storage and oil recovery respectively. These concerns are not only with the well construction materials, but also with the EPA's lack of transparency and oversight associated with these leaks.

The events at the ADM facility have brought to light systemic problems with CCS technology and its regulation, raising serious concerns that CCS is neither safe nor viable. Reported failures at monitoring and detection systems due to corrosion and the migration of CO₂ outside the intended storage zone expose multiple levels of failure. What is perhaps more concerning is that EPA has [identified](#) that injection wells around the country have the same design and material flaws that led to corrosion at at least one of ADM's leaking wells, raising concerns that CO₂ injection wells could very well be leaking significant quantities of CO₂ into groundwater and the atmosphere.

To date, ADM has [acknowledged](#) the release of at least 1,394 metric tons of CO₂ between 2018 and 2022. We also know that ADM's Illinois CO₂ injection operation had:

- experienced [intermittent electrical shorts](#) in September 2020 that were affecting the gauges; and
- experienced surface leaks on [November 28, 2021](#) and another on [June 28, 2022](#). Both were vented to the atmosphere; and
- detected characteristics of [CO₂ contamination](#) in the Ironton-Galesville formation above the confining zone sometime after 2021; and
- identified [malfunctioning monitoring gauges](#) by January 2022; and
- found a [subsurface leak](#) of 307 metric tons in 2022. [According to ADM's reporting](#) to EPA, the company took “temporary measures to isolate the CO₂ leakage” which consisted of removing the tube, plugging the well with cement, and closing a downhole flow control valve and two wellhead valves at the surface to prevent further leakage. ADM's [response](#) to the EPA's Notice of Violation indicates that the company identified the corroded pipe in October 2023 and at that time stopped using the well.

Neither EPA nor ADM made efforts to inform the public of any of these failures. It wasn't until September 13, 2024, when investigative journalists [reported](#) 8,000 metric tons of CO₂ had leaked in March of 2024 that the public became aware that there were any problems at this facility.

This timeline raises questions about the transparency and effectiveness of the monitoring and enforcement process. Despite reporting that the presence of CO₂ was detected outside the confinement zone in 2021, that Monitoring Well #2 was totally malfunctioning in January of 2022, and that the first subsurface leak was detected as early as 2022, EPA waited until August of 2024 to issue a [notice of violation](#) to ADM, and September to send an [enforcement order](#). It is important to note that ADM was publicly silent on these leaks, both while they were negotiating state legislation that passed in May, and during negotiations with the City of Decatur regarding [easements](#) that would allow ADM to store CO₂ under Lake Decatur.

Following release of the enforcement order, ADM [reported](#) another leak in another monitoring well that it claims was discovered in response to EPA fact-finding requests, which prompted ADM to stop injecting CO₂ into its well. As with the 2018 leak, this additional breach highlights the uncertainty about how long that other well had been leaking, what caused these leaks, why the required testing regimes under ADM's permit failed to detect the leak, why injection was not stopped earlier, and why we rely on corporations to monitor themselves for pollution instead of EPA regulators.

The threat to drinking water and public health posed by CO₂ injection wells cannot be overstated given that leaks from the injection of CO₂ into underground saline formations can [migrate](#) into overlying freshwater aquifers and be released into the atmosphere. Once CO₂ dissolves in water, it [forms carbonic acid](#), which lowers the pH of the water, eroding and [corroding](#) rock and well equipment, and [mobilizing toxic metals](#) such as lead, arsenic, and mercury. These metals are particularly concerning for drinking water sources near injection sites. The release of CO₂ into the atmosphere adversely impacts our climate. Even at relatively low concentrations, it can impair cognitive, cardiovascular, neurologic, hearing, and vision function through asphyxiation and toxicity as was, in part, demonstrated by a [CO₂ pipeline rupture in Satartia, Mississippi](#) that sent dozens of people to the hospital and highlighted the challenges to first responders needing to respond to CO₂ releases into the atmosphere.

Another serious concern associated with CO₂ sequestration is [induced seismicity](#) from injecting CO₂ underground, which can cause fractures and re-activate faults, either of which can result in additional pathways for CO₂ migration. In combination with malfunctioning equipment, the injections can create unpredictable and widespread impacts from leaks on the water we drink and the air we breathe.

EPA's oversight of carbon dioxide injection wells is lacking in general, and is highlighted by the lack of transparency and oversight relating to these well failures. These concerns are not limited to Class VI wells like the one operated by ADM, but extend to Class II wells, a much larger universe of thousands of potential injection sites across the country used to extract oil. The practice of injecting CO₂ into these wells carries many of the same risks associated with Class VI wells used for CCS; however, the regulations governing Class II wells are less stringent, posing an even greater risk of leaks.

EPA has [approved](#) primacy for permitting Class VI wells to Wyoming, North Dakota, Louisiana and granted primacy for dozens of states for permitting Class II wells. Several states have [begun](#) the process of gaining primacy or program revisions for class VI wells. Many of these states, such as Louisiana, which was just granted primacy, have a history of favoring oil and gas interests over the health and wellbeing of their residents. A [summary](#) of peer review literature, regulatory actions, and other sources highlight this history in Louisiana specifically, raising serious questions about the appropriateness of EPA's decision to grant primacy to states.

The concerns raised in this letter also bear on the efficacy of the 45Q tax credit for carbon oxide sequestration. 26 U.S.C. §45Q. Section 45Q(f)(2) expressly requires that the Secretary of

Treasury consult with EPA to define the term “secure geological storage,” which must be achieved for a taxpayer to claim this credit. The statute requires the Secretary of Treasury to determine “adequate security measures for secure geological storage . . . such that the qualified carbon oxide does not escape into the atmosphere.” Rather than establish its own program to ensure “secure geological storage,” Treasury relies on the EPA’s Underground Injection Control program contained in 40 C.F.R. Part 98 for both sequestration and enhanced oil and gas recovery facilities. 26 C.F.R. §1.45Q-3. The well failures at the ADM Decatur sequestration facility put into question whether the EPA’s Underground Injection Control program’s well construction standards are adequate to prevent “escape into the atmosphere” and ensure permanent secure geological storage in the near term, much less on a geologic time scale.

Given the potential for significant harm to the environment, human health, taxpayers, and our climate, we urge EPA to take immediate action to update rules and regulations for CO2 injection wells. These revisions are needed to ensure more rigorous permitting, transparency, and oversight to ensure safety of existing wells. Until these revisions are finalized, EPA should:

- Halt CO2 injections into Class II and Class VI wells across the country;
- Halt permitting of new Class II and Class VI injection wells;
- Halt approval of State primacy applications for Class II and Class VI injection programs; and
- Direct States with primacy to halt injections as well as approvals of new Class II and Class VI injection wells.

The risks associated with carbon capture and storage, particularly the injection of CO2 into Class II and Class VI wells, are too great to ignore. The recent events at the ADM facility in Decatur are a warning sign that current regulatory practices are inadequate. We urge EPA to act now to protect drinking water, public safety, and the environment from the dangers of CO2 injection, transportation, and storage.

Sincerely,

Original Signatories:

Food & Water Watch

350 Chicago (Illinois)

Blacks in Green (Illinois)

Central Illinois Healthy Community Alliance
(Illinois)

Citizens Against Heartland Greenwashing
Projects (Illinois)

Eco-Justice Collaborative (Illinois)

Citizens Against Predatory Pipelines
(Illinois)

Climate Reality Project: Chicago Metro
Chapter (Illinois)

Coalition to Stop CO2 Pipelines (Illinois)

Faith in Place (Illinois)

Fox Valley Peace and Justice Group
(Illinois)

Illinois Environmental Council (Illinois)

Illinois People's Action (Illinois)

Nuclear Energy Information Services
(Illinois)

Prairie Rivers Network (Illinois)

Save Our Illinois Land (Illinois)

Third Act (Illinois)

Unitarian-Universalists Advocacy Network
of Illinois (Illinois)

BOLD Alliance

Commission Shift CURE

Institute for Policy Studies Climate Policy
Program

Public Goods Institute

Science and Environmental Health Network

350 Bay Area Action

Signatories

ACES 4 Youth

Alliance for Affordable Energy

Alliance for the Wild Rockies

American Holistic Nurses Association
(AHNA)

Benicians for a Safe and Healthy
Community

Better Path Coalition

Biofuelwatch

Blacks in Green

BOLD Alliance

Breathe Easy Susquehanna County

Breathe Project

Carbondale Concerned Citizens

Center for Biological Diversity

Center for International Environmental Law

Central Illinois Healthy Community Alliance

Citizens Against Heartland Greenwashing
Projects

Citizens Against Predatory Pipelines

Clean Power Lake County

Climate Code Blue

Climate Equity Policy Center

Climate Reality Project Greater New
Orleans Chapter

Climate Reality Project: Chicago Metro
Chapter

Coalition Against Death Alley

Coalition Against the Rockaway Pipeline

Coalition to Stop CO2 Pipelines

Commission Shift

Communities Against Carbon Transport &
Injection (CACTI)

Concerned Citizens of St. John

Concerned Health Professionals of New York

Concerned Health Professionals of PA

CURE

Dakota Resource Council

Deep South Center for Environmental Justice

Delaware Riverkeeper Network

Don't Gas the Meadowlands

Earth Ethics, Inc.

Eco-Justice Collaborative

Eco.Logic

Elders Climate Action

Elders Climate Action (ECA) Northern California (NorCal) Chapter

Elders Climate Action (ECA) Southern California (SoCal) Chapter

Elmirans & Friends Against Fracking

Faith Coalition for the Common Good

Faith in Place (Illinois)

Faith in Place Action Fund

Fenceline Watch

First Unitarian Universalist Society of New Haven, Social Justice Cttee

Food & Water Watch

For a Better Bayou

Fox Valley Electric Auto Association

Fox Valley Peace and Justice Group

FracTracker Alliance

FreshWater Accountability Project

Friends of the Earth

Go Green Winnetka

Good Neighbor Steering Committee of Benicis

Great Plains Action Society

Greater Highland Area Concerned Citizens

Greater New Orleans Interfaith Climate Coalition

Greenfire Coalition Writers' Forum

Health Professionals for a Healthy Climate

Healthy Gulf

Human Impact Partners

Illinois Environmental Council

Illinois People's Action

Illinois Water Authority Association

Inclusive Louisiana

Institute for Policy Studies Climate Policy Program

Iowa Citizens for Community Improvement

ISEE-Justice40 Consortium

JPAP

Illinois People's Action

Louisiana Just Recovery Network

Louisiana League of Conscious Voters

Metro East Green Alliance

Mi Familia en Accion

Micah 6:8 Mission

Move Past Plastic (MPP)

NAACP Peoria Branch

New Mexico Climate Justice

New Mexico Environmental Law Center

New York Climate Action Group

Ní Btháska Stand Collective

No False Solutions PA

No North Brooklyn Pipeline Alliance

North American Climate, Conservation and Environment(NACCE)

Nuclear Energy Information Service (NEIS)

Ocean Conservation Research

Oil and Gas Action Network

Oil Change International

Oilfield Witness

Oregon Physicians for Social Responsibility

People for a Healthy Environment

Peoria Riverkeeper

Physicians for Social Responsibility

Physicians for Social Responsibility Los Angeles

Physicians for Social Responsibility Florida

Physicians for Social Responsibility Pennsylvania

Physicians for Social Responsibility Texas

Port Arthur Community Action Network(PACAN)

Prairie Group of the Sierra Club

Prairie Rivers Network

Presente.org

Public Goods Institute

Resistor Sisterhood

San Francisco Bay Physicians for Social Responsibility

Santa Cruz Climate Action Network

Save Our Illinois Land

Science and Environmental Health Network

Sierra Club - Houston Group

Social Action Council, Unitarian Universalist Church of Urbana-Champaign

South Bronx Unite

Sunflower Alliance

Sustainable Springfield Inc

Terra Advocati

Texas Campaign for the Environment

Texas Environmental Justice Advocacy Services

Texas Permian Future Generations

The Enviro Show

The Park Church in Elmira

The People's Justice Council

The Raices Collab Project

The Texas Drought Project

The Wei LLC

Third Act Illinois

TRIAA-Divest!

| | |
|---|---|
| Turtle Island Restoration Network | WE ACT for Environmental Justice |
| Unitarian Universalist Advocacy Network of Illinois | Wellington United Church of Christ |
| Unitarian Universalist Church in Anaheim | Western Organization of Resource Councils |
| United For Clean Energy | WindSolarUSA, Inc. |
| United Native Americans | 1000 Grandmothers for Future Generations |
| Universalist Unitarian Church of Peoria | 198 methods |
| Utah Physicians for a Healthy Environment | 350 Bay Area Action |
| Vermont Climate and Health Alliance | 350 Chicago |
| Vessel Project of Louisiana | 350 Eugene |
| Veterans for Climate Justice | 350 New Orleans |
| Washington Physicians for Social Responsibility | 350 Seattle |
| Waterspirit | 350 Wisconsin |
| | 350 Hawaii |