Coleman-Selby, Sterling

From: r5hearingclerk

Sent: Monday, September 30, 2024 8:48 AM **To:** Adamiec, James; Dooley, Carlene

Subject: FW: Webform submission from: Comment Form for ADM Geologic Sequestration Well -

Proposed Order SDWA-05-2025-0001

From: US EPA <drupal_admin@epa.gov>
Sent: Sunday, September 29, 2024 6:14 PM
To: r5hearingclerk <r5hearingclerk@epa.gov>

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Submitted on September 29, 2024 7:13 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Decatur II 62526

Email

Comments

Case Docket No. SDWA-05-2025-0001

ADM / Decatur City Manager/ Decatur Mayor/ Decatur City Council is not informing the Decatur public and surrounding areas of the dangers of carbon sequestation and the pumping of CO2 being stored under our drinking supply. ADM had CO2 leaking from a well under their own property and failed to notify until months later. Public information should be posted on all social media sites as well as informational pamphlets mailed out. The public would not support this project if properly informed.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Monday, September 30, 2024 8:01:47 AM

Submitted on September 30, 2024 9:01 am EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

, Niantic, Illinois 62551

Email

Comments

As a rural family in Macon County, we rely on the Mahomet Aquafer to supply our well with water. It concerns me that should we not heard about the Co2 leak through national news we would not have been made aware of the leak. My family appreciates the information we now have but believe that the lack of information provided by ADM, and our local officials is neglectful and irresponsible. We have yet to see more specific information provided to the community other that "a leak" has occurred. Sharing information related to how to check our water supply and how to protect your family is needed. Specifics are needed and should be shared.

From: <u>US EPA</u>
To: <u>r5hearingclerk</u>

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Thursday, October 3, 2024 1:31:16 PM

Submitted on October 3, 2024 2:30 pm EDT

Submitted by: Anonymous

Submitted values are:

<u>Name</u>

Mailing Address

Peoria, IL 61614

Email

Comments

Thank you to U.S. EPA for this comment opportunity and for your Violation Notice to ADM regarding their first known CO2 injection monitoring well failure. It is overwhelmingly alarming to me that not only one of their monitoring wells has had unpermitted releases, but that now there is information that a second well has malfunctioned. ADM and the Prairie Research Institute, at the University of Illinois, have promoted the ADM Carbon Capture and Sequestration project as a complete success. Yet ADM knew of the ongoing monitoring well problems for years and did not inform the EPA as required, or the public. That is unconscionable. The facts that this highly promoted project now has two monitoring well failures should require a full investigation by the EPA. There are currently 22 pending Class VI well EPA applications for Illinois. The failures at ADM do not bode well for other projects in Illinois that will be at smaller corporations, with fewer resources and experience than ADM. Several of the pending Class VI well applications are under the Mahomet Aquifer, the only EPA designated Sole Source Aquifer in Illinois. An estimated one million people depend on this water supply. I urge EPA to recognize the clear and present danger more Class VI wells mean, and particularly, risks to the Mahomet Aquifer. If monitoring wells leak fluids and CO2 into unpermitted levels already at the very low amounts ADM has been doing, what will the vastly increased amounts of CO2 sequestration being proposed for the pending injection wells mean? What remediation procedures can EPA require for leaking wells? What would a leak mean that contaminates the Mahomet Aquifer? This is no time for any federal or state agency to 'kick the can down the road' by discounting these incidents or that excuse the situations because the leaks have not risen to aquifer levels. Humans will need water 30,60, 100, however many years ahead. I respectfully ask that EPA action must be taken now to make it clear to industry that what ADM has done is not tolerated and withdraw their injection permitting. I urge EPA to put a hold on CO2 deep injection well applications in any location affecting major aquifers, like the Mahomet Aquifer, until this situation is fully investigated, and the extent and future of the two failures at ADM, Decatur, have complete answers and are under full control showing further unpermitted migration has ended. Thank you.

From: <u>US EPA</u>
To: <u>r5hearingclerk</u>

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Thursday, October 3, 2024 4:48:47 PM

Submitted on October 3, 2024 5:48 pm EDT

Submitted by: Anonymous

Submitted values are:

Name Redacted

Mailing Address Redacted Pontiac, IL Redacted

Email	
Redacted	

Comments

First I would like to emphasize that this is still experimental technology. However, the experiment includes significant risk to a large population of un-consenting citizens (mostly never asked for consent), as well as risk to resources not owned by the permittee.

It would seem that the economics of sequestration incentivize a permittee to hide information about a failure that might cause sequestration to be shut down. Based on reported sequestration, it would seem that to stop sequestration in this instance would cost nearly \$100,000.00 per day in lost tax credits. Permittees should be fined double that for every day that they continue injecting after there is any evidence that there is a leak of either injected CO2, or formation fluid.

It should always be required that an injection operation cease injection immediately any time there is a leak detected, OR monitoring equipment has failed.

A thorough, state of the art 3D seismic study should be done of as much area as it takes to determine the limits of the leakage plume and spread, as well as to evaluate the geology for fractures, faults, or other risks of the escape migrating further.

All data gathered and actions taken should be documented, and data and documentation should be publicly available. This technology is experimental, and we have now learned that state of the art monitoring equipment is not adequate for the long term monitoring that is necessary for carbon sequestration. Only with full disclosure of the failures can technology advance and improve.

Most future projects pending Class VI permits are significantly larger than this project. All pending permits should be put on hold. With a 100% track record of monitoring failure, it would be unacceptable to allow more and bigger projects to be constructed without adequate

means to monitor them.

The public was given assurance by the permitte, as well as the US EPA that there was almost no risk of CO2 ending up above the confining layer. Since this has now proved to be a false assurance, the many stakeholders involved here should have a say in any decision to restart injection. The invitation for public comment is inadequate for this. The stakeholders include: --All landowners within the AoR of the current permit, plus the AoR revised to include the leak plume.

--All residents and communities and businesses which utilize water from any aquifers that the injection site is located near, under, over or through, AND that the leak plume is located under or near.

Injection should not be allowed to restart without a referendum of these stakeholders, and this referendum should require at least 75% agreement to pass.

All of these requirements should be incorporated in the Class VI regulations so that there is no delay in stopping injection and performing all the tests and studies necessary. Remedial and corrective action should not have to be proposed and commented on before the operation is shut down and timely investigation begins.

Please protect our Central Illinois residents and resources and do not let injection restart until everything is known, and new methods of monitoring can be developed. These wells are going to be a risk for hundreds of years, so this can't move forward until monitoring systems can be developed that can survive much longer than 15 years!. We are counting on you to do your job of protecting the people and the environment, which includes the environment within our geology.

Subject: Webfo m submission from Comment Form for A M Geologic Sequestration Well - Proposed Orde SDWA-05-

2025-0001

Date: Thurs ay October 3 2024 8 6: 3 PM

Submitted on October 3, 2024 9:24 pm EDT

Submitted by: Anonymous

Submitted val es are:

Name

Ma ling Address

Hopedale L 61747

Emai

C mments

Water is life. o not jeopardize the Mahomet Aquifer for a scheme to keep the fossil fuel industry alive.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Saturday, October 5, 2024 10:58:08 AM

Submitted on October 5, 2024 11:57 am EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Universal indiana 47884

Email

Comments

Please think about our water supplies.

Water can't be replaced ,people can't live without water.

Think long and hard about what you're doing to our land.

 From:
 r5hearingclerk

 Subject:
 Water

Date: Saturday, October 5, 2024 10:59:51 AM

Caution: This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

Please

Stop putting our water at risk.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Monday, October 7, 2024 1:05:06 PM

Submitted on October 7, 2024 2:04 pm EDT

Submitted by: Anonymous

Submitted values are:

Comments

Was the CO2 stream dehydrated before injecting downhole what material grade did you use for casing and tubing

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Thursday, October 10, 2024 2:41:15 PM

Submitted on October 10, 2024 3:41 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Glenarm, IL 62536

Email

Comments

ADM should have its Class VI Well permits revoked. Not only did its well fail, they were non compliant with the EPA for months, if not years, and withheld the information from the public during legislative negotiations and City of Decatur negotiations falsely claiming a record of safety and success. If they are allowed to keep their permits, this would send a clear message to all companies that obtain Class VI Well permits that they do not need to comply nor be transparent. I am not an attorney but it seems that could also set a legal precedent for other companies going forward. That puts our water and lives at risk.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Thursday, October 10, 2024 6:31:19 PM

Submitted on October 10, 2024 7:31 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Glenarm, IL 62636

Email

Comments

The ADM project is relatively small and yet it has failed in two wells in less than 10 years. Certainly no larger Class VI well permits should be approved for any larger sequestration projects until smaller projects are proven to be safe and not leak for at least 20 years. Even if steel specifications are upgraded the new steel could corrode, even if it does so more slowly. Certainly ADMs failure tells us not to expand these projects at all.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Friday, October 11, 2024 7:48:04 AM

Submitted on October 11, 2024 8:47 am EDT

Submitted by: Anonymous

Submitted values are:

Name

Email

Comments

Re ADM CO2 leaks, the ADM permit should be revoked/no new CO2 sequestration wells should be approved, etc.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Friday, October 11, 2024 5:30:09 PM

Submitted on October 11, 2024 6:30 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Springfield, IL 62707

Email

Comments

The recent CO2 leaks at ADM demonstrates clearly that they are not able to avoid them. Furthermore, their duplicity and not reporting them in a timely manner is totally irresponsible. ADM's behavior demands any current activities that sequester CO2 or any plans to do so in the future, including, SDWA-05-2025-0001, must be denied. The health of too many individuals are at risk by their irresponsible behavior. Thank you for considering my opinion.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Saturday, October 12, 2024 4:36:12 PM

Submitted on October 12, 2024 5:36 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Springfield, IL 62711

Email

Comments

ADM's permit should be revoked due to their repeated dishonesty in hiding leaks. Furthermore, no new permits should be issued for CO2 sequestration.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Sunday, October 13, 2024 11:03:34 PM

Submitted on October 14, 2024 12:03 am EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Chatham, IL 62629

Email

Comments

ADM's permit should be revoked. No new CO2 sequestration wells should be approved.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Wednesday, October 16, 2024 4:11:11 PM

Submitted on October 16, 2024 5:11 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Email

Comments

Sequestering CO2 near the Mahomet Aquifer is a disaster waiting to happy. The Mahomet Aquifer supplies water to almost 1,000,000 in Central Illinois.

From: <u>US EPA</u>
To: <u>r5hearingclerk</u>

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Wednesday, October 16, 2024 9:21:37 PM

Submitted on October 16, 2024 10:21 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Philadelphia, PA 19118

Email

Comments

I own farm land in Logan and Bureau County Illinois. I grew up in IL and who farm my land reside outside IL. Our fore-bearers started farming in central Illinois in 1820's. I remain close to other family members, friends, and businesses in this area. I am alarmed about the surface and subsurface leaks at ADM Monitoring wells No. 2 and monitoring well no. 1. They were designed and installed supposedly using state of the art of technology in just after five years for well no. 2 and after 7 years for well no. 1. The US EPA should have required ADM to stop injecting CO2 immediately when they leaks started but that was not the case. US EPA should fine ADM for their non-compliance and hiding the initial leak from the public and local officials. ADM, US EPA and the public do not know the extent of the leak, how much was leaked, and if the leaks are stopped. We do not understand the impact of seismic activity that has occurred on the ADM site on these wells and the leaks. These leaks and the lack of EPA and private company accountabilities demonstrate that our federal authorities are not ready for a massive rollout of CO2 pipelines, sequestrations and injections into ground that could permanently damage our drinking water and communities. This technology is too new and the risks to our local communities, land, and drinking water are too great. Before the EPA approves more Class VI injection wells, ADM should answer all the questions raised by EPA, that testing of materials used in monitoring and injecting wells can withstand corrosion from CO2 and brine, and more scientific studies conducted regarding leaks and CO2 sequestrated materials from moving into drinking water areas in the our geology layers. These leaks demonstrate that this CO2 sequestration technology is not safe at this time and that more studies and research are necessary before more Class VI wells are approved by the EPA and pipelines are laid across the rural communities of Illinois and other states endangering the lives of families, livestock and businesses.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Thursday, October 17, 2024 10:49:51 AM

Submitted on October 17, 2024 11:49 am EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Menlo Park, CA 94025

Email

Comments

Our family owns a farm in Central Illinois where a CO2 pipeline company planned a route to cut through our neighbor's fields (across the road from our fields) and less than a mile from the center of our small town. After doing in-depth research on what exactly CCS was, we realized how dangerous it is to capture, transport, and sequester hazardous CO2 waste. The leaks at ADM demonstrate these risks. At the injection site that was to last for 25-30 years (with safe CO2 storage required for hundreds of years), the monitoring wells corroded in less than 7 years! ADM was slow to discover the leaks and the public was not notified. My understanding is that ADM did not follow the conditions of its permit. We're lucky to have had this demonstration of risk before other Class VI well applications have been approved. I ask the EPA to enact the following:

- 1. Withdraw ADM's Decatur permit to inject CO2 given their failures to follow permit requirements.
- 2. Place a moratorium on ALL Class VI well permits until there is convincing INDEPENDENT testing that identifies safe materials and process technologies that will not corrode over the lifetime of moving CO2 (not solidified) nor allow CO2 to move outside the Area of Review (assuming that can be accurately measured) nor cause additional cracks (e.g., seismic activity).
- 3. Require all CCS projects/Class VI well operators to have robust emergency plans and to be fully transparent with the pubic about their operations, their emergency plans as well as immediate notification of any anomalies or emergencies.
- 4. Follow through on pulling permits if any conditions of approval are violated. Respectively, but urgently,

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Thursday, October 17, 2024 5:03:47 PM

Submitted on October 17, 2024 6:03 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Glenarm, IL 62536

Email

Comments

Two leaking wells in 7 years in a relatively small sequestration project clearly tells us that no larger sequestration projects should be approved until we know that the smaller projects do not leak at all over a number of years.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Thursday, October 17, 2024 5:04:52 PM

Submitted on October 17, 2024 6:04 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Sugar Grove, IL 60554

Email

Comments

Dear EPA staff,

In light of the fact that Archers Daniel Midland (ADM) was used as an example of a successful Carbon Capture and Sequestration operation, SB1289, signed into law in late-May of this year, might have been crafted differently including more protections for the general public and our precious water supply had ADM been forthcoming with the leak that occurred in Decatur in March.

As an Illinois citizen I am very concerned that the U.S.E.P.A. will grant more permits for this dangerous new industry that is untried and unregulated on the large scale that is proposed for the near future. Our water is precious and is not replaceable. Please judge this situation on the side of people's health and the environment, rather than on the side of commerce.

Thanks for your consideration!

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Thursday, October 17, 2024 8:06:23 PM

Submitted on October 17, 2024 9:06 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Pleasant Plains, IL 62677

Email

Comments

IEPA and ADM hid the leaks from the public. Any consent order must provide the stiffest penalties possible, and significant disincentives to cover up any leaks in the future.

Why greenlight unsafe materials? They've already failed in just a few years. Both gauge failure, and 13 chrome steel failure. So what you propose to do is recreate conditions for failure?

We still don't have a report of the 2022 failures. It's almost 2025!

IEPA's job should be to safeguard communities, water supplies, and the environment, but this proves once again the goal is to issue permits without adequate staff to even begin to police them

Pathetic response.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Thursday, October 17, 2024 5:09:14 PM

Submitted on October 17, 2024 6:09 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Glenarm, IL 62536

Email

Comments

We need at least a 5 year moratorium on all new Class VI well permits and it should only be lifted when the public is guaranteed that there will be full and immediate public transparency of any problems or leaks and that we know for sure that corrosion in the wells will not occur and cause leaks. Ever.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Thursday, October 17, 2024 9:30:33 PM

Submitted on October 17, 2024 10:29 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Rochester,IL 62563

Email

Comments

Lets Protect the commidetie that God has provided . There is so much danger in this whole project. Why not protect the American people. We dont do this by bringing in more wells of Dangerous Gases. Please consider the safety for all including the Farmers that feed the World. God Bless

 From:
 US EPA

 To:
 r5hearingclerk

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Friday, October 18, 2024 9:23:14 AM

Submitted on October 18, 2024 10:23 am EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Williamsfield, IL 61489

Email

Comments

Please call an immediate moratorium on all Class VI well permitting projects until the permitting structure and process is remedied. Obviously, the current plan doesn't work as evidenced by recent (actually not so recent, but undisclosed) events at ADM. Third party oversight as opposed to self-monitoring is an essential first step to avoid a financial conflict of interest. The current structure appears to be nothing more than an EPA/ADM partnership. Third party monitoring and oversight is also essential to ensure all technical personnel involved in the process (engineers, geologists, hydrogeologists, chemists, project managers, etc.) are protected from retaliation/pressure to compromise their findings (and livelihoods) due to outside influences based on the bottom line. I can personally speak to how likely this scenario is because it happened to me professionally. Thank you for the opportunity to comment on this very important issue for the state of Illinois.

From: <u>US EPA</u>
To: <u>r5hearingclerk</u>

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Friday, October 18, 2024 9:49:56 AM

Submitted on October 18, 2024 10:49 am EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Decatur, IL 62522

Email

Comments

Dear Regional Hearing Clerk,

This letter is regarding ADM Geologic Sequestration Well - Proposed Order SDWA-05-2005-0001. I am writing to request that the EPA order ADM to suspend CO2 sequestration operations at its current facility and reject ADM's request for a permit that would allow the company to sequester CO2 under Lake Decatur.

According to Region 5 Administrator Debra Shore in a press release dated September 19, 2024, "The Biden-Harris Administration is committed to ensuring that carbon management projects are designed, built, and operated safely and responsibly, and in a way that reflects the best science and responds to the needs and inputs of local communities". ADM has failed to build a sequestration facility that is safe from leaks and has been irresponsible in its lack of communication about multiple leaks taking place. Furthermore, if the USEPA is committed to projects that reflect the best science and the needs and inputs of local communities, it will not only suspend current sequestration operations, but it will also reject ADM's proposed permit allowing sequestration under the city's main drinking water source, Lake Decatur.

The current carbon sequestration operation was not built safely – ADM is using steel that may be unsafe for sequestration. As reported in an article in E&E News written by Snider and Lefebvre and published on October 9, 2024, "13 Chrome ... appears to be vulnerable to corrosion when exposed to the liquids in carbon sequestration wells." In other words, ADM Co. is using materials in its carbon sequestration wells that are vulnerable to leaks. Since November 2021, ADM Co. has reported 5 leaks at 2 wells.

The current carbon sequestration operation is not operated responsibly – Based on the multiple leaks that have taken place at the surface, subsurface, and 1000's of feet deep, it can be concluded that there is a systemic problem with carbon sequestration operations. Decatur residents, and employees and elected officials of Decatur, were not notified of the first four leaks, and only became aware of one of them through an investigative journalist in the national media. ADM failed its basic ethical responsibility to notify interested parties in a timely manner.

Is the best science available adequate to protect human health and drinking water quality? — Even if one were to argue that ADM was using steel thought to be safe for sequestration, the fact that the steel corroded after approximately 10 years of operation is an indicator that the best available science is currently inadequate to protect human health and drinking water quality from carbon sequestration activities. It is also unclear whether the best science available is adequate to mitigate a substantial subsurface leak of CO2 into Lake Decatur, the city's drinking water supply for 68,000 residents. Furthermore, the City of Decatur does not have a plan in the event of a significant CO2 surface leak such as the one that occurred in Satartia, Mississippi.

The current carbon sequestration operation does not reflect the needs and input of the local community – ADM was negotiating a carbon sequestration easement agreement with the City of Decatur around the time of the leak in March 2024, and was aware of three other leaks that occurred prior to that. However, residents were not made aware of the leaks until months after the March 2024 leak. How are residents able to effectively provide input when ADM withheld substantive, relevant facts that residents would need to provide such input? ADM through its lack of timely disclosure has completely disregarded the needs and input of our residents, many of whom live in distressed communities.

In its announcement of a proposed order against ADM on September 19, 2024, the EPA states "Safeguarding underground sources of drinking water and protecting human health and the environment continues to be EPA's highest priority." If this is the case, the EPA should suspend ADM's current permit to sequester CO2 and reject ADM's proposed permit to sequester CO2 under Lake Decatur. There is simply no compelling reason to risk the city's drinking water source, public safety, and a crown jewel of our city to store CO2 from what appears to be imminent and substantial threat as defined by the Safe Drinking Water Act. Thank you for your time and consideration. Sincerely,

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Friday, October 18, 2024 10:37:25 AM

Submitted on October 18, 2024 11:37 am EDT

Submitted by: Anonymous

Submitted values are:

Email

Comments

Concerning ADM's recent admission/finding of CO2 leaks. Obviously injection and sequestration of CO2 is not safe and needs further research before implementing CO2 injection and sequestration! I urge US EPA to order ADM to STOP injecting CO2 immediately and that ALL future Class VI CO2 applications be denied. Do not put company profit over my safety!

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Friday, October 18, 2024 3:57:36 PM

Submitted on October 18, 2024 4:57 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Citizens Against Predatory Pipelines, Joyce Harant, President

Mailing Address

Peoria, IL 61615

Email

Comments

This letter is from the Citizens Against Predatory Pipelines, a 501(c) 4 organization filed in the State of Illinois. As such, CAPP is an organization of Illinois residents, landowners, and other interested parties in the state of Illinois with the goal of protecting Central and Western Illinois communities from harm associated with carbon capture and sequestration, as well weighing in on state, federal and local legislation and regulatory processes that determine where these projects are proposed and implemented.

Our present communication is related to the CCS project by Archer Daniels Midland in Decatur, Illinois, specifically related to leaks documented as early as September 2020 of Monitoring Verification Well #2 and of Monitoring Verification Well #1 in September of 2024. Our comments are also related to Administrative Order on Consent, from the United States Environmental Protection Agency, Region 5, Dockett, SDWA-05-2025-0001 of the Safe Drinking Water Act, 42 U.S.C. § 300h-2(c).

CAPP has concerns that the respondent may be unable or unwilling to appropriately respond to the demands of the Administrative Order on Consent of the EPA. While federal regulations were in place at the time Archer Daniels Midland began its Decatur project, these regulations did not prevent the leaks from occurring relatively early in the CCS project. Because of lack of transparency in the communication between the respondent and the EPA, it is not apparent that the respondent reported an issue prior to the EPA citing a violation. This is despite ADM indicating monitoring gauges had failed completely in 2022. Yet, the respondent did not close and plug the well until 2023. E & E News reported that 8,000 metric tons of CO2 supercritical fluid had been leaked by Verification Monitoring Well#2. It is imperative to know where the leakage went, including whether groundwater has or will be impacted. If the respondent has not given the EPA this information in the past, what assurance is there that they will in the future?

Monitoring Wells #s 1 and 2 are made with Chrome 13 which has proven to be corroded by

supercritical C02 in less than ten years. There is no longevity research on what pipeline materials will not be corroded over time by supercritical C02. It takes supercritical C02 more than 1,000 years to become inert. Scientific modeling by a third party not chosen by the respondent as to appropriate materials for CCS is imperative before the respondent is allowed to proceed with any CCS project. When appropriate materials are discovered, Verification Monitoring Wells 1 & 2 should be replaced, not restored.

There is no proof that ADM is reliable in timely reporting of leaks, or whether leaks were into water, air or both. It follows that they may not be reliable in reporting how much C02 leaked and where it went. The respondent should be required to use qualified third-party entities (again, not chosen by the respondent) to determine what (C02 and/or brine) leaked from each verification monitoring well, how much leaked, and where it went. All this information needs to be communicated clearly to all landowners, residents and other appropriate parties in a timely fashion. Additionally, if drinking and potable water has been adversely affected, emergency water supplies need to be made immediately available and for as long as needed. Special care needs to be taken to assure safe water for pregnant women, those being treated for cancer, as well as others with health challenges.

CAPP is also concerned that the history of lack of notification of well malfunction might be repeated. Therefore, it is imperative that the respondent report on a routine (perhaps monthly or quarterly) basis to EPA all parameters of functioning of any monitoring wells for CCS. This information must also be promptly available to the public in a prominent place on the ADM website. If the respondent feels such routine reporting is not feasible, then the entire project should cease. If there is cessation, the respondent is responsible for returning all land to the original state.

The EPA is charged with protecting the environment (including the safety of drinking water). When entities such as the respondent harm the environment or may through continued behavior harm the environment, they should be fined. That fine should reflect the seriousness of the threat, actual or potential. In this case, ADM appears to have acted as if they did not need to report any problems along the CCS process. That equates to utter disregard for human life and welfare. Unless the respondent can prove they were judicious, they should be fined commensurate with potential harm. Their CCS project should also be shut down. Additionally, ADM should be required to pay back any tax credits it received as C02 has not been effectively stored.

The present Decatur CCS project is small yet filled with large, potentially lethal, problems and administrative weaknesses. The EPA has the potential to stop these dangerous practices as well as minimize future misadventures by imposing stiff consequences for irresponsible behavior, including closure of the entire capture and sequestration project.

*In addition, the EPA should require a moratorium on all Class Vi well permits in Illinois at this time until the full information on what caused the problems and delays in notification at ADM.

*If there are underground conditions in Illinois, such as issues with the intensity of the brine in the Mt. Simon sequestration areas or other issues, these need to be known and identified as potential risks for any future injection wells in Illinois and specific procedures and steps in place to address such concerns, before any further Class VI wells applications can proceed.

From: <u>US EPA</u>
To: <u>r5hearingclerk</u>

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Friday, October 18, 2024 4:03:35 PM

Submitted on October 18, 2024 5:03 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Champaign, IL 61820

Email

Comments

Given that two wells, intended to be part of a long-term CO2 storage project, have already corroded to failure within 7 years or less, the EPA should require much more of ADM before sequestration could continue:

- The wells should be completely replaced, not repaired, since the steel used to make them is now known to corrode far too quickly under these conditions.
- Any new choice of well material to replace the 13 chrome steel used for these failed wells must be tested by a trustworthy third party which does not have a stake in the outcome. ADM, or other bodies which are involved in promoting sequestration, should not be the only ones carrying out this work.
- If ADM's injection wells are made using the same material, they too must be replaced, not merely tested or repaired.
- EPA should *require* ADM to stop sequestration at the site until the wells are rebuilt. This should not be a voluntary offer on ADM's part.

Permits for CO2 sequestration wells need to include criteria for permanence. Given that we appear to be staking our planet's future on measures including CO2 sequestration, the EPA needs to make sure that its permitting process will yield wells that actually confine CO2 over the long term. Without that, the attempt will prove worse than useless.

Given that ADM has already violated its emergency action plan, in not notifying the USEPA, local authorities, nor the public, when the leaks were detected, the EPA should consider revoking this sequestration permit altogether.

Why, when the EPA learned two years ago that Well #2 had failed, did it not issue a notice of

violation?

What has been happening with seismic activity around this site? I've heard that the thickest of the involved shale layers has cracked, with seismic activity suspected as the cause. ADM should make seismic reports publicly available, especially since those records may reveal a connection between seismicity and the CO2 injection already done.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Friday, October 18, 2024 9:11:09 PM

Submitted on October 18, 2024 10:11 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

DECATUR, IL 62521

Email

Comments

ADM was never given the approval to store CO2 under my land or the land of several of my neighbors. They sent me forms in 2023 asking for an easement after they have been sequestering CO2 since 2011. ADM has proven that the sequestration of CO2 is not safe and will leak. I believe that they have been aware of the leaks for quite some time and that is why they are not injecting at the full level that they proposed. They have found leaks at both of their monitoring wells and they are just now coming forward about it because they got caught. Why didn't the EPA shut ADM down during their inspection performed in June 2024? The EPA never disclosed the leaks either. Why? Where are the penalties for violating these contracts and permits that the company received millions of dollars and tax breaks for? It is only a matter of time before the Mt Simon Sandstone feature has been stressed beyond its capabilities and starts to crack. This will create faults and crevices that will leak out CO2 to the surface and contaminate the area and water nearby. We don't need several other companies testing the integrity of the Mt Simon Sandstone. ADM has already stressed it enough and it is just a matter of time before the balloon burst and all of us that live nearby will be deceased. Please protect us from this catastrophe. Where is all of the saline water going to that is being displaced by the CO2? How many years are you going to hold these firms accountable for their actions that they are being compensated for today? Who is monitoring the firms that are supposed to be monitoring the sequestration of CO2?

I am aware that the injection process is causing seismic activity. The USGS approached me to inquire about installing monitoring equipment on my property Prior to ADM beginning the injection of CO2 into the sandstone. I know that they have a monitoring system in this area and I feel that the results produced regarding seismic activity above 1.0 should be made public. I am also under the impression that monitoring equipment is at our local community college.

Please do not approve any new projects until there has actually been several years of review to

prove that this will be safe for future generations. I live near ADM and what they have proven so far, scares me. This company is still trying to get their safety protocol in order when it comes to the handling of their grain processing procedures according to the accidents they have had in the few years.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Saturday, October 19, 2024 10:55:30 AM

Submitted on October 19, 2024 11:55 am EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

W. Terre Haute IN 47785

Email

Comments

The lack of enforceable regulations and consequences for CCS projects is extremely concerning and absolutely unconscionable. CCS projects carry extreme and irreversible risks to the health and safety of the populace, the environment, and the aquifers, risks that, once realized can never be reversed. Yet, current standards and regulations allow for broad gaps in regulation and oversight that allow companies, like ADM in Decatur, Illinois, and Wabash Valley Resources in West Terre Haute, Indiana, to push projects through that support their corporate bottom line at the expense of the health and safety of the communities.

Lack of oversight and stringent regulation has led to companies like these running roughshod over the communities. Since they believe they are safe from repercussions, companies like these refuse to be transparent with community members, government officials, and the EPA itself. Instead, they hide behind the protection of regulatory gaps and undefined parameters that allow them free reign to do as they please without any apparent consequences.

For example, ADM was aware of the leak from Monitoring Well #1 while negotiating an easement with the City of Decatur. This easement would allow the company to store CO2 beneath Lake Decatur. Furthermore, ADM was aware of the leak during the negotiations surrounding the SAFE CCS Act, that culminated with a signing held on ADM's property in July. This company knew it had serious problems. This company chose to disclose nothing.

Why? Because regulations are not stringent enough and the lack of transparency surrounding CCS projects is often concealed behind the statement that their data is proprietary.

The company's failure to disclose this critical information to the public, local authorities, and regulatory bodies during these events not only undermines public trust but also puts the community at risk. ADM continued negotiating for their easement and allowed the bill signing

ceremony to take place under these circumstances—while knowingly allowing a significant leak to persist and putting people and our environment at risk—a blatant prioritization of profits over public safety.

Moreover, ADM's actions constitute a clear violation of its emergency plan requirements. According to these requirements, the company should have taken immediate action to inform the public about the leak and halt any activities that could have exacerbated the situation. The failure to adhere to these protocols shows a disturbing lack of commitment to the safety of the surrounding community and the environment. This is an attitude and a commonality between ADM and the only other CCS project in the nation, Wabash Valley Resources, that the EPA must take decisive and immediate steps to address.

In light of these actions, I urge your office to consider the following steps:

1. Fines and Penalties:

At a minimum, ADM should be fined the most allowed by law for its lack of transparency, non-compliance with emergency response protocols, and its failure to inform the public about a known leak that could endanger local resources and communities. Doing any less sends a clear message that the EPA is in partnership with these corporations and supports their attitudes of profits over people and the environment.

2. Permit Revocation Consideration:

Given ADM's apparent disregard for public safety and its failure to disclose critical information, serious consideration should be given to revoking the company's permit for CO2 sequestration activities. The company's actions not only violate regulatory requirements but also jeopardize the credibility and integrity of CO2 storage projects in the region.

3. Halt to other projects and Permit review/reapplication

Since there are still many uncertainties surrounding the events that culminated in ADM's multiple leaks and both the company and the EPA are uncertain as to the whereabouts and composition of the leaked material, all other CCS projects and permitting under the EPA's jurisdiction should halt immediately. This suspension should continue until the reason for failures has been identified, the effects have been tracked and monitored for a significant period, and long-term tests for possible solutions have occurred.

ADM's lack of transparency and failure to take appropriate action in response to the leaks has put both public safety and environmental health in jeopardy and other CCS projects across the nation, including Wabash Valley Resources have, and continue to, follow ADM's path. The inherent risks of CCS are only compounded by companies who withhold data, refuse to disclose the extent and the nature of issues with their projects, communicate only the information that promotes their projects, and self-report and self-monitor according regulations with gaping oversights. The public has a right to know about and be protected from environmental risks, especially those posed by large-scale, experimental, industrial projects such as CO2 sequestration. It is the responsibility of the EPA to put communities and the environment above corporations. Therefore, the EPA must take a stand to protect the environment and the people from the risks associated with CCS and the lack of corporate accountability and transparency.

The mission of the EPA is to protect human health and the environment, today and every day. Yet, when the leak at ADM occurred and the EPA was finally notified, this body did not

require AMD to cease injection until the safety of the environment and people could be assured. This lack of response runs contrary to the EPA's mission statement directives. ADM's leaks raise great concerns about the processes, technology, and soundness of CCS. Until these concerns can be researched, examined in the long-term, and adequately addressed, the EPA should call for a halt on all Class VI injection wells to fulfill its obligations to human health and the environment. Our health, environment, and water cannot be risked on technology that has just been proven to fail.

We urge your office to take swift and decisive action to address this issue, hold ADM accountable for its actions, halt any other CCS projects until thorough investigations and responses can occur, and ensure that such lapses in safety and transparency are not allowed to happen again. If, after long-term testing and data collection, CCS is allowed to continue, the EPA must require all CCS projects to have independent oversight and monitoring at every stage of development to ensure that the issues inherent in for-profit companies self-reporting, are addressed.

Thank you for your attention to this critical matter. We look forward to your response and the steps that will be taken to rectify this situation.

Sincerely,

Concerned Citizens Against Wabash Valley Resources

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Saturday, October 19, 2024 12:17:07 PM

Submitted on October 19, 2024 1:16 pm EDT

Submitted by: Anonymous

Submitted values are:

Email

Comments

ADM should be held accountable! If US EPA cannot hold ADM accountable, then all future companies that inject and sequester CO2 will "get by" with leaks and threaten the public health and human life. I DO NOT want to be the canary in the mine! No more Class VI injection wells for CO2! They are NOT safe!

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Saturday, October 19, 2024 1:28:06 PM

Submitted on October 19, 2024 2:27 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Trenton, IL 62293

Email

Comments

Hearing Clerk at EPA:

ADM Geologic Sequestration Well- Proposed Order SDWA-05-2025-0001.

Docket number: SDWA -05-2025-0001

All sequestration at the ADM wells should be halted. There have been leaks at the two monitor wells

and no telling how much else has already leaked. There have been indications the monitoring

began malfunctioning as early as 2020 because of corrosion.

ADM has been negligent in reporting this to EPA, the EPA has been slow in calling ADM into account,

and the public has been kept in the dark for months if not years. To date, no fines and no reimbursement from ADM to us taxpayers have been issued, required, and forthcoming from ADM. This

is not only an environmental travesty, but a financial travesty for taxpayers, our country and for a

proper address to CO2 decrease to our environment.

To ADM: Stop with this sham. The technology is too nascent to be safe, useful nor productive. You are

creating more of a problem, rather than solving it.

TO EPA: Do your mission. Stop ADM now. Halt all CO@ sequestration until proper guidelines for

accurate, efficient and realistic technology become available; if that is possible.?

Do your work, EPA! Issue fines. Issue notice to ADM to return the grant monies and sequestration tax

subsidies they took from our government.

Put teeth into your practice as watchdog for our environment.

DO NOT ALLOW ANY MORE PERMITS FOR SEQUESTRATION FOR ADM. For that

matter, STOP all permits for carbon capture and sequestration in Illinois and the United States. It is the right and prudent action for this moment in time

Sincerely,

Trenton, IL 62293

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Saturday, October 19, 2024 4:02:33 PM

Submitted on October 19, 2024 5:02 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Decatur, IL 62522

Email

Comments

Dear Regional Hearing Clerk,

This letter is regarding ADM Geologic Sequestration Well - Proposed Order SDWA-05-2005-0001. I am writing to request that the EPA order ADM Co. to suspend CO2 sequestration operations at its current facility and reject ADM's request for a permit that would allow the company to sequester CO2 under Lake Decatur.

According to Region 5 Administrator Debra Shore in a press release dated September 19, 2024, "The Biden-Harris Administration is committed to ensuring that carbon management projects are designed, built, and operated safely and responsibly, and in a way that reflects the best science and responds to the needs and inputs of local communities". ADM has failed to build a sequestration facility that is safe from leaks and has been irresponsible in its lack of communication about multiple leaks taking place. Furthermore, if the USEPA is committed to projects that reflect the best science and the needs and inputs of local communities, it will not only suspend current sequestration operations, but it will also reject ADM's proposed permit allowing sequestration under the city's main drinking water source, Lake Decatur.

The current carbon sequestration operation was not built safely – ADM is using steel that may be unsafe for sequestration. As reported in an article in E&E News written by Snider and Lefebvre and published on October 9, 2024, "13 Chrome ... appears to be vulnerable to corrosion when exposed to the liquids in carbon sequestration wells." In other words, ADM Co. is using materials in its carbon sequestration wells that are vulnerable to leaks. Since November 2021, ADM Co. has reported 5 leaks at 2 wells.

The current carbon sequestration operation is not operated responsibly – Based on the multiple leaks that have taken place at the surface, subsurface, and 1000's of feet deep, it can be concluded that there is a systemic problem with carbon sequestration operations. Decatur

residents, and employees and elected officials of Decatur, were not notified of the first four leaks, and only became aware of one of them through an investigative journalist in the national media. ADM failed its basic ethical responsibility to notify interested parties in a timely manner.

Is the best science available adequate to protect human health and drinking water quality? — Even if one were to argue that ADM was using steel thought to be safe for sequestration, the fact that the steel corroded after approximately 10 years of operation is an indicator that the best available science is currently inadequate to protect human health and drinking water quality from carbon sequestration activities. It is also unclear whether the best science available is adequate to mitigate a substantial subsurface leak of CO2 into Lake Decatur, the city's drinking water supply for 68,000 residents. Furthermore, the City of Decatur does not have a plan in the event of a significant CO2 surface leak such as the one that occurred in Satartia, Mississippi.

The current carbon sequestration operation does not reflect the needs and input of the local community –ADM was negotiating a carbon sequestration easement agreement with the City of Decatur around the time of the leak in March 2024, and was aware of three other leaks that occurred prior to that. However, neither the City of Decatur nor residents were not made aware of the leaks until months after the March 2024 leak. How are residents able to effectively provide input when ADM withheld substantive, relevant facts that residents would need to provide such input? ADM through its lack of timely disclosure has completely disregarded the needs and input of our residents, many of whom live in distressed communities.

In its announcement of a proposed order against ADM on September 19, 2024, the EPA states "Safeguarding underground sources of drinking water and protecting human health and the environment continues to be EPA's highest priority." If this is the case, the EPA should suspend ADM's current permit to sequester CO2 and reject ADM's proposed permit to sequester CO2 under Lake Decatur. There is simply no compelling reason to risk the city's drinking water source, public safety, and a crown jewel of our city to store CO2 from what appears to be imminent and substantial threat.

Thank you for your time and consideration.

Sincerely,

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Sunday, October 20, 2024 12:21:21 PM

Submitted on October 20, 2024 1:21 pm EDT

Submitted by: Anonymous

Submitted values are:

Email

Comments

If 13 Chrome Steel isn't adequate what steel is adequate and resistant to corrosion. We should determine what steel will hold up to CO2 exposure before we add more Class VI injection wells. By the way ADM should be required to stop injecting CO2 until they make amends and they should refund my tax payer dollars they received to store CO2 that has now leaked and they no longer store.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Sunday, October 20, 2024 7:41:23 PM

Submitted on October 20, 2024 8:41 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Bloomington, IL 61701

Email

Comments

Comments to the EPA on the ADM Consent Decree

Remediation steps will not undo the damage done in the recent ADM leaks, nor will they prevent future harm. Our community needs a revocation of ADM's existing permit, a halt on future permits currently under EPA review, and a ban on all projects in the region of the Mahomet Aquifer and its recharge areas, as described below.

ADM has been the national poster child for "safe" CCS practices. Other companies with far less CCS experience have described ADM's EPA Class VI operation as a blueprint for describing their own proposed CCS activities. I heard this personally during the McLean County, Illinois hearings regarding special use permits for One Earth Sequestration. The hearings went on for weeks with packed hearing rooms and testimony from many community members and One Earth representatives and allies. The McLean County Board, comprised of 10 Democrats and 10 Republicans, unanimously denied One Earth's request, with one of the 20 Board Members abstaining due to conflict of interest.

ADM representatives have presented regionally throughout the state of Illinois on how CCS can be done safely. Their record of "success" was touted as a reason the Illinois General assembly should fast-track CCS in Illinois.

While grassroots groups like Illinois People's Action - who live in communities that will be affected by CCS accidents - were pushing for a moratorium or an outright ban on CCS, an ADM consultant testified under oath at a McLean County hearing and publicly stated throughout downstate Illinois counties that they could guarantee that once CO2 was sequestered, it would

"stay put forever."

ADM was making these statements while they knew internally that this wasn't the case. They hid their accidents from the public in direct contrast to what their safety plans demanded. There was no transparency. And, when they reported it to the EPA, neither ADM nor the EPA told the public what was going on. That tells downstate Illinoisans that we cannot trust ADM or the EPA.

ADM has demonstrated that it is not a reliable narrator. There is no way that they can predict accidents will not happen again. Their application for permits before the EPA include projects that are hundreds of times larger than what they have done to date. Their projects and most of the other Region 5 projects currently being reviewed by the EPA largely fall in the footprint of the Mahomet Aquifer and its recharge areas, and the Sangamon Valley watershed. A million downstate residents get their water from the Mahomet Aquifer. That's a million people who don't have alternatives if the aquifer is contaminated.

I recently retired as the Lead Environmental Justice Organizer for Illinois People's Action. But I've lived in McLean County 40 years—my entire adult life. I've lived in both Normal and Bloomington. My last two years at IPA were spent fighting against CCS. I can honestly say that of the dozens of community trainings I've done and the thousands of people I've spoken with about CCS, I have never met a single resident who is in favor of these projects except those getting paid (or offered to be paid if projects are approved) large sums of money by companies like ADM and One Earth. Since retiring, I've started walking through my own neighborhood and asking people where they stand on the issue. The phrase I hear over and over is, "This is crazy." No one wants Central Illinois to be the nation's test case on CCS.

You have the power. Please use it. Deny ADM's current permit and the others it has before you. Pay attention to the canary in the coal mine. Say no to this nascent technology.

 From:
 r5hearingclerk

 Subject:
 SDWA-05-2025-0001

Date: Sunday, October 20, 2024 8:24:38 PM

Caution: This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

We are very concerned about ADM's CO2 Sequestration near the Mahomet Aquifer AND Lake Decatur!!! This is an unproven, irresponsible, dangerous science experiment that is very likely to contaminate Sole-Source water for central Illinois residents. PLEASE put a stop to this!



Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Sunday, October 20, 2024 8:42:34 PM

Submitted on October 20, 2024 9:42 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Email

Comments

These comments are in response to the Administrative Order of Consent, Docket No: SDWA-05-2025-0001 to Archer-Daniels-Midland Company (ADM), Decatur IL.

Both ADM and EPA are not fulfilling their duties to protect the public and water sources: in how the CO2 injection wells were constructed & operated, the lack of public notice for several years and ADM's lack of conformance to required emergency procedures when Monitoring Well #2 began to fail in 2020.

Other information:

- The 2nd injection well permit was just issued in 2017 and the system has already failed.
- Now, we have the failure of Monitoring Well #1 that is announced by ADM almost concurrently with this EPA Administrative Order of Consent. This 2nd Leak was found by ADM only due to the work required of them by EPA for Leak #1, not due to ADM's diligent oversight. This means that normal oversight processes are not capable of identifying leaks as they occur.
- ADM has only injected ½ the volume of CO2 as planned, without any public or EPA requirement to identify the cause. Are there concerns about seismic activity, malfunctioning CO2 Capture equipment, are pressures not controlled with greater injections volumes? These answers should not be left to speculation but fully answered by ADM and EPA.
- Monitoring Well #2 (Leak #1), had faulty equipment starting in 2020, with total failure in 2022, two subsurface leaks were identified between 2021-2022 and Leak #1 from MW #2 was not plugged until 10/2023. EPA allowed CO2 injections to continue. It was ADM who voluntarily stopped in October 2024 after Leak #2 was found. While EPA's Consent Order requires ADM to identify the amount of CO2 that leaked, the public can have no confidence that any CO2 leakage estimate would be valid. How will EPA validate their estimates?
- ADM does not know whether Leak #2 is leaking CO2 or only brine. ADM has not ruled out that Leak #1 is still leaking. Without knowing with certainty whether CO2 continues to leak and both monitoring wells now being closed down, the public has no assurance that the volume of CO2 nor the migration of leaks can ever be accurately determined and tracked. Assurances that the water supply is not in jeopardy are premature. It seems clear that current EPA required construction, monitoring equipment and oversight of Class VI wells are inadequate to protect the public.
- Chromium #13 was approved for use in the EPA Class VI ADM construction permit. Yet,

- within 5-7 years corrosion was occurring. EPA has now issued a notice to the industry that Chromium #13 should not be used in situations where CO2 and water will be in contact. How could this simple testing and research have been overlooked? What other construction and monitoring requirements of EPA are not supported by research that is meant to ensure that these CO2 injection wells will last thousands of years. If the current standards fail after 5-7 years, we cannot rely on CO2 wells to last for the duration of time needed before CO2 bonds with the subsurface rock formations.
- Now, ADM has been sued by workers for alleged misconduct and lack of safety inspections and follow-up after several serious accidents at its Decatur plant. It has been written that OSHA had found that ADM had not inspected or tested critical safety systems. This circumstance highlights that the reliance and trust that the public and our government agencies have placed in companies such as ADM is misguided. When profits may compete with oversight and safety, in such a critical area as employee safety, the public surely cannot rely on self- reporting and monitoring for CO2 injection wells.

This Order of Consent should:

- Require the payment of the maximum fine by ADM.
- Order ADM to keep the CO2 injection Well #2 shut down.
- Require ADM to pay for a third party selected by the EPA to conduct the needed testing, monitoring and reporting of the conditions set forth in the Order of Consent and to publish these on the EPA website in a timely manner after being submitted to EPA.
- Require after all needed data is obtained and any ongoing monitoring systems are restored and paid for by ADM but monitored by independent company(s), that ADM's Class VI permit be withdrawn, without eligibility to seek additional Class VI permits under ADM or through any company with which ADM has a relationship.
- Ensure that CO2 is no longer leaking from any of the ADM CCS infrastructure, thus creating a greater threat to drinking water and above ground leakage. This must occur quickly so that any possible remedial actions can be taken, and the public made aware.
- EPA should work with IRS to ensure that sequestration tax credits are withheld from ADM until such time as accurate and reliable measurements of the actual amount of CO2 that has been sequestered is obtained and verified.

Other actions that EPA should undertake:

- Cease all Class VI CO2 injection permit applications and approvals by EPA and states with primacy. The type of piping and other materials that can be used and will last for thousands of years where CO2 and water are co-mingled underground and under pressure is unknown.
- Given that the industry already has plans to inject in Illinois, over 100 times the amount of CO2 than has currently been injected, EPA must develop and implement a multiyear study to conduct research into all facets of the CCS with the knowledge that to determine: the physical changes that will happen under and above the ground, probability that CO2 will remain below the cap rock and not migrate up over the course of hundreds to thousands of years, infrastructure and monitoring system requirements to monitor and contain the CO2, best practices for reliable and accurate 3rd party monitoring and a robust industry public notification system and CO2 above ground and drinking water monitoring practices.
- This ADM experience makes it clear that EPA regulations and monitoring requirements do not stop leaks or require quick remedial action by the company. EPA must rewrite oversight regulations with a view to separating the company that is reaping the profits from the oversight and public notifications. The monitoring requirements must be strengthened. If monitoring systems do not yet exist that can guarantee immediate identification, plume monitoring and CO2 leak stoppage then Class VI CO2 injection well permits must be stopped

until these are in place.

- Since CCS will require long term monitoring, EPA should deny permits to companies that are "bad" actors and have a history of noncompliance in other aspects of their business practices. The public's trust should not be given on CCS compliance to companies that have abridged that trust in other areas of their performance, whether to the EPA or other ways.
- ADM, the CCS industry, some academics and elected officials and EPA have been advising the public as to the unquestioned safety of this CCS technology. The broader public is only aware of the ADM leak #1 because of an investigative reporter's article. The "enforcement" activities for this Leak #1 were happening while ADM was negotiating IL CCS legislation on 2024, without any indication by ADM that there were problems with their CO2 injection well. The public's trust must be earned through sound research.
- EPA should admit that the "science" is not known to safely and reliably construct, operate and monitor Class VI CO2 injection wells that inject into brine. They should apply the Precautionary Principle.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Sunday, October 20, 2024 10:57:32 PM

Submitted on October 20, 2024 11:57 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Atlanta, IL 61723

Email

Comments

ADM Geologic Sequestration Well - Proposed Order SDWA-05-2025-0001

ADM should have to cease CO2 injection when ever their monitoring well equipment malfunctions or fails. ADM should also have to stop injection when there is a CO2 leak. It was irresponsible for ADM not to disclose that there were major problems with their CCS project. ADM was involved with crafting CCS legislation in Illinois in May 2024 and didn't tell anyone about what was going wrong with CCS and their project – this is unacceptable.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Monday, October 21, 2024 5:13:03 AM

Submitted on October 21, 2024 6:12 am EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Colchester, IL 62326

Email

Comments

This is a small scale pilot project with two 13 Chrome steel monitoring wells with both having leaks. Corrosion has occurred. 25 Chrome steel needs more testing before use. We should not go forward until a lot more research and testing is done.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Monday, October 21, 2024 11:28:17 AM

Submitted on October 21, 2024 12:28 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Email

Comments

As a citizen and homeowner, I'm demanding a stoppage to placing pipelines under the Mahomet Aquifer. Whatever potential environmental benefits may be derived from CO2 sequestration are far outweighed by the risks to our sole water supply. Leaks have already been reported of such pipelines. We should take these as fair warnings.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Monday, October 21, 2024 1:12:28 PM

Submitted on October 21, 2024 2:12 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Bloomington, IL 61704

Email

Comments

On behalf of Illinois People's Action (IPA) I have been asked to provide my expert analysis regarding the proposed ADM consent decree.

I have 28 years' experience in product design as a mechanical engineer at Caterpillar, Inc. As a project manager, I spent much of my time identifying and rectifying potential failures in fuel systems of Caterpillar products; in addition, I used my skills to design several unique, patented product designs for Caterpillar. It is with great interest that I have reviewed both the ADM underground injection control permit and the EPA consent decree for corrective action in the aftermath of the recent leak.

Failure is Not a Starting Point

I believe the EPA's oversight of ADM's pilot project to sequester C02 underground was based on the wrong premise: acceptance that the mechanical systems of the project will fail and simply prescribing a monitoring and response system so that action can be taken when it does fail. This project puts the health and safety of both humans and environment at significant risk. As an engineer, I was involved in the development and implementation of mechanical systems that put humans at considerably less risk, yet our protocol demanded that we take steps to prevent failures, not just react to them. Now there has been a serious malfunction, yet the EPA is still not demanding that ADM provide evidence of a rigorous analysis to yield an accurate representation of what will fail and when, and then how they will prevent that failure. Without such an analysis, our mechanical designs at Caterpillar were a no-go. It is hard for me to understand how this is not the case when so much is at stake in carbon capture and sequestration.

Preventing Failure Through With a Design FMEA

It is hard for me understand how the EPA could not have demanded that ADM provide results from a Failure Mode Effect Analysis (FMEA) before even granting the permit, let alone in response to an actual failure in the well monitoring system. A design FMEA is derived from actual risk assessment data, not merely based on a model of the system; it identifies potential hazards and their impact on systems and the environment. Such an analysis would predict corrosion on pipes, pumps, wiring, etc. as well as leakage measurements and the ensuing ecological hazards, economic loss and bodily harm. In other words, a design FMEA figures out the actual risks and parameters for failure so as to prevent failures. Without the FMEA, the monitoring data that EPA is asking for is relatively meaningless in failure prevention.

Inadequate Pipeline Technology

This approach is especially egregious, since the EPA approved the Class 6 Permit before PHMSA released the necessary guidelines for pipeline safety. Thus, ADM is using pipeline technology that has been only approved for natural gas and oil. Not only is C02 different in its effect on pipeline materials, the captured C02 is not purified, meaning that there are impurities such as hydrogen sulfite and sulfur among other things, that vary depending on extraction location. This adds an entirely new dimension to the unsuitability of the current pipelines. These facts are another reason that a design FMEA is required.

Monitoring Without a Blindfold – Process FMEA

A process FMEA, which provides analyses of the process, provides a framework that minimizes the chance of failure. For example, if the analysis indicates that a monitoring device will fail due to corrosion after 6 months, ADM would know to replace that device every 4 months.

With a process FMEA, a sequestration site dashboard to monitor well performance uses statistical process control to control parameters such as well pressure, injectivity, cumulative injected volume, well temperature and monthly volume. Without this data, monitoring does not equal control. From my perspective, merely requiring 24 hour monitoring approaches the problem from a concern for when a failure occurs, not if. In the case of carbon sequestration, failure should not be an option. It is already too late when C02 escapes, and an analysis needs to occur to have containments BEFORE it happens, not after. The EPA decree requires "periodic testing on mechanical integrity". This is meaningless if a FMEA has not been done, as there is no accurate data to determine when and what testing needs to be done to prevent a failure.

Protecting Our Water Supply: Steps to Take

- Require ADM to conduct full design and process FMEAs for well design and structure.
- Do not allow C02 capture and sequestration to continue until these analyses are completed.
- Demand that ADM share the FMEA results with the EPA to ensure that the analyses provides evidence that the systems are designed for maximum safety and failure prevention.
- Demand that ADM's monitoring systems are designed to not only prevent a failure but to ensure that should a failure occur, health and safety of people and the environment are not significantly compromised.
- Deny ADM permission to continue this project unless these demands are met.

Certainly, the cost of FMEAs are significant, and no doubt ADM would prefer not to spend

their own funds to conduct the necessary analyses to safeguard the Mahomet Aquifer. However, allowing ADM to conduct uncontrolled experiments with this nascent technology without FMEAs is irresponsible. Better to force ADM to spend their resources to prevent a catastrophe than to expect taxpayers to fund a massive cleanup when the inevitable happens. In my expert opinion, the ADM pilot program is a failure on so many levels that it should be shut down immediately and the permit revoked. The health, safety and well-being of Central Illinois residents and environment is at stake.

Retired

Design Engineer and Project Manager at Caterpillar, Inc. 1992-2020 B.S. Mechanical Engineering, 1980 B.S. Engineering Mechanics, 1983 University of Wisconsin, Madison

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Monday, October 21, 2024 1:19:38 PM

Submitted on October 21, 2024 2:19 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Email

Comments

ADM Geologic Sequestration Well – Proposed Order SDWA 05-2025-0001 Archer Daniels Midland is not a company that deserves our trust or confidence in their ability to sequester CO2 safely or even successfully. Dangerous and life threatening "accidents" are evidence of ADM's negligence and disregard for their employees and the surrounding community at their Decatur Plant. Maintenance failures, non-functional safety systems, out-of-date inspections, grain dust explosions, a three-alarm fire, a "deflagration propagation event", a railcar collision, and homes rocked by explosions reveal culture of dangerous disregard. Employees and first responders have been injured, severely burned, hospitalized, and killed because of ADM's malfeasance. For a company with profits in the billions, the fines issued are paltry and ineffective. Even the death of the rail worker received a measly \$15,000 fine. About the grain dust explosion, OSHA Area Director Edward Marshall said, ADM "failed to follow common industry practices and Occupational Safety and Health Administration standards to maintain these protective systems." One man, caught in this explosion, immolated and put in an induced coma, is suing ADM for the accident that has left him with significant injuries and a long recovery.

While these dangerous situations and violations were happening over the past decade above ground, more corporate malfeasance was happening underground. In 2017 ADM began their second CCS project. In three short years monitoring well #2 started malfunctioning, fully malfunctioning in 2022. Intermittent electrical shorts affected gauges. Surface "leaks" vented CO2 into the atmosphere in 2021 and 2022. Subsurface corrosion allowed CO2 contamination to escape "beyond authorized zones." The well, being too damaged for repair, was plugged in 2023. In 2024 the public is finally being informed that ADM discovered that CO2 had escaped. EPA issued a Notification of Violation in August, and Administrative Order on Consent in September. Then just a few weeks ago ADM started admitting to another "leak" from monitoring well #1 but this time we're told no worries, it's just brine.

The more I read and learn, ethanol plants, CCS, and pipelines just get worse and worse. If

The more I read and learn, ethanol plants, CCS, and pipelines just get worse and worse. If ADM is using best technology, best practices, and best materials, then this is a failed technology. We know that the type of steel used, 13 Chrome, is inadequate. There may be no

steel or material that can safely and permanently stand up to CCS. ADM did not follow its emergency plan or properly monitor the well as required by its permit. They said they did not see a need to alert the public or EPA. EPA notices, fines, and violations, and Federal regulations did not prevent this breach from happening. EPA did not demand that the wells be shut down and injection halted and, in fact, is still considering permitting more wells. How can the public trust what we are being told? How much CO2 has actually escaped? Where is it now? "Brine is pretty nasty stuff", too. How is seismic activity affecting the geologic formations and wells? The Mahomet Aquifer is being threatened by companies wanting to drill through, inject, and store CO2 underneath our precious water source. All water in Illinois is being threatened. Illinois must not become the dumping ground for this latest corporate boondoggle.

I call these lies, deceit, denial, and cover-up. And greed. ADM negotiated the SAFE Act while they were hiding the truth from Illinois legislators and the City of Decatur. They were deceitful about the safety of their operation while Governor Pritzker signed the Act at their plant! ADM has received huge tax breaks for CCS. They failed. Will the American taxpayers get a refund from this booming multibillion-dollar industry?

ADM must be made to stop all CCS, explain to the public what went wrong and where the CO2 and brine are now, and receive hefty fines that really mean something, When would we have learned any of this if not for investigative reporting by E&E News, bringing these lies into the public consciousness?

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

Date: Monday, October 21, 2024 1:20:21 PM

Submitted on October 21, 2024 2:20 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Urbana, IL 61801

Email

Comments

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technology. We know that the type of steel used, 13 Chrome, is inadequate. There may be no steel or material that can safely and permanently stand up to CCS. ADM did not follow its emergency plan or properly monitor the well as required by its permit. They said they did not see a need to alert the public or EPA. EPA notices, fines, and violations, and Federal regulations did not prevent this breach from happening. EPA did not demand that the wells be shut down and injection halted and, in fact, is still considering permitting more wells. How can the public trust what we are being told? How much CO2 has actually escaped? Where is it now? "Brine is pretty nasty stuff", too. How is seismic activity affecting the geologic formations and wells? The Mahomet Aquifer is being threatened by companies wanting to drill through, inject, and store CO2 underneath our precious water source. All water in Illinois is being threatened. Illinois must not become the dumping ground for this latest corporate boondoggle.

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bringing these lies into the public consciousness?

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Monday, October 21, 2024 1:32:40 PM

Submitted on October 21, 2024 2:32 pm EDT

Submitted by: Anonymous

Submitted values are:

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Glenarm, IL 62536

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Comments

On behalf of Citizens Against Heartland Greenwashing Projects, an Illinois grassroots landowners group, we request that ADMs current Class VI Well permits be revoked for EPA non-compliance and lack of safety and to set a precedent for any future Class VI Well permit holders. Further we ask that no new Class VI well permits be issued for any larger project larger than ADMs leaking projects until projects smaller than or equal to, ADMs are proven to be safe and successful for at least 15 years.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Monday, October 21, 2024 2:27:28 PM

Submitted on October 21, 2024 3:27 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Pekin, IL 61554-8206

Email

Comments

Dear Illinois Environmental Protection Agency,

As a 52 year resident of Tazewell County Illinois, we rely heavily on the Mahomet aquifer for personal and livestock use. Considering all the risks involved, I can't imagine why anyone other than the corporate greedy would be in favor of carbon sequestration anywhere near our precious aquifers.

A prime example of the risks are only reinforced by the recent reports of the complete failures at the ADM plant in Decatur, Illinois. The technology is just not there to sequester in a safe manner. Also, ADM has shown they and others can not be trusted to self report their failures to the EPA and public in a timely manner as required.

As a citizen of Illinois, I am requesting that you support any and all avenues to stop sequestration in, through and under our aquifers. CCS is nothing but a boondoggle by our government with no regards to the many risks this would bring to the citizens of Illinois.

Sincerely,

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Monday, October 21, 2024 3:30:27 PM

Submitted on October 21, 2024 4:30 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Atlanta, IL 61723

Email

Comments

ADM experienced surface leaks on November 28, 2021 and another on June 28, 2022. Both were vented to the atmosphere; and showed characteristics of CO2 contamination in the Ironton-Galesville formation above the confining zone sometime after 2021. By January 2022 the monitoring gauges were fully malfunctioning. ADM met with U.S. EPA in February 2022 to discuss repairing and restoring the well.

And yet, Navigator / Vault 44.01 were pushing landowners, just 39 miles away, to sign CO2 sequestration contracts and telling us it was safe. This is SO wrong. ADM withholding information from the public shows they can not be trusted to look out for the well being of residents and landowners.

Carbon capture and sequestration needs to be halted and the permitting of injection well stopped until all the safety issues are resolved.

From: Pamela J. Richart

To: r5hearingclerk

Cc: Schmalle, Kayla; Greenhagen, Andrew (he/him/his)

 Subject:
 Case Docket No. SDWA-05-2025-0001

 Date:
 Monday, October 21, 2024 3:31:02 PM

Attachments: 10-21-2024 EPA comments on Docket No. SDWA-05-2025-0001.pdf

Caution: This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

Attached please find Eco-Justice Collaborative's comments on Case Docket No. SDWA-05-2025-0001.

Please let me know these have been received.

Thank you.

Pam Richart

Pamela J. Richart, Co-Director Eco-Justice Collaborative

Champaign, Illinois 61821 773.556.3418 prichart@ecojusticecollaborative.org ecojusticecollaborative.org

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Our Mission

EJC first raises public awareness of the consequences of our actions on people and our planet, then advocates personal and policy changes that:

- Seek harmony with planet earth.
- Respect all life.
- Value diversity.
- Support ecological sustainability.
- Bring about a just distribution of the world's resources.

October 21, 2024

Ms. Debra Shore, Regional Administrator U.S. Environmental Protection Agency, Region V 77 W. Jackson Blvd. Chicago, IL 60604

Subject: Case Docket No. SDWA-05-2025-0001

Archer Daniels Midland Carbon Sequestration Leaks

This letter is in response to the opportunity to submit comments on the U.S. EPA's Proposed Order SDWA-05-2025-0001 related to ADM's S Geologic Sequestration Well. The recent leaks at the Archer Daniels Midland (ADM) sequestration facility in Decatur, Illinois, first reported by E&E News Political on September 13, demonstrate that the U.S. EPA needs to update its rules and regulations regarding Class VI and Class II well permits used for enhanced oil recovery.

The company's lack of transparency and the agency's lack of oversight require the immediate halt of:

- Injection of CO₂ into Class VI and Class II wells.
- Issuance of permits for CO₂ injection into Class VI and Class II wells.
- Approval of any state's request for primacy, which would provide the authority to administer the U.S. EPA's Class VI well program.
- Approval of any permit for injection CO₂ into a Class VI or Class II well
 by any state that has been granted primacy for issuing either Class VI
 or Class II well permits.

These activities should be stopped until such time as the questions raised in this memo, regarding ADM's actions and those of the U.S. EPA, are satisfactorily addressed.

We have included Class II wells in this request, given information about damage affecting groundwater and soil in Texas, where the Railroad Commission (RCC) has primacy over the EPA's Class II well program. Examples include well blowouts, which can create vast pools of dangerous waters, and other leaks, spills, sinkholes, and other seismic events. The RCC's failure to comply with the 1974 Safe Drinking Water Act (SDWA) showcases the failures of the EPA's Class II program, and calls into question the appropriateness of the RCC's request made for primacy over Class VI well permits.

Background

Archer Daniels Midland began injecting CO₂ underground in Decatur, Illinois in November 2011. This pilot project stored 1 million metric tons of CO₂ over three years before it was closed in 2014. In 2017, ADM began its second project, the Illinois Industrial Carbon Capture and Storage Project (ICCS), which has stored an additional estimated 3.5 metric tons of CO₂.

Eco-Justice Collaborative

Email: ejc@ecojusticecollaborative.org • Phone: 773.556.3417 /3418 Page 1 of 7

ADM's sequestration facility is the only operating U.S. EPA-approved Class VI project in the United States. ADM considers its Illinois Industrial Carbon Capture and Storage Project to be "commercial scale". Within just seven years of the start of injection, two of ADM's monitoring wells were leaking.

Timeline, Two Monitoring Well Leaks

Leak #1, Monitoring Verification Well #2 (MRV #2).

On September 13, 2024, <u>E&E News</u> broke its story about a leak form ADM's MVW #2, associated with their ICCS project. ADM's reports to the U.S. EPA, along with their <u>August response</u> to the agency's June 2024 inspection report show MRV#2 had:

- Experienced intermittent electrical shorts in monitoring well gauges as early as September 2020
- Experienced surface leaks on <u>November 28, 2021</u> and <u>June 28, 2022</u>, which were vented to the atmosphere.
- Showed characteristics of CO₂ contamination in the Ironton-Galesville Formation above the confining zone sometime after 2021 (exact date not provided by ADM). This is an "unauthorized area".
- Fully malfunctioning monitoring gauges by January 2022.
- Leaked 307 metric tons in a subsurface leak in 2022 (exact date not provided by ADM).
- Been temporarily plugged in 2022 to isolate the leak.
- Corroded, requiring ADM to <u>pull MVW #2's completion assembly</u> in October 2023. In the process of pulling the VW#2 completion assembly, ADM discovered corrosion, installed cement plugs, and stopped using the well.

The EPA inspected all wells in June of 2024, issued a <u>Notification of Violation</u> in August, and an <u>Administrative Order on Consent</u> on September 18, 2024. Until E&E News broke its story about the leak in March 2024 no one knew anything had happened.

A second leak, Monitoring Verification Well #1 (MV W#1).

According to ADM, this well was "re-completed" in 2017 to help monitor the ICCS. On September 24, 2024, ADM determined that MVW #1 was leaking. This leak was discovered when the company was responding to actions required by the U.S. EPA in its September 18 order. As with the first leak, formation fluid leaked into the unauthorized area above the cap rock. ADM says they have not detected any well corrosion, and believe that only brine may have leaked. But they are not certain. ADM is considering capping the well and has temporarily halted injection.

Notably, the U.S. EPA's Administrative Order on Consent does not apply to MVWI #1 and the second leak.

Overarching Concerns

The two subsurface leaks from monitoring wells at ADM's sequestration facility occurred just five (MVW #2, 2022) and seven years after injection began at ADM's ICCS project (MV#2, 2024 and MVW#1, 2024). The following summarizes key concerns related to the way both ADM and the EPA handled the failure of the monitoring wells, as well as recommendations to be taken into consideration.

Best available technology is not good enough.

The EPA's Administrative Order on Consent requires ADM to restore MVW #2 and reinitiate monitoring.

Comments:

- Both wells were constructed with 13 Chrome steel, which was approved by the U.S. EPA. The U.S. EPA now says 13 Chrome steel <u>should not be used</u> when CO₂ and water are present. A higher grade steel also could be subject to corrosion in saline aquifers, such as the Mount Simon Sandstone.
- Both monitoring wells used the same technology that allowed sampling both above and below the cap rock. According to ADM, corrosion prevented the closing of these openings, allowing CO₂ and brine to enter the well below the cap and exit above the cap into the unauthorized Ironton-Galesville Formation. This is an example of where the "best available technology" failed, potentially risking drinking water supplies.

Recommendations:

- Additional research and testing should be carried out to identify suitable corrosion-proof materials.
- ADM's MVW #1 and #2 should be REPLACED with materials tested for use in saline aquifers, rather than restored, since they are made with 13 Chrome steel and the design is flawed.
- Remedial actions for all of ADM's wells should be required by the EPA; reviewed by a qualified third party; and actions made public, along with a timeline for addressing the threat of corrosion that can lead to leaks.
- While suitable materials are being identified and tested, the U.S. EPA should **require** ADM to stop all injection of CO₂.

Identifying how much CO₂ leaked.

The EPA's proposed <u>Administrative Order on Consent</u> requires ADM to identify how much formation fluid leaked from MVW #1.

Comments:

- It is not clear whether the well continued to leak from the time its gauges were discovered to be fully malfunctioning in 2022 until it was plugged by ADM in October 2023, or whether the well is still leaking. Nor is it known when the 2024 leak was reported to the U.S. EPA.
- It is clear that ADM was not able to fully monitor its ICCS project once MVW #2 fully malfunctioned in January 2022. It also is clear that monitoring from MVW #2 was no longer was possible once ADM pulled the completion assembly and stopped using the well in October 2023.

Questions and Recommendations:

- How can ADM retroactively identify how much formation fluid leaked, since MVW #2 had been malfunctioning since September 2020, was determined to totally inoperable in January 2022, and was plugged in October 2023?
- How long MVW #2 has been leaking? CO2 and brine also can corrode cement. Is it possible the well began to leak CO2 and brine in 2022 as reported by ADM, and then again after MVW #2 was plugged in October 2023? EPA should consider this possibility when evaluating how much CO2 and brine escaped, and not take for granted ADM's claims that the CO2 discovered in the Ironton-Galesville Formation in March of 2024 was from the 2022 leak.
- ADM should also be required to identify whether CO₂, in addition to brine, escaped from MVW #1, and, if so, in what quantities.
- A leakage rate of less than 1% per thousand years is necessary for geological storage of CO₂ to achieve the same climate benefits as renewable energy sources. Given ADM's surface and subsurface leaks

from its two monitoring wells, the U.S. EPA should be required to identify and stipulate a permanence criterion as a prerequisite for ADM, should its project continue, as well as for all other Class VI permit applications anywhere in the country.

• The EPA should explain why the agency did not issue a Notice of Violation in 2022 / 2023 or fines when ADM determined MVW #2 had malfunctioned, was leaking, and needed to be plugged.

Identifying Pathways for CO₂ to Escape.

EPA's <u>Administrative Order on Consent</u> requires ADM to identify all potential pathways that may exist for CO2 to escape confinement.

Comment. While ADM and the EPA claim no water supplies have been contaminated, carbon dioxide injected into a saline aquifer like Illinois' Mount Simon Sandstone Formation can take hundreds, or even *thousands* of years to become inert. It is likely to be years before anyone knows whether these leaks affected drinking water.

- Water. When CO₂ mixes with water it forms carbonic acid, which can leach heavy metals from sand and rock formations into the aquifer. These include arsenic, manganese, cobalt, nickel, uranium, and barium. Heavy metals can cause severe health issues, including cancer, liver damage, and anemia.
- Air. The release of CO₂ into the atmosphere adversely affects our climate and negates the purpose of attempting to store it underground. CO₂ is heavier than air, and can concentrate in low-lying areas. Even at relatively low concentrations, it can affect human health, impairing cognitive, cardiovascular, neurologic, hearing, and vision functions.

Recommendations:

- The EPA should require ADM to use qualified third-party entities to determine:
 - The location of CO₂ and brine. Brine was initially released to the Ironton-Galesville above the cap rock. Both CO₂ and brine are under pressure and mobile, and will move towards the surface.
 - What pathways exist for CO₂ and brine to find their way to the surface, and potentially mix with groundwater along the way. Faults? Fractures? Abandoned wells?
 - O Whether it is even possible, without functioning monitoring wells, to answer these questions.
- Surface air monitoring and/or soil gas monitoring should be required for ADM's project and all future sequestration projects to detect movement of carbon dioxide that could endanger human lives.

Seismic Activity.

Comment. Induced seismic activity <u>has happened</u> at ADM's site as a result of the injection of CO₂. This can open pathways for CO₂ to escape confinement if the cap rock or well bores are damaged.

Recommendations: The EPA should require ADM to:

- Make seismic information available to the public on all events M1.0 and above.
- Demonstrate that induced seismic events did not damage the MVW #2, leading to corrosion.
 - ADM has injected about one half the CO₂ per year as was approved. The EPA should determine
 whether this could be due to company concerns related to injecting CO₂ in larger volumes that
 might trigger induced earthquakes.
 - o If it is determined that seismic activity damaged MVW #2, OR injection of CO₂ has been reduced from that planned due to concerns related to induced earthquakes, the EPA should determine whether injection is safe to continue or whether it should be stopped due to risk.

Emergency Response.

Comments:

- The mechanical failure of MVW #2 should have resulted in an <u>emergency response</u>, including the following actions for a response to well integrity failures per ADM's plan:
 - o Initiation of the shutdown plan including cessation of pumping.
 - Closing the flow valve.
 - Venting CO₂ from surface facilities.
 - Limiting access to the wellhead to authorized personnel only.
 - Monitoring well pressure, temperature, and annulus pressure to verify or refute integrity loss and determine the cause and extent of failure; identifying and implementing appropriate remedial actions to repair damage to the well (in consultation with the UIC Program Director).
 - If contamination is detected (and it was), identifying and implementing appropriate remedial actions (in consultation with the UIC Program Director).
- The discovery of CO₂ and brine should have triggered the collection of a confirmation sample(s) of groundwater and analysis for indicator parameters. If such parameters identified in their emergency response plan were found, then remedial action should have been taken.

Recommendations:

- The EPA and ADM should be required to identify:
 - o What steps were taken when MWV #2 fully malfunctioned, and explain why others were not.
 - What coordination took place with the US EPA and what that agency's response was regarding remediation, including collecting groundwater samples as required. ADM and the EPA claim that groundwater supplies were not impacted, but this information should be made publicly available, given the lack of follow-through with other actions required by the emergency response plan.
 - Why the company continued to and was allowed to inject CO₂, when it was determined that:
 - MVW #2 could not be repaired after consultation with the EPA in February 2022; and
 - Formation fluid was discovered in an unauthorized zone due to a subsurface leak.

Continuing to inject CO2 was in direct violation of the company's emergency response plan.

• ADM should be held liable for any and all actions that may lead to water contamination. This includes replacement of water that might be contaminated from these leaks.

Accountability.

Comments:

- The EPA should explain why the agency has not required ADM to stop injecting CO₂. The agency knew MWV #2 had totally malfunctioned, and had to be plugged early in 2022. This lack of accountability means other companies will know they can continue to operate while being non-compliant, and not lose their permit.
- EPA doesn't have the capacity to regularly inspect Class VI wells, leaving reporting to companies. Also, the agency appears to be accepting what the industry claims are best practices. The decision to allow 13 Chrome steel to be used is one example.
- The EPA knew that the company had violated its emergency plan requirements when the
 company determined it needed to plug the well, and stop using it. The failure of the well,
 coupled with the reported subsurface leak, should have triggered an immediate halt to
 injection, mandated by the company's emergency response plan, but it did not.

Recommendations:

- Given the lack of accountability, follow-up, and demonstrated expertise (e.g., evaluating the use of 13 Chrome steel in a saltine aquifer), a qualified third-party that has not provided support for a CCS project (funding, research, construction, modeling, preparing the application, etc.) should be hired to:
 - Review Class VI well permits in addition to the EPA.
 - Review and comment annual reports submitted to the EPA, particularly as they relate to seismic activity and leakage.
 - Inspect ADM's wells and monitoring equipment (design, construction, operation, and maintenance).
- The EPA, in addition to the Class VI permit holder, should be required to notify the public, agencies, landowners, communities, etc. when a leak or well malfunction occurs.
- The U.S. EPA should fine ADM for non-compliance.
- ADM should be required to pay back tax credits it received for storing CO₂, once the extent of the leak has been identified. This is because CO₂ left the containment area, and can no longer be considered "stored."
- If it is determined that a USDW has been contaminated, ADM should be required to replace such water at their expense.

Lack of Transparency.

Comments:

- ADM knew MVW #2 was leaking when negotiating an easement with the City of Decatur that would allow their CO₂ to be stored under Lake Decatur. The company also knew their well was leaking during negotiations of the SAFE CCS Act and the signing by the Governor that took place on their property on July 18. If either the City of Decatur the Illinois General Assembly and Govern Pritzker knew that ADM's MVW #2 had totally malfunctioned and was leaking, there likely would have been different outcomes.
- Without E&E News' investigation and reporting, it is likely the public, and potentially affected communities, would not know about the leaks today.

Recommendations:

- These actions should have consequences, because ADM clearly put their profits over public safety. This also is in direct violation of their emergency plan requirements, which would have required the company to stop injecting. EPA rules should be updated to require public notice when a well malfunctions and a leak occurs.
- At a minimum, ADM should be fined. Consideration should be given to revoking their permit.

Conclusion

The lack of response and accountability by ADM, and decisions by the U.S. EPA to withhold enforcement for two years after a subsurface leak was detected, clearly demonstrate that technology and enforcement mechanisms do not exist to ensure the safe and permanent storage of CO₂. The lack of accountability and transparency experienced from the EPA and ADM has put profits over public safety, and risk to Illinois' drinking water. That should never be tolerated.

The pace of development and scale of Class VI well projects in Illinois and Class VI and Class II wells across the country need to temporarily stopped. This would allow the EPA to update rules and regulations related to Class VI and Class II well programs to require more rigorous permitting, transparency, and oversight. Until this occurs, Eco-Justice Collaborative recommends that the EPA immediately halt:

- Injection of CO2 into Class VI and Class II wells.
- Issuance of permits for CO₂ injection into Class VI and Class II wells.
- Approval of any state's request for primacy, which would provide the authority to administer the U.S. EPA's Class VI well program.
- Approval of any permit for injection CO₂ into a Class VI or Class II well by any state that has been granted primacy for issuing either Class VI or Class II well permits.

Sincerely,

Pamela J. Richart, Co-Director Eco-Justice Collaborative

Lan R.. Richart, Co-Director Eco-Justice Collaborative

cc: Kayla Schmalle

schmalle.kayla@epa.gov

Andrew Greenhagen

greenhagen.andrew@epa.gov

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Monday, October 21, 2024 3:43:51 PM

Submitted on October 21, 2024 4:38 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Pamela J. Richart

Mailing Address

Eco-Justice Collaborative

Champaign, IL 61821

Email

prichart@ecojusticecollaborative.org

Comments

Comments from EJC were sent via email to: r5hearingclerk@epa.gov. They also can be accessed via our website here:

http://ecojusticecollaborative.org/wp-content/uploads/2024/10/10-21-2024-EPA-comments-on-Docket-No.-SDWA-05-2025-0001.pdf

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Monday, October 21, 2024 4:52:11 PM

Submitted on October 21, 2024 5:52 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Pekin, IL. 61554

Email

Comments

I represent 2500+ members of our CCS opposition group (TAZEWELL COUNTY Stop the co2 pipeline. We are strongly apposed to sequestration of co2 through or under our precious and fragile aquifers in illinois.

We also do not want sequestration in any of the water sheds that feed our aquifers. These aquifers are key critical to life by those dependent on this critical water source.

There isn't nearly enough history to show they are safe. Industry (ADM) has already shown how unreiable current methods will fail after a brief period of time (chrome 13 pipe). Do what is right

In protecting this unreplaceble warer source. Industry has already shown they cannot be trusted to self report as has been the case with the 2 leaking wells in Decature. Do what is right for the residents of Illinois and support or inact what ever itvtakes to protect our aquifers.

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Monday, October 21, 2024 5:36:47 PM

Submitted on October 21, 2024 6:36 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Tracy Meints Fox, Central Illinois Healthy Community Alliance

Mailing Address

Chillicothe, IL 61523

Email

Comments

Central Illinois Healthy Community Alliance (CIHCA) is a ten-year-old organization working to replace dirty fossil fuels with clean, renewable energy. We have followed the various proposals for Carbon Capture and Sequestration (CCS) as a general matter of policy and due to the proposed Wolf pipeline, which had been slated to run through Peoria County.

While we wish that removing CO2 was as simple as sending it "away," far underground, the issues raised by the series of failures at the Archer Daniels Midland (ADM) sequestration site in Decatur illustrate why we believe CCS to be a false solution.

We thank you for the opportunity to comment on the Administrative Order on Consent (AOC) prepared following the inspections of ADM's site earlier this summer. We appreciate the clear explanations of the various permit requirements, but also encourage EPA to publicly share a straightforward timeline of what information was available when and where. Based on details contained in the September 13, 2024 E&E News, it seems many opportunities to begin addressing the leaking Verification Well were missed. The electrical shorts in 2021, the surface leaks in 2021 and 2022, and the observation of CO2 contamination characteristics in the Ironton-Galesville formation in 2022 all should have triggered an EPA response. The malfunctioning monitoring gauges were reported in 2022, but only after ADM had removed the corroded tube and plugged the well with cement, making any root cause analysis all but impossible. It appears the same scenario is playing out with the second Verification Well. ADM has determined that the well may just be leaking brine and doesn't think the well is corroding. EPA needs to intervene now and assure the public that larger incursions into unauthorized zones are not occurring.

RQUESTED ACTION: Ascertain Sufficiency of Relying on a Single Verification Well

It is very concerning that ADM's two sequestration wells rely on just two Verification Wells

and now one has ceased operations and the other is having problems. Part of ADM's August 5, 2024 response included the explanation that "using VW#1 as an alternate monitoring well for CCS#2 is fully supported by the data recorded during the last monitoring period when the downhole gauges were functional." CICHA wonders if this data was collected when the electrical shorts were occurring, when the surface leaks were occurring, when CO2 contamination characteristics started to be observed, or prior to 2021? As part of 59(a), CIHCA encourages EPA to review this determination, preferably with outside experts. It seems overly convenient and difficult to accept that one monitoring well is sufficient for the entire project. Unless that redundancy was specifically called out in the original permit, CICHA asks that EPA suspend all sequestration until a review can be completed and a second Verification Well is in place.

REQUESTED ACTION: Mandate Inclusion of a Seismicity Review

A complete accounting of what happened at the failed Verification Well is essential. CIHCA requests that in addition to failure analysis, historic and future fluid migration studies, and a multiple conduit search, the Status Report required in 59(b) should include a listing of seismic events above M1.0 and a description of steps ADM took to verify that no damages occurred to the Verification Well. It will be impossible to determine whether seismic events are related to the corrosion without this data. If seismic data raises concerns, suspend the sequestration permit until safety can be assured.

REQUESTED ACTION: Require that ADM Identify How Migration Assessment Will Improve on Original Models and Specs

The modeling conducted at the time the permit was issued obviously failed to flag the CO2 migration at the heart of this AOC. As ADM prepares its Migration Assessment Proposal per 59(c), CIHCA requests that EPA require ADM to identify which deficiencies in its original modeling failed to predict the migration and which elements in its engineering specifications failed to perform as expected or failed to be tested against real-world sequestration conditions. It troubles CICHA that although ADM agrees to the jurisdictional allegations and consents to the conditions of the AOC, it neither admits nor denies the specific factual allegations.

Without such an admission, CIHCA believes it is essential that EPA require this type of backward-looking modeling and engineering failure mode analysis. Without it, EPA cannot accurately quantify the risk that CCS projects pose. Given that ADM, knowing about these failures, pitched a CCS expansion to the Decatur City Council and repeatedly asserted the safety of their technology to the Illinois Legislature, the Governor's Office and the public, it seems unwise to merely take them at their word. CIHCA believes the sequestration activity should be suspended until both the modeling and engineering specs can both account for what happened and remedy it.

REQUESTED ACTION: Require A More Specific Migration Assessment Period

CIHCA is concerned that the Migration Assessment may only look a short way into the future. We believe that migration of the fluids is poorly characterized and rather than accept one of the conditions in 59(d)(iii), the model should continue until (1) plume movement ceases, AND (2) pressure differentials are no longer present, AND (3) the project ends.

Any deviations from the original plume modeling should be accompanied by maps contrasting

the forecast and actual plume movement and corresponding changes required to the area of review. New modeling should not be accepted without a clear demonstration that it is capable of looking back and predicting the exact behavior that was observed at the leaking monitoring well. CIHCA believes all sequestration should be suspended until the modeling issues are resolved.

REQUESTED ACTION: Require Contrast with Original Permit Application for Penetrations

CIHCA understands that locating abandoned wells is an ongoing process, but believes that in addition to identifying active and abandoned wells and mines and which ones are plugged and how, the Migration Assessment Report should identify how many of these were omitted from the permit application and how many have changed status since the permit was originally approved. This would help EPA better understand the magnitude of risk posed by these projects.

CIHCA asks that sequestration be suspended until this critical review is complete. If EPA finds new pathways that put drinking water at risk, CIHCA believes the sequestration permit should be cancelled.

REQUESTED ACTION: Expand the Corrective Action Plan to Include Property Owner Compensation

CICHA believes that landowners who are not being compensated for use of their property suffer toxic trespass when brine and CO2 are forced under their land. As part of the Corrective Action Plan outlined in 59(e), EPA should require ADM to have compensated any landowners whose property will potentially be impacted by the updated CO2 plume models.

REQUESTED ACTION: Set up Channels for Improved and Timely Review of Monitoring

CHICA appreciates that Section IV indicates EPA will be reviewing status reports every two months and hopes that the "summary of all permit violations that occurred in the previous months" implies that semi-annual sampling from all shallow groundwater monitoring wells and annual sampling at both Geophysical Monitoring Wells and the sole remaining Verification Well will now be conducted every two months. If that is not the case, CIHCA requests that two month reporting frequencies be included in the AOC for all monitoring. This seems prudent given that the remaining Verification Well is already showing signs of malfunction.

CIHCA further requests that EPA establish a direct link to all continuous monitoring going on at the site and be granted the autonomy to set notifications flagging developments of interest in all continuous distributed temperature sensing (DTS) meshes and via the continuous pressure/temperature monitors used for direct pressure-front monitoring in the Mount Simon and at the Geophysical Monitoring Wells. Similar provisions should be made for any other plume/pressure-front monitoring, including passive seismic monitors.

REQUESTED ACTION: Mandate Blind Third Party Review of All ADM Submissions

Because the performance of this CCS well has so many implications for the future of CCS across the country, CIHCA encourages EPA to select qualified third-party reviewers and require ADM to make blind submissions of all Monitoring Reports, all Status Reports, the

Migration Assessment Proposal, the Migration Assessment Report, and the Corrective Action Plan. This additional level of review for all documents required in Section III would provide EPA with additional insights into complex technical matters and give the public the measure of accountability they are seeking.

REQUESTED ACTION: Publicly Present All ADM Submissions

Again, because the performance of this CCS well has so many implications for the future of CCS across the country, CIHCA encourages EPA to make public information a key part of this AOC. We request that EPA post all submissions required under Section III on its web site with a single index. We also request that when significant documents become available, EPA hold a webinar to walk through the submissions with the public and answer questions. The risks posed by these wells weigh heavily on landowners, emergency responders and local governmental officials. With the accelerated push for this technology, these groups and the larger public deserve transparency from the EPA.

CONCLUSION

CIHCA has participated in citizen suits to force polluter cleanup and understands how arduous the process can be. We also recognize that EPA officials feel pressured to get CCS permits moving. Please stand strong for the environment, the climate and the Illinois residents whose drinking water are at risk. You have the chance to the act decisively. Remember that not only did ADM endanger drinking water supplies, it also flagrantly disregarded required emergency procedures. As we expand CCS from a few million tons of CO2 sequestration to 100X that, we need more than ADM's false assurances. CIHCA requests that you suspend all sequestration until this matter is worked out and enact a much stronger AOC using the many protective suggestions this request for comments is bringing forward.

CIHCA is glad to see that "This AOC does not affect the rights of EPA or the United States to pursue appropriate injunctive or other equitable relief or criminal sanctions for any violation of law." We ask you to push for the maximum accountability and transparency from ADM and use all the tools in your toolbox to keep the public safe.

Sincerely,
Tracy Meints Fox
Central Illinois Healthy Community Alliance volunteer

From: Pressley, Macy
To: r5hearingclerk

Subject: FW: ADM CO2 Sequestration - model risk management failures, remediation options

Date: Wednesday, October 23, 2024 9:19:41 AM

Here you go!

Macy Pressley
Press Officer
External Communications Office
U.S. EPA Region 5 – Chicago
312-886-1443 (office)
pressley.macy@epa.gov

From:

Sent: Monday, October 21, 2024 4:22 PM **To:** Pressley, Macy <Pressley.Macy@epa.gov>

Subject: ADM CO2 Sequestration - model risk management failures, remediation options

Caution: This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

I read with more-than-passing interest the recent articles about unexpected leakage from ADM's liquid CO2 test well. My family is a generation owner of acres of prime farmland near Atlanta, IL that is the target of several proposed CO2 pipelines and injection sites. These pipeline and storage proposals have met with resistance from many residents. Sponsors have threatened landowners with use of eminent domain should they refuse to agree to future pipeline or storage leases on their land.

Governor Pritzker recently signed a two-year moratorium on all pipeline construction pending development of some form of regulatory risk review and, possibly, the establishment of risk limits, ongoing oversight mechanisms, and remedial expectations. No proposals for limits, controls, or oversight have been detailed in the media to-date.

The EPA's announcement of storage leak violations on the ADM site is disturbing. If new pipelines are built, the quantities of CO2 expected to be injected under Logan County will be more than 100X the amounts injected into ADM's test well in Decatur.

Typically, when an operation is to be built at such a novel scale, mathematical models are developed to plan for possible environmental risks. Model assumptions should be transparent, and subject to ongoing validation review and challenge. Key risks should be defined, measured, and monitored. In the case of CO2 storage, the risks include horizontal and vertical spread of injected CO2 beyond ranges predicted by the model, adverse impact on water quality, and diminished land fertility. CO2 pipeline risks are already well-publicized after the Sartartia accident.

When model-defined key risk measurements exceed established model tolerances, management should be required to take predetermined action, consistent with a reporting plan, until risks are back within limits. Regulatory action should include several steps to reduce existing risk and eliminate new risks until they are back under control.

It is concerning that ADM's test site well leakage has occurred beyond the model-predicted limits, that there are no plans to mitigate it (other than to cap the well and temporarily stop injection operations), and that ADM management was not up- front or timely about disclosing the leaks to EPA or the public. ADM seems to think that installing a well cap and touting job benefits are sufficient to mitigate excessive underground leakage.

The current strategy to mitigate CO2 leak damage to fertile farmland and water supplies is to make nominal cash payments to farm owners from an insurance policy. Absent strong risk management, this strategy is not sustainable or prudent for residents of central Illinois.

Active management deflection should be a fineable and potentially fireable offense. Going forward, there should be ongoing regulatory challenge to confirm ADM management maintains robust, proactive risk management practices.

One effective solution to safely prevent future spread from a CO2 injection well is to inject calcium carbonate into the well to trigger a chemical change from a liquid to a solid. This is an expensive remediation process that ADM and pipeline shareholders clearly wish to avoid. But requiring sponsors to convert liquid CO2 into solid rock using calcium carbonate merits serious consideration as a financial and operational repercussion of ADM's failure to effectively manage the model risk and resulting CO2 spread.

I encourage EPA to look at various university studies about CO2 calcification processes, and model risk management. Over the long run, it would benefit ADM and the Illinois EPA to take a more proactive model risk management approach (with early warning systems and red line stop/repair limits) requiring operators take actions up to and including calcification) to preclude irreversible damage to Illinois farmland and water supplies.

The short-term interests of current ADM management and CO2 storage and pipeline sponsors are not aligned with landowners or the general public. Will ADM, Navigator, Wolf Carbon, or their future successors agree to develop strong model risk management processes, including robust remediation solutions? Will they make their key risk measurements subject to timely, independent regulatory review? Can Illinois residents dependent on the Mahoney aquifer afford future "surprise failures" at a larger scale?

https://www.occ.treas.gov/publications-and-resources/publications/comptrollers-handbook/files/model-risk-management/pub-ch-model-risk.pdf

Sent from my iPhone

From: US EPA
To: r5hearingclerk

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Date: Tuesday, October 22, 2024 3:15:29 PM

Submitted on October 22, 2024 4:15 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

Buckley, IL 60918

Email

Comments

In lieu of the fact that Archer Daniels Midland in Decatur, Illinois has had 2 serious CO2 leaks at their injection sites in "unauthorized zones" above the Eau Claire Shale, more serious and time tested studies must be done in order to prevent these leaks. It is clear that the current technology and enforcement mechanism of the EPA does not exist to ensure the safe and permanent storage of CO2, without risk to drinking water. ADM did not follow their own emergency response plan and was therefore out of compliance. The fact that the EPA did not require ADM to stop injecting CO2, gives other companies the go ahead to operate while being non-compliant.

The EPA should be required to notify the public, agencies, landowners, communities etc. when a leak occurs and fine ADM for this non-compliance. Because of these factors, the EPA should stop all CO2 injections of class VI permits in Region V until the scientific community has researched and tested materials for injection and monitoring wells to be fully resistant to corrosion from CO2 and brine. Congress should be able to determine that the technology can be safely carried out without leaks to the surface, induced earthquakes that can damage property and people or contaminate the drinking water.

Coleman-Selby, Sterling

From: r5hearingclerk

Sent: Monday, September 30, 2024 8:48 AM **To:** Adamiec, James; Dooley, Carlene

Subject: FW: Webform submission from: Comment Form for ADM Geologic Sequestration Well -

Proposed Order SDWA-05-2025-0001

From: US EPA <drupal_admin@epa.gov>
Sent: Friday, September 27, 2024 5:24 PM
To: r5hearingclerk <r5hearingclerk@epa.gov>

Subject: Webform submission from: Comment Form for ADM Geologic Sequestration Well - Proposed Order SDWA-05-

2025-0001

Submitted on September 27, 2024 6:23 pm EDT

Submitted by: Anonymous

Submitted values are:

Name

Mailing Address

, Katy, TX, 77450

Email

Comments

I would appreciate it if you could share a wellbore diagram of VW#2 that includes details such as casing, tubing, packers, sleeves, and perforations.

From:
To: r5hearingclerk

Subject:Re: SDWA-05-2025-0001 Public CommentsDate:Tuesday, October 22, 2024 5:00:58 PM

Attachments: SDWA-05-2025-0001 Comments, Illinois People"s Action-3.pdf

Caution: This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

Hello,

I hope you are well. I apologize for the inconvenience. My previous comments contained a factual error, which I seek to rectify with a corrected version. Please replace the previous comment document with the corrected one (see attached) and remove our earlier comments from the online portal (I submitted them via email and the portal to ensure they went through). Thank you for your time and consideration.

Best, Ava Traverso

On Mon, Oct 21, 2024 at 3:29 PM r5hearingclerk <<u>r5hearingclerk@epa.gov</u>> wrote:

Good afternoon,

The comments referenced in and attached to the email below were received by the U.S. EPA Regional Hearing Clerk, Region 5, on October 21, 2024, at 3:09 PM CDT.

Thank you,

Regional Hearing Clerk

United States Environmental Protection Agency, Region 5

Phone 312-886-9868

From: Ava Traverso

Sent: Monday, October 21, 2024 3:09 PM

To: r5hearingclerk < r5hearingclerk@epa.gov > Subject: SDWA-05-2025-0001 Public Comments

Caution: This email originated from outside EPA, please exercise additional caution
when deciding whether to open attachments or click on provided links.

Hello,

I hope this email finds you well. I am reaching out on behalf of Illinois People's Action to submit our comments regarding SDWA-05-2025-0001. I would appreciate a confirmation that you have received this message. Thank you for your consideration.

Sincerely,

Ava Traverso

--

Ava Traverso

Equitable Climate and Clean Energy Policy Fellow

Illinois People's Action

--

Ava Traverso Equitable Climate and Clean Energy Policy Fellow Illinois People's Action **DATE: October 21, 2024**

Introduction

We respectfully submit this request to the United States Environmental Protection Agency (EPA), urging the agency to hold Archer Daniels Midland (ADM) accountable for its actions and revoke its Class VI well permit. Furthermore, we strongly recommend that the EPA reject ADM's pending Class VI permit application for its Maroa site.

Illinois People's Action seeks the EPA to take decisive and immediate action against ADM's violations, which have put the citizens of Decatur and surrounding areas at risk. Despite presenting itself as a responsible community leader, ADM has concealed significant operational issues at its facility. Notably, ADM actively participated in negotiations for the CCS industry's regulatory framework in Illinois while aware of its non-compliance.

ADM's repeated actions have eroded public trust. The EPA's limited oversight of permitted operations has contributed to this crisis. ADM's permit must be revoked to re-establish public confidence in the agency and protect our communities. ADM's repeated failures demonstrate a lack of accountability and unwillingness to improve safety protocols.

Concerns

ADM has violated its EPA permit since January 2022, when Monitoring Well #2 (MW#2) was found to be non-operational. However, ADM has been aware of operational issues with their monitoring wells since September 2020, when electrical malfunctions became known. EPA was unaware of monitoring disruptions for nearly two years, and ADM and EPA only became aware of the second leak at Monitoring Well #1 (MW#1) during mitigation efforts for the first leak occurring at MW#2. The two separate leaks happened shortly after ADM's permit was granted, seven years (MW#2) and five years (MW#1), respectively.

There also is a significant gap in data recording from the monitoring wells. According to the order of consent, because of the electrical and equipment malfunctions at Monitoring Well #2, "the downhole pressure and temperature gauges are no longer operational and no downhole data was recorded in the January 1, 2024 to the July 1, 2024 reporting period" (p 11). Given the plethora of malfunctions at the plant since 2020, it is difficult to know the full scope of the fluid migration.

ADM has presented a pattern of negligent behavior in recent history. The recent number of non-CCS incidents at the Decatur plant is enough for concern and scrutiny. While the administrative order on consent focuses on leaks and malfunctions with their CCS operations,

their other accidents should not be overlooked. ADM has experienced four accidents in 2023¹ that resulted in OSHA violations, multiple worker injuries, and one death. OSHA has also fined ADM \$405,418 since 2013.

The continued operation of ADM would violate one of the EPA's pillars: The Safe Drinking Water Act (SDWA). The SDWA was enacted to protect public health by ensuring that our drinking water remains free from contamination, particularly in vulnerable areas such as a Sole Source Aquifer. By letting a polluting entity like ADM continue to operate, the EPA is putting the Sole Source Aquifer that serves close to a million people at significant risk. As well as failing to uphold its responsibility to safeguard this vital resource.

The SDWA not only mandates strict protections for public water systems but also includes the Underground Injection Control (UIC) program, which is designed to prevent contaminants from entering underground water supplies. ADM's continued carbon capture and sequestration operation puts this program's integrity and our water's safety at serious risk. In order to maintain the integrity of the EPA and fulfill its mission of environmental protection, immediate action is necessary.

Actions sought

Each new revelation concerning ADM has undermined public trust. EPA has shown a lack of awareness regarding the operations of the permits it grants. In order to re-establish public trust in the EPA and protect our communities, the agency must revoke ADM's operating permit at their Decatur facility and fine ADM for their egregious actions. The people of Decatur and Illinois deserve better than the sporadic operations at ADM currently occurring, given that ADM only stopped injecting after the second leak was discovered. ADM paused injecting voluntarily, with no order to cease operations with the EPA. The EPA needs to rectify this glaring error by requiring ADM to operate within strict parameters of safety and monitoring and actually enforcing these stipulations. ADM cannot be allowed to operate after monumental mistakes without penalty.

Their permit was granted under the requirement that the facility be running safely <u>at all times</u>. ADM should not be allowed to restart operations in the hope that they will correct their behaviors, given that prior penalties have not led them to rectify their actions. ADM is also a case study of why self-reporting does not work. The EPA must play an active role in monitoring efforts in order to protect our citizens and the environment.

Every incident mentioned under the concerns section should bolster EPA to reject ADM's Maroa Class VI well permit. Given their actions and deception, ADM has shown they can no longer be trusted to operate their existing CCS site safely and transparently. We can likely assume that permitting another facility and three additional wells would lead to even more disastrous results.

¹ Murillo, N. (2023, December 6). One year, four accidents at Archer Daniels Midland's Decatur, III. Headquarters; company fined over \$400,000 in past 10 years. CU-Citizen Access.

The EPA has the legal authority to revoke or reject applications and has previously exercised that right. In September 2022, the EPA revoked the pollution control permit of Blueshore Texas Terminal² after environmental groups protested. Blueshore's application was withdrawn and required amendment to fit with pollution control regulations. EPA has also revoked multiple oil and gas well air permits in Colorado in recent history³. Though those rejections were for air pollutants compared to water contamination, it sets the precedent of EPA regulating pollution streams of well facilities. Using the SDWA, which ADM is currently violating, the EPA can further expand the precedent of regulating pollution at well sites.

Conclusion

The EPA must prioritize the well-being of Illinois citizens by rescinding ADM's permit and rejecting any future Class VI well applications by ADM or others. Our state should not serve as a testing ground for irresponsible corporations seeking to profit from CCS at the expense of public safety. Another incident would result in monumental damage and loss of life. We cannot afford to put irreplaceable resources at risk.

Thank you for considering these comments.

Illinois People's Action

² Krisha, R. (2022, September 2). *U.S. EPA revokes permit for Phillips-Trafigura Bluewater Offshore Terminal* | *Reuters*. Reuters.

³ Center for Biological Diversity. (2024, August 1). *EPA rejects another air pollution permit for oil, Gas Wells in Colorado*. Center for Biological Diversity.

From:

To: Schmalle, Kayla; r5hearingclerk
Cc: prichart@ecojusticecollaborative.org
Subject: Case Docket No. SDWA-05-2025-0001
Date: Tuesday, October 22, 2024 12:47:29 PM

Caution: This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

Director Shore

Apologies for my late comment submittal. I will be try to be brief:

Having spent over 30 years studying, teaching and performing failure analysis of a wide variety of complex systems involving fluids and machinery interaction with its local environment, I am concerned with what appears to be a rather passive acceptance by the EPA of claims by ADM that the numerous carbon sequestration failure(s) were somewhat benign and easily corrected. Applying existing technology in a new setting can result in excessive confidence by the operator and become the first chapter of a arge scale failure event.

Sequestering CO2 in the geological vicinity of potable water resources should require a degree of oversight that is similar to that demanded of nuclear equipment/ facilities. As an engineer involved in the Three Mile Island event in 1979, I recall the high state of confidence of those in the industry prior to the event. Until the event happened. I strongly urge the EPA to require a full and complete failure analysis to be conducted by a highly qualified team of engineers representing the relevant disciplines from organizations that have never had any commercial relationship, direct or indirect, with ADM or its sequestration equipment vendors. This published report should identify the exact cause(s) of the failure(s): both equipment and personnel&procedures, not unlike those following Three Mile Island and commercial aircraft/ship disasters. Claims of proprietary/business confidentiality by ADM or its vendors should be rejected in light of the gravity of the investigation.

Respectfully Submitted,

, PhD, Fellow ASME

Naperville IL 60565



Caution: This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

18 Oct 2024 , physicist

A Brief Comment on a Hazard from the ADM Carbon Sequestration Project

Case Docket No. SDWA-05-2025-0001

I am a retired PhD physicist living near Houston, TX and have been appointed Scientific Advisor to the Bay Area Sierra Club Houston. Many of our members have become concerned about the possibility of large **above ground** releases of CO2 from carbon sequestration projects planned for our area.

DOE representative Matt Villante assured me that the DOE takes no interest in nor any responsibility for such accidents.

EPA employee Molly McEvoy told me that such safety concerns were addressed in the final permit, such as the one issued by the EPA for the ADM project in Decatur, IL. Subsequently, she wrote me to say that the EPA does **not** concern itself with the hazard presented from such above ground releases, beyond a vague statement leaving all responsibility to ADM found in the permit documentation. That document is entirely devoid of any estimate of risk or consequences.

Based on published estimates for flow rates for a CO2 injection well failure [Pan, et al., https://doi.org/10.1002/ghg.41], one could expect a maximum leak rate of >100 tons/hr for a long time (many days) of cold CO2 released into a city with a population density of 1500 persons/mi^2, likely resulting in many fatalities (~90/hr) outside the facility. Our experience with similar accidents near us suggest that evacuations would likely not begin for several hours.

We have reached out to the mayor of Decatur, IL to find what, if any, studies, plans or preparation has been made for such an accident. As of this writing we have had no response. ADM has a long history of accidents, some fatal, and based on those accidents and a review of well and pipeline failures in the industry we estimate a likelihood of $\sim 0.1\%$ facility/year

Given this hazard and the absence of any DOE or other agency enforcement, the EPA must take responsibility for the safety of the community from the hazard of large, above ground CO2 leaks.