

# Wabash County Plan Commission

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## **Wabash County Plan Commission Board – Special Meeting Minutes**

Board Members: Randy Curless, Jeff Dawes, Sam Hann, Mark Milam, Doug Rice, Mike Ruse, Geoff Schortgen, Cheri Slee, Joe Vogel

Staff: Mark Frantz, Board Attorney; Brian Campbell, Plan Director; Jennifer Hicks, PC Secretary

### **Thursday, March 20, 2025**

#### **1. Call To Order**

Mr. Randy Curless, PC Chairman called the meeting to order at 6:00 pm.

#### **2. Roll Call**

Jennifer Hicks, PC Secretary, called roll:

- ✓ Randy Curless – *present*
- ✓ Jeff Dawes – *present*
- ✓ Sam Hann – *present*
- ✓ Mark Milam – *present*
- ✓ Doug Rice – *absent*
- ✓ Mike Ruse – *absent*
- ✓ Geoff Schortgen – *present*
- ✓ Cheri Slee – *present*
- ✓ Joe Vogel – *present*

Jennifer Hicks declared a quorum was present.

#### **3. New Business**

- ❖ Mr. Curless provided the public a brief statement regarding the purpose, format and guidelines for the meeting. The meeting is informational only, there will be no votes or action taken. Mr. Curless turned the meeting over to the Poet and Vault 44.01 to provide a presentation regarding Carbon Capture and Sequestration (CCS).

Mr. David Pyle, General Manager for POET, introduced himself and highlighted the significant opportunity the project presents for Wabash County. He emphasized POET's commitment to the community since 2008 as a strong economic partner, aiming to create long-term value for local farmers.

Mr. Pyle acknowledged that such projects raise questions and concerns, including those he initially had himself. He stated that while geological storage might be unfamiliar locally, it is an established industry with rigorous standards worldwide. He assured the Plan Commission and the public of POET and Vault's commitment to a safe, responsible, and beneficial project for all involved, noting his personal connection to the community as a resident.

He provided context on POET's North Manchester facility, which processes 90 truckloads of corn daily from approximately 900 farmers across 155,000 acres in northern Indiana. Mr. Pyle explained that 40% of the U.S. corn crop is used for biofuel and distiller's grains, and the growth in biofuel demand has strengthened the agricultural economy and corn prices. He noted that corn yields have doubled since the ethanol industry's inception. He detailed POET's production process: one-third corn to ethanol, one-third to high-protein animal feed and corn oil, and one-third to clean, fermented CO<sub>2</sub>. He mentioned that almost half of POET's 34 facilities bottle CO<sub>2</sub> for various industrial uses but clarified that the North Manchester facility currently does not due to a lack of local market.

Mr. Pyle pointed to the growing market for CO<sub>2</sub> removal from the atmosphere and emphasized corn's efficiency in capturing solar energy through photosynthesis. He stated that the market demands low-carbon liquid fuels, requiring the industry to adapt. Capturing bio-dynamic CO<sub>2</sub> would lower POET's carbon score, maintain industry viability, and ensure long-term economic success by unlocking new low-carbon fuel markets and the sustainable aviation fuel industry. This could position Wabash County as a leader in ag-based energy without harming topsoil.

He stressed POET's 17-year history as a responsible and safe neighbor in the community. He understood the questions surrounding the project and committed to transparency, listening, and addressing concerns. He noted the project is in the initial vetting phase with an expected two-plus years before full operations. POET fully supports rigorous state and federal regulations and will work closely with the Indiana Department of Natural Resources (IDNR) and the Environmental Protection Agency (EPA) to meet and exceed necessary standards.

Mr. Pyle drew a parallel to the introduction of the ethanol plant in 2006, which also raised concerns that ultimately were mitigated through careful operation. He concluded by stating that POET selected Vault 44.01 after evaluating numerous companies due to their proven experience, advanced technology, and commitment to exceeding safety standards. He reiterated POET's commitment to working closely with the community to ensure the project is done right.

Mr. Craig Hall, an engineer with Vault 44.01, introduced himself and his colleague Susan Fakharzadeh. Mr. Hall provided background on the project, mentioning meetings with landowners representing approximately 11,000 acres surrounding the facility over the past year and a half. He stated that Vault 44.01 has voluntary participation for two-thirds of those landowners for use of the pore space. He continued that Vault 44.01 and Poet has met with representatives across Wabash County, within the Town of North Manchester, Economic Development, and Grow Wabash.

Mr. Hall clarified that the project involves taking CO<sub>2</sub> currently emitted into the atmosphere and storing it deep underground with voluntary participation and no pipeline involved. There will be a compressor on the POET facility and a small 4-inch flow line connecting it to an on-site well. All injection activity will occur on private property. An emergency response plan will be developed in consultation with local responders, acknowledging that this is different from their current training. Mr. Hall provided an email address for feedback on outreach and unanswered questions.

Mr. Hall defined CCS as the process of capturing, compressing, and permanently storing CO<sub>2</sub> in a secure, deep, underground geological formation. He explained the capture process at the POET facility, where CO<sub>2</sub> is a byproduct of corn fermentation (along with feed/dry grain and ethanol) and is currently emitted into the atmosphere. The CCS process would capture this CO<sub>2</sub> for underground storage. He used an example of another Indiana ethanol plant capturing CO<sub>2</sub> for industrial uses (carbonated beverages, fire extinguishers, etc.), showing pictures of the stack where CO<sub>2</sub> is emitted, the flow line to a compressor, and trucks used for transporting utilized CO<sub>2</sub>. He emphasized that this project is about storage, not utilization.

To explain deep underground storage, Mr. Hall compared it to familiar wells: home water wells (100-150 feet), industrial water wells (300-350 feet), and then much deeper formations. He introduced the Trenton Formation (900-1,200 feet deep) as a hydrocarbon-bearing formation where oil and natural gas has been located and that stretches across 22 Indiana Counties. He continued by saying the natural gas in this formation has been trapped there by the Maquoketa. The Maquoketa formation is a shale layer, a sealing formation. It has kept the natural gas trapped in the Trenton Formation for millions of years. Below the Maquoketa Formation is the Mount Simon Formation, comprised of sandstone with "very salty water," approximately 200,000-300,000 ppm, currently occupying the pores in the stone. Above the Mount Simon is the Eau Claire Shale, an approximately 400-foot-thick primary sealing formation, similar to the Maquoketa, ensuring secure, long-term storage. Mr. Hall clarified that the Mount Simon Formation is not a tank in the ground, but rather an extensive underground formation spanning several states with varying thickness, anywhere from 100 to 1,000 feet thick. He also noted that the Mount Simon Formation has no other use other than the potential storage of CO<sub>2</sub>.

Mr. Hall detailed there are multiple layers of protection. The sequestration wells are proposed to be 3,000 feet plus deep, which is significantly deeper than water and most oil/gas wells. The proposed project includes three monitoring wells being drilled, one right above the Eau Claire Shale to detect any upward migration, which would be monitoring pressure and temperature 24 hours a day, 7 days a week, a second deep observational well within the Mount Simon Formation to track the movement of the CO<sub>2</sub>, and a third shallow monitoring well at approximately 2,000 feet deep. The shallow monitoring well would be used for quarterly testing on water quality to assure there are no changes to the quality that was present prior to the sequestration.

Mr. Hall went on to explain the well construction process, ensuring the integrity of the shale while drilling through these sealing formations. He detailed going down to the primary surface casing, approximately 600 feet, and cement that in. Within this casing would be another steel pipe going to the bottom of the well, which would be cemented in as well, creating a cement-steel-cement-steel barrier. Mr. Hall again stated they would be monitoring this well 24 hours a day, 7 days a week. He stated that there would be annual inspections of this piping to ensure the integrity of the well remains intact. He stated they plan on using corrosion resistant piping, as CO<sub>2</sub> in the presence of water can be corrosive. With that knowledge, Vault 44.01 plans to use 25 chrome materials to prevent this corrosion within the wells.

Mr. Hall then addressed how CCS is regulated at both the Federal and State level, through the EPA and Indiana Department of Natural Resources (DNR). With the EPA the process includes permitting for a class VI well, which permits injecting fluids into the earth. He pointed out there are several classifications of wells, but for the class VI wells the applicant has to prove there is suitable geological formations for the whole CO<sub>2</sub> injection and that it isn't going to leak. There is also a financial assurance commitment required. The EPA permitting process is an approximately two-year process, sometimes longer. This does include a public comment period. Vault 44.01 is currently expecting to obtain approvals from the EPA sometime in 2026. He stated in this case; Vault 44.01 is putting out \$10 million with the EPA to ensure there is enough money to plug the wells and for post-injection care. Mr. Hall stated that even after POET is done with injecting the CO<sub>2</sub>, Vault 44.01 and POET are not released from their obligation to care for the wells. For up to 50 years after closing the well, testing is completed to show the CO<sub>2</sub> is not moving or migrating.

Mr. Hall continued explaining there are different types of emergency response. The monitoring wells monitor heat, pressure, and temperature. He stated that if anything is noted in the monitoring, injection is to be stopped immediately. At that time the EPA is contacted and the emergency response plan is enacted. He stated that an emergency response plan will be developed with local first responders.

Mr. Hall reiterated there will be no off-site pipeline for the project at POET, it will be completely contained on POET's property with a "short 4-inch flow line" connecting the compressor to the wellhead.

Mr. Hall address concerns regarding potential ruptures. He stated dispersion modeling has been conducted. The 4-inch flow line will be able to hold approximately two tons of CO<sub>2</sub>. The modeling that has been completed indicates that in the event of a rupture, the event of a rupture, the distance where CO<sub>2</sub> concentration in the atmosphere reaches 4% would be less than 500 feet. Craig explained that 4% CO<sub>2</sub> is roughly the concentration one might breathe while wearing a mask for over five minutes, emphasizing the small scale compared to incidents like the Mississippi pipeline rupture where 1,800 tons was released.

Mr. Hall summarized his presentation by stating that CCS involves capturing and injecting CO<sub>2</sub> into a deep underground geological reservoir, not tanks. POET and Vault 44.01 are ensuring there isn't contamination with drinking water by utilizing the existing multiple geological shale seals, with the primary being Eau Claire Shale. Regulations are occurring at the federal level with the EPA and the state level with Indiana DNR. Strong voluntary landowner participation has been secured already, approximately 2/3 of landowners at this point. There is no off-site pipeline and an emergency response plan will be developed with local first responders.

Mr. Brian Campbell, Plan Commission Director, expressed thanks to the MSD Administration for the use of the building for the meeting, the Wabash County Sheriff's Department and EMA for assistance as well.

Mr. Campbell reiterated the meeting was for informational purposes only, no votes or decisions would be made at the time of this meeting. Mr. Campbell stated explained the

Plan Commission's role is to ensure proposed projects in Wabash County comply with local zoning and land use regulations, while protecting the interests of all Wabash County residents and evaluating potential impacts on the communities.

Mr. Campbell acknowledged that private sequestration is a relatively new technology with unknowns regarding long-term effects in Indiana. He noted the lack of any ongoing carbon capture and sequestration projects within the state. Mr. Campbell referenced Public Bill 163 from 2022, which stemmed from Indiana House Bill 1209, and is now Indiana Code 14-39-2, that establishes a framework for underground storage in Indiana and the requirement of permits from Indiana DNR. He stated that within the last week, there was a first reading regarding rulemaking with the state's permitting process being separate from local setbacks and zoning regulations. He stated on the Indiana DNR Division of Oil and Gas website there was a statement that read "decisions on the location of carbon pipelines and carbon injection wells will continue to be overseen through local zoning." He stated once the public law is finalized and the permitting process is completed through DNR, Wabash County will be left with Home Rule when it comes to additional requirements and zoning, noting that nothing in the EPA or DNR guidelines are any regulations regarding setbacks and zoning for projects such as this.

Mr. Campbell went on to state that equitable compensation will be provided for the pore space to owners who do not agree with or want anything to do with the carbon sequestration project. Indiana Code 14-39-25, states the applicants (in this case POET and Vault 44.01) will operate in accordance with local, state and federal laws.

Mr. Campbell then handed off the Plan Commission members to ask questions to Vault 44.01 and POET representatives.

**Mr. Sam Hann**

- **Question:** Regarding financial assurances, if Vault or POET cease to exist, who monitors the site for 50 years, and what protects the community financially for capping the well? IS it state bonds or local funds?
  - **Answer:** Mr. Hall answered the financial assurance is with the EPA. If Vault were to cease operations, the EPA would have the funds to monitor the well, take control, and ensure permit obligations are met.
- **Question:** To Vault, how long has your company been in business, and who funds you? POET mentioned your proven track record.
  - **Answer:** Mr. Hall answered Vault's CEO started the company in 2021, having worked in carbon capture and sequestration for 15 years previously, including projects in Kentucky and Alberta (which has had carbon tax and sequestration for about 12 years). While the Kentucky project didn't proceed, Vault was formed by experienced individuals (currently 45 people) who have worked on CCS projects globally, including the Shell Quest project in Alberta and others in Saskatchewan (around 10 years). So, while the organization is four years old, the team has extensive experience.

**Mr. Mark Milam**

- **Question:** It takes two-plus years for federal approval. Regarding the 4-inch flow line and potential rupture, how much pressure do your compressors need to

push CO2 down 3,000 feet? What safety devices (check valves, etc.) are in place on the vertical part to control leaks or bleeds, and what is the pressure it needs to control?

- **Answer:** Mr. Hall clarified that he wasn't saying a pipeline rupture could never happen, but that their system involves a small 4-inch line with a small volume of CO2 (two-ton capacity), unlike the 1,800 tons in the Mississippi incident. There are multiple safety devices within the well: one at the well end, one within the well tree, and a downhole valve to prevent backflow. Check valves are in place, and the well is designed to handle the necessary pressure.

#### **Mr. Campbell**

- **Question:** At a previous presentation by Vault and POET it was mentioned sequestering approximately 1,000 metric tons per day. Is that still the plan?
  - **Answer:** Mr. Pyle answered the plan is to sequester around 250,000 tons per year.
- **Question:** The 2023 Greenhouse Gas Report to the EPA for POET, it shows facility emissions of only 123,000 tons. What accounts for the difference?
  - **Answer:** Mr. Hall answered that biogenic CO2 is not reported on that report, only the CO2 from the boiler and dryer using natural gas.
- **Question:** What percentage of CO2 produced by Poet will be captured?
  - **Answer (Mr. Pyle):** The intent is to capture 100% of the fermented biogenic CO2 from the corn fermentation process.
- **Question:** What is the proposed timeline for injecting CO2 at the facility?
  - **Answer:** The permit was submitted for 12 years.
- **Question:** The proposal mentioned sustainable aviation fuel as justification. Will this require facility expansion?
  - **Answer (Mr. Pyle):** Producing sustainable aviation fuel would lower the carbon score of their ethanol, making it suitable for further processing, similar to corn oil. These processes are still being evaluated.
- **Question:** Who would own the CO2 sequestration equipment? POET or Vault?
  - **Answer (Mr. Hall):** Vault would own the equipment.
- **Question:** Does Vault intend to claim tax credits for CO2 capture under the Bipartisan Budget Act?
  - **Answer (Mr. Hall):** The scope of their responsibility includes the capture, pipeline, and well for sequestration. POET would not be claiming those credits for this part.
- **Question:** Regarding 100% voluntary participation, are you willing to cancel the project if you don't achieve it?
  - **Answer (Mr. Hall):** Similar to oil and gas production, there are mechanisms for unitization if there's enough support within the geological pool, allowing access to the value even without 100% agreement.
- **Question:** You mentioned direct air capture earlier. Is that still the plan? What capture method are you using?
  - **Answer (Mr. Hall):** They are *not* using direct air capture. The CO2 is captured from the fermentation process, after it goes through a scrubber to remove other compounds. This is considered capturing from a point source, not direct air capture.

- **Question:** For non-voluntary landowners, if the injected CO<sub>2</sub> migrates onto their property, but they don't want to be part of it, do they not get compensated? How do you justify that?
  - **Answer (Mr. Hall):** The IDNR rulemaking process is defining the rules for compensation in such cases, similar to how mineral rights are handled in oil and gas, where a unit with multiple owners shares the benefits. While they can monitor CO<sub>2</sub> movement, controlling it strictly by property lines isn't possible.
- **Question:** Who handles the monitoring of the pipeline and the spread of CO<sub>2</sub>? Is it continuous or sporadic? What about surrounding areas?
  - **Answer (Mr. Hall):** Vault handles the monitoring, sometimes using third-party contractors for specific tasks like seismic surveys. Monitoring includes continuous 24/7 pressure and temperature readings in monitoring wells and periodic (e.g., quarterly water quality checks, seismic surveys every 4-5 years) assessments. This is all part of a Measurement and Monitoring Verification (MMV) plan submitted to and reviewed by the EPA.
- **Question:** Are you required to conduct 3D seismic testing? If so, will you ask for county commission approval and landowner permission to be on their property? Will you compensate for any damages (roadways, tiles, etc.) from testing?
  - **Answer (Mr. Hall):** 3D seismic testing needs to be done before injection starts. They cannot and will not enter private property without permission. Compensation for damages will absolutely be provided.

#### **Public Comment Period:**

**David Terflinger** asked Mr. Hall to answer the question regarding the pressure in the injection well. Mr. Hall clarified that the wellhead will have approximately 1,400 psi. 1,400 psi on the well.

**Dave Randal** asked a question regarding the 70% threshold for landowner participation. Mr. Hall answered that the 70% relates to the unitization mechanism, similar to oil and gas, for the carbon sequestration project to move forward. The member of the public then asked if that meant if they don't get the 70% does that mean the project can't be completed. Mr. Hall confirmed that is the case.

**Brent Klutz (Vice President of Klutz Well Drilling, Past President of the Indiana Groundwater Association, Licensed Well Driller, Lifetime Resident of Wabash County):** Mr. Klutz stated he has provided work for probably 95% of the people present. He asked the board if POET and Vault 44.01 notified them about submitting a permit application with the EPA. The Plan Commission Board answered they did had not contacted them. Mr. Klutz stated the application date was 7/30/24, with Vault 44.01 submitting another application for a project in Madison County on 7/25/24. He again stated the current timeframe for these permits is roughly 24 months. He mentioned contacting the IDNR Oil and Gas Division regarding their role in the rulemaking process for the State of Indiana. He also detailed the EPA dashboard for following Class VI well applications, stating that the public comment period for the project in Wabash County is tentatively scheduled for 7/31/26, with final permitting around 10/29/26. He advised checking the EPA Class 6 Permit Tracker database and the Citizens Action Coalition website (citact.org), which is tracking nine carbon capture projects in Indiana.

Mr. Klutz then shared his opinion, stating groundwater contamination from the injection well is "absolutely" possible, regardless of depth. He questioned what would happen first: well failure, pipeline leak (though deemed unlikely by Mr. Hall), monitoring well failure, earthquake, or groundwater pollution. He believes long-term contamination will be slow but likely, with potential for arsenic and mercury contamination due to carbonic acid formation from CO<sub>2</sub> mixing with brine, along with increased pressure causing fractures. He asked about typical natural gas pressure underground (no specific answer provided). He mentioned a 90% pressure limit for injection and how that's measured. Mr. Hall stated they use a process called coring, where they use a drill bit with a hole in the center to extract a piece of the rock that is taken to a lab to test the actual pressure.

Mr. Klutz raised concerns about the "push-and-pull" effect on groundwater from POET's significant water withdrawal (1.6 million gallons/day from three wells) and the town of North Manchester's (6.62 million gallons/day from five wells) in relation to the three interconnected aquifer systems in the area. He suggested that existing wellbores might be weak points for contamination. He described the extensive process of constructing a Class VI injection well, similar in some ways to oil wells. Mr. Klutz brought up bringing in a platform rig for drilling the wells that will be running large pumps, multiple diesel engines, along with a transport system of semis, bringing tooling, premixed drilling fluid, cement for grouting, steel pipe for the casing, hauling containers and cuttings from the site for disposal. He brought up the issue of increased traffic around the area, along with the crew and workers traveling in and out of the drilling site, 24 hours a day until the wells are completed.

Mr. Klutz asked Vault 44.01 where the monitoring wells would be located. Mr. Hall answered that the shallow monitoring well would be located close to the injection well. The deep observation well, needs to be a "bit further away" to get another data point. Therefore you have data being received from where the injection is occurring, pressure and temperature, and additional pressure and temperature information being monitored a distance away. Mr. Hall also stated they would be drilling additional water wells to ensure water quality.

Mr. Klutz then discussed well development practices like hydrofracking or acidizing. Mr. Hall commented that Vault would not be fracking as they are not allowed to do that process. Mr. Hall did state that there was the possibility of using acid post drilling to open up the pores.

Mr. Klutz emphasized his family's 100+ year history in the water well business and their access to information. He questioned how Vault expects to inject the CO<sub>2</sub> and have it stay, asking if it's mixed with water. Mr. Hall answered that the CO<sub>2</sub> would be in a supercritical state. He clarified at 1,070 psi, the CO<sub>2</sub> becomes a supercritical fluid, the wellhead will be operating at 1,400 psi and the natural reservoir pressure is at 1,250 psi. Mr. Klutz inquired about well screens. Mr. Hall stated they will be setting 25 chrome casing all the way to the bottom, then there will be holes "poked" through for the CO<sub>2</sub> to leave the casing. Mr. Klutz asked about the annular space between the casings. Mr. Hall stated the annular space will be filled with treated water and will be monitored 24 hours a day, 7 days a week.



**Mr. Campbell:** Mr. Campbell stated in his research there is no known material that can withstand supercritical CO2 without corrosion. He asked how they plan to mitigate any potential corrosion damage to the pipes. Mr. Hall stated that CO2, regardless of its state as a gas or in its supercritical form, is not corrosive. CO2 in the presence of water is corrosive, so they plan to pull the water out before it goes into the platform using a dehydration process. Using 25 chrome metals in the casings due to it being corrosive resistant.

**Josh Leffel (local resident living across from POET):** Mr. Leffel expressed strong skepticism about Vault's four years in business being sufficient experience for such a potentially risky project, comparing it to machinists with similar tenure still learning. Mr. Leffel shared a personal story about his family moving to a handicap-accessible home in the neighborhood around POET due to his children having Duchenne's muscular dystrophy, describing it as a dream come true. He expressed anger and disappointment at learning about the carbon capture project through seismic testing in his neighborhood, the information not coming from POET. He worried that this project could turn their "safe place" into a "nightmare" and felt POET only cared about those they do business with not their neighbors. He urged direct phone contact with all county residents. He stated he and his neighbors have done their research and are not "dumb." He found the idea of pumping massive amounts CO2 underground, potentially harming neighbors, morally reprehensible, especially for a tax credit ("the only reason you're doing it"). He hoped the plan would be stopped for his family and everyone else.

**Scott Sheehan (County resident living 2 miles south of POET):** Expressed concern about well water contamination for his family. He sought studies or scientific facts and guarantees. He asked what "contaminating well water" means. Mr. Hall stated if there's insufficient carbonate within the aquifer, 1% calcium carbonate acts as a buffer for CO2 which doesn't change the pH of the water. If there is an imbalance, the CO2 can change the pH. The solution to those changes in water quality if there is an increase in CO2 in the aquifer is an RO water softener. Sheehan asked for a map showing the radius of influence if a leak occurred. Mr. Hall stated that Vault would be responsible for everything if there was a leak regardless of the distance, but stated the area is roughly 0.6-mile radius from the well after 12 years.

Mr. Sheehan inquired about financial impact if the community is negatively affected. Mr. Hall stated the financial requirement of \$10 million is going to the EPA for future care of the well. Mr. Hall stated that \$10 million would be "way more than sufficient" for all of the studies and well care. Ms. Susan Fakhrazadeh stated that part of the Indiana Senate bill that was referenced previously also includes a set of fines established by the Indiana DNR for noncompliance. She also stated about the Indiana DNR rulemaking that will be happening so there will be financial assurance with the EPA, as well as with the state.

Mr. Sheehan asked if something happened to contaminate the wells in the area and water had to be trucked in to the residents on a long-term basis, would the funding be there for that. Mr. Hall stated the worst-case scenario includes using water softeners with reverse osmosis. Mr. Hall stated that would take all of the contaminants out of the water.

Mr. Sheehan stated he felt as though the project is driven by Washington, DC and being brought to our area. He continued that it about tax credits for this initiative using the 45Q. Mr. Matt Ward, a Vault 44.01 employee, stated the reason why they are doing

projects such as these are not for the credits, because credits go away, its because they see real opportunities to be able to participate in lower carbon liquid fuel markets, such as sustainable aviation fuel. They see the market potential to not only POET but to every bushel of corn. 45Q is one factor that is giving assurance to the significant investments that are needed to start projects like this.

**David Terflinger (Retired Pipeliner, Cathodic Protection Specialist, Non-Destructive Testing):** He cited a 2005 Intergovernmental Panel on Climate Change (IPCC) report noting significant government subsidies for carbon sequestration globally with a high failure rate (70% not implemented) due to various factors including long-term liability and social acceptability. He stated only 44 such plants were operational worldwide as of July 2024. He summarized the behavior of supercritical CO<sub>2</sub> underground (rising to cap rock, spreading laterally, potential migration along fault planes, risk of earthquakes from high pressure). He noted research suggesting small earthquakes but potential for leaks. He cited IPCC data suggesting well-managed sites could retain over 99% of CO<sub>2</sub> for 1,000+ years but acknowledged limited field data. The retention data is only available due to simulations. He warned of potential widespread issues if many injection sites are created. He likened the well construction to concrete with rebar, raising concerns about long-term corrosion (noting 90% of current carbon capture capacity involves the oil and gas industry). He mentioned impurities in CO<sub>2</sub> streams (sulfur dioxide, water vapor) causing corrosion and the need for removal. He stated only 20% of captured CO<sub>2</sub> is injected into dedicated geological structures (like proposed), often cheaper than using it for oil fracking. He questioned how the project benefits Wabash County and pointed out that Indiana Code approves a pilot project in other counties until 2028, questioning the urgency here. He mentioned speaking with State Representative Andy Zay who say that carbon sequestration was only approved as a pilot program so why is there urgency. He concluded by saying it was obvious when you follow the money.

**Kyle Sparks (Farmer, Urbana, IN):** Asked why landowners are being paid \$225/acre/year and by whom. Mr. Hall stated the compensation is for permission to store the supercritical CO<sub>2</sub> in the Mount Simon Formation, similar to obtaining mineral rights. Mr. Sparks questioned compensation for farmers renting land near the well if the ecosystem is negatively affected. Mr. Hall stated the reimbursement for cash rent if something goes wrong is part of an agreement with the landowner and is completely separate from the agreements that Vault and POET have made.

**Suzanne Peebles (Resident, South State Road 13):** Ms. Peebles raised concerns about the accuracy of a fact presented. First was regarding the corn yield and asked for clarification from POET. Mr. Pyle stated that the corn yield in the United States has doubled since the ethanol industry has come about in approximately the early 1980's. She asked what the yields were compared to what they are now. Mr. Pyle did not have the numbers with him.

Ms. Peebles asked if this was Vault's first sequestration project. Mr. Hall stated it would be the organizations fourth or fifth such project. He continued that they are working with 7 other ethanol plants throughout the US. Ms. Peebles asked for clarification that none of the projects have been completed. Mr. Hall stated that no projects for Vault have been completed, but some team members have prior experience. Ms. Peebles expressed concern about lack of foundational proof and the theoretical nature. She asked if the project would continue if federal subsidies were removed. Mr. Ward stated the subsidies help with the upfront costs, but long-term market access for low-carbon

fuels is the main driver in these projects. Ms. Peebles pressed for a yes/no answer on subsidies being essential. Mr. Pyle stated he believed they answer the question. She asked about the dollar amount for subsidies received per gallon of ethanol and for carbon sequestration. Mr. Ward answered that they don't receive a subsidy for ethanol per gallon. He continued by saying the 45Q credit value is \$85/ton sequestered. Ms. Peebles stated many locals are knowledgeable and will find answers.

**Amy Lybarger (32 years with Natural Resource Conservation Service, Agronomy and Soils Background):** Ms. Lybarger expressed concerns about the Mount Simon Sandstone being used for multiple projects. She has spoken with colleagues in Benton County with the Whiting Project pipeline. She has also spoken with the individuals in Vigo and Vermillion Counties. Both projects in the state have used eminent domain. She expressed concern regarding the fact that eminent domain is not allowed to be used for utility and private money projects, which she feels this is. She continued with concerns regarding multiple entities wanting to inject in the Mount Simon Sandstone Formation. She further expressed that there is no information regarding how much CO<sub>2</sub> the Mount Simon can hold. Furthermore, she referenced the information provided by Vault showing that Alberta has been injecting CO<sub>2</sub> for 12-15 years, which is not considered long-term to know the effects of projects such as this. She stated the negative effects are not an "if," its "when."

**Tammy Ingalls (Retired Research Scientist, Corrosion-Resistant Alloys):** Ms. Ingalls stated the environment is a favorite subject and noted her background in highly corrosive environments, finding the lack of corrosiveness claim "difficult to accept." While supporting carbon dioxide control, she believes this isn't effective and is more of a short-term lucrative investment scheme without long-term viability. She argued carbon sequestration requires additional energy, which will come from fossil fuels unless using a renewable form of energy production. She continued by stating that Vault recommends RO water filters, which again increases energy usage in manufacturing. She questioned the effectiveness of EPA and IDEM oversight given the EPA's current state and Indiana's polluted waterways and air. She stressed the unknown long-term risks and the need to consider future generations. She continued by advocating for better carbon control methods.

**John Kline (Resident, North Manchester):** Mr. Kline believes carbon capture is a good idea for now but emphasized the need to reduce fossil fuel dependency and reduce how much carbon the facility produces. He was surprised by the amount of CO<sub>2</sub> emitted. He sees carbon capture as a positive step but not a complete solution, hoping for a future embracing renewables like switchgrass for ethanol. He noted people support what benefits them and oppose what doesn't.

**Becky Merkel (Local Landowner):** Ms. Merkel asked about the trucks carrying CO<sub>2</sub> in a picture included in the presentation. Mr. Hall clarified they were for transporting utilized CO<sub>2</sub> from another plant. She asked if POET and Vault plan to sell sequestration services to other CO<sub>2</sub> producers. Mr. Hall stated Vault is working with seven other ethanol plants. She asked if CO<sub>2</sub> from other plants would be piped in, ever. Mr. Hall stated no there wouldn't be any CO<sub>2</sub> from other facilities being injected in their sequestration well, only CO<sub>2</sub> captured on the POET property. Ms. Merkel commented on emerging better and safer filtration systems that don't involve underground storage, finding it concerning that this project seems like a potentially outdated money-making venture.

**Chris Hickman:** Mr. Hickman asked if other pipelines would be brought in or if CO<sub>2</sub> would be trucked in from other locations. Mr. Hall stated no. He referenced a previous meeting where Vault representatives seemed impatient for the county to finalize ordinances, noting the discrepancy with their later submission to the state. Mr. Hall clarified that they have submitted only an application to the EPA, they have not submitted anything to the State of Indiana at this time. Mr. Hickman urged Vault to wait for local ordinances just as they are waiting for state regulations. Mr. Ward stated that there isn't any intent to not work closely with the state and the community. He continued by stating they have the two-year window to work through the EPA process giving Vault time to engage with members of the community, including the Plan Commission and County Commissioners to make sure the ordinances are in place for these types of projects to move forward safely and responsibly. Mr. Ward stated they want to make sure they have time to work and assure that everything is done. Mr. Hickman then raised concerns about what happens if the project compromises the water, questioning how to "put a band-aid on that" given the unknown full extent of the impact. He stated fines and \$10 million with the EPA doesn't provide the county with clean water. Mr. Hickman questioned who determines the project's length and how guarantees extend to future generations if POET and Vault are gone and \$10 million proves insufficient. He called CCS in its infancy a "big experiment." Mr. Hickman asked how the 0.6-mile containment is guaranteed. Mr. Hall noted the salty water already underground and the pressure dynamics, mentioning a 1990s Norway project (Sleipner) that tracked CO<sub>2</sub>. Mr. Hickman asked about homeowner-level water monitoring in surrounding areas. Mr. Hall stated that every individual homeowner's well in the area will be tested on a quarterly basis.

**Rose Wenrich (Family Doctor for 45 years, Board Certified in Family Medicine, Integrated Medicine, and Functional Medicine, Born and Raised in Wabash):** Dr. Wenrich stated the project matters to her and noted Australia, Queensland, Great Artesian Basin specifically, banned similar operations due to contamination concerns. She emphasized the preciousness of water and health, deeming the risk not worth taking.

**David Blocher:** Mr. Blocher asked about the project's acreage needs for a unit. Mr. Hall stated a 0.6-mile radius with 70% landowner approval. Mr. Blocher asked if that approval was secured. Mr. Hall stated they have received the support of over two-thirds of landowners in the radius. Mr. Blocher asked for the definition of "reduced carbon fuel." Mr. Ward explained it's based on a lifecycle analysis of production using the Department of Energy's Argon Green model, with carbon capture reducing the carbon intensity score. Mr. Blocher asked if carbon sequestration is the only way to create reduced carbon fuels. Mr. Ward stated Vault looks at carbon sequestration as the most viable option today. Mr. Blocher then asked how much less CO<sub>2</sub> is created in the production of reduced carbon fuels. Mr. Pyle stated that the carbon score reduction is measured in grams of CO<sub>2</sub> per megajoule and is measured relative to the typical fossil fuel, therefore, in the case of the POET's production today, they have a lower carbon score relative to gasoline, for example. Mr. Blocher asked if what POET and Vault are saying is that the process itself isn't less CO<sub>2</sub>-producing, but the CO<sub>2</sub> is captured and stored. Mr. Ward explained the results of POET's production includes ethanol, distiller's grains, feed products, and biogenic CO<sub>2</sub> that is produced during the fermentation process. He continued by saying the biogenic CO<sub>2</sub> produced during the fermentation process is captured, compressed and sequestered in the Mount Simon Formation, where as of right now the biogenic CO<sub>2</sub> is currently released into the atmosphere to be cycled back

through and the process repeats itself. Mr. Ward continued by saying they are taking that biogenic CO<sub>2</sub> and removing it from being able to be released into the atmosphere, so the production process is reduced by that amount of CO<sub>2</sub>. Mr. Blocher noted the \$85/ton tax credit, equating to roughly \$21 million/year for 250,000 tons.

**Rodney Wilcox (Farmer):** Mr. Wilcox used a biblical analogy of the Garden of Eden, urging POET not to let their CO<sub>2</sub> touch his farmland, equating it to disobedience with consequences.

**Cheryl Ross (County Commissioner):** Ms. Ross expressed disappointment that the county has to go through this again and that Vault/POET only showed up when they saw moratorium on an agenda. She continued by noting RO systems aren't affordable for everyone. She asked if POET/Vault would pay for RO systems for those with CO<sub>2</sub> contamination to anyone in the county that has CO<sub>2</sub> in their water. Mr. Hall yes, it is within their permit to the EPA and obligation to provide the systems to landowners that need them. Ms. Ross mentioned a bill to eliminate the 45Q tax credit, asking if POET knew about it. Mr. Ward answered in the affirmative. Ms. Ross noted that carbon capture and sequestration lobbyists have been pushing bills through at the State House. Ms. Ross questioned if POET is paying Vault or vice versa for the project. Mr. Ward answered that there is both significant capital investment by both POET and Vault. Ms. Ross asked if either was already getting paid by the government for this project. Mr. Ward answered that they are not receiving 45Q right now. Ms. Ross asked for clarification if there were any funds being received from the government. Mr. Ward asked to confirm is she meant in regards to carbon capture. She answered yes. Mr. Ward confirmed they are not receiving funds from the government; it is out of their pockets at this time. Ms. Ross urged public involvement at all levels.

**David Terflinger:** Mr. Terflinger pointed out a discrepancy in the easement agreement allowing payment for third-party carbon despite claims of not bringing it in and the agreement taking away mineral rights, potentially preventing landowners from drilling for oil if it surfaces due to the project. Mr. Hall stated that he isn't the landman so he isn't privy to the information discussed in the agreements, but they are not planning on bringing in third-party CO<sub>2</sub>. Mr. Terflinger asked if RO systems would remove crude oil. He also urged for a straight answer on mineral rights. Mr. Hall stated Vault is not intending to lease mineral rights. He would have to double check what Mr. Terflinger was referencing, but they are not leasing mineral rights. Mr. Hall stated they are only preventing others from drilling a well in to the cap rock. Mr. Terflinger then asked a question for Mr. Frantz, Wabash County Plan Commission Attorney, about putting this project on a ballot for Wabash County residents to decide. Mr. Frantz answered no, the best way to do something like that, contact state representatives. Mr. Terflinger mentioned another carbon sequestration project in Vermilion County with political contributions and resignations of involved officials, advising not to expect help from the state, especially Indiana DNR.

**Josh Leffel:** Mr. Leffel used the example of a natural CO<sub>2</sub> release in Cameroon, Lake Nyos, in 1986 that killed thousands, contrasting it with the "nothing to worry about" comparison to natural gas being under pressure underground. He mentioned a POET pledge related to community benefit, but only in smaller groups.

**Boyd Brubaker (Resident near POET):** Mr. Brubaker stated initial project acreage goals decreased significantly, feeling landowners weren't dealt with honestly. Mr. Hall stated

Vault started with a very large area prior to performing the seismic testing. Their testing showed no faults in the area so they were looking at areas that would be the best location for the injection well. He also referenced the Mount Simon Formation was thicker in the area where they are planning on injecting therefore decreasing the acreage needed.

**Unknown Resident:** Asked how many acres of POET owned ground are included in what is needed. Mr. Hall answered all of POETs ground is counted. Mr. Pyle answered around one hundred acres. Mr. Campbell stated it is about 185 acres.

**Dave Cummings (Resident, West 900 North):** Mr. Cummings stated he learned about the project from ground shaking. He noted the shrinking radius of the project area. Mr. Hall stated the radius is from the sequestration well location. Mr. Cummings asked how many acres in that 0.6 mile radius is not owned by POET. Mr. Hall answered a significant amount. Mr. Cummings asked how many households are within the 0.6-mile radius. No immediate answer was provided. Mr. Cummings ended with you don't know but you are saying you will be responsible for them.

**Brenda Carver:** Ms. Carver questioned the number of landowners in the 0.6-mile radius. Ms. Fakharzadeh stated that they don't know if they could speak to that number because they want landowners that are currently considering the opportunity to make the decision. She continued by saying Vault doesn't have the number affected readily available to share with those asking.

**Cheryl Ross:** Ms. Ross asked if they are planning on getting 100% of the landowners signed up or are they planning on using eminent domain is planned for the remainder, given the previous mention of larger acreage. Mr. Hall stated they are using 0.6 contiguous acres. Ms. Ross again asked about those that hadn't signed up are they going to use eminent domain. She continued that since the meeting in November, the acreage has decreased significantly to be able to either hit or come close to the 70% participation. Mr. Hall reiterated the need for the state to finalize rules and the importance of working with landowners, and that Vault is still aiming for 100% participation. Mr. Hall stated they prefer smaller groups because people feel more comfortable in small groups. He continued that people who understand the project support it.

**Members of the Public:** Asked again for clarification if they are planning on using eminent domain for those who don't sign. Mr. Hall answered that there is a pooling process that hasn't been developed yet in the State of Indiana so they can't answer on a process that isn't developed. Ms. Fakharzadeh stated that the problem is that eminent domain is a concept that is used for surface. The wells are on POETs private property and how there is rulemaking happening at the State level that deals with how compensation comes to those who haven't signed prior to the project starting. She stated they will continue to meet with landowners and will continue to strive for 100% participation. She continued stating that the Indiana DNR rulemaking will dictate what the compensation looks like for the unitization.

**Cheryl Ross:** Ms. Ross asked how much land are they allowed to take regardless of what the initial intent was. Mr. Hall stated that the radius and the seismic testing area is greater than the radius of where the CO2 will be which he believes is part of what is causing confusion as to how much land is needed. He clarified the difference between the seismic survey area and the CO2 plume area, noting the seismic area is larger. Ms.

Ross asked if the CO2 goes outside of the 0.6-mile radius what happens. Mr. Hall answered that would be considered trespassing and their intention is to not trespass. Ms. Ross asked what would happen if they did trespass. Mr. Hall compared the CO2 injection to water injection wells used already in the Trenton Formation nearby. Ms. Ross urged people to watch state actions and contact legislators, feeling her question wasn't fully answered.

**John Hartsough:** Mr. Hartsough focused on the nature of CO2, stating exhaled breath is far more concentrated and CO2 itself isn't toxic. He stated it is used for euthanizing chickens by oxygen displacement. Mr. Hartsough continued by referencing ADM in Illinois that has been injecting CO2 for 8-10 years. He went on to state that ADM has an education center regarding their carbon sequestration.

**Cody Meeks (Resident, East 900 North):** Mr. Meeks asked about the 12-year lifespan. Mr. Hall stated they submitted their permit for 12 years. Mr. Meeks asked what happens after those 12 years. Mr. Hall explained a post-injection site care period of at least 50 years involving monitoring and eventual well plugging, exceeding standards for other wells. Mr. Meek asked if it is capped after 12 years. Mr. Hall stated they stop injecting and monitor the wells for 50 years. Mr. Meeks asked after the 12 years, where is the CO2 going to go, back into the atmosphere. Mr. Hall stated they haven't defined what will happen at that time.

**David Terflinger:** Mr. Terflinger stated the lack of information feels like a major threat to water and criticized POET/Vault for not holding this public meeting sooner as requested. He accused them of wanting to "divide and conquer" with smaller meetings. He demanded clear and truthful information.

**Brett Klutz:** Mr. Klutz argued that injecting CO2 underground just moves it from one atmosphere to another, it does not eliminate it. He questioned why POET/Vault would take on such risk and trouble.

**Kerwin Olson (Executive Director of Citizens Action Coalition):** Mr. Olson introduced himself and offered their organization as a resource on CCS, noting their strong opposition. He made two points: the 12-year plan is likely tied to a 45Q tax credit timeline, and the comparison of 4% CO2 concentration to wearing a mask is wrong, citing potential fatality at that level (OSHA/CDC). He expressed worry about no monitoring outside the fence line, noting CO2 will move. He mentioned a Clean Water Act violation at the only operating facility with a Class VI permit due to migrating CO2 and the remand of a West Terre Haute pilot project's permit. He urged continued fighting and offered their help.

## 10. Adjournment

Mr. Dawes made a motion to adjourn, it was seconded by Cheri Slee and Sam Hann. With no further public comments, the chair reiterated the meeting was informational only. Mr. Jeff Dawes made a motion for adjournment at 8:57 pm. Second by Ms. Cheri Slee and Mr. Sam Hann. All in favor said "aye." The meeting was adjourned.

- ❖ With no further public comments, the chair reiterated the meeting was informational only. Mr. Jeff Dawes made a motion for adjournment, second by Ms. Cheri Slee and Mr. Sam Hann. All in favor said "aye."

The meeting adjourned at 8:57 pm.

**Also present:** Steve Hicks, Cris Renn, Ryan Hauptert, Roxanne Hauptert, Chery Ross, Kent Marshall, Teresa Marshall, Bryce Gustafson, Josh Leffel, Melissa Leffel, Kerwin Olson, Kim Egner, Scott Egner, Lindsay Egner, Nicole Hauptert, Jim Lewis, Suzie Lewis, Richard Palmer, Donna Palmer, Boyd Brubaker, Anita Brubaker, Michael Wall, David Pyle, Kip Gaerte, Gene Custer, Zach Renz, Brent Klutz, Marcus Niccum, Randy Niccum, Andrew Eltzroth, Renee Penrod, Galen Penrod, Nelson Dyson, Emily Blocher, Nancy Whitman, Rex Grossman, Ryan Logan, Ryan Smith, Ryan Layman, Jared Cordes, Matt Whitesel, Chris Hickman, Tami Hickman, Michael Easterday, Ryan Niccum, Lisa Kinsey, Cathy Montel, Matt Montel, Matt Driscoll, Frank Driscoll, Erica Cordes, Riley Whitesel, Faith Ogden, Scott Sheehan, Taylor Poole, Keith Walters, Tim Powers, Jeff Steele, Alex Miracle, Isaac Egner, Andrea Egner, Steph Brainard, Kevin Brainard, Mark Miller, Cindy Runkel, Steve Runkel, Jorge Garcia, Jama Garcia, Steve Bella, Katherine Bella, Mike Hensley, Glen \_\_\_\_, Frances Dawson, Gary Dawson, Corbin Dawes, Mark York, Connie Cole, Joe Menna, Jennifer Menna, Mike Urschel, Violet Ozenbaugh, Virgil Ozenbaugh, Sonya Hammons, Brian Hammons, Libby Cook, Joe Cook, John Jenkins, Jordan Jenkins, Natalie Sawes, Jake Schuler, Andrea Schuler, Lance Agness, Shelley Agness, Marcella Palmer, William Palmer, Devin Dodson, Amanda Dodson, Bailey Tenant, Colin Tenant, Jerome Malott, Matt \_\_\_\_, Philip Dale, Stacey Hippensteel, \_\_\_\_ Hauptert, Chris Rice, Becky Merkel, Bill Green, Amy Lybarger, Todd Lybarger, Rodney Warren, Benda Carver, Larry Carver, David Randall, Ken Benson, Leslie Hickman, Jon Kline, Zach Vawter, Katie Vawter, Cory Rice, Scott Wilcox, Kim Wilcox, Seth Doctor, Gabrielle Doctor, Jonathan Lawyer, Justin Lawyer, Phillip Layman, Tammy Ingalls, Jerry Bolinger, Mary Bolinger, Pam Hawkes, Mike Hawkes, Daryn Cordes, Pete Brubaker, Monica Brubaker, Lucas Hawkins, William Konyha, Benji Blocher, Daphanie Blocher, Aimee Blocher, Sandy Ferguson, Rodney Wilcox, Jill Wilcox, Michelle Hauptert, Zach Vrooman, Dan Metzger, Dianne Fox, \_\_\_\_ Fox, Amy Hauptert, Chris Hauptert, Wendell Smith, Robin Brubaker, Vicki Niccum, Steve Vawter, Dave Cummings, Dennis Greer, \_\_\_\_ Lyons, Christian Rosen, Bill Urschel, Michael Reed, Kyle Reed, Blaine Miller, Kris Biehl, Latheda Metzger, Dan Metzger, Chris Brown, Alex Metzger, Deborah Strange, Dave Dale, Tyler Guenin, Jay Reed, Kim Oldfather, Mark Oldfather, Jeff Michel, Roger Winters, Ted Little, Mike Pyle, Loretta McNell, Scott Summers, Samantha Summers, Stephanie Summers, Brian Blocher, Trista Brubaker, Brad Brubaker, Matt Ward, Louella Krom, Bob Shultz, Dave Terflinger, Gary Runkel, Ashley Cordes, Jorden Krom, Cody Meeks, Kyle Metzger, Elaine Anderson, Todd Dierks, Larry Yunker, Angela Yunker, Kyle Sparks, Suzanne Peebles, Roger Peebles, Vaughn Peebles, Barbara Amiss, Bev Fitzpatrick, Diane Stephen, Dennis Biehl, Charles Miller, Nicky Burnsworth