

**In The Matter Of:**  
*McLEAN COUNTY ZONING BOARD OF APPEALS*

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*ONE EARTH SEQUESTRATION LLC*  
*Vol. 3*  
*November 21, 2023*

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1 MCLEAN COUNTY ZONING BOARD OF APPEALS  
 2 PUBLIC HEARING  
 3 SPECIAL USE PERMIT, SU-23-06  
 4 ONE EARTH SEQUESTRATION LLC

5  
 6  
 7 Tuesday, November 21, 2023  
 8 7:00 PM  
 9 115 East Washington St. Room 400  
 10 Bloomington, IL

11  
 12 Reported In Person By:

13 Deann K. Parkinson: CSR 84-002089  
 14 Area Wide Reporting & Video Conferencing  
 15 301 West White  
 16 Champaign, Illinois 61820  
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18 BOARD MEMBERS PRESENT:

19 James Finnigan  
 20 Julia Turner  
 21 Rick Dean  
 22 Brian Bangert  
 23 Ruth Novosad  
 24 Shirley Deerwester

ALSO PRESENT:

Taylor Williams, State's Attorney's Office  
 Phil Dick, Director of Building & Zoning

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1 make a motion.  
 2 **RICK DEAN:** Move they be appointed as  
 3 presented.  
 4 **RUTH NOVOSAD:** Second.  
 5 **JIM FINNIGAN:** We have a motion by Dean,  
 6 second by Novosad. All say aye or nay.  
 7 (All say aye.)  
 8 **JIM FINNIGAN:** Approved.  
 9 At this time I'm going to affirm the  
 10 staff.  
 11 (Staff affirmed.)  
 12 **JIM FINNIGAN:** This is a continuation of  
 13 case SU-23-06. And where we are tonight is we're  
 14 still taking testimony. So I think we still have  
 15 a few people on the list that haven't given  
 16 testimony. So tonight will be, we can get the  
 17 testimony done, then we're going to go to rebuttal  
 18 from the applicant. And after that point, we will  
 19 have closing statements for anybody that wants to  
 20 make a closing statement. And it's anybody that's  
 21 given testimony can give a closing statement if  
 22 they want to. So it's up to you.  
 23 And then after that, we're going to ask  
 24 our Assistant State's Attorney to answer a few

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1 (The time is 7:01 p.m.)  
 2 **JIM FINNIGAN:** We're requesting to bring  
 3 the McLean County Zoning Board to order. Will the  
 4 secretary call the roll.  
 5 **MR. DICK:** Shirley Deerwester.  
 6 **A. Present.**  
 7 **MR. DICK:** Brian Bangert.  
 8 **A. Here.**  
 9 **MR. DICK:** Michael Kuritz.  
 10 (No response.)  
 11 **MR. DICK:** Rick Dean.  
 12 **A. Here.**  
 13 **MR. DICK:** Julia Turner.  
 14 **A. Here.**  
 15 **MR. DICK:** Ruth Novosad.  
 16 **A. Here.**  
 17 **MR. DICK:** Jim Finnigan.  
 18 **A. Here.**  
 19 **JIM FINNIGAN:** We have six members and  
 20 we can conduct business, and is anyone in the  
 21 audience here to talk to us about something that's  
 22 not on the agenda? If they do, please come  
 23 forward. Seeing none.  
 24 Has everybody seen the minutes? Want to

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1 questions that we have come up with on procedural  
 2 questions, what we can and can't do and he's going  
 3 to talk to us. And we're going to, when we get to  
 4 that point, I just kind of want to let you know  
 5 how it's going.  
 6 So, Phil is going to call a name.  
 7 **MR. DICK:** Phillip Loritz.  
 8 **JIM FINNIGAN:** Would you like to be  
 9 sworn in.  
 10 (Witness sworn.)  
 11 **JIM FINNIGAN:** Would you state your name  
 12 and address for the record, please.  
 13 **PHILLIP LORITZ:** Phillip, P-H-I-L-L-I-P.  
 14 L-O-R-I-T-Z. 19081 West, 5500 South.  
 15 **JIM FINNIGAN:** Better slow down. He  
 16 can't write that fast.  
 17 **PHILLIP LORITZ:** Ready? Buckingham,  
 18 Illinois.  
 19 **MR. DICK:** Is that 19081 West, 5500 --  
 20 **PHILLIP LORITZ:** South Road.  
 21 **MR. DICK:** Buckingham, Illinois.  
 22 **PHILLIP LORITZ:** Correct. My name is  
 23 Phillip Loritz. I'm on the board of directors for  
 24 three companies that operate in the agricultural

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1 industry in McLean County, as well as being a  
 2 farmer myself.  
 3 For full transparency on this, I am on  
 4 the board of directors for Alliance Grain Company  
 5 based in Gibson City, which also assigned me to  
 6 their board seat for One Earth Energy, as well as  
 7 the Bloomer Line Shipping Railroad. I wanted to  
 8 come up here and put my full support behind these  
 9 CO2 capture wells.  
 10 One Earth Energy has been a huge  
 11 contributor to the economy in McLean County. Be  
 12 it either corn consumption, their ethanol  
 13 production and their employment that they bring to  
 14 the area. Not only on top of that, they are  
 15 working harder than any of us to reduce their  
 16 carbon footprint as well for future generations.  
 17 My grand kids are part of this future  
 18 generation, as my son and his wife live and work  
 19 in McLean County, and are raising three of my  
 20 grand daughters here.  
 21 Most people in this room that have come  
 22 up here and have talked about the worse case  
 23 scenarios involved, and I don't think they have  
 24 fully considered how much background work One

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1 Earth Energy has put into this project well before  
 2 even getting to this step.  
 3 They have involved many scientists,  
 4 geologists and industry experts to come to the  
 5 conclusion of where and how they develop this  
 6 carbon sequestration.  
 7 If you think back to this summer here in  
 8 Central Illinois when we were blanketed with the  
 9 Canadian wild fire smoke, we all took precautions,  
 10 sent children, elderly, inside to protect them  
 11 from this carbon in the air.  
 12 No amount of regulation could have  
 13 prevented that from happening. And yet, as One  
 14 Earth Energy seeks to prevent some of that CO2  
 15 from getting in the air, we are trying to regulate  
 16 them as to so the project dies.  
 17 Most in this room, myself included, do  
 18 not have the scientific background to say whether  
 19 it is a perfect plan or not. But I think what is  
 20 lost on most of the people with negativity toward  
 21 this project is they are trying to find those  
 22 gotcha moments in the finite details without  
 23 taking a bird's eye view of the bigger picture.  
 24 The bigger picture is that they are one

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1 of the few companies that can make an impact in  
 2 McLean County for a cleaner future for our  
 3 children and grandchildren. And I fully support  
 4 them in this effort. Thank you.  
 5 **JIM FINNIGAN:** Thank you. Questions  
 6 from the board?  
 7 **JULIA TURNER:** Do you live near the  
 8 proposed well at all? You are in Gibson City you  
 9 said.  
 10 **PHILLIP LORITZ:** My address is  
 11 Buckingham.  
 12 **JULIA TURNER:** How far are you from the  
 13 proposed well?  
 14 **PHILLIP LORITZ:** Probably 40 miles.  
 15 **JULIA TURNER:** Okay. Thank you.  
 16 **JIM FINNIGAN:** Staff? Would anyone in  
 17 the audience have a question of this witness?  
 18 **A VOICE:** Hello.  
 19 **JIM FINNIGAN:** State your name.  
 20 **MARGARET KEYLIN:** Margaret Keylin,  
 21 K-E-Y-L-I-N. 304 North Woodlawn Street, Downs,  
 22 Illinois, 61736.  
 23 The CO2 that's being sequestered in  
 24 these wells, is that CO2 that's being taken from

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1 the air already in existence, or is that new CO2  
 2 that's being created from ethanol plants and  
 3 fertilizer plants and other plants that create new  
 4 CO2?  
 5 **PHILLIP LORITZ:** The CO2 is coming from  
 6 the ethanol plant.  
 7 **JIM FINNIGAN:** Any other questions?  
 8 (Witness excused.)  
 9 **MR. DICK:** Paul Bielfeldt.  
 10 **PAUL BIELFELDT:** I'm Paul Bielfeldt  
 11 Anchor, Illinois. Street address is 418 Second  
 12 Street in Anchor, Illinois. You want my phone  
 13 number and everything? Nickname is Beefy.  
 14 Everybody knows that.  
 15 (Witness sworn. )  
 16 **JIM FINNIGAN:** Go ahead.  
 17 **PAUL BIELFELDT:** Well, I'm new at this.  
 18 I've never done this before in my life, but the  
 19 guy just talked about the smoke from the fire, and  
 20 of course everybody had a dry year. That was just  
 21 one more thing that I remembered.  
 22 From high school, all plants live on  
 23 carbon dioxide and people put that out.  
 24 Everything that lives and breathes and all that.

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1 And the trees and the grass all take the carbon  
 2 dioxide and make oxygen for us.  
 3 And when you put the CO2 in the ground,  
 4 we don't know what it's going to affect; the  
 5 water, the Mandarin fault. The aquifers and the  
 6 water.  
 7 Nobody can explain to me, I'm just a  
 8 high school kid, 13 years in a 12 year curriculum.  
 9 The benefits of it is financial for some people  
 10 and a heartbreak for others. I got a couple  
 11 landlords that absolutely aren't wanting this at  
 12 all. If I'm talking silly, raise a hand and I'll  
 13 stop. I ain't lying. This country uses natural  
 14 gas to make your ethanol. You take the amount of  
 15 BTUs, and I'm not sure about this stuff, folks, I  
 16 haven't been around this in my lifetime. It's  
 17 just what I've gathered, so I ain't perjuring  
 18 anybody. But you take the amount of BTUs from  
 19 natural gas, which is the cleanest burning fuel  
 20 you have to make ethanol to make gasoline burn  
 21 cleaner, okay? We use the corn or you could use  
 22 hemp. Hemp would make more ethanol than corn.  
 23 That's what I was told. I don't know if it's  
 24 hearsay. But, you could look it up.

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1 Same as oil. We have more oil in this  
 2 country than any other country in the world. We  
 3 have more fresh water than any country in the  
 4 world. That's what I was taught in high school.  
 5 I wasn't very good in high school, but I do  
 6 remember a few things.  
 7 You start putting things in the ground  
 8 under high pressure, you might cause an  
 9 earthquake. We just had a 3.6 a week or so ago.  
 10 There's another one, okay?  
 11 These are just my little facts that I  
 12 believe that if I was sitting on that board, I'd  
 13 be looking into real close. God didn't make a bad  
 14 world. He just put people in it that want to do  
 15 things. Whether it's good for the country, or  
 16 good for your pocketbook, and some things don't  
 17 work with me. And I'm speaking on behalf of my  
 18 nieces and nephews. I'm not married. I have  
 19 nothing in this game. But if you look at them and  
 20 they're in Gibson City and something goes really  
 21 wrong, I'm not big enough to walk that far with no  
 22 oxygen. And I could show up, but trust me, it's  
 23 not a threat. You don't know what you're dealing  
 24 with. And I would ask all of you to think about

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1 that.  
 2 I could give you a lot of numbers, a lot  
 3 of things that I've learned in my lifetime. And  
 4 if I'm wrong, I'm wrong. And if you don't want to  
 5 hear more, I'll sit down. But, this is a big, big  
 6 story. And this one will present all kinds of  
 7 things across the nation. How we're going to look  
 8 at this product, how you're going to do it, how  
 9 you're going to consume with it and that. There's  
 10 a lot of other things; Russia, China, India, all  
 11 put more pollution in the air than we do. We're  
 12 the cleanest living in the nicest country in the  
 13 world. And I don't know where the money comes  
 14 from, but to do something to this category in my  
 15 backyard where my family all lives, maybe we don't  
 16 see eye to eye every day, but I'm speaking for a  
 17 lot of people. And my landlords are older than I  
 18 am, and they see nothing nice. They can see a  
 19 mistake, but it won't be in our lifetime.  
 20 And I'm not going to stand here and work  
 21 my life and then pass on, pass something to  
 22 somebody that your Government is going to take  
 23 your land away from you or humane or whatever that  
 24 big word is. But, I'm just speaking from the

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1 heart. And I don't have much to say because I  
 2 don't have the education to do it the right way.  
 3 But wrong is wrong. And by golly, right  
 4 is right. And if you can't see it, go talk to the  
 5 man that brushes your teeth. That's good enough.  
 6 Now that's my opinion. Now if it's not right, and  
 7 you didn't like it, you can strike me or tell me  
 8 what I got to do after a while. But, I don't --  
 9 this is not a BS session in the bar. This is from  
 10 my heart.  
 11 So, you can take the guys that's getting  
 12 the money and the people that don't get the money,  
 13 and the ones that ain't getting the money aren't  
 14 very happy. And if you're sitting somewhere and  
 15 you're elected, and you're going to get some  
 16 money, and the little person that don't get no  
 17 money, one person said don't say this, but I'm  
 18 going to tell you anyway. There's consequences  
 19 coming down the line from this that nobody knows  
 20 the shock value of it. And some people are going  
 21 to get real rich. Some aren't. And somebody is  
 22 going to pay the piper. And I'm telling you, when  
 23 they pay the piper, you better be ready. It's not  
 24 a threat. I'm just saying people are going to

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1 take this both ways. And I wouldn't want to be in  
 2 your seat anywhere.  
 3 I have a lot of wonderful people on both  
 4 sides here. And I don't want anybody hurt. And I  
 5 think it takes a lot of things. But, when we have  
 6 the water and the gas, the coal, the oil, and we  
 7 put the CO2 in the air our whole life why is all  
 8 of a sudden 'cuz a green person says you got to  
 9 put it in the ground? If you had a green house,  
 10 they pump carbon dioxide into it, if I remember  
 11 right from my science class, the plants will grow  
 12 better and that's why the flower shops put extra  
 13 CO2 in the rooms where they don't have the people  
 14 going in the grow rooms or something like that  
 15 when I was young. But, this is all information  
 16 you people can look up on your cell phone and find  
 17 it.  
 18 And if you don't want to do the work,  
 19 I'm trying to pull all this out of my mind from  
 20 high school. And it may not all be right. They  
 21 might even have rewrote the textbooks because we  
 22 got boys trying to be girls and girls wanna be  
 23 boys. I don't know what's going on any more. Now  
 24 does anything I say make sense to anybody? Am I

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1 in trouble for speaking my mind?  
 2 **JIM FINNIGAN:** You're never in trouble  
 3 for speaking your mind, not here or anywhere. So  
 4 that's not a problem.  
 5 **PAUL BIELFELDT:** If I'm not right, if you  
 6 want to talk to me, I can talk to anybody. I  
 7 travel a lot of miles. I can talk to anybody.  
 8 But does it make sense or does it not?  
 9 **JIM FINNIGAN:** I can't comment on it.  
 10 But, did you have anything else you wanted to say?  
 11 **PAUL BIELFELDT:** Yeah, a lot more, but  
 12 I'm going to quit because I don't want to be tied  
 13 up.  
 14 **JIM FINNIGAN:** All right.  
 15 **PAUL BIELFELDT:** But you can ask me  
 16 anything you want.  
 17 **JIM FINNIGAN:** That's what we're getting  
 18 to. At this point the board can ask you  
 19 questions? Anyone have questions on the board?  
 20 Would staff have questions?  
 21 **MR. DICK:** No.  
 22 **JIM FINNIGAN:** Would anyone in the  
 23 audience have questions of this witness? Please  
 24 come forward. Thank you very much for coming up.

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1 (Witness excused.)  
 2 **PAUL BIELFELDT:** I hope I didn't upset  
 3 everybody, but I got a lot of questions. Thank  
 4 you.  
 5 **MR. DICK:** Jack Murray.  
 6 (Witness sworn.)  
 7 **JIM FINNIGAN:** Would you state your name  
 8 and address for the record slowly, please.  
 9 **JACK MURRAY:** My name is Jack Murray.  
 10 Address 2607 County Road 1000 East, Champaign,  
 11 Illinois, 61822. Murray, M-U-R-R-A-Y.  
 12 I'm a farmer. I'm also president of  
 13 Premiere Co-op that operates 25 grain facilities  
 14 in five counties and representing 3,100 farmer  
 15 owners. I'm also secretary of One Earth Energy  
 16 and have been since its inception.  
 17 A little history. Steve Kelly got all  
 18 the local co-ops from our area together and  
 19 pitched us the idea of an ethanol plant 15 years  
 20 ago. Five of us came away and said yes, we need  
 21 to do this for our farmers to keep them competing  
 22 in the world. We spent two years trying to sell  
 23 the idea to local farmers, and I guess we weren't  
 24 very good salesmen because we had to look outside

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1 the area to get a large enough investor to make it  
 2 fly.  
 3 We had three sites picked out and Gibson  
 4 City is the one with the railroad, the corn and  
 5 the people that were going to make it work. I  
 6 don't know whether Steve had a crystal ball or we  
 7 were just lucky, but this is probably the only  
 8 site of those three that the project would have  
 9 worked at today.  
 10 We have grown the plant by 75 percent  
 11 and made it one of the most efficient and safest  
 12 plants in the country. Which also means one of  
 13 the most profitable plants for its farmer owners.  
 14 15 years ago we met with Safar Rizvi and  
 15 the Taffys in Indiana and we walked away. He  
 16 shook my hand and he said are you going to make  
 17 this thing go? And I assured him that we were  
 18 going to make it go.  
 19 He sold his business and got in the  
 20 ethanol business right beside us. Ethanol is what  
 21 makes the farmers today what they are. 40 percent  
 22 of every bushel of corn produced in this country  
 23 goes to ethanol production.  
 24 I think some people think it will

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1 continue forever. Truth is, when the Government  
 2 came up with a zero carbon initiative, it put a  
 3 target on our back that we never thought could  
 4 happen five years ago.  
 5        Luckily, we're sitting on top of this  
 6 sandstone mountain that let's us participate and  
 7 Safar saw it coming before us. Timing has been  
 8 brought up a lot also in these meetings.  
 9        One Earth was the last ethanol plant to  
 10 be built in this country. They got too expensive  
 11 to make money and we were lucky to get it done in  
 12 the time we did.  
 13        This has also got a very tight timeline.  
 14 We have two full time people working on it,  
 15 working on permits, making purchases and other  
 16 things besides Steven Safar trying to get this put  
 17 together in time.  
 18        So that's why we're here now. And we  
 19 know we can't do anything until we have all of the  
 20 proper permits and procedures in place, but it  
 21 can't get done overnight. And this part of it  
 22 needs to get done now.  
 23        Safety has also been a big concern at  
 24 these meetings, and it should be. As you might

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1 guess, running an ethanol plant, safety is number  
 2 one. Our employees' bonuses are based on safety  
 3 scores from an independent safety auditing  
 4 company, and we have won eight Norfolk Southern  
 5 Railroad safety awards annually for being their  
 6 safest shipper.  
 7        I could go on and on about our safety  
 8 records and how we work with the local fire  
 9 departments and hospitals to develop plans and  
 10 procedures. But I'm a farmer and superstition  
 11 isn't going to take me there because I don't want  
 12 the place to burn down tonight.  
 13        Economically, if you thought losing 50  
 14 percent of State Farm changed the landscape of  
 15 McLean County, do away with 40 percent of the  
 16 farmers. Farmers spend money. When they get a 25  
 17 percent raise in profits, they spend it on new  
 18 tractors, trucks, cars and clothing.  
 19        You people know this. And if you don't,  
 20 go talk to your local business people. They will  
 21 let you know what farmers do when they make an  
 22 extra dollar.  
 23        When the State Farm employee gets a  
 24 raise it goes in savings. This boon has also

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1 changed who is farming today. 30 years ago, no  
 2 young people were able to stay on the farm. There  
 3 was no money in farming. Go ask ISU officials  
 4 what the most active employment opportunities are  
 5 in, and they will tell you agriculture 100 percent  
 6 today.  
 7        I've got five young grandchildren living  
 8 in McLean County that I would love to see be able  
 9 to stay on the farm. If ethanol goes away, that  
 10 possibility goes away also. It's all about  
 11 education and staying ahead of the curve.  
 12        But this is an opportunity for progress.  
 13 You have all of the information in front of you  
 14 that we can provide. Some has to still be  
 15 developed because we can't put it together until  
 16 we go to the next step. We can't answer some of  
 17 the questions because in today's world our legal  
 18 counsel says say yes or no and go on. That's the  
 19 world we live in.  
 20        If we would say 41,820,622 cubic feet  
 21 are going to be used, and it comes out 45 million,  
 22 we would get sued. So you have to answer, we  
 23 don't have the exact figure right now.  
 24        What I will tell you is, shake hands

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1 with Steve Kelly, myself or any one of the other  
 2 founders. Tour our plant. If it's not the  
 3 cleanest, most state of the art, safety  
 4 technology, I'll eat my hat. But I will guarantee  
 5 you this: The plans we are putting in place, the  
 6 money we are spending to build this next plant,  
 7 will be just as good as where we are today.  
 8        Safar will tell you when you shake --  
 9 when you shake these farmers' hands, you've got a  
 10 guarantee you can take to the bank. Thank you.  
 11 I sit on a lot of boards like you guys, and I know  
 12 what you guys do, and I appreciate your help. So  
 13 thank you.  
 14        **JIM FINNIGAN:** Thank you. Questions  
 15 from the board?  
 16        **RUTH NOVOSAD:** You mentioned in your  
 17 talk that this has to get done and it has to get  
 18 done today. And why is that?  
 19        **JACK MURRAY:** I said now. Not today.  
 20        **RUTH NOVOSAD:** Why now?  
 21        **JACK MURRAY:** If you would look at this  
 22 list that gets put before us at each board meeting  
 23 of what has to get done, it's four pages of line  
 24 after line after line of permitting, of purchases

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1 that have to be done with two year lead times that  
 2 all of this has to get done. And this is just one  
 3 of those items. It doesn't have to get done  
 4 today. We just know that we have to have this  
 5 before we can go to the next step. And we know we  
 6 can't go into operation until we have all of the  
 7 EPA permits, all of the other state permits that  
 8 have to be there. This is just one of those items  
 9 that is on our list and we need to do it.

10 **RUTH NOVOSAD:** Okay. And we're not -- I  
 11 mean, so you say this has to get done before you  
 12 go to the next step. What's the next step?

13 **JACK MURRAY:** The next step is we've got  
 14 to build buildings. We've got to hire drilling  
 15 people to do that. And we have to know that we  
 16 can -- we have to have a permit from you in order  
 17 to go into operation. So this is just one of  
 18 those things that we have to have done. Thank  
 19 you.

20 **JULIA TURNER:** I have a couple of  
 21 questions. One, you stated that this plant is  
 22 more efficient than other plants. What makes it  
 23 more efficient? What is it that makes you  
 24 consider it efficient?

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1 **JACK MURRAY:** When we did all of the  
 2 initial work, and to what, to make a gallon of  
 3 ethanol, and we were at 3.8 gallons of water it  
 4 took to make a gallon of ethanol. It takes ten  
 5 gallons of water to make a gallon of gasoline in a  
 6 refinery. So it's still, it's efficient. Today  
 7 we are using 2.34 gallons of water to make a  
 8 gallon of ethanol. We are using 80 percent of the  
 9 electricity that we had projected and what we  
 10 budgeted. So every time we make an improvement to  
 11 the plant, we are making it more efficient. To do  
 12 what we had done ten years ago, we might not even  
 13 be in business today because you have to be more  
 14 efficient today than you were ten years ago in  
 15 order to be financially more stable.

16 **JULIA TURNER:** Okay. What, the question  
 17 just slipped my brain. Something came up there.  
 18 The other one I have, and then we'll  
 19 come back to whichever one is floating out there  
 20 right now.

21 Is there any advantage for you guys to  
 22 coming to ask us for a permit before you get one  
 23 from the EPA?

24 **JACK MURRAY:** No, it all -- there's no

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1 reason. It doesn't go on our EPA. That's all  
 2 been already sent in. This is just another step  
 3 getting the special use permit from you. It is  
 4 not a part of the EPA. As your guidelines say,  
 5 you have to have the EPA permit before we can, the  
 6 special use permit can be used by you. So we know  
 7 that. We just have to have both of them before we  
 8 can go in operation.

9 **JULIA TURNER:** So the only strategy  
 10 behind this is that it's on your list, and you  
 11 just want to be ready to go when you get the EPA  
 12 permit.

13 **JACK MURRAY:** Exactly.

14 **JIM FINNIGAN:** So, what would be your  
 15 plan if the EPA says no and you can't do all this  
 16 stuff that we're talking about tonight? Is there  
 17 any more -- are you just maxed out on how many  
 18 bushel you can put through to make ethanol now, or  
 19 are you on a mandate that you gotta do better?

20 **JACK MURRAY:** No, we've increased from  
 21 115 million gallons a year, to 150 to 175 million  
 22 gallons a year, which helps all the farmers  
 23 because we're using more corn to do that. We're  
 24 at where we think we can be. We might be able to

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1 go to 200 million. That is not part of this.

2 We have got to lower our footprint, our  
 3 CO2 footprint in order for us to go to that next  
 4 step of producing carbon, or ethanol. And what we  
 5 can use that ethanol for in the future. If  
 6 there's -- if our, if the Government, and I'm not  
 7 saying they're going to, or to force us into half  
 8 of the cars out there are going to be electric,  
 9 guess what? We're not going to be using ethanol.  
 10 If we don't use ethanol, we don't need the corn.  
 11 If we don't need the corn, farmers go away. But  
 12 if we can use that ethanol, and if we get a low  
 13 enough carbon footprint, we can use ethanol to  
 14 make jet fuel. If jet fuel is -- you can imagine  
 15 the bazillion gallons of jet fuel that are used a  
 16 year. That's going to make the ten percent  
 17 ethanol we're putting in gas look minor. We can  
 18 not make jet fuel until we get a lower carbon  
 19 footprint.

20 That's why we've got to do what the  
 21 Government is saying, we have got to get clean.  
 22 This Government can step in tomorrow and say, if  
 23 you're not this clean, you're not going to make  
 24 ethanol. And that's what's scaring us. That's

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1 why we're doing the research. That's why we're  
 2 spending all this money on scientists and people  
 3 to tell us what we need to do, the safest thing to  
 4 do with it today is put it underneath this  
 5 mountain. Somebody brought up the other day, hey,  
 6 let's make electricity out of it. Do you think if  
 7 we could sell our CO2 to make electricity, we  
 8 wouldn't do it? We're in this thing to burn corn.  
 9 And if we can make more ethanol, get rid of the  
 10 CO2 so we can make more ethanol, then we're going  
 11 to do it. And if we're putting this underground,  
 12 somebody comes up with a better use for that CO2,  
 13 we're going to go to it, guys. We're going to use  
 14 whatever we can do that makes us the most  
 15 efficient out there and able to make more ethanol  
 16 and burn more corn. That's who we are. A bunch  
 17 of farmers.  
 18 **JULIA TURNER:** I just wanted to clarify,  
 19 because you hit on the question that was floating  
 20 out there. So, earlier you said you're at risk,  
 21 and the reason you're at risk is because electric  
 22 cars are coming down the pike.  
 23 And then so you want, and this push is  
 24 not to make you more appealing to the gas

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1 companies for cars' fuel, but for jet fuel?  
 2 **JACK MURRAY:** I don't think we're going  
 3 to be half electric. I mean, it's just my  
 4 personal, don't take me, you know. But we're  
 5 going to keep burning gas. But, I mean, every day  
 6 Rivian is getting bigger, Tesla, they're building  
 7 more electric cars. We're going to use less  
 8 ethanol. We have to look at other uses for  
 9 ethanol and we are. Just like they're trying to  
 10 find more uses for corn. We're looking at other  
 11 uses for ethanol.  
 12 Right now you can make jet fuel out of  
 13 ethanol. But, in order for us to be in the  
 14 market, we have to have a lower carbon footprint  
 15 than they do to make jet fuel.  
 16 **JULIA TURNER:** It would also make you  
 17 more appealing to companies that make gas for  
 18 cars?  
 19 **JACK MURRAY:** Exactly. Cheaper we can  
 20 get, the better we look.  
 21 **BRIAN BANGERT:** So, you're going through  
 22 this process with the experts and you're talking  
 23 about the carbon sequestration, and your carbon  
 24 footprint, the corn you take in your ethanol plant

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1 and the fermentation of the corn; when you look at  
 2 the two, what do the experts say? Is the growing  
 3 corn absorbing less CO2 than it gives off when  
 4 it's fermented? Or is it the same? What it  
 5 absorbs to create that corn and what it gives off  
 6 on the ferments? What is the experts saying to  
 7 you about that?  
 8 **JACK MURRAY:** You can't stop it from  
 9 taking it in and giving it off. I mean, the corn  
 10 plant is going to continue to do that. Whether  
 11 it's more efficient, it's a totally different  
 12 thing when we're making, you know, making ethanol.  
 13 We also don't have a choice. We're going to  
 14 produce CO2. So, the efficiency of a God made  
 15 plant versus us trying to extract a fuel out of  
 16 that? That is -- that changed, and it's changed  
 17 since we have gone in the business of how  
 18 efficient that corn plant is producing corn. And  
 19 how efficient we are producing ethanol.  
 20 When we -- our corn production, so in  
 21 other words we have got a plant that's reducing a  
 22 fuel out there. When we built this plant, we had  
 23 -- the national average for corn production was  
 24 about 170 bushel an acre. Today we're at 184

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1 bushel an acre. So, in ten years we have taken  
 2 that same plant and we produce more corn. At the  
 3 same time, it's become it's using less fuel to do  
 4 that. We're using less fertilizer and everything.  
 5 So that plant is more efficient in producing less  
 6 CO2 per bushel than it was ten years ago. It's an  
 7 ever changing number in that corn plant. And we  
 8 have got a stagnant number basically as far as how  
 9 much we produce per gallon. And that CO2 is a  
 10 stagnant number. So it's kind of a moving target.  
 11 I can't answer that 'cuz it changes every year.  
 12 **BRIAN BANGERT:** Okay. But, what you're  
 13 saying is, is that this process of ethanol  
 14 production gives off more CO2 than the corn that's  
 15 raised through the process of photosynthesis, what  
 16 you're saying is it does not absorb an equal  
 17 amount?  
 18 **JACK MURRAY:** No, it does not absorb an  
 19 equal amount.  
 20 **BRIAN BANGERT:** So we're talking about  
 21 creating and destroying mass, you might say?  
 22 **JACK MURRAY:** Yes.  
 23 **BRIAN BANGERT:** So we're able to not --  
 24 we're creating more mass of CO2, is what you're



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1 saying, than what was absorbed when the crop grew.  
 2 So we're --  
 3 **JACK MURRAY:** Concentrating it. Yes.  
 4 **BRIAN BANGERT:** Okay.  
 5 **JACK MURRAY:** Because when you've got,  
 6 I'm an agronomist also. So when you've got a  
 7 plant that's producing CO2 all the time, but only  
 8 a percentage of that plant is actually making the  
 9 corn on the ear. So, the rest of the plant is  
 10 making CO2 just to make the plant itself. It's  
 11 giving off CO2 the whole time and taking it in  
 12 while, you know, from the time it's that big. So,  
 13 it's giving it off its entire life-style.  
 14 **BRIAN BANGERT:** You're saying that the  
 15 corn that's growing is giving off CO2?  
 16 **JACK MURRAY:** No, it's taking it in as --  
 17 the entire life, not just what goes into that ear.  
 18 It's the entire plant.  
 19 **BRIAN BANGERT:** Okay. And then what  
 20 did, you know, there's a higher percentage of  
 21 ethanol in gasoline than used to be. What did it  
 22 replace? What got replaced?  
 23 **JACK MURRAY:** There's a carcinogen and  
 24 I'm going to have to ask science. I can't

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1 remember the name of it. But it was outlawed. It  
 2 started out in California getting outlawed, came  
 3 all the way across the United States and being  
 4 outlawed. So that is why they had to come up with  
 5 a new oxygenation agent. And ethanol was the  
 6 cleanest one that they developed and the cheapest.  
 7 And so that is why, back in the  
 8 seventies when they said we're going to clean up  
 9 all the pollution, did away with the lead. That's  
 10 all the lead was, was an oxygenator in that fuel.  
 11 Then they came up with a new one, they found out  
 12 it was cancer causing and they had to get rid of  
 13 it; and that's why ethanol did what -- that's  
 14 where the ethanol came from.  
 15 **BRIAN BANGERT:** Thank you.  
 16 **JIM FINNIGAN:** Questions from staff?  
 17 **MR. DICK:** No.  
 18 **JIM FINNIGAN:** Would anyone in the  
 19 audience? Come forward. State your name again.  
 20 **PAUL BIELFELDT:** Paul Bielfeldt, Anchor  
 21 Illinois, 418 Second Street. And like I said  
 22 before, I'm Beefy. So, on that fuel, which is  
 23 alcohol, back in the seventies they had racing  
 24 fuel and one was E and one was with an A or

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1 whatever. One was made from coal derivatives and  
 2 they had additives in it, and at the Indy 500 they  
 3 ran it and along with the corn --  
 4 **JIM FINNIGAN:** We got to make a question  
 5 out of this somehow.  
 6 **PAUL BIELFELDT:** Okay. You said -- I'm  
 7 sorry. I was filling him in on it. You said the  
 8 additive, that the corn that you talk about, then  
 9 the other one, the fuel was made from coal. Was  
 10 that not right? And that's why they went away  
 11 from it because it made people sick? You said it  
 12 caused cancer or something? That might be right,  
 13 but I think the additive was, is they took it away  
 14 from the coal and made it into ethanol. One of  
 15 the ethanols was with an E and one was with an A  
 16 or something years ago back in the seventies when  
 17 I pulled tractors. I'm sorry. But one was coal,  
 18 made from coal, you know what I'm talking about  
 19 years ago?  
 20 **JIM FINNIGAN:** We got to limit questions  
 21 to him.  
 22 **PAUL BIELFELDT:** I'm sorry.  
 23 **JIM FINNIGAN:** That's no problem. It's  
 24 just the way it is.

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1 **PAUL BIELFELDT:** I'm sorry, but I thought  
 2 it was coal.  
 3 **JIM FINNIGAN:** Anyone else have  
 4 questions? Come forward.  
 5 **DON CARLSON:** My name is Don Carlson,  
 6 C-A-R-L-S-O-N. I live at 208 Kreitzer,  
 7 K-R-E-I-T-Z-E-R in Bloomington.  
 8 Good evening. Sir, did you say that you  
 9 were an officer of One Earth Corporation?  
 10 **JACK MURRAY:** Yes, I am the secretary.  
 11 **DON CARLSON:** So you're familiar with the  
 12 financial statements and the books and have a  
 13 fiduciary responsibility with One Earth?  
 14 **JACK MURRAY:** I go to monthly meetings,  
 15 yes.  
 16 **DON CARLSON:** In a fiduciary  
 17 responsibility?  
 18 **JACK MURRAY:** As a board member.  
 19 **DON CARLSON:** And how much in Federal tax  
 20 credits per ton of CO2 are you proposing to  
 21 receive from the Federal Government?  
 22 **JACK MURRAY:** I'm not sure about that.  
 23 **DON CARLSON:** Would it surprise you if it  
 24 was 85 dollars a ton in Federal tax credits?

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1       **JACK MURRAY:** I'm not surprised by  
2 anything today.  
3       **DON CARLSON:** That doesn't come up in  
4 conversation of board meetings when you go over  
5 the financial statements?  
6       **JACK MURRAY:** We've talked about it, yes.  
7 What it is. I think it's a varying amount.  
8       **DON CARLSON:** Well, I think it's a fixed  
9 amount. But, you don't really recall having that  
10 conversation about the Federal tax credits?  
11       **JACK MURRAY:** Yes, there is Federal tax  
12 credits.  
13       **DON CARLSON:** Of 85 dollars a ton?  
14       **JACK MURRAY:** I don't know that amount,  
15 no.  
16       **DON CARLSON:** And how many hundreds of  
17 thousands of tons do you propose to store every  
18 year at the three well sites?  
19       **JACK MURRAY:** I'm not sure about that  
20 number.  
21       **DON CARLSON:** I believe in your  
22 applications that you refer to with the EPA talk  
23 about --  
24       **JIM FINNIGAN:** That's coming to testify.

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1 You got to ask the question. You know the rule.  
2       **DON CARLSON:** So, doesn't the Rex  
3 Corporation own 75 percent of One Earth?  
4       **JACK MURRAY:** I don't know that. It  
5 changes as we buy bank stock. That changes every  
6 month.  
7       **DON CARLSON:** You're not familiar with  
8 the Rex Corporation?  
9       **JACK MURRAY:** Yes.  
10       **DON CARLSON:** And what is their  
11 relationship with One Earth?  
12       **JACK MURRAY:** They are a stockholder in  
13 One Earth.  
14       **DON CARLSON:** And how much stock do they  
15 own in One Earth?  
16       **JACK MURRAY:** I do not know what exact  
17 number.  
18       **DON CARLSON:** Would 75 percent surprise  
19 you?  
20       **JACK MURRAY:** I'm not surprised by  
21 anything today.  
22       **DON CARLSON:** And so these Federal tax  
23 credits that are coming, that amount to 34 million  
24 dollars a year, is One Earth going to receive

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1 those or is Rex Corporation going to receive them?  
2       **JACK MURRAY:** One Earth will receive, One  
3 Earth Sequestration will receive.  
4       **DON CARLSON:** What was your tax liability  
5 last year?  
6       **JACK MURRAY:** I have no idea.  
7       **DON CARLSON:** It certainly wasn't 34  
8 million dollars.  
9       **JACK MURRAY:** I have no -- no, we did not  
10 make that kind of money.  
11       **DON CARLSON:** So what are you going to do  
12 with the rest of the tax credits?  
13       **JACK MURRAY:** I have no idea. We have  
14 not made a dollar on this yet.  
15       **DON CARLSON:** But you anticipate there's  
16 going to be millions of dollars of Federal tax  
17 credits coming down the pike if this proposal is  
18 approved?  
19       **JACK MURRAY:** We have not made one dollar  
20 on this.  
21       **DON CARLSON:** If this project is  
22 approved, you anticipate millions of dollars in  
23 tax credits from the Federal Government?  
24       **JACK MURRAY:** I hope so, yes.

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1       **DON CARLSON:** Yes. And then my last  
2 question is, can you explain to me why I should  
3 subsidize you?  
4       **JACK MURRAY:** I don't have any idea who  
5 you are.  
6       **DON CARLSON:** I'm a tax payer?  
7       **JACK MURRAY:** Oh; so am I.  
8       **DON CARLSON:** Why should I subsidize you  
9 in Federal tax credits?  
10       **JACK MURRAY:** I'm not -- I don't know the  
11 answer to that.  
12       **DON CARLSON:** Okay. Thank you.  
13       **JIM FINNIGAN:** Thank you. Any other  
14 questions?  
15       **MARGARET KEYLIN:** Margaret Keylin, 304  
16 North Woodlawn, Downs, Illinois. 61736.  
17 I just had two questions. One is, once  
18 you put CO2 down a well, can you retrieve it?  
19       **JACK MURRAY:** No.  
20       **MARGARET KEYLIN:** The other one is, and  
21 I don't know if I misunderstood what you were  
22 saying, it was toward the end of your statement,  
23 but is One Earth planning on building another  
24 ethanol plant?

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1       **JACK MURRAY:** No.  
 2       **JIM FINNIGAN:** Thank you. Any other  
 3 questions?  
 4       (Witness excused. )  
 5       **MR. DICK:** Peggy Keylin. I thought you  
 6 were Margaret.  
 7       **MARGARET KEYLIN:** I didn't know if I was  
 8 Margaret until I reached the first grade, but it's  
 9 a nickname.  
 10       **JIM FINNIGAN:** You're going to give  
 11 testimony.  
 12       (Witness sworn. )  
 13       **JIM FINNIGAN:** Could you tell us your  
 14 name, please, and your address.  
 15       **MARGARET KEYLIN:** I'm Margaret Keylin.  
 16 Do you want Peggy this time? Peggy is okay.  
 17 Peggy Keylin. 304 North Woodlawn, Downs,  
 18 Illinois, 61736.  
 19       A few of the things I will be reading is  
 20 from the McLean County zoning ordinance special  
 21 use permit chapter 350-56. And also 350-58. It's  
 22 the standards of issuance. It contains that.  
 23       It says, generally before any permit  
 24 shall be granted, the zoning board of appeals

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1 shall make written findings certifying that  
 2 adequate provision has been made for the  
 3 following: So the standard A is the proposed  
 4 special use will not be detrimental to or endanger  
 5 the health, safety, morals, comfort or welfare of  
 6 the public.  
 7       We have learned CO2 leaks can be  
 8 catastrophic and cause harm to people nearby very  
 9 quickly. Basically, no One Earth safety plan that  
 10 shows true concern for the health, safety and  
 11 welfare of McLean County residents has been  
 12 submitted. I feel it's an inadequate provision  
 13 for safety, and by locating the wells here it's  
 14 detrimental.  
 15       Also, CO2 not contaminating drinking  
 16 water aquifers can not be guaranteed. Hundreds of  
 17 thousands of people in Central Illinois, including  
 18 McLean County, depend upon the Mahomet Aquifer,  
 19 which is fed from a wide area including the  
 20 proposed well sites.  
 21       Locating wells there would be  
 22 detrimental and could possibly endanger the health  
 23 safety, comfort and welfare of the people.  
 24       Standard B, the proposed special use

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1 will not be injurious to the use and enjoyment of  
 2 other property in the immediate vicinity for  
 3 purposes already permitted, or substantially  
 4 diminish property values in the immediate area.  
 5       The fact that schools are located in the  
 6 area of the review zone affected by the wells  
 7 makes this special use potentially injurious.  
 8 Particularly, when no effective safety plan is in  
 9 place. Nearby farmers and residents are already  
 10 concerned that their property will be negatively  
 11 affected because it's near a CO2 well site. No  
 12 property will keep its value if this water source  
 13 is under an ever present cloud of possible CO2  
 14 contamination. Unanswered questions about how far  
 15 plumes can spread and what effect they will have  
 16 on land and water make land owners anxious about  
 17 losing value for their land.  
 18       Standard C, the proposed special use  
 19 will not impede the orderly development of the  
 20 surrounding property from uses permitted in the  
 21 district.  
 22       If water is compromised, farming, a use  
 23 permitted in this district would not be a choice  
 24 for that area.

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1       Standard F, the establishment,  
 2 maintenance and operation of the special use will  
 3 be in conformance with the intent of the district  
 4 in which the special use is proposed to be  
 5 located.  
 6       The intent of an agriculture district is  
 7 for raising crops and animals for human  
 8 consumption, not to house a hazardous waste dump.  
 9 We have rich land in McLean County and a sizeable  
 10 fresh water aquifer. Food and water sustain life.  
 11 We can not gamble them away for the sole benefit  
 12 of a private for-profit company.  
 13       So four of seven standards in my opinion  
 14 aren't met. Section or chapter 350-58 has a time  
 15 limit. A says, sunset. A special use permit  
 16 shall expire unless a construction permit is taken  
 17 within 24 months. At this point there is no  
 18 Federal, state or local rule in place to regulate  
 19 these kinds of industries.  
 20       And I don't know that there will be  
 21 within that 24 month period.  
 22       Thank you.  
 23       **JIM FINNIGAN:** Questions from the board?  
 24 Staff? Anyone in the audience have questions of

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1 this witness?  
 2 **PAUL BIELFELDT:** I'd like to ask her a  
 3 question.  
 4 **JIM FINNIGAN:** Come up with the  
 5 microphone.  
 6 **PAUL BIELFELDT:** I'm Paul Bielfeldt,  
 7 Anchor, Illinois, 418 Second Street. You are  
 8 asking about that and I was the president of the  
 9 drainage district, so what's the likeliness of  
 10 anything escaping and coming down the Mackinaw,  
 11 which goes through Lake Evergreen over to Peoria  
 12 and into Illinois and into the Mississippi? They  
 13 don't know what they're going to do and they ain't  
 14 got the tonnage on fact. But on my little book it  
 15 says carbon dioxide weighs point 0781 pounds per  
 16 cubic foot.  
 17 **JIM FINNIGAN:** We got to get to a  
 18 question.  
 19 **PAUL BIELFELDT:** But the question is, if  
 20 it stays in the ground, if it comes up through the  
 21 water and it travels all the way down the river,  
 22 what are we supposed to do? Is that in your books  
 23 that tells you?  
 24 **MARGARET KEYLIN:** I can answer that

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1 question to the best of my ability.  
 2 **PAUL BIELFELDT:** But if we're going to  
 3 get 85 dollars a ton, they want 4 million ton,  
 4 that's a bunch of money going somewhere. I'm out  
 5 of line again I think. I don't know. Don't  
 6 think so. I'm not an expert on that. I just know  
 7 that the physics, of what I've heard about the  
 8 physics of CO2 is that it goes down underground  
 9 but it doesn't stay put. It travels. It moves  
 10 from pore to pore. It pushes brine out of one  
 11 pore into the next. And so it is buoyant when it  
 12 gets under, on the surface it sinks. But  
 13 underneath it's buoyant. And it travels any  
 14 direction it wants, including upward. So, the  
 15 possibilities are open, I would think, to ground  
 16 water, water above the sequestration site to be  
 17 eventually impacted, but I'm not an expert on that  
 18 at all.  
 19 **JIM FINNIGAN:** Thank you. Any other  
 20 questions? One more.  
 21 **TYLER YOUNG:** Tyler Young, 40563 East,  
 22 1400 North, Saybrook.  
 23 **JIM FINNIGAN:** Questions.  
 24 **TYLER YOUNG:** Of course, sir. You've

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1 heard that my house is right near our well? And  
 2 your side has claimed that the aquifer is being  
 3 affected. Would you guys like to present an  
 4 expert to attest to that fact?  
 5 **MARGARET KEYLIN:** I have no expert. But,  
 6 if there was one I would like to, yes.  
 7 **TYLER YOUNG:** Thank you.  
 8 **JIM FINNIGAN:** Any more questions?  
 9 (Witness excused.)  
 10 **MR. DICK:** Nick Malkewicz.  
 11 (Witness sworn.)  
 12 **JIM FINNIGAN:** Would you state your name  
 13 and address for the record.  
 14 **NICK MALKEWICZ:** Yes, it's, N-I-C-K,  
 15 M-A-L-K-E-W-I-C-Z. My address is 2409 Bernice,  
 16 that's B-E-R-N-I-E-C-E Drive, Champaign, Illinois,  
 17 61822.  
 18 I want to thank the board for allowing  
 19 me the time to speak here today. Like I said, my  
 20 name is Nick Malkewicz, I'm the president of  
 21 Projeo Corporation. We are a small business  
 22 focused on accelerating the energy transition  
 23 using subsurface resources. Lead a team of about  
 24 15 people, primarily based out of Illinois, but

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1 we're all over the country.  
 2 My background is a mechanical engineer,  
 3 with a project management certification and a  
 4 Master's degree in the science of project  
 5 management. I founded Projeo Corporation to help  
 6 develop projects just like this because I believe  
 7 that it's important that we have a safe and secure  
 8 energy future in this country.  
 9 And so I think that subsurface resources  
 10 have a tremendous part to play in that. I've been  
 11 working on the subsurface resources for the better  
 12 part of 20 years in the development of such  
 13 projects, and the last 15 of which have been in  
 14 the development of CO2 storage projects. My  
 15 company has helped One Earth Sequestration develop  
 16 their site and drill their stratigraphic test  
 17 well.  
 18 We continue to support their application  
 19 for a Class VI permit, and for the development of  
 20 their site and the subsurface resources.  
 21 At Projeo, we believe that CO2  
 22 sequestration can be done safely, effectively, at  
 23 low cost and forever.  
 24 One Earth Sequestration is working to do

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1 just this, and from what we've seen and how they  
 2 perform the work that they do, the attention that  
 3 they give to safety, and what they do with  
 4 listening to the folks who, and enlisting the help  
 5 of the folks who know about the things that  
 6 they're working in, is second to none.  
 7 So, with that, I would just like to  
 8 recommend that the board approve this permit, this  
 9 special use application. Thank you for your time.  
 10 **JIM FINNIGAN:** Thank you. Questions?  
 11 **RICK DEAN:** You mentioned plume studies?  
 12 Is that something you've done?  
 13 **NICK MALKEWICZ:** I don't believe I  
 14 mentioned plume studies.  
 15 **MR. DICK:** Okay. Misunderstood you  
 16 then. Thank you.  
 17 **NICK MALKEWICZ:** Sure.  
 18 **RUTH NOVOSAD:** What other CO2  
 19 sequestration wells have you worked on?  
 20 **NICK MALKEWICZ:** A number of them all  
 21 over the country. So, we've worked on some in  
 22 Illinois, at the ADM facility for example. I've  
 23 worked on some in the Gulf Coast as well, and  
 24 elsewhere.

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1 **RUTH NOVOSAD:** Okay.  
 2 **JULIA TURNER:** What leads you to believe  
 3 that one, that you said you look at subsurface  
 4 resources, why do you feel that's so important?  
 5 And what leads you to believe it can be done  
 6 safely, effectively and forever?  
 7 **NICK MALKEWICZ:** So, the past 15 years of  
 8 developing these projects, I've worked with  
 9 scientists all over the country at various  
 10 universities and national labs. And by and large  
 11 the majority of them that I've talked to have  
 12 indicated that it can be done just like that.  
 13 That's also been my experience when you  
 14 build one of these wells, when you properly  
 15 characterize a site, and look at the geology, you  
 16 look at it. And if it's done right, it's  
 17 permanent. You look at oil underground that's  
 18 been there for hundreds of millions of years. And  
 19 that's trapped down underground for hundreds of  
 20 millions of years. There's no reason we can't  
 21 replicate that using the subsurface resources for  
 22 storing CO2 underground. I think there was a  
 23 second part to your question, I'm sorry. Did I  
 24 address it? Thank you.

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1 **BRIAN BANGERT:** I think you mentioned  
 2 that this could be forever as well; this is  
 3 displacing a brine, a salt brine?  
 4 **NICK MALKEWICZ:** Yeah, what I meant  
 5 forever is I meant it can stay underground  
 6 forever. You could not pump underground  
 7 indefinitely. The subsurface is just like any  
 8 other storage container, you can picture that, so  
 9 it has a fixed capacity and every site is  
 10 different and we enlist the expertise of lots of  
 11 different technical disciplines to calculate,  
 12 quantify that subsurface resources. How big is  
 13 your tank? And we design a project to make sure  
 14 we're effectively using that tank, not overfilling  
 15 it.  
 16 **BRIAN BANGERT:** Okay. One other thing  
 17 I've asked before, and I don't know that I  
 18 understood the response. Because if this CO2 is  
 19 pumped below ground, it's displacing brine. And  
 20 if the pore space is already full, it's forcing  
 21 that brine some place. Where is it going and how  
 22 is that -- at what point do you realize the well  
 23 is full then, I guess?  
 24 **NICK MALKEWICZ:** So, in each project we

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1 do things to characterize the rock. One of the  
 2 things we do is understand the strength of the  
 3 rock, and at what pressure the rock will break.  
 4 And the US EPA limits your injection pressure to  
 5 be no more than 90 percent of that pressure. So,  
 6 we have a very good understanding of what pressure  
 7 the rock will break prior to commencing a project.  
 8 And we make sure we stay well under that limit.  
 9 As far as what displacing brine and  
 10 understanding the capacity of the tank, what  
 11 you're effectively doing is, I've heard of the  
 12 analogy used of dropping a marble in a bathtub in  
 13 a tank. You are slightly displacing that brine.  
 14 But when you think of the Mt. Simon, which is the  
 15 injection target here at this site, that's  
 16 pervasive across the Illinois basin. If you think  
 17 of the sheer volume, we have had about 2,000 feet  
 18 of Mt. Simon spread throughout the whole Illinois  
 19 basin, so that's up from Rockford all the way down  
 20 past Kentucky. It's just gigantic.  
 21 And so it's fairly immaterial, the  
 22 amount we're displacing in this project. Does  
 23 that answer your question?  
 24 **BRIAN BANGERT:** Yeah, I think so. It

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1 still doesn't, I mean, is the brine absorbing the  
 2 CO2 or is it -- are they occupying the same space?  
 3 **NICK MALKEWICZ:** So, some of the CO2 does  
 4 dissolve into the brine and some of it is  
 5 displacing the brine as well. And effectively it  
 6 does slightly raise the reservoir pressure. But,  
 7 like I say, your tank is so big, on a basin scale  
 8 it doesn't raise it very much. But yes, we do  
 9 monitor the reservoir pressure to make sure we're  
 10 not raising it beyond a safe limit.  
 11 **BRIAN BANGERT:** So of the brine that is  
 12 displaced, where does it go?  
 13 **NICK MALKEWICZ:** The brine, it stays in  
 14 the tank.  
 15 **BRIAN BANGERT:** But the tank is full, no?  
 16 **NICK MALKEWICZ:** No, the tank's pressure  
 17 just goes up.  
 18 **BRIAN BANGERT:** Okay. Thank you.  
 19 **JIM FINNIGAN:** It sounds like you were  
 20 involved with the placement of these wells?  
 21 **NICK MALKEWICZ:** No.  
 22 **JIM FINNIGAN:** Okay.  
 23 **NICK MALKEWICZ:** One of the other partner  
 24 organizations on the project was.

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1 **JIM FINNIGAN:** I'm just trying to figure  
 2 out, I mean --  
 3 **NICK MALKEWICZ:** I can try to answer your  
 4 question, go ahead.  
 5 **JIM FINNIGAN:** Well, you threw me on one  
 6 there because I thought that's what you said, and  
 7 that's okay. I just misunderstood you. I guess I  
 8 wasn't thinking we were going into a basin that  
 9 was nearly as big as what we're talking about.  
 10 **NICK MALKEWICZ:** No, we are. It's  
 11 actually a tremendous resource in Illinois. It's  
 12 used, like others have mentioned, for gas storage.  
 13 It's brine. It's very salty brine. It's 200,000  
 14 PPM at the bottom of Mt. Simon. I know that  
 15 doesn't mean much to people. If you think of sea  
 16 water it's like 30, 35,000 BPM, so it's  
 17 incredibly, incredibly, salty water.  
 18 **JIM FINNIGAN:** The other question I got  
 19 is, if this is such a vast area, why are we still  
 20 concentrated on McLean County?  
 21 **NICK MALKEWICZ:** I can't speak to why One  
 22 Earth is choosing to put it in McLean County. But  
 23 I can speak in generalities. And generally, you  
 24 want to site a CO2 storage project as close to a

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1 plant as you can get it within reason. And so  
 2 you -- and the whole point of that is you don't  
 3 want to move things far. And so the closer they  
 4 are to the plant, the better.  
 5 **JIM FINNIGAN:** Okay. Thank you.  
 6 Questions from staff?  
 7 **MR. DICK:** How much would the pressure  
 8 increase in the Mt. Simon with the amount that  
 9 they're proposing to inject?  
 10 **NICK MALKEWICZ:** You're testing my memory  
 11 here and it's not very good. I believe over the  
 12 course of the project, towards the end -- so, I  
 13 think after injection, the pressure falls back to  
 14 nearly initial pressure. So the reservoir has an  
 15 initial pressure, like what it is today.  
 16 After approximately five years, the  
 17 pressure falls back to nearly initial pressure. I  
 18 know that's not an absolute value. I think over  
 19 the course of the project during injection we're  
 20 talking about hundreds of PSI, and what we look at  
 21 after the project ends, you look at the pressure  
 22 as it has a fall off to it and that's part of the  
 23 post injection site care period that the EPA looks  
 24 at. And what we need to do is look at how quickly

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1 does that approach the initial pressure. And on  
 2 this project it's after about five years.  
 3 **MR. DICK:** Could you explain what your  
 4 expertise and what your role in the siting process  
 5 is?  
 6 **NICK MALKEWICZ:** In general or on this  
 7 project?  
 8 **MR. DICK:** On this project.  
 9 **NICK MALKEWICZ:** Yeah, on this project,  
 10 we helped with the well design in supporting that.  
 11 And we helped with the well testing. Going  
 12 forward, we will help with the well construction  
 13 is the plan.  
 14 **MR. DICK:** With well design, does that  
 15 take into account the safety measures that are  
 16 required under the EPA permit?  
 17 **NICK MALKEWICZ:** Absolutely.  
 18 **MR. DICK:** Could you explain them a  
 19 little bit?  
 20 **NICK MALKEWICZ:** Yeah, so the EPA,  
 21 remember that the EPA permit is -- so the EPA  
 22 regulates these as part of the UIC program which  
 23 is under the Safe Drinking Water Act. When we  
 24 talk about a Class VI permit, that whole system is

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1 designed to protect underground sources of  
 2 drinking water which the EPA defines as reservoirs  
 3 with less than ten thousand PPM salinity to them.  
 4 So that whole program and permitting process is  
 5 surrounding -- is focused on protecting the  
 6 underground sources of drinking water. When we  
 7 design the well to the Class VI specification,  
 8 it's with that in mind.  
 9 And so for these wells, I believe, well  
 10 others have explained. But we run multiple  
 11 strings of casing. And casing is just a steel  
 12 tubing. And we run those multiple strings of  
 13 casing to protect the rock from the injected  
 14 fluids. And that casing has cement. It's pure  
 15 cement, not concrete. And we do that. And on  
 16 this particular project we have three different  
 17 strings of casing that we'll plan on running with  
 18 cement behind it. The final string of casing is  
 19 actually a chrome alloy casing. It's to help  
 20 protect against any unintentional encounters of  
 21 CO2. Because when CO2 mixes with water or brine  
 22 it can become corrosive. And so we want to make  
 23 sure that that casing that's protecting isn't  
 24 corroded or degraded.

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1 We also use a special kind of cement  
 2 that is meant to withstand that carbonic acid that  
 3 could be formed when CO2 and brine mixes.  
 4 So that's part of the tubular design.  
 5 Now inside of the tubulars, the casing as well is  
 6 built with, we also have a tubing which carries  
 7 the CO2 down to the injected formation. And  
 8 that's also just meant to protect the casing from  
 9 the long-term exposure to the injected CO2.  
 10 We have a series of valves, it's often  
 11 called a well head at the top of the hole, which  
 12 are meant to be able to isolate and close off the  
 13 injection, both coming from the plant or the  
 14 piping, and from the subsurface. And some of  
 15 those valves are automatically actuated based on  
 16 certain trigger conditions. Others are manually  
 17 actuated. So those are the kind of mechanicals  
 18 behind it.  
 19 The other thing we do is we have  
 20 monitoring technology we use to make sure  
 21 everything is acting the way it should be acting.  
 22 And those are all sorts of different things. They  
 23 are often project specific, but by and large they  
 24 are pressure measurements, where we are looking at

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1 pressure and comparing that against expected  
 2 behavior.  
 3 Like I mentioned earlier, it's to make  
 4 sure we're keeping it under the regulated limit so  
 5 we're not breaking the rock. But also making sure  
 6 that it's behaving as we had modeled and expected.  
 7 And one of the US EPA regulations if you have a  
 8 significant deviation from the anticipated  
 9 pressure behavior, you need to stop and revisit it  
 10 and say what's going on here? Because this isn't  
 11 acting the way we thought it was going to act.  
 12 In addition to that, we monitor things  
 13 like temperature. One thing that if CO2 is  
 14 leaking or going somewhere it shouldn't be, you  
 15 can get a temperature fermentation, so these  
 16 injection wells we have what is called fiber optic  
 17 string along the tubulars. And that -- it's  
 18 pretty cool, I'm going nerd on you here for a  
 19 minute.  
 20 **COURT REPORTER:** Slow down a little bit.  
 21 **NICK MALKEWICZ:** That fiber optic string  
 22 allows you to get a temperature measurement every  
 23 meter, every three feet in the well. And what  
 24 happens is when CO2 leaks, it depressurizes and

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1 that creates a cooling effect. If you have ever  
 2 worked with a soda machine or something like that,  
 3 you've experienced this before; some sort of  
 4 welding device, you've experienced this.  
 5 So when you lose pressure, it's a gas  
 6 log.  
 7 **COURT REPORTER:** Wait a minute, wait a  
 8 minute. You're going to have to slow down.  
 9 **NICK MALKEWICZ:** You monitor temperature  
 10 to look for leaks in CO2. So we have those in the  
 11 CO2 injection models. In addition to that, we  
 12 have microseismic monitoring equipment. So one  
 13 thing that we're concerned with, that we watch for  
 14 is the geomechanical state of the reservoir.  
 15 And so what I mean by that is we look at  
 16 how stressed that rock naturally is in the  
 17 reservoir. And we want to be very, very certain  
 18 that we're not cracking that rock or moving it.  
 19 And so we have these extremely precise devices  
 20 that are effectively microphones that listen for  
 21 small tiny cracks in the rock. And if we start to  
 22 get a series of those or trend to those outside of  
 23 the anticipated thresholds, some micro seismicity  
 24 is normal and anticipated and okay. But, when we

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1 model for that, we want to make sure we understand  
 2 what that's going to look like. And if it's  
 3 outside of the anticipated threshold, again, we  
 4 shut down, we shut in and revisit and say what's  
 5 going on here. We need to understand this better.  
 6 That was a long winded answer to a short question.  
 7 I'm sorry.  
 8 **MR. DICK:** Thank you.  
 9 **RUTH NOVOSAD:** When you encounter a  
 10 situation that is outside the expected behavior,  
 11 you say you have to stop. Does the EPA get  
 12 involved? I mean, you have to notify the EPA and  
 13 do they get involved? And tell you that you can  
 14 commence operations again?  
 15 **NICK MALKEWICZ:** Well, remember that the  
 16 operating company that's running one of these  
 17 sites has a vested interest in making sure that  
 18 the site is performing safely. They don't want it  
 19 to break, right? They want it to all work  
 20 properly. Because breaking is bad.  
 21 And so they will stop on their own if  
 22 things aren't operating as they should be because  
 23 they don't want it to go wrong. Now, the EPA also  
 24 gets involved when it comes to protection of the

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1 underground sources of drinking water. And so  
 2 there's regulatory thresholds that they set where  
 3 they would get involved if they, or the operating  
 4 company, such as One Earth Sequestration, believe  
 5 there's a threat to the underground source of  
 6 drinking water because the operating parameters  
 7 are outside of some anticipated threshold.  
 8 So the answer to that is yes, but that's  
 9 not the only reason an operating company might  
 10 stop. Does that answer your question, ma'am?  
 11 **JULIA TURNER:** What industries help  
 12 perfect all of this?  
 13 **NICK MALKEWICZ:** A lot, but I come from  
 14 upstream oil and gas, and upstream oil and gas has  
 15 been working in the subsurface for well over 100  
 16 years. So we're using a lot of the know-how and  
 17 expertise developed over the last century to apply  
 18 to a new technology here.  
 19 In addition to that, upstream oil and  
 20 gas since the 1970s has been doing a process  
 21 called enhanced oil recovery where --  
 22 **MR. DICK:** Could you say what that word  
 23 is again? Extreme oil and gas, is that what it's  
 24 called?

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1 **NICK MALKEWICZ:** Upstream oil and gas.  
 2 So oil production. Enhanced oil recovery is a  
 3 process where you inject something or manipulate  
 4 the reservoir to extract additional oil and gas.  
 5 Since the 1970s, we have been doing this in  
 6 upstream oil and gas using CO2.  
 7 **JIM FINNIGAN:** Would that be referred to  
 8 as fracking?  
 9 **NICK MALKEWICZ:** So, fracking is a  
 10 process that's used in oil and gas where you  
 11 intentionally break the rock to create  
 12 permeability pathways. So, fracking was invented  
 13 as oil and gas became harder to produce over the  
 14 years, the industry looked for reservoirs that had  
 15 the oil and gas but maybe it wouldn't come out on  
 16 its own easily. So fracking was invented to try  
 17 to allow pathways for that oil and that gas to get  
 18 to the well to come out. Like Lincoln talked  
 19 about earlier, that's where you intentionally  
 20 break the rock; the fracking is where you  
 21 intentionally break the rock. Fracking doesn't  
 22 happen in these projects. It's not permitted by  
 23 US EPA.  
 24 **JIM FINNIGAN:** Any other questions from

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1 the board? Staff? Would anyone in the audience  
 2 have a question?  
 3 **DON CARLSON:** Don Carlson. You were  
 4 talking about Class VI wells and that is what  
 5 we're talking about with One Earth, right?  
 6 **NICK MALKEWICZ:** That's one of the things  
 7 we were talking about, correct.  
 8 **DON CARLSON:** And that is what they  
 9 applied for is a Class VI EPA UIC well?  
 10 **NICK MALKEWICZ:** I believe this meeting  
 11 is to discuss the special use permit.  
 12 **DON CARLSON:** Which is for a Class VI UIC  
 13 well, right? This is the easy part of the  
 14 questions.  
 15 **NICK MALKEWICZ:** Yes, sir.  
 16 **DON CARLSON:** Okay. And how many Class  
 17 VI EPA permits are there in the United States  
 18 active?  
 19 **NICK MALKEWICZ:** I don't know the current  
 20 number. But, I believe there's two active and  
 21 about 100 being applied for.  
 22 **DON CARLSON:** How about one active in  
 23 Decatur?  
 24 **NICK MALKEWICZ:** That's not correct.



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1       **DON CARLSON:** And you kept on talking  
 2 about, we do this and we do that and we're doing  
 3 this. What other project, if there's only one or  
 4 two Class VI wells in the United States, are you  
 5 working on those to that degree, or are you  
 6 talking about something that you hope to do or  
 7 propose to do?  
 8       **NICK MALKEWICZ:** My company is working on  
 9 those Class VI wells.  
 10       **DON CARLSON:** In Decatur and ADM?  
 11       **NICK MALKEWICZ:** Yes, sir.  
 12       **DON CARLSON:** Okay. You talked about  
 13 forever. And I think everybody sort of stopped  
 14 when you used that word. That's going to be safe  
 15 forever. Is your company part of the financial  
 16 assurance plan that would guarantee payment to  
 17 this county if something -- if your forever  
 18 promise doesn't hold up?  
 19       **NICK MALKEWICZ:** No, sir.  
 20       **DON CARLSON:** Thank you.  
 21       **NICK MALKEWICZ:** You're welcome.  
 22       **PAUL BIELFELDT:** Here I am again, Paul  
 23 Bielfeldt, 418 Second Street, better known as  
 24 Beefy. People's Gas down by Clinton or Fisher,

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1 Dewey has got great big high pressure tanks  
 2 sitting out there. When I was a young boy once  
 3 again you could fly a 747 in it, and it didn't put  
 4 a dent in it, but it's like a thermos well.  
 5       My question is, I was down there when I  
 6 was in high school, you said that you're not  
 7 fracking, you're going to put this in the ground  
 8 at 2500 PSI? Is that how much pressure you're  
 9 going to put to it?  
 10       **NICK MALKEWICZ:** Give or take.  
 11       **PAUL BIELFELDT:** Okay. What is the  
 12 pressure when they frack?  
 13       **NICK MALKEWICZ:** At this site?  
 14       **PAUL BIELFELDT:** Well, you got three,  
 15 four pipelines, I want to know how much pressure  
 16 you're going to put down there? You're asking for  
 17 2500 PSI, that's an oxygen bottle on a cutting  
 18 torch. They fly a lot if you knock the tip off.  
 19 Go ahead.  
 20       **NICK MALKEWICZ:** Yeah, so the pressure to  
 21 fracture is different at different depths and for  
 22 different formations, the rock strength is  
 23 different. I believe, and again I'm going from  
 24 memory here, but I believe the fracture pressure

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1 at this site for the Mt. Simon is approximately  
 2 point 7 PSI per foot. So, if, for example, you  
 3 were injecting at 7,000 feet, you would be  
 4 somewhere on the order of point 7 times 7,000  
 5 would be your fracture pressure at this site.  
 6 Again, I'm going off of rough numbers here.  
 7       **PAUL BIELFELDT:** I go off of rough  
 8 numbers from high school a lot. Okay. So you're  
 9 not fracking. And down there by Fisher they pump  
 10 the natural gas in water, and like I was out of  
 11 high school 50 years ago they said they would  
 12 never get in the well water; well, they could burn  
 13 water in a five gallon bucket with the air  
 14 bubbles, okay? And then you're going to take  
 15 brine water and displace it with 2500 PSI or  
 16 whatever. And so where is it going to go if  
 17 you're not going to push it out of the rock? You  
 18 take a sponge and you squeeze it, and water drips  
 19 out on the floor or in a bucket.  
 20       **NICK MALKEWICZ:** Remember that the  
 21 pressure down there is already quite high. It's  
 22 on the order of approximately 0.47 PSI per foot.  
 23 So it's already thousands of PSI pressure down  
 24 there. So the pressure that we're inducing to

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1 inject the CO2 to displace the brine is just  
 2 slightly over the existing brine pressure.  
 3       **PAUL BIELFELDT:** So, you're trying to  
 4 explain to me like if I put them guys in that  
 5 submarine down in the bottom of the ocean, pushed  
 6 'em in a pop can, there's that much pressure down  
 7 in the center of the earth is what you're trying  
 8 to say? It's 14.5 here in this room PSI. That's  
 9 for the aspirated engine. So when we go down  
 10 7,000 feet it's going to be seven times seven? Or  
 11 how does that work?  
 12       **NICK MALKEWICZ:** Yes. It's very similar  
 13 to the ocean, the pressure increases as you go  
 14 underground. So, I think we're aligned there,  
 15 yes.  
 16       **PAUL BIELFELDT:** All right. I'm trying  
 17 to figure out how to ask you this next one. So if  
 18 you're going to sit there and you got water under  
 19 7,000 PSI, like a hydraulic cylinder, and if you  
 20 cut the hose it would squirt quite the distance to  
 21 your load real quick, and you're pushing this in  
 22 there and that water is down there and it's  
 23 already under that kind of pressure and you gotta  
 24 add more pressure to move it; you understand where

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1 I'm going?  
 2 **NICK MALKEWICZ:** No.  
 3 **PAUL BIELFELDT:** Where is the liquid, if  
 4 you got it in the can already and it's got  
 5 pressure? You're the expert, I'm just a farm boy.  
 6 I'm trying to look at this like through  
 7 hydraulics.  
 8 **NICK MALKEWICZ:** I really appreciate farm  
 9 know-how, so I wouldn't downplay that. I'm having  
 10 trouble following your question.  
 11 But, what I can say is in the subsurface  
 12 when we have thousands of PSI in the formation and  
 13 thousands of PSI in the tubulars down a hole, the  
 14 steel and how we think about that, how it can  
 15 withstand the pressures; it's the differential  
 16 pressure that will create a crushing force or  
 17 deformation on a pipe, so that's what we're  
 18 concerned with is the differential pressure there.  
 19 I don't know if I answered your question, sir.  
 20 I'm sorry if I didn't really get what you're  
 21 asking.  
 22 **PAUL BIELFELDT:** But, if you're going to  
 23 pump that kind of pressure in this ground and you  
 24 got natural gas pipelines on one side 30 inches,

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1 two of them, and a 36 that's put it in the fifties  
 2 and sixties and you're going to push this, and  
 3 this gravel pane that you're going to push this  
 4 all through comes from way up north and goes way  
 5 down south and you're under the Mahomet Aquifer  
 6 and all that, and you said you could pretty well  
 7 promise or keep it, but you can't retract this  
 8 stuff after you pump it down there. And I got a  
 9 little book in my pocket, I'd like you to look at  
 10 it after we're done talking tonight.  
 11 **NICK MALKEWICZ:** I'd be happy to have a  
 12 conversation after we're done talking.  
 13 **PAUL BIELFELDT:** I will because you're  
 14 going to get to. I'm going to show you something.  
 15 And what I'm trying to find out is you're going to  
 16 pump all this pressure and we're on the fault  
 17 line, you got pipelines up here, you got my nieces  
 18 and nephews and that's what I said earlier; I'm  
 19 not drinking bath water. I'm pretty serious. I  
 20 ain't threatening anybody. I'm just saying, it  
 21 don't add up, sir. You can't -- you can not have  
 22 7,000 PSI or 5,000 or 2500 PSI --  
 23 **JIM FINNIGAN:** Got to be a question.  
 24 **PAUL BIELFELDT:** Why does it erode to the

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1 cases when you pour the concrete, special concrete  
 2 and then it -- with the brine water it dissolves  
 3 and ruins your well casings? What does it turn  
 4 into? A kind of an acid?  
 5 **NICK MALKEWICZ:** Yes, when CO2 mixes with  
 6 brine water it creates a carbonic acid.  
 7 **PAUL BIELFELDT:** Where is that at to  
 8 sulfuric acid?  
 9 **NICK MALKEWICZ:** Carbonic acid, not  
 10 sulfuric. But that's where the CO2 and the brine  
 11 mix down.  
 12 **PAUL BIELFELDT:** But how corrosive is it  
 13 on the corrosive scale? You said it eats it and  
 14 you got chrome alloy shaft at the bottom. They  
 15 started up at 18 or 15 inch and then they drop to  
 16 12, then they went to eight down at the bottom or  
 17 something like that when I was out there watching  
 18 them dig that hole.  
 19 And I just want to know how corrosive is  
 20 the acid? Because then you're going to push the  
 21 brine water into the clear drinking water because  
 22 it's got to go somewhere. And if you put a  
 23 postage stamp on a basketball court down in the  
 24 corner you can't see it, but if you put it in the

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1 center of the circle you can see it, maybe from  
 2 the sidelines, but if you get up you might see it.  
 3 I'm just wanting to know where the brine water  
 4 with the poisonous acid that can eat up a well  
 5 casing is going to go and what's it going to do to  
 6 the water that it might infect because we're not  
 7 sure it's going to stay where you want it to stay.  
 8 That's my question. You can't guarantee that this  
 9 is all going to work, can you?  
 10 **JIM FINNIGAN:** That's a little bit more  
 11 than a question. You're making statements too.  
 12 Just questions. I'm not trying to be  
 13 argumentative.  
 14 **PAUL BIELFELDT:** I'll get out of here.  
 15 I've stayed here too long. My question is, how do  
 16 you get the acid to eat up the casing and you're  
 17 not going to have a problem, is what I'm trying to  
 18 figure out?  
 19 **NICK MALKEWICZ:** Yeah, I think you're  
 20 asking how corrosive it was. I appreciate that  
 21 question. And we actually have engineers that do  
 22 corrosion studies to design the tubulars to make  
 23 sure they're appropriate for what they're going to  
 24 see and the exposure. It used to be called NACE,

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1 I know they recently changed their name. But the  
 2 National Association of Corrosion Experts. They  
 3 use studies and standards developed by them to  
 4 design the well tubulars and the equipment that we  
 5 use.  
 6 **PAUL BIELFELDT:** That's fine, but what's  
 7 it going to do to the well water down the line 30  
 8 miles or ten miles? If you've got a 70, 80 mile  
 9 wide thing, and you're pushing this stuff  
 10 somewhere, what's it gonna do to the regular well  
 11 water that's up here?  
 12 **NICK MALKEWICZ:** I appreciate that  
 13 question and concern. It's a valid one. Remember  
 14 we're injecting about a mile underground here.  
 15 And we've specifically looked at and characterized  
 16 the site to make sure that anything within the  
 17 area of review that we encounter isn't a potential  
 18 leakage pathway. And so it doesn't push its way  
 19 up because we've sited the geology such that it  
 20 will stay underground for millions or hundreds of  
 21 millions of years just like the oil has. We want  
 22 it to stay a mile underground. It's very -- we've  
 23 been very cautious and very thorough in trying to  
 24 characterize the geology to make sure it does just

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1 that. That's part of what the US EPA permit  
 2 requires and insists upon.  
 3 So, we make sure that there are no  
 4 potential leaking pathways up that wouldn't have  
 5 the tubulars or the equipment necessary to  
 6 withstand that corrosive material.  
 7 **JIM FINNIGAN:** Just to clarify, to make  
 8 it simple. If you're pumping down 7,000 feet,  
 9 will that ever get back to drinking water if the  
 10 casing does not degrade?  
 11 **NICK MALKEWICZ:** No.  
 12 **JIM FINNIGAN:** I think that's what he was  
 13 trying to ask the question, is what does it do to  
 14 the drinking water?  
 15 **NICK MALKEWICZ:** You know, I live in  
 16 Champaign and we drink water out of the Mahomet  
 17 Aquifer. I have family here in Bloomington. I  
 18 wouldn't be doing this if I thought it was ever  
 19 going to get there. I'm pretty sure the One Earth  
 20 folks wouldn't either. I've spent my career doing  
 21 this. I don't think it will, no.  
 22 **JIM FINNIGAN:** So, the layers underneath  
 23 the ground, and we have talked about them, I don't  
 24 have it with me tonight, but how many layers would

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1 it have to get through to get back up to the  
 2 aquifer?  
 3 **NICK MALKEWICZ:** It would have to get  
 4 through a mile of hard rock.  
 5 **JIM FINNIGAN:** A mile of hard rock?  
 6 **NICK MALKEWICZ:** Yes, sir.  
 7 **JIM FINNIGAN:** Thank you.  
 8 **NICK MALKEWICZ:** Let me qualify that a  
 9 little bit. There are, the subsurface has  
 10 permeable and impermeable barriers. It's a  
 11 sequence of sands, shales, dolomites, lots of  
 12 different kinds of rock. Most of that rock is  
 13 impermeable. It's tight and not interconnected  
 14 pore space that wouldn't allow it to pass through.  
 15 This site, for example, we use the Eau Claire  
 16 shale as a primary sealing layer. The majority of  
 17 that mile of rock is tight hard rock that the CO2  
 18 wouldn't pass through. There are layers that  
 19 aren't -- that it could pass through. But it  
 20 would have to get through many, many, many of  
 21 those layers that are very hard and tight and very  
 22 hard to pass through.  
 23 **JIM FINNIGAN:** And the only way it could  
 24 get out is if the casing would -- something happen

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1 to the casing and it got out through the spot  
 2 where the Mahomet Aquifer is?  
 3 **NICK MALKEWICZ:** Yes; well water is a  
 4 potential leakage pathway for the CO2. That's  
 5 exactly right. That's why we build them so  
 6 carefully.  
 7 **JIM FINNIGAN:** Any other questions?  
 8 **SALLY LASER:** My name is Sally Laser.  
 9 4177 White Tail Court, Joliet, 60431. My farm is  
 10 located between the proposed well sites. My  
 11 question is -- well, I have a few. What was the  
 12 number of past projects that you mentioned?  
 13 **NICK MALKEWICZ:** Are we talking about  
 14 Class VI permits?  
 15 **SALLY LASER:** Yes.  
 16 **NICK MALKEWICZ:** Yeah, so as far as I  
 17 know in Illinois there's two US EPA class permits  
 18 that are active at the ADM site. There were a few  
 19 issues for the Future Gen site which were never  
 20 built. And I believe actually I want to correct  
 21 something from earlier. I believe it's in North  
 22 Dakota now, there's several active projects as  
 23 well. But North Dakota has primacy, which means  
 24 that the state regulates the class VI wells, not

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1 the Federal US EPA.  
 2 **SALLY LASER:** And these were all your  
 3 projects personally?  
 4 **NICK MALKEWICZ:** No, no.  
 5 **SALLY LASER:** On how many of these, this  
 6 type project, have you been responsible for so  
 7 far?  
 8 **NICK MALKEWICZ:** Obviously projects like  
 9 this get built by a lot of different people coming  
 10 together. We have been involved in those two that  
 11 I talked to at ADM through my company. I was  
 12 actually also involved in the Future Gen one about  
 13 13 or 14 years ago, but it was only tangential  
 14 involvement in those.  
 15 **SALLY LASER:** So how many of those have  
 16 come to fruition out of the amount that you have  
 17 worked on?  
 18 **NICK MALKEWICZ:** The two, US EPA Class VI  
 19 permits in Illinois are the ones we're working on.  
 20 **SALLY LASER:** That have actually been  
 21 built and are established now?  
 22 **NICK MALKEWICZ:** That's correct, yes.  
 23 **SALLY LASER:** And how long has that been?  
 24 **NICK MALKEWICZ:** Those projects were

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1 built in, I believe they went on line in 2009.  
 2 **SALLY LASER:** Okay. So not much time  
 3 yet?  
 4 **NICK MALKEWICZ:** 14 years.  
 5 **SALLY LASER:** Okay. And built in to the  
 6 studies and designs of these things is also the  
 7 predictability of earthquakes or tremors?  
 8 **NICK MALKEWICZ:** Yeah, that's right.  
 9 Mechanical studies looking at the natural stress  
 10 of the rock and the natural seismicity of the site  
 11 is part of how we characterize these storage  
 12 sites.  
 13 **SALLY LASER:** And is there ways to know  
 14 what kind of faults or cracks that there are  
 15 underground at that deep of a level?  
 16 **NICK MALKEWICZ:** Yeah, there are ways  
 17 that we study that. We do what's called a seismic  
 18 survey. It's a different kind of seismic than  
 19 what we talked about with earthquakes. But it's a  
 20 process that uses something kind of like echo  
 21 location where we bounce sound waves off the  
 22 underground and we look at the reflected and  
 23 refracted wave forms to build a subsurface 3D  
 24 contour map of all of the rock underground. And

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1 through that we can look at the faults and  
 2 fractures that are naturally occurring in an area  
 3 that we're going to work.  
 4 **SALLY LASER:** Are you able to observe  
 5 like every inch of that ground underneath?  
 6 **NICK MALKEWICZ:** No, we don't have a one  
 7 inch resolution, no.  
 8 **SALLY LASER:** Well, I was not being quite  
 9 that precise saying every inch. But when we're  
 10 talking about a vast area underground, are you  
 11 able to look at all of it?  
 12 **NICK MALKEWICZ:** So, the manner in which  
 13 you conduct the site study, that kind of study,  
 14 really depends on the site and what you're trying  
 15 to characterize and what you know about the site.  
 16 One of the things we do is those 3D surveys like I  
 17 was saying. The resolution, the vertical  
 18 resolution of those are somewhere on the order of  
 19 50, 25 feet, obviously depending on how you  
 20 conduct the study. And that's important because  
 21 what's important to us or one of the things that's  
 22 important to us I think to your question of  
 23 understanding where faults and fractures are is  
 24 when we talk about faults and fractures in the

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1 subsurface, what we're really concerned with --  
 2 I'm going to slow down. What we're really  
 3 concerned with is throw. And that is how far does  
 4 that fault or fracture propagate because what we  
 5 want to know, is there potential in our sealing  
 6 rock, our cap rock, that it is faulted to the  
 7 extent that CO2 might leak through it. And so we  
 8 know that here at this site our cap rock is  
 9 hundreds of feet thick.  
 10 And so we did do a survey to look at  
 11 that to make sure that it wasn't faulted. That it  
 12 was consistent and didn't have that sort of  
 13 characteristic which would prevent it from being a  
 14 good seal.  
 15 **SALLY LASER:** Thank you. You feel that  
 16 you can guarantee people's safety by estimating  
 17 unknowns of tremors and earthquakes and the  
 18 effects that would come from that?  
 19 **NICK MALKEWICZ:** Well, I feel that's an  
 20 oversimplification of things. But, yeah; I mean,  
 21 I feel that we can properly characterize the site  
 22 and the CO2 storage here can be done safely.  
 23 **SALLY LASER:** Thank you.  
 24 **NICK MALKEWICZ:** You're welcome.

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1           **JIM FINNIGAN:** Is there any other  
2 questions for this witness?  
3           **MARGARET KEYLIN:** Margaret Keylin. 304  
4 North Woodlawn, Downs, Illinois. I just had a  
5 couple questions. One, you mentioned CO2 stored  
6 underground naturally in one of your opening  
7 statements; you mentioned that.  
8           **NICK MALKEWICZ:** I think that's a  
9 question. I don't actually remember mentioning  
10 that. But, okay.  
11          **MARGARET KEYLIN:** I just was wondering,  
12 how does it get there naturally?  
13          **NICK MALKEWICZ:** Well, I can say that CO2  
14 does occur underground naturally. Whether or not  
15 I said that, I don't remember. I don't remember  
16 saying that. And the answer is, I don't know.  
17 But I know we have, my actual subsurface technical  
18 manager is here. She is a Ph.D.  
19 geoscientist and understands geochemistry much  
20 better than me so she could potentially answer  
21 that later for you. But I don't know the answer  
22 to that.  
23          **MARGARET KEYLIN:** Okay. The other one is  
24 you've worked on upstream oil and gas wells, is

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1 that something you've worked on?  
2           **NICK MALKEWICZ:** Yes, ma'am.  
3           **MARGARET KEYLIN:** And the fracking wells  
4 basically, that's what they would be?  
5           **NICK MALKEWICZ:** Well, like I mentioned  
6 earlier, fracking is a process that is used  
7 sometimes in upstream oil and gas production. I  
8 have been involved in fracking at some point in my  
9 life, yes.  
10          **MARGARET KEYLIN:** Okay. I just wonder  
11 two things; what is the depth of these wells?  
12 Maybe it varies. But, in terms of comparing it to  
13 CO2 depths?  
14          **NICK MALKEWICZ:** Of fracked wells?  
15          **MARGARET KEYLIN:** Yeah. Of the upstream  
16 oil and gas wells?  
17          **NICK MALKEWICZ:** Oh, that's all over the  
18 map globally.  
19          **MARGARET KEYLIN:** Do they go as deep as  
20 the CO2s?  
21          **NICK MALKEWICZ:** So, for example, the  
22 site is approximately six or 7,000 feet, are you  
23 asking me if fracking happens at six or 7,000 feet  
24 in upstream oil and gas, is that your question?

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1           **MARGARET KEYLIN:** I guess. It's those  
2 wells, I'm asking for a comparison between those  
3 type of wells and the CO2 sequestration well in  
4 terms of depth?  
5           **NICK MALKEWICZ:** There are oil and gas  
6 production wells that go to six or 7,000 feet,  
7 yes.  
8           **MARGARET KEYLIN:** Okay. And then how are  
9 the CO2 wells connected to fracking?  
10          **NICK MALKEWICZ:** They are not.  
11          **MARGARET KEYLIN:** They are not used in  
12 the fracking, not as fracking, but in conjunction  
13 with fracking for the -- you said something about  
14 a removal E-R something.  
15          **NICK MALKEWICZ:** So, enhanced oil  
16 recovery is a generic term for a process that's  
17 used in upstream oil and gas to get additional oil  
18 out of reservoirs. One method of enhanced oil  
19 recovery is called CO2 enhanced oil recovery, and  
20 it's where you put CO2 into the reservoir to help  
21 push additional oil out.  
22          **MARGARET KEYLIN:** Okay. Thank you.  
23          **NICK MALKEWICZ:** You're welcome.  
24          **JIM FINNIGAN:** Name and address.

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1           **MARTY SEIGEL:** My name is Marty,  
2 S-E-I-G-E-L. I live in Bloomington, 615 East  
3 Chestnut, Bloomington, Illinois.  
4           I was interested in how long this  
5 technology has been developed? I think you said  
6 it was 14 years that you had done one of the wells  
7 in Illinois. But how long has this technology,  
8 when did it begin? To do this subsurface CO2?  
9           **NICK MALKEWICZ:** Well, I'm going to give  
10 you an answer you're probably not going to like.  
11 But, as I mentioned earlier we've been developing  
12 subsurface resources for well over a 100 years.  
13 Marsh Creek Pennsylvania is one of the early  
14 projects, I don't know if you have ever done that.  
15 It's a beautiful state park. Great for back  
16 packing. That was well over 100 years ago that  
17 those were developed. And so across that time in  
18 the last century we've learned a lot about the  
19 subsurface behavior in underground rock and how to  
20 characterize it and understand it and interact  
21 with it. And so we've been doing subsurface  
22 development for well over 100 years.  
23          **MARTY SEIGEL:** I think I understood that.  
24 But the CO2 sequestration isn't the same as oil?

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1       **NICK MALKEWICZ:** Correct. Yes.  
 2       **MARTY SEIGEL:** So, what, how long has the  
 3 sequestration been studied and developed?  
 4       **NICK MALKEWICZ:** So, I also mentioned  
 5 earlier that the injection of CO2 underground  
 6 really started in about 1970s for enhanced oil  
 7 recovery. So that's been happening for a little  
 8 over 50 years.  
 9       Just injecting CO2 underground, to  
 10 inject CO2 underground is really relatively new.  
 11 It's only been happening for approximately 20  
 12 years because there's really been no financial  
 13 incentive to do so.  
 14       **MARTY SEIGEL:** And as you were talking,  
 15 I'm imagining that as you're studying and trying  
 16 to protect the environment and all that, you're  
 17 finding -- are you finding new rules or new ways?  
 18 Has the technology been evolving to protect the  
 19 people, the aquifer? Or has it maintained, been  
 20 about the same?  
 21       **NICK MALKEWICZ:** Well, the wonderful  
 22 thing about humans is that we're always improving  
 23 and evolving; so we're curious people. And so  
 24 yes, technology is always evolving.

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1       **MARTY SEIGEL:** And do you expect more  
 2 changes in the way you study and measure these  
 3 sites? Or do you expect it to stay about the  
 4 same?  
 5       **NICK MALKEWICZ:** Oh, I expect we'll  
 6 continue to learn as we go on, as we always do. I  
 7 think that's what God put us here for so --  
 8       **MARTY SEIGEL:** Sure. And I guess in  
 9 terms of protecting the people, have there been  
 10 investigations of economic ways of protecting the  
 11 people? For example, has there ever been a way of  
 12 creating an insurance policy and how would that be  
 13 measured? How would you do that? To protect the  
 14 people, if there is an accident, if there is  
 15 something that goes wrong; is there -- I think I  
 16 heard at one of the meetings that there's  
 17 something that the EPA requires. But, is there an  
 18 interest in getting an insurance policy?  
 19       **NICK MALKEWICZ:** Well, I'm struggling to  
 20 kind of pinpoint that question. But, I guess as  
 21 far as the question of insurance goes, I can't  
 22 speak to One Earth Sequestration. But most  
 23 companies hold liability policies and insurance  
 24 policies associated with operating. I don't think

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1 I'm answering your question, ma'am. I'm sorry.  
 2 Can you maybe narrow it down.  
 3       **MARTY SEIGEL:** I just mean if there is an  
 4 accident, and it sounds like you're really working  
 5 hard to avoid it, and of course we're glad about  
 6 that, but if there's a serious accident, is there  
 7 a reliable way of measuring the cause and is this  
 8 a way of getting some sort of insurance policy to  
 9 protect the public?  
 10       **JIM FINNIGAN:** I think this is past what  
 11 you're here to testify about.  
 12       **MARTY SEIGEL:** I'm sorry.  
 13       **NICK MALKEWICZ:** Yeah, I think I can  
 14 speak to Projeco Corporation, my company. And when  
 15 we operate and do work we make sure we carry  
 16 insurance policies that are appropriate for the  
 17 level of work we're doing, as most prudent  
 18 businesses do.  
 19       **MARTY SEIGEL:** Thank you.  
 20       **JIM FINNIGAN:** Any other questions?  
 21       **SALLY LASER:** Sally Laser, do you need my  
 22 address again? I just have one more question for  
 23 you. So, if you were considering like what  
 24 tremors or earthquakes could do, was there any

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1 studies or any consideration if there were any  
 2 natural gas line breaks? Because as my neighbor  
 3 had touched on, with where the well sites are  
 4 proposed, we've got a lot of very old natural gas  
 5 lines that come through there. So, is there any  
 6 consideration or studies done with what, if there  
 7 was a disruption from them? Not even the fault of  
 8 anything on behalf of your design or your company;  
 9 was there any studies done on what that impact  
 10 could be?  
 11       **NICK MALKEWICZ:** The threshold for action  
 12 on the permit is below the -- or at or below the  
 13 field (sic) threshold at surface. So, if an  
 14 induced seismic event were to happen as a result  
 15 of this, the shutdown would happen long before the  
 16 threshold that you would feel at the surface.  
 17 Does that answer your question?  
 18       **SALLY LASER:** I'm not clear. Could you  
 19 just maybe say it a little differently to make me  
 20 understand that better?  
 21       **NICK MALKEWICZ:** Yeah. So, seismic  
 22 events are measured on the Richter scale. And the  
 23 energy released the seismic event. And so the  
 24 actionable threshold on this permit is below where

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1 there would be some impact on surface  
 2 infrastructure. So the shutdown would happen  
 3 prior to that.  
 4 **SALLY LASER:** Okay. Thank you.  
 5 **ANNA ZIEGLER:** Anna Ziegler,  
 6 Z-I-E-G-L-E-R, address is 2242 West Gate Drive,  
 7 Bloomington.  
 8 From your involvement in the ADM  
 9 project, can you describe to what extent have  
 10 those wells behaved as was projected? That's  
 11 maybe a really broad question. That's a very  
 12 broad.  
 13 **NICK MALKEWICZ:** That's a very broad  
 14 question. I would say in generalities they  
 15 behaved as expected.  
 16 **ANNA ZIEGLER:** In terms of the CO2  
 17 staying in place and where it was projected to go?  
 18 **NICK MALKEWICZ:** Yes.  
 19 **ANNA ZIEGLER:** And have there been any  
 20 surface impacts from those wells?  
 21 **NICK MALKEWICZ:** Well, when you build a  
 22 well there's -- you have a well site. So, that  
 23 that -- could you restate your question.  
 24 **ANNA ZIEGLER:** In terms of land use

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1 surrounding the well sites, has there been any  
 2 activity of the land surrounding the well site  
 3 above land, the pore spaces being used as storage,  
 4 has there been any surface impacts for the land  
 5 that has pore space being used under it?  
 6 **NICK MALKEWICZ:** Not to my knowledge, no.  
 7 It's business as usual out there.  
 8 **ANNA ZIEGLER:** And have there been any  
 9 water impacts in the area of review?  
 10 **NICK MALKEWICZ:** No, not to my knowledge.  
 11 **ANNA ZIEGLER:** Thank you.  
 12 **JIM FINNIGAN:** Any other questions?  
 13 **BRENT LAGE:** Brent Lage, L-A-G-E. 18486  
 14 North, 4100 East Road, Anchor.  
 15 **MR. DICK:** Could you repeat the address.  
 16 **BRENT LAGE:** 18486 North, 4100 East Road.  
 17 You mentioned in your work, you worked with  
 18 scientists across the country, that a majority of  
 19 them believe these to be good ideas. So has there  
 20 been scientists that do not believe it's a good  
 21 idea?  
 22 **NICK MALKEWICZ:** From what I've read,  
 23 yes.  
 24 **BRENT LAGE:** Is there ever any one

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1 specific or anything, I guess that's the usual  
 2 cause or concern among scientists that don't like  
 3 these ideas, one thing that comes to mind of what  
 4 they don't like?  
 5 **NICK MALKEWICZ:** Yeah, primarily from the  
 6 things that I've read, and again this is just  
 7 things, I'm telling you about things I'm reading,  
 8 not things I'm an expert on here, but what I read  
 9 the general opposition is the why of doing the CO2  
 10 storage. Many people are opposed to that CO2  
 11 storage is an appropriate response to climate  
 12 change.  
 13 **BRENT LAGE:** Okay. Is there any way to  
 14 measure the CO2 plume underground to know exactly  
 15 where it's gone with accuracy?  
 16 **NICK MALKEWICZ:** We have ways of  
 17 measuring the CO2, and where it's gone. I could  
 18 go into some of the details of that. Is that what  
 19 you're asking for?  
 20 **BRENT LAGE:** Yeah, I was curious, once  
 21 it's injected down there, can they test and know  
 22 exactly where and how far it's going?  
 23 **NICK MALKEWICZ:** Yeah, we do. So again,  
 24 that's part of the UIC permit, the class VI

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1 permit, requires a number of different measurement  
 2 methodologies conducted throughout the project  
 3 life cycle, both during the injection phase and  
 4 during the post injection phase, to verify the CO2  
 5 is going where you anticipated it.  
 6 And the reason they want you to do that  
 7 and the reason you do to that is because you want  
 8 to make sure that the models and simulations that  
 9 you've built are accurate in performing as  
 10 expected. So one of the ways we do that is  
 11 through monitoring.  
 12 So the monitoring technologies that were  
 13 proposed at this site include the pressure, like I  
 14 mentioned earlier, making sure the pressure is  
 15 acting as anticipated, but we also do what's  
 16 called time lap seismic measurements. So I spoke  
 17 about the seismic a little bit earlier, that's  
 18 where you use kind of the echo location to  
 19 understand the subsurface.  
 20 One of the things that -- am I going too  
 21 fast? One of the things that we do with that echo  
 22 location is we can do that in sequence over time.  
 23 And compare the differences. So, you knock once,  
 24 it goes like that. You knock twice, it goes like

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1 that. You put your hand under, it's a different  
 2 sound, right?  
 3 And so we do that actually out at the  
 4 site in order to infer where the CO2 is  
 5 developing, and how close that is to the predicted  
 6 behavior.  
 7 And if there's a significant deviation  
 8 from the predicted behavior, we revisit our models  
 9 and update them. In addition to that, we do  
 10 distributed sampling. We have monitor wells that  
 11 are positioned kind of towards the edge of the  
 12 plume, the CO2 plume, and we go in, we go down  
 13 deep underground, about a mile underground and we  
 14 sample those regularly. I believe in this permit  
 15 we go in once every quarter for the first year,  
 16 then once every year, and what we're looking for  
 17 in that is one of the things we're looking for is  
 18 when does the CO2 breakthrough happen.  
 19 So, eventually the CO2 is going to reach  
 20 that monitor well and we want to make sure that's  
 21 approximately when we predicted. All of these  
 22 things are to verify that our models and  
 23 simulations are accurately representing where we  
 24 think the CO2 is going to be.

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1 **BRENT LAGE:** Okay. Thank you.  
 2 **MARGARET KEYLIN:** Margaret Keylin. 304  
 3 North Woodlawn, Downs, Illinois. This is  
 4 connected to that last question. Have any of,  
 5 this is the ADM wells, to your knowledge, have any  
 6 of the plumes traveled upwards?  
 7 **NICK MALKEWICZ:** So, the CO2, I'm going  
 8 to speak in generalities here. And information in  
 9 the public domain. CO2 generally is pulling it  
 10 underground. It's lighter than water. So  
 11 generally it does tend to move upwards  
 12 underground.  
 13 **MARGARET KEYLIN:** Do you have any idea  
 14 how far it's been moving upwards?  
 15 **NICK MALKEWICZ:** Again, I'm going to  
 16 speak in generalities, and in general it moves  
 17 upwards very slowly.  
 18 **MARGARET KEYLIN:** But, how far it could  
 19 go?  
 20 **NICK MALKEWICZ:** Yeah, so typically what  
 21 will happen is it will move upwards until it  
 22 encounters an impermeable barrier. In the  
 23 Illinois basin, actually the whole middle section  
 24 of the Mt. Simon sandstone reservoir is very, very

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1 low permeability. And it is unlikely that the CO2  
 2 injected in the lower Mt. Simon will move beyond  
 3 that. The middle Mt. Simon is not what's  
 4 considered to be the cap rock as defined by the  
 5 EPA permit. The cap rock is actually a shale  
 6 formation, which is even less permeable. But,  
 7 generally, it probably won't make it up past the  
 8 middle of Mt. Simon since it is so I am per me  
 9 believe.  
 10 **MARGARET KEYLIN:** Okay.  
 11 **JIM FINNIGAN:** Any other questions?  
 12 **JOAN BROADDUS:** My name is Joan  
 13 Broaddus. I live at 13822 North, 4000 East Road  
 14 in Saybrook.  
 15 **MR. DICK:** Could you repeat the name and  
 16 address.  
 17 **JOAN BROADDUS:** Joan, B-R-O-A-D-D-U-S.  
 18 And it's 13822 North, 4000 East Road, Saybrook.  
 19 And this is part of the other question,  
 20 when Sally asked the question about if there were  
 21 a tremor or an earthquake, and you said that it  
 22 could be shut down. So, define shutting down.  
 23 What do you mean?  
 24 **NICK MALKEWICZ:** Well, shutting down

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1 means stopping injection, is what I meant when I  
 2 said that.  
 3 **JOAN BROADDUS:** So, if something would  
 4 happen, and as you say, this gas is buoyant and  
 5 would rise, then there's nothing to stop it if  
 6 there's a crack all the way up? If we have a big  
 7 enough earthquake, there's nothing to stop it, is  
 8 that correct?  
 9 **NICK MALKEWICZ:** Okay. So, underground  
 10 it's where we're injecting it's not a gas. It's a  
 11 super critical state, which is kind of a state of  
 12 matter somewhat like a liquid and gas. It's  
 13 compressible like a gas, but liquid. So it's  
 14 dense phase.  
 15 The, like I mentioned earlier, there's  
 16 approximately a mile of rock between where we're  
 17 injecting and underground sources of drinking  
 18 water.  
 19 **JOAN BROADDUS:** Yes. I see that. But,  
 20 if there was a crack that went all the way?  
 21 **NICK MALKEWICZ:** So, I think, yes. So  
 22 cracks are -- I like to think of them as faults.  
 23 Faults can be sealing or nonsealing. So just  
 24 because there is a fault doesn't mean that it will



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1 conduct CO2. It could. But it doesn't mean it  
2 will.

3 **JOAN BROADDUS:** Okay. So, it's possible,  
4 but probably unlikely in your mind, right?

5 **NICK MALKEWICZ:** Well, yeah, that's what  
6 we've worked so hard to characterize this  
7 reservoir and make sure there aren't faults here.

8 **JOAN BROADDUS:** Okay. Thank you.

9 **JIM FINNIGAN:** We need a break. We're  
10 going to have to take a break for 10 minutes.  
11 (The time is 8:55 p.m.)  
12 (The time is 9:06 p.m.)

13 **JIM FINNIGAN:** We're coming back to  
14 order. If you have a question, come up.

15 **DAWN DANNENBRING:** Dawn Dannenbring.  
16 D-A-N-N-E-N-B-R-I-N-G. 208 Kreitzer,  
17 K-R-E-I-T-Z-E-R Avenue, in Bloomington.  
18 When you answered Peggy's question  
19 earlier about what was happening with the Decatur  
20 well, you said you were going to answer in  
21 generalities and in the public domain.  
22 Is there something you know that you  
23 can't tell us?  
24 **NICK MALKEWICZ:** So, I'm not sure what

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1 information is public versus what information is  
2 not public out there. And so I would encourage  
3 you to go to the US EPA website if you want  
4 specific information about that project. Or  
5 perhaps submit a Freedom of Information Act  
6 request.

7 **DAWN DANNENBRING:** Have you signed a  
8 nondisclosure agreement with the ADM project?

9 **NICK MALKEWICZ:** We have a contract with  
10 ADM.

11 **DAWN DANNENBRING:** Okay. Thank you.

12 **JIM FINNIGAN:** Will there be any other  
13 questions for this witness? I don't see anybody.  
14 (Witness excused. )

15 **MR. DICK:** Joan Broaddus.

16 **JOAN BROADDUS:** My name is Joan  
17 Broaddus, I live at 13822 North, 4000 East Road in  
18 Saybrook. And in May of 1991 my husband and I  
19 purchased the home where we live.

20 **JIM FINNIGAN:** I need to swear you in.  
21 (Witness sworn.)

22 **JOAN BROADDUS:** In May of 1991 we  
23 purchased our home where we live now. We live --  
24 well, I'll show you. We live three-fourths of a

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1 mile directly west of that well. Which I had no  
2 idea was going in until a week ago when a neighbor  
3 came and told us. Someone I never met actually.  
4 We were so appreciative that he did because we had  
5 no idea this was happening, which amazes me that  
6 nobody told us. And it disturbs me greatly, I  
7 guess, that we weren't informed about this.

8 Anyway, we have lived in this spot for  
9 32 years. We wanted to be in the country. We  
10 wanted privacy and it was a beautiful spot and it  
11 was perfect until the windmills went in, but  
12 anyway it was perfect. We raised two children  
13 there. We love it there. We have no plans to  
14 move unless we absolutely have to when we get  
15 older, which probably will eventually happen.

16 Anyway, once we became aware as to where  
17 this pipeline or this well would be, we came to  
18 the meeting last week so we could learn more about  
19 it. Because we knew very little except for what  
20 the gentleman told us and showed us on a map how  
21 we were basically on the edge of the plume. So it  
22 would be right under us once it gets going. And  
23 the CO2 will be under our property.  
24 And we had a neighbor that gave us a

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1 video so we could see something about it. And it  
2 was a nice little video. But, it didn't answer a  
3 lot of questions for me. And yes, something does  
4 need to be done to reduce the CO2 emissions and we  
5 agree with that, that something needs to be done.  
6 But, I'm not sure that this is the answer.  
7 There's still, it worries us. It's worrisome.

8 Anyway, what would happen if there with  
9 were a major earthquake and any seismic activity  
10 and how would this possibly affect the CO2? Now  
11 we have been told that the shale, it probably  
12 can't get through. But, who knows really? On  
13 something like this, they don't know. And so  
14 could this somehow infiltrate the water table  
15 where we get our water? And if so, then who do we  
16 contact and what would they do? I would really  
17 like to know. When we try to contact somebody  
18 about the windmill that grinds next to us, we  
19 never get an answer. Not even after six months of  
20 calling. Nobody does anything for a windmill that  
21 grinds 24 hours a day, seven days a week, months  
22 at a time.

23 Anyway, so I want to know, it makes me  
24 wonder if something goes wrong here, who do I

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1 call? Who do we call and how long will it be  
 2 before somebody comes and does something about it,  
 3 and then what could they do? I would like to know  
 4 what could they do? Yeah.  
 5 So, the other thing is, we believe this  
 6 could possibly have a detrimental effect if we did  
 7 need to sell our house for any reason. Would  
 8 somebody else want to buy it? I'm sure that we  
 9 wouldn't get the assessed property value for it.  
 10 I would be very surprised if we did. And I, to  
 11 confess, if it were me and if I knew, if I knew in  
 12 1991 what was going to happen to where we live, I  
 13 would not have bought this property. It would not  
 14 have been something I would have wanted. I don't  
 15 want to be sitting above where somebody is dumping  
 16 and pouring hundreds of thousands of billions of  
 17 gallons of CO2 underneath us that could possibly  
 18 potentially rise up? I would not want -- I  
 19 wouldn't want that at all.  
 20 I think if I have anything else here.  
 21 Basically, I wouldn't want it. I wouldn't want  
 22 our property. So if I wouldn't want it, would  
 23 somebody else want it? And would we be able to  
 24 sell it if we had to? I don't know.

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1 Anyway, so, for these reasons I would  
 2 ask you to deny the application for this well.  
 3 And thank you for your time. I know you guys have  
 4 a hard job. So, thank you for listening. Thank  
 5 you for your time.  
 6 **JIM FINNIGAN:** Hang on. Any questions  
 7 from the board? Staff? Would anyone in the  
 8 audience have questions of this witness?  
 9 Questions only.  
 10 **TYLER YOUNG:** Tyler Young, 40563 East,  
 11 1400 North. Has Illinois Peoples Action provided  
 12 an expert geologist for you to talk to?  
 13 **JOAN BROADDUS:** No, I have not had -- no.  
 14 Not to my knowledge. I have not talked to an  
 15 expert geologist.  
 16 **TYLER YOUNG:** Thank you.  
 17 **JIM FINNIGAN:** Any other questions?  
 18 (Witness excused.)  
 19 **MR. DICK:** Mark Ummel.  
 20 **A VOICE:** He's not here.  
 21 **MR. DICK:** Mike Kerber.  
 22 (Witness sworn.)  
 23 **JIM FINNIGAN:** State your name and  
 24 address for the record, please.

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1 **MIKE KERBER:** Mike Kerber, K-E-R-B-E-R.  
 2 1014 Broadway Avenue, Normal.  
 3 McLean County really does have a  
 4 wonderful quality of life. I've lived in nine  
 5 different cities and towns and this has been my  
 6 all time favorite.  
 7 And it's also great that more and more  
 8 people are concerned about CO2. For the past ten  
 9 years, however, the amount of CO2 has been  
 10 decreasing in the US. And that's due to wind  
 11 energy, solar, hybrid vehicles, less coal being  
 12 used, and that's made it, making a difference. If  
 13 these CO2 levels keep dropping, the ethanol  
 14 industry may not need to pump it under our water  
 15 supply.  
 16 If we pump CO2 at a very high pressure,  
 17 it may very well migrate into our aquifer and  
 18 contaminate the water, which is the water for  
 19 about a million people.  
 20 We've heard promises here that it can,  
 21 CO2 can never get past the rock layers and get  
 22 into our water. But, the Titanic could never sink  
 23 either. So it's up to this board to protect the  
 24 people of McLean County. And please do what you

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1 can to keep all these people that are profiting  
 2 from this, from contaminating our water. Thank  
 3 you.  
 4 **JIM FINNIGAN:** Thank you. Questions  
 5 from the board? Staff? Anyone in the audience?  
 6 **HANNAH YOUNG:** Hannah Young.  
 7 H-A-N-N-A-H. Y-O-U-N-G. My address is 40563 East  
 8 1400 North Road, Saybrook, Illinois. 61770.  
 9 Were you present when the two experts  
 10 testified, was it two meetings ago? Was it  
 11 November 7th? Regarding the distance our aquifer  
 12 is from this proposed injection well?  
 13 **MIKE KERBER:** Two meetings ago?  
 14 **HANNAH YOUNG:** November 7th, I believe it  
 15 was.  
 16 **MIKE KERBER:** Yes.  
 17 **HANNAH YOUNG:** Do you recall what they  
 18 said about how far the aquifer was from this?  
 19 **MIKE KERBER:** I have heard nine hours of  
 20 testimony and I can't remember everything.  
 21 **HANNAH YOUNG:** Okay. Just curious.  
 22 Thank you.  
 23 **JIM FINNIGAN:** Any other questions?  
 24 (Witness excused. )

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1       **MR. DICK:** Julia Fosdick.  
 2       (Witness sworn.)  
 3       **JIM FINNIGAN:** State your name and  
 4       address for the record.  
 5       **JULIA FOSDICK:** Julia Fosdick,  
 6       F-O-S-D-I-C-K. My address is 14530 East, 1300  
 7       North Road, Pontiac.  
 8       So, I'm a land owner that has property  
 9       within the sequestration zone in the navigator's  
 10      sequestration zone. I also have land that Wolf  
 11      wants to build a pipeline across, and I live in  
 12      Livingston County, north of where this project is  
 13      proposed.  
 14      And so I've been looking at, for the  
 15      last two years I've been looking at this whole  
 16      concept of sequestration and the transport for it.  
 17      And reckless is the word I'd use to  
 18      describe the entire federally driven program of  
 19      carbon capture and storage.  
 20      There was, to my knowledge, never any  
 21      study done to determine if forcing CCS on the  
 22      ethanol industry, let alone other industries,  
 23      would ever be carbon negative.  
 24      I don't know of any studies that really

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1      looked at the environmental risks, and determined  
 2      whether they would be offset by the benefit of  
 3      reducing atmospheric CO2. And I had not seen  
 4      studies of the risks to the human population, and  
 5      any determination that the value of removing CO2  
 6      from the atmosphere would outweigh the risk to  
 7      humans.  
 8      Yet, here this program is being pushed  
 9      forward recklessly. The result is, it's creating  
 10     a lot of victims. I felt this when I was here two  
 11     weeks ago, I felt like this room was filled with  
 12     victims of this Federal policy that's being  
 13     crammed down everyone's throats.  
 14     The ethanol industry is being forced  
 15     into something that if the risk materialized they  
 16     could be left with a huge liability. Local  
 17     government officials are forced to make decisions  
 18     on sequestration, a process which can in effect --  
 19     affect our environment forever, and we only really  
 20     have about a dozen years of experience with this  
 21     anywhere in the world. And predictions are  
 22     attempting to be made for what this is going to do  
 23     for thousands of years down the road.  
 24     And we also have citizens who want to

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1      protect their homes, communities, health, lives,  
 2      resources, water supplies. And yes, a market for  
 3      our agricultural crops. My husband and I are  
 4      farmers.  
 5      Reckless is the best word I can use to  
 6      describe the way this project is being, this whole  
 7      nationwide project, not this project, the  
 8      nationwide push for this. And I don't feel like  
 9      the background work was ever done before this was  
 10     pushed. And so I just feel like it's up to us at  
 11     the local level that we have to push back, maybe  
 12     down the road this might be a solution.  
 13     But at this point it's not a safe  
 14     solution, and it's not shown to actually  
 15     accomplish what it's supposed to accomplish.  
 16     Thank you.  
 17     **JIM FINNIGAN:** Thank you. Questions  
 18     from the board? Staff? Anyone in the audience?  
 19     **TYLER YOUNG:** Tyler Young, 40563 East,  
 20     1400 North Road, Saybrook. I was asking in your  
 21     gathering of knowledge, what experts in geology  
 22     you spoke with?  
 23     **JULIA FOSDICK:** Actually, I read lots of  
 24     scientific papers. I have not spoken in person

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1      with an expert geologist, but I read lots of  
 2      scientific papers. I've been at various meetings  
 3      when information was presented.  
 4      **TYLER YOUNG:** Thank you.  
 5      **JIM FINNIGAN:** Any other questions?  
 6      (Witness excused.)  
 7      **MR. DICK:** Neil Bryant.  
 8      (Witness sworn.)  
 9      **JIM FINNIGAN:** Would you state your name?  
 10     **NEIL BRYANT:** My name is Neil Bryant. I  
 11     live at 745 North 00 East Road, Gibson City,  
 12     Illinois, Ford County. I walk across the road  
 13     from the -- I walk across the road and it's 4200  
 14     McLean County.  
 15     I've heard a lot of discussion tonight.  
 16     I will share with you that I'm neutral on this  
 17     project. I'm neutral because I've had zero  
 18     information and zero communication from the  
 19     company that wants to put this carbon dioxide  
 20     underneath the land that my family and my brothers  
 21     and I own and where my wife and I live.  
 22     Well number two is approximately one  
 23     half mile to the south and west of where I live.  
 24     And well number three is approximately one and a

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1 quarter miles to the north and west of where I  
 2 live. And there has been zero communication from  
 3 One Earth Energy or from One Earth Sequestration  
 4 LLC as to the effect of what it's going to do on  
 5 we adjacent land owners. So I have a prepared  
 6 statement. I signed in to appear at this hearing  
 7 not for or against this project.

8 My reason for appearing is my family has  
 9 had zero communication with One Earth Energy on  
 10 this project as it would affect our land. The CO2  
 11 plume as it's designated in their exhibits would  
 12 completely encompass our family farm, which is 110  
 13 acres in Ford County.

14 With no communications from One Earth  
 15 Energy, I'm wondering if this is an oversight, or  
 16 if it's a part of the structure. Is this an  
 17 oversight? Has there been other areas that have  
 18 been overlooked? Is One Earth Energy aware that  
 19 there's an abandoned oil well project, a drilling  
 20 project located on the land owned by John Miners,  
 21 located on the land located at -- we call it  
 22 Gobblers Knob at 800 North, 100 East Road. Have  
 23 they investigated the depth of this abandoned  
 24 project? The well was done in the early part of

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1 the 19th century, or 20th century, sorry.

2 As an adjacent land owner and as  
 3 resident of the impacted area, there's been zero  
 4 effort to discuss this project with affected land  
 5 owners and residents. I also currently serve as  
 6 president of the church council for St. John's  
 7 Lutheran Church of Anchor. It's located at 16576  
 8 North, 4000 East Road. Our church has been at  
 9 this location since 1877. And we'll celebrate our  
 10 150th anniversary in 2027. We have weekly  
 11 services with an average attendance of between 40  
 12 and 50 members, but on special occasions for  
 13 weddings and funerals our attendance can be over  
 14 150 people. Our church is located approximately  
 15 three-quarters of a mile northwest from the  
 16 projected well site number three.

17 We also have had zero communications  
 18 with One Earth Energy or One Earth Energy  
 19 Sequestration LLC, which leads me to wonder if  
 20 they have overlooked this communication with land  
 21 owners or adjacent land owners and stake holders  
 22 in the area, if they overlooked something else.

23 I previously stated I'm neutral on this  
 24 project. The only information I've had is from

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1 neighbors that have come and talked to me or  
 2 research that we have done that exists in the  
 3 public domain.

4 I think, I request that you take this  
 5 consideration as you make your zoning decisions.  
 6 Thank you. That's all I have.

7 **JIM FINNIGAN:** Thank you. Any  
 8 questions? Staff? Anyone in the audience?  
 9 (Witness excused.)

10 **MR. DICK:** John Sedbrook.  
 11 (Witness sworn.)

12 **JIM FINNIGAN:** State your name and  
 13 address please.

14 **JOHN SEDBROOK:** John Sedbrook, J-O-H-N.  
 15 S-E-D-B-R-O-O-K. 7 Kenyon Court, K-E-N-Y-O-N  
 16 Court, Bloomington, Illinois.

17 So I was here and testified previously  
 18 for the zoning, the sub app for the other well.  
 19 And at that time I said that I was a professor of  
 20 biology at Illinois State University. I've been  
 21 studying and teaching the science and analyzed  
 22 climate change for over 20 years. I do research  
 23 on bioenergy production, so, and fairly well  
 24 versed on that, including carbon cycling. And

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1 have been trained as a scientist.

2 As a scientist, our currency is  
 3 truthfulness. And we're very measured in what we  
 4 say. We don't make things up. And it's very hard  
 5 to sit here and hear the mischaracterizations that  
 6 are occurring, the false equivalencies and the  
 7 attempted character assassination of people just  
 8 because they're possibly making money at this,  
 9 right?

10 Let me go back to when Dr. Whitaker was  
 11 here. You probably remember that incident there.  
 12 While I knew Dr. Whitaker before he was a  
 13 consultant for a company, not that there's  
 14 anything wrong with that; he's an expert, right?  
 15 So that's what consultants are supposed to do. He  
 16 worked for the Illinois State Geological Survey,  
 17 which is a public job, right? And you heard his  
 18 testimony. He was very, very careful, very  
 19 measured. You heard the testimony of the  
 20 gentleman there, right?

21 As a scientist, we are very careful in  
 22 what we say, right? And we don't overstate  
 23 things. That's why he equivocated a lot of his  
 24 answers because we just are careful what we say,

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1 right? And that's probably why scientists are not  
 2 very good at this sort of back and forth, right?  
 3 'Cuz we're very measured. Whereas the other side  
 4 is throwing everything, including the kitchen sink  
 5 at the wall, and seeing what sticks, right?  
 6 So, there are a number of things to talk  
 7 about here. One I've talked about before is the  
 8 necessity to be getting to net carbon zero. The  
 9 goal is to do it by 2050. We have made progress  
 10 as it was pointed out, but we're not doing nearly  
 11 enough. I would also point out that by a third of  
 12 this past year we're over 1.5 degrees celsius  
 13 warming for the entire climate. Just last Friday,  
 14 we hit 2 degrees celsius; first time ever. And  
 15 the projections are not good. We're projecting to  
 16 be near three degrees celsius.  
 17 So the point being is we can not do  
 18 business as usual. We can't just deny this well,  
 19 and think oh, we're cutting enough, it's going to  
 20 be okay. We're not cutting enough. And there's  
 21 been plenty of science here. I forget the person  
 22 who is saying that there's no science.  
 23 There's a huge amount of science. This  
 24 is not reckless. There's thousands of scientists

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1 that are studying this. There's thousands of  
 2 scientific documents on this. There's annual  
 3 meetings on this. There's the IPCC, International  
 4 Panel of Climate Change, meets on this annually,  
 5 and carbon sequestration is necessary to reach our  
 6 goals, okay?  
 7 So, is McLean County a place to be doing  
 8 this? Well, A, all of us are emitting CO2, right?  
 9 Have been for decades. So we have some  
 10 responsibility with that. But, also farming,  
 11 growing corn does cause carbon emission. So an  
 12 acre of corn brings a -- sequesters something like  
 13 19 tons of carbon, but a lot of that gets eaten by  
 14 microbes; it goes back up in the atmosphere. So  
 15 it's not staying there. And we have to put  
 16 fertilizer on it, which is made from fossil fuels  
 17 because that nitrogen is necessary to make  
 18 protein. We need protein in our diets. We need  
 19 protein to grow corn. So there's 1,400 farms in  
 20 McLean County. And they have produced -- McLean  
 21 County is the largest producer of corn in the  
 22 State of Illinois. And Illinois is like the  
 23 second largest producer of corn in the country.  
 24 And so it's the bread and butter of this

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1 country. And/or this state; this county and  
 2 state. And to be able to keep growing corn and  
 3 market it, the ethanol, absolutely have to be  
 4 lowering the carbon; the footprint of that  
 5 ethanol. Because you can't sell that ethanol to  
 6 make sustainable aviation fuel with the current  
 7 carbon footprint, all right? So they can sell it  
 8 for sometime now for mixing with gasoline, but  
 9 they're not going to be able to sell it to the SAF  
 10 market.  
 11 And there are no other sources, or not  
 12 enough other sources to generate enough jet fuel  
 13 that's low carbon intensity, which means what are  
 14 we going to do? Stop flying, right? I mean,  
 15 that's your choices. Either come up with  
 16 alternatives, including SAF from ethanol, or stop  
 17 flying, or some other way to deal with that. All  
 18 right.  
 19 So, I guess that was the important  
 20 point. And really that's why these guys are here  
 21 and petitioning for this. And again, this is all  
 22 science based. The Government is trying to  
 23 incentivize people to cut carbon emissions instead  
 24 of mandating it. And there's only so much you can

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1 do with sequestration, right?  
 2 I guess I'll leave it at that.  
 3 **JIM FINNIGAN:** Any questions from the  
 4 board?  
 5 **RICK DEAN:** I don't quite understand the  
 6 concept of not being able to use ethanol as  
 7 sustainable aviation fuel because of the carbon  
 8 impact. I don't quite -- I'm having trouble  
 9 getting a grasp on that.  
 10 **JOHN SEDBROOK:** So, the Government sets  
 11 rules on how much carbon, what the carbon  
 12 intensity score of a given fuel can be to be used  
 13 for consideration as aviation fuel. And so the  
 14 current methods of growing corn with taking fossil  
 15 methane to make fertilizer and all the inputs make  
 16 that CI score too high for that ethanol to --  
 17 unless you do carbon sequestration from that, this  
 18 pure CO2 stream that the fermentation is creating,  
 19 unless that is sequestered somehow, you're not  
 20 going to get below that score to be able to use it  
 21 for SAF.  
 22 **JULIA TURNER:** So just to make sure we  
 23 understand what you're saying. It's not  
 24 changing -- you're not talking about changing the

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1 way ethanol is made at this point.  
 2 What you're saying is if we sequester  
 3 the carbon, it lowers the carbon score for  
 4 ethanol. And therefore, which means the overall  
 5 carbon production or emission, but since they  
 6 would capture this and put it under the ground, it  
 7 would lower technically the carbon emissions.  
 8 **JOHN SEDBROOK:** Correct.  
 9 **JULIA TURNER:** And then would make that  
 10 more appealing and actually not just more  
 11 appealing; it would be the only way that it could  
 12 be used for aeronautical fuel or airplane fuel?  
 13 **JOHN SEDBROOK:** Yeah, as scientists and  
 14 policy makers we're trying to come up with real  
 15 solutions here, right? We're not just trying to  
 16 make a zero lateral move here. And in order to  
 17 make real differences and lower, getting to net  
 18 carbon zero, you have got to have these standards  
 19 of lower carbon footprints of fuels, right? And  
 20 it's a process. Now, with this, you have a  
 21 certain CI score, eventually we can come up with  
 22 fertilizer that have a low carbon intensity too.  
 23 Growing cover crops will take carbon out of the  
 24 atmosphere. That will lower the carbon footprint

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1 of corn even more. So we can scientifically get  
 2 to zero carbon corn, even net negative carbon  
 3 corn. It's not going to happen overnight. Give  
 4 us a chance to do this. Don't take our possible  
 5 tools out of our tool box to be able to do this,  
 6 right?  
 7 **JIM FINNIGAN:** Staff have questions?  
 8 **MR. DICK:** Could you tell us, are you a  
 9 Ph.D.?  
 10 **JOHN SEDBROOK:** Correct.  
 11 **MR. DICK:** Could you tell us where you  
 12 got your Ph.D and in what?  
 13 **JOHN SEDBROOK:** So I got my bachelor's  
 14 degree in geology and geophysics at the University  
 15 of Wisconsin in Madison. I got my Ph.D. at the  
 16 University of Wisconsin, Madison. Also in  
 17 genetics. And I did a post doctoral fellowship at  
 18 Stanford University and have been at Illinois  
 19 State University for 20 years.  
 20 **MR. DICK:** Have you published anything  
 21 having to do with climate change?  
 22 **JOHN SEDBROOK:** I have published in  
 23 having to do with bioenergy, bio gas production,  
 24 bio fuels. But not in climate change.

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1 **MR. DICK:** Does carbon sequestration  
 2 have a significant role in lowering our problems  
 3 with reaching net zero?  
 4 **JOHN SEDBROOK:** So, if you look at the  
 5 models, which have a lot of scientific data behind  
 6 them, the models all require carbon sequestration  
 7 in order to meet net zero.  
 8 **MR. DICK:** Did these recommendations  
 9 come before they actually researched the safety of  
 10 carbon sequestration?  
 11 **JOHN SEDBROOK:** Well, those I think  
 12 efforts are going in parallel. And I think  
 13 there's been a lot of mischaracterization about  
 14 the risks of carbon sequestration, comparing  
 15 carbon escape to the Titanic sinking is a false  
 16 equivalency.  
 17 Another thing I was going to say is,  
 18 there are a number of experts out there that you  
 19 can reach out to and talk with. Some have been  
 20 here already. The Illinois State Geological  
 21 Survey is down in Champaign-Urbana on the  
 22 University of Illinois campus. You can go there.  
 23 Richland Community College has a carbon  
 24 sequestration center there. And ADM has experts.

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1 So, that well so far has sequestered four million  
 2 tons of CO2 with no problems. And you can --  
 3 problems, if you are interested, I can see if I  
 4 can talk to some people. I've gone and seen that  
 5 well. It's very non-descript. It's not like it  
 6 looks like it's about ready to explode. These  
 7 things are heavily overly engineered. They are  
 8 not designed to fail. And these failures that  
 9 they are bringing up are very rare instances that  
 10 are special circumstances. These aren't like  
 11 failing left and right.  
 12 **MR. DICK:** Thank you.  
 13 **JIM FINNIGAN:** Anyone in the audience  
 14 have questions?  
 15 **PAUL BIELFELDT:** When you are talking  
 16 about fuels and that, and the Government -- I'm  
 17 Paul Bielfeldt from Anchor, Illinois; Beefy. When  
 18 you're talking about fuels and the carbon and how  
 19 bad it is, you're using natural gas to do most of  
 20 this stuff and that is the cleanest burning fuel  
 21 we got other than electricity, would you not agree  
 22 with that?  
 23 **JOHN SEDBROOK:** Compared to what?  
 24 Natural gas is cleaner than what?

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1           **PAUL BIELFELDT:** Natural gas in this  
 2 country is the cleanest burning fuel we have,  
 3 other than electricity, which would be from water,  
 4 nitro or nuclear power plants?  
 5           **JIM FINNIGAN:** You got to get to a  
 6 question. I'm sorry.  
 7           **PAUL BIELFELDT:** I'm asking him, you're  
 8 trying to get rid of the carbon dioxide, and  
 9 natural gas is always advertised as the cleanest  
 10 burning fuel we have in this country, other than  
 11 electricity. Is that not correct?  
 12           **JOHN SEDBROOK:** So, I think you're  
 13 talking fossil and natural gas, that's been -- so  
 14 that's -- relative to coal, it has less carbon  
 15 emissions. But still, that alone has too much  
 16 carbon emissions for us to get to net zero. So if  
 17 you're talking natural gas from bio gas  
 18 production, that actually can be negative. If you  
 19 can sequester the carbon along with it, and that's  
 20 really a better way to go.  
 21           **PAUL BIELFELDT:** Okay. So, if you're  
 22 going to have zero carbon in the air, and you  
 23 don't have no carbon and all the trees and the  
 24 plants suck in carbon and put out, produce oxygen

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1 for you and me, and as soon as you get all of this  
 2 carbon low enough, where is our oxygen going to  
 3 come from when the trees, and I'm talking, you're  
 4 talking clear over here to me, and I'm talking  
 5 clear over here to you? But you're trying to take  
 6 away what one side of the world lives on so we can  
 7 live on the other side. They used to have coal  
 8 and used to have to put sulphur on your ground as  
 9 a chemical because you burned coal. Now we got to  
 10 buy coal or sulfur.  
 11           **JIM FINNIGAN:** We got to get to the  
 12 question. I'm sorry.  
 13           **PAUL BIELFELDT:** That's the question I'm  
 14 asking.  
 15           **JIM FINNIGAN:** You're not. You're  
 16 making a statement.  
 17           **JOHN SEDBROOK:** So you're advocating for  
 18 acid rain? Is that what you're saying? You know,  
 19 the points about taking carbon out of the  
 20 atmosphere, so right now we're emitting so much  
 21 that the planet is unable to absorb it, both plant  
 22 life and the ocean, so we're over 400 parts per  
 23 million. Historically we've been around 300 parts  
 24 per million. We're trying to get back to that so

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1 we stabilize the climate and we don't have runaway  
 2 warming here causing all sorts of problems.  
 3           **PAUL BIELFELDT:** Okay. So, we got China,  
 4 Russia and India polluting way more than the  
 5 United States. So you want the United States to  
 6 clean this up so they can pollute more?  
 7           **JOHN SEDBROOK:** So, if you want to look  
 8 at historically here, the United States  
 9 cumulatively has put more carbon dioxide in the  
 10 atmosphere than China. And China currently  
 11 annually is putting more in the atmosphere, but if  
 12 you look at since the industrial revolution, we  
 13 have put more than China, okay? So that's one  
 14 part. But we're all in this together, right?  
 15 It's not like pointing fingers at each other, oh,  
 16 I'm not going to do it until somebody else does  
 17 it. Next thing you know, the house burns down  
 18 because nobody wants to put a bucket of water on  
 19 it. So is that what you propose us doing?  
 20           **PAUL BIELFELDT:** You betcha, because  
 21 you're getting -- well --  
 22           **JIM FINNIGAN:** Any other questions?  
 23 Thanks for coming up.  
 24 (Witness excused. )

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1           **MR. DICK:** Paul Branch. Susan Adams.  
 2           **JIM FINNIGAN:** Would you like to be  
 3 sworn in.  
 4 (Witness sworn. )  
 5           **SUSAN ADAMS:** Susan Adams, A-D-A-M-S.  
 6 And it's 1659 2500 Street, Atlanta, Illinois,  
 7 61723.  
 8           What I'm wanting to talk about was the  
 9 Mahomet Aquifer. And to make a note, I've been a  
 10 member of the Mahomet Aquifer Consortium since  
 11 2005. And I've been serving as chair since 2021.  
 12 And our efforts are to learn more about the  
 13 Mahomet Aquifer and how it functions and how to  
 14 keep it in a sustainable form.  
 15           And one of my concerns is that there are  
 16 three wells that fall within the Mahomet Aquifer  
 17 sole source project review area. And I know the  
 18 sole source designation was something that was  
 19 worked for to try and make sure that the aquifer  
 20 doesn't ever have a pollution issue.  
 21           The area of concern where the wells will  
 22 be also fall within some of the watershed area  
 23 which recharges the sole source aquifer. So,  
 24 certainly something to be considered when this is

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1 being looked at.  
 2 When we talk about the Class VI well,  
 3 that Class VI well was not created by the EPA  
 4 until December 24th, 2010. So we have less -- we  
 5 have a little less than 13 years of data and  
 6 science to back any of this up.  
 7 The ADM projects are not over the  
 8 Mahomet Aquifer. They don't sequester under the  
 9 Mahomet Aquifer. And some of what we know is that  
 10 even though we have equipment that will do sonic  
 11 testing and thumping of the subsurface structure,  
 12 the geology still has issues as in the Ancona gas  
 13 field in Livingston County where you have three  
 14 layers of shale that -- Eau Claire shale which is  
 15 supposed to be the cap rock for the Mt. Simon.  
 16 You have the Maquoketa shale above that. And  
 17 above that you have the New Albany shale, which  
 18 should all serve as a stopgap for anything like  
 19 CO2 or natural gas getting to the surface.  
 20 But we know in the Ancona area that  
 21 natural gas is getting to the surface in that  
 22 area. And in fact, it's been getting there for a  
 23 number of years. And Nicor, that owns that area,  
 24 is asking for a rate increase so they can buy

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1 equipment to recapture the escaping gas to put it  
 2 back down.  
 3 We also know that in the Manlove gas  
 4 field, and your natural gas and CO2 are both  
 5 stored in the Mt. Simon formation. The Manlove  
 6 gas field had a leak that was poor maintenance on  
 7 an injection well. And that got into the Mahomet  
 8 Aquifer. That was about six years ago. And even  
 9 though the residents had to sue to get the problem  
 10 corrected, a plan has been established, I believe  
 11 money has been allocated, but the problem has  
 12 still not been resolved.  
 13 So, when you talk about the Mahomet  
 14 Aquifer and all the people and communities it  
 15 supports, my question is, is it really a good  
 16 thing to be putting injection wells or CO2 next to  
 17 or under an aquifer?  
 18 So that's my concern. Thank you.  
 19 **JIM FINNIGAN:** Thank you. Any questions  
 20 from the board?  
 21 **RICK DEAN:** You equated storing natural  
 22 gas at the same, in the same formation as CO2?  
 23 **SUSAN ADAMS:** Yes.  
 24 **RICK DEAN:** Okay. Thank you.

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1 **JULIA TURNER:** Do you have any expertise  
 2 in geology?  
 3 **SUSAN ADAMS:** I do from the standpoint of  
 4 being involved with Mahomet Aquifer Consortium,  
 5 and our advisers, our technical advisers, our  
 6 Illinois water survey people that we work with,  
 7 and Illinois geological people. I talk with Steve  
 8 Whitaker. Ed Maynard. Al Wierman. That have  
 9 been --  
 10 **JULIA TURNER:** Great. That was a  
 11 precursor to my question. So, do you know what's  
 12 caused these vaults in the gas? You mentioned it  
 13 was from the drilling in the one. Do you know  
 14 what's caused the faults in the others?  
 15 **SUSAN ADAMS:** The Manlove gas field by  
 16 Fisher, that was an injection well that developed  
 17 a leak. So poor maintenance. The Ancona gas  
 18 field, I don't know that we know, other than it's  
 19 fractures and fissures that caused leaks through  
 20 the different shale layers. You can actually see,  
 21 when a crop is growing you know where the leaks  
 22 are because the crop will die.  
 23 **JIM FINNIGAN:** Staff have any questions?  
 24 Anyone in the audience have questions? Thanks

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1 (Witness excused.)  
 2 **JIM FINNIGAN:** This is where we're at.  
 3 I thought we would get a little farther tonight.  
 4 That's the way it is. We're going to take this up  
 5 again on December 5th. That is our regular  
 6 meeting night. And we're going to be going to  
 7 rebuttal from the applicant. And then we will  
 8 have closing statements and rebuttal from the  
 9 public. And we will fill you in. But that's kind  
 10 of where we're at.  
 11 The testimony part is over with. We  
 12 won't go back to that. So, it's going to be  
 13 moving on.  
 14 And it will take as many meetings as it  
 15 takes. And we are going to call it for 7:15  
 16 because we have one case that night that we're  
 17 going to hear before this. So we're going to call  
 18 a continuation of this case, SU-23-06, for  
 19 December 5th at 7:15 in this room. Thanks for  
 20 coming.  
 21 (The time is 9:55 p.m.)  
 22  
 23  
 24



1 STATE OF ILLINOIS )  
2 COUNTY OF CHAMPAIGN ) SS

3 I, DEANN K. PARKINSON, a Notary Public  
4 in and for the County of Champaign State of  
5 Illinois, do hereby certify that the foregoing was  
6 taken on November 21, 2023.

7 That said hearing was taken down in  
8 stenographic notes and afterwards reduced to  
9 typewriting under my instruction and said  
10 transcription is a true record of the testimony  
11 given.

12 I do hereby certify that I am a  
13 disinterested person in this cause of action; that  
14 I am not a relative of any party or any attorney  
15 of record in this cause, or an attorney for any  
16 party herein, or otherwise interested in the event  
17 of this action, and am not in the employ of the  
18 attorneys for either party.

19 In witness whereof, I have hereunto set  
20 my hand and affixed my notarial seal November  
21 28th, 2023.

22 \_\_\_\_\_  
23 DEANN K. PARKINSON, CSR  
24 NOTARY PUBLIC

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