1		STATE OF MICHIGAN
2	DEPA	ARTMENT OF ENVIRONMENTAL QUALITY
3	OI	L, GAS, AND MINERALS DIVISION
4	In the matter of:	
5	Rule Set 2017-17 EQ	2
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8		PUBLIC HEARING
9	I	Lansing Community College West
	5708 Cc	ornerstone Drive, Lansing, Michigan
10	Wednes	day, February 28, 2018, 6:00 p.m.
11		
12	APPEARANCES:	MR. JAMES ARMBRUSTER
		Saginaw Bay District Supervisor
13		Oil, Gas, and Minerals Division
		Michigan Department of Environmental
14		Quality
15		MR. HAL FITCH
		State Geologist and Division Director
16		Oil, Gas, and Minerals Division
		Michigan Department of Environmental
17		Quality
18		
	Also Present:	Mr. Adam Wygant
19		Mr David Fiedler
		Mr. Mark Snow
20		Ms. Deana Lawrence
21		
22	RECORDED BY:	Sandra K. Bolton, CER 3193
		Certified Electronic Recorder
23		Network Reporting Corporation
		Firm Registration Number 8151
24		1-800-632-2720
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Wednesday, February 28, 2018 - 6:04 p.m.

MR. ARMBRUSTER: Good evening, ladies and gentleman. My name is Jim Armbruster. I am the Saginaw Bay District supervisor for the Oil, Gas, and Minerals Division, Michigan Department of Environmental Quality, and I will be serving as the hearing officer for today's public hearing. With me today, are other staff who will be assisting with this hearing. I would like to introduce Mr. Hal Fitch, state geologist and director of Oil, Gas, and Minerals Division, Michigan Department of Environmental Quality.

Other staff members attending this hearing are Mr. David Fiedler, back there, DEQ Regulatory Affairs officer and from the Oil, Gas, and Minerals Division; Mr. Adam Wygant, Permits and Technical Services Section manager; Mr. Mark Snow, Permits and Bonding Unit supervisor; and Ms. Deana Lawrence who is the administrative assistant working out front.

This is a public hearing on proposed amendments to the Administrative Rules promulgated under Part 615,
Supervisor of Wells, of the Natural Resources and
Environmental Protection Act, Act Number 451 of the Public
Acts of 1994, as amended. The Oil, Gas, and Mineral
Division of the Michigan Department of Environmental Quality is conducting this public hearing under the provisions of

Part 615 and in accordance with the Administrative

Procedures Act, Act Number 306 of the Public Acts of 1969,
as amended.

The purpose of this hearing is to receive your comments and recommendations on the proposed rules. We will not be responding to questions tonight; however, the DEQ will prepare a written response to all comments. The DEQ will post that response on its website and provide a copy to any interested person on request.

If you haven't done so, please fill out a registration card if you wish to speak. If you need a registration card please raise your hand and DEQ staff will provide you with a card.

Mr. Wygant will begin by providing some background on the process the department utilized to prepare the proposed rules and a summary of the major changes that are included in the proposal rules. We will then provide an opportunity for statements from those of you who wish to speak. Any interested person may also submit written comments on the proposed rules. Written comments will be accepted until Friday, March 16th, 2018, at 5:00 p.m. Handouts listing the mailing address and e-mail address for submitting comments are available near the entrance of the hearing room.

The mailing address is Department of Environmental

Quality, Oil, Gas, and Minerals Division, P.O. Box 30256,
Lansing, Michigan, 48909. The e-mail address for comments
is DEQ-OGMDpubliccomments@michigan.gov. All public comments
are being recorded and will be incorporated into the record.

The official legal notice for this public hearing was published in the Lansing State Journal, on February 15th, 2018; the Gaylord/Herald Times on February 13th, 2018; and the Escanaba Daily Press on February 15th, 2018. The hearing notice also appeared in the February 15th, 2018 DEQ Calendar of Events and the February 15th, 2018, Michigan Register. The proposed rules were posted on the website of the Office of Regulatory Reinvention and copies were made available directly to any interested person upon request.

MR. WYGANT: I'll give you a little background on the rule promulgation process and some background on the rule set here tonight. Following tonight's hearing, the next step in the rule-making process is preparing the agency report to the Joint Committee on Administrative Rules or JCAR. That report will contain a summary of all the comments on the rules. Any changes to the proposed rules will have to be based on comments received during today's hearing or written comments received during the public comment period, which will end March 16th at 5:00 p.m., 2018. The agency report will be available on the department's website or by contacting the OGMD office. The

report and the final proposed rules will then go through another round of review and approvals by the Legislative Services Bureau (LSB) and the Office of the Regulatory Reinvention (ORR) before they are forwarded to JCAR. JCAR has 15 full session days in which to consider the rule package. The Office of Regulatory Reinvention then files the rules with the Secretary of State. The rules will then become effective seven days after filing with the Secretary of State.

As a background, the proposed rule set, 2017-17 EQ, will amend the current rules to strengthen and clarify requirements for construction, operation, and monitoring of wells used for injection of fluids associated with oil and gas development. Increased single-well bond amounts to amounts equal or typical to well plugging and restoration costs provide flexibility to extend termination dates and streamline requirements for approving minor changes to the well locations prior to drilling.

The OGMD has proposed the increase in single well bond amounts, essentially doubling the amounts for each depth category, as a response to an audit finding that indicated that OGMD plugging costs were higher than single well bond amounts. The proposed increase is the first increase to the single well bond amounts since 1996 and will reflect current actual cost to plug a well based on each

depth category.

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The proposed rule changes to allow greater flexibility in extending permit termination date reflects trends that OGMD has seen in complexity of obtaining other necessary local zoning approval or federal permits, as well as delays due to litigation. Other programs and agencies have authority to extend issued permits for such reasons; however, currently Part 615 does not have this flexibility. Similarly, Part 615 Administrative Rules allow for minor changes to surface hole location when a lost hole situation occurs but does not have such flexibility in the event that a landowner might make a request to avoid some feature, maybe a favorite rock, tree, these sort of things. Currently right now to accommodate this, an operator would have to go back through a full permit application. So this will allow for those minor changes of location up to 165 feet with a thorough administrative review and revision to the existing permit upon the event that a permittee turns in the required request and associated documentation.

The bulk of the proposed rules in this rule revision relate to injection wells found in the section known as Part 8. This is a comprehensive update being proposed in anticipation of Michigan pursuing Class II undergrown injection control primacy from the U.S. EPA under Section 1425 of the Federal Safe Drinking Water Act or SDWA.

Currently, injection wells related to oil and gas operations and dually regulated by Part 615 at the state level as well as by SDWA at the federal level. Most oil and gas producing states currently have primacy because of the closely related nature of these types of wells, particularly related to enhanced oil recovery and disposal of fluids that are associated with oil and gas production. The proposed rule set did not go beyond federal requirements but will strengthen the state program and position Michigan to eliminate dual regulation by obtaining primacy. The goal of OGMD is to continue having an equally effective program and protecting underground sources of drinking water while eliminating the need for dual regulation over Class II wells.

MR. ARMBRUSTER: Thank you for your attention. We will now receive public comments. If there are any completed registration cards in the audience that I don't already have, you can -- I'll look around. Are there any?

No? Okay. I will now begin calling the names of those who have indicated they would like to make a statement. In order that your statements may be recorded, we ask that you come to the microphone, the one right up there on the front corner. Please keep your statements brief and to the point.

Each speaker will be provided with five minutes. However, if you are unable to complete your statement in five minutes

and time is available at the end of the hearing, I will allow those speakers an additional five minutes of time.

Prior to presenting your remarks, please give us your name and we ask that you please spell your name and also your address if you want it to be part of the public record. Also, any group or organization that you represent so we can identify your remarks for the record. Please respect the person who is speaking and address your remarks to the department.

Now, for the first speaker from the audience, David Heinz.

MR. DAVID HEINZ: My name is David Heinz; that is H-e-i-n-z. I'm vice president of exploration at Trendwell Energy, located in Rockford, Michigan. Trendwell currently operates 14 saltwater disposal wells and like other operators here tonight we attempted to permit a new saltwater disposal well several years ago. So we are familiar with how Michigan's current Class II UIC program is managed. I'm here tonight to voice my company's support for the State of Michigan's efforts to gain primacy of Michigan Class II program from the EPA. Even though the EPA currently has primacy of Michigan's Class II program, and the staff of the DEQ's Oil and Gas and Minerals Division perform a dual regulatory oversight role on all aspects of the program, including well permitting, construction,

operation, and abandonment of wells, having the program under one state-controlled authority will allow for streamlined permitting process and get rid of redundant regulations that cost companies like Trendwell both time and money.

With seven district offices located throughout Michigan staffed by geologists and engineers who are knowledgeable of Michigan's unique geology, freshwater resources, we believe the DEQ's Oil and Gas and Minerals Division is well equipped and better suited to manage Michigan's Class II UIC program. From our observations and interactions with DEQ staff, we see that these are reasonable, well-trained individuals with real field experience and are informed and up-to-date on the best well construction and operational practices. Furthermore, these people live, work, and raise families here in Michigan, not Chicago or Washington, D.C. They have a vested interested in seeing that all the Michigan resources are protected.

In Michigan's primacy application, they are also seeking to strengthen the definition of waters that must be protected, going beyond the current EPA definition. Plus they are going to increase the reporting, monitoring requirements on new and existing wells. In our view, these are all good things for the continued protection of Michigan's freshwater resources. The State of Michigan

- should have primacy of the State's Class II UIC program.
- 2 Thank you.

- 3 MR. ARMBRUSTER: Okay. The next speaker is Bill 4 Myler, Jr.
- 5 MR. BILL MYLER, JR.: Good evening. My name is 6 Bill Myler, Jr., M-y-l-e-r, from

. I'm the president of Muskegon

Development Company. I'm also the chairman of the Oil and

Gas Advisory Council Committee and former chairman of the

Michigan Oil and Gas Association way back in 1998 to '99, so

20 years ago.

Michigan's oil and gas regulations, Part 615, are as strong and comprehensive as any set of rules in the country. From the permitting of the well to the operation of the well to the eventual plugging of the well, Michigan's current rules are strict and protective of public health and the environment. My first reaction to these rules changes are that they are overkill and not needed. Our rules are already good enough. But then I realized that without adding these additional rules on top of our already complete set of rules that the EPA will not grant primacy to the State of Michigan, and I believe that is important for Michigan to have primacy.

I began working for Muskegon Development Company in 1984. That was the same year that the EPA actually began

the UIC program. I submitted the original data provided to the EPA for our company's wells and have worked closely with the UIC program for the past 34 years.

During the early years of the program, the 1980's and the 1990's, we applied for permits and received the permits within two to three months. Muskegon applied for and received permits for 35 wells during the time period 2010 to 2013. The average time to receive permits for these wells was seven months. More recently, we applied for two permits in August of 2016 and received one of these permits in 16 months and we have not yet received the second permit, so we're going on 20 months for that permit. We are a working interest owner and projects operated by other Michigan operators, and I know that they have also experienced even longer times than this to get permits.

In addition, when the program was first started the EPA was -- would respond promptly to requests to pressure test a well by sending an EPA representative to witness the test. More recently, when we need a five-year test or a test after a rework, the EPA is slow to respond to our request, resulting in unnecessary down time and lost production. The current UIC program involves a duplication of work duties and reporting requirements between the State and the EPA. You need a permit for both the EPA and a permit from the State. The UIC program involves a myriad of

reporting requirements; the tubing pressure, casing pressure, and injection rate have to be reported on various forms on a weekly, monthly, and yearly basis. Annual still up reports have to be sent in on a quarterly basis. If Michigan gets privacy, the above paperwork will still have to be done, but it eliminates a duplication of reporting between two agencies that currently exist.

I believe it is time for the State of Michigan to take over the UIC program from the EPA. The OOGM staff understands our industry and they are in the field and reviewing our operations every day. OOGM is more knowledgeable and they have more expertise when it comes to Michigan geology and the Michigan oil and gas industry. Muskegon Develop Company supports the proposed rules presented here by OOGM because they are necessary for Michigan to obtain privacy.

Thank you for the opportunity to speak tonight.

MR. ARMBRUSTER: The next speaker is Robert Long.

MR. ROBERT LONG: Good evening. My name is Robert Long. That's L-o-n-g. And from Summit Petroleum and our address is

So I'm Robert Long and I'm president of Summit

Petroleum, Oil, and Gas, and we're an exploration production

company based in Mount Pleasant. We operate over 650 wells

in the state; 125 of those are disposal or injection wells

that we operate. We also participate in approximately 128 wells that were the non-operator, but we know that those wells are also serviced by either disposal or injection wells. And these wells are critical and very important to our business model as we produce oil and gas in the state. Our industry needs these in order to take the produced waters out of the reservoirs that they're currently producing in and putting them essentially, in most cases, right back in the same reservoir that they came from.

We have 48 employees in our company that are all reliant on us to make good decisions, be good stewards of our property, and with the help of the DEQ and the regulatory oversight I think we achieve that and it provides good jobs for people in central Michigan and other part of the state that we operate in.

Some advantages to the State and the DEQ having primacy, which is what we're here about tonight, would be Michigan is one of the only states or one of several states that don't have primacy and probably should, because we have a knowledgeable staff right here in Michigan that's very familiar with the geology and the makeup of these reservoirs that these wells operate out of. Also, that the elimination of this duplicity -- you've heard that before here tonight -- the redundancy of that, they are already doing the work that is required. They know us. We know them.

It's a good relationship. They're tough, but they're fair.

Also, the elimination of delays in permitting wells that meet the standards has been an issue lately, and that was brought up earlier, too, and my company had one instance where it took four years to get a permit through, to get an authorization from the EPA. We finally got it. It was contentious. A lot of frustration over it, but we finally got it. We think that that process can be greatly reduced by having the State take over primacy, which would be very important to us, because in our case where we have situations where a well may go down because of mechanical difficulties or you have to redrill it or you have to drill a brand new well with a brand new prospect that's been developed, you can't wait for four years. That's just not a good business model to operate under.

And above all, the construction of these wells serve the purpose of protecting underground sources of fresh water. That's been the charge of the EPA all these years and it's the charge of the DEQ also. And I can go on and mention many other facets of this program that we could highlight, but those are the highlights I wanted to touch on tonight, and I want to thank you for the time and that's why I'm in favor of the State getting primacy. Thank you.

MR. ARMBRUSTER: Next is Bill Stelzer.

MR. WILLIAM STELZER: Good afternoon. My name is

William Stelzer, and the spelling is S-t-e-l-z-e-r. I'm a petroleum geologist consultant and my offices are in East Lansing at

I'm speaking this afternoon in support of the proposed rule changes, particularly as they relate to injection wells and the ability of the State to assume primacy of administering those wells. I do not operate any wells but consult for a number of Michigan producers, and this issue of particular -- is of particular significance to me.

The time requirement, as it's been mentioned, to obtain permits for Class II injection wells is of great importance and I have observed past delays in obtaining permits creating significant economic impact on operators for water disposal as well as the impact on major exploration programs that require that -- assurance of the economic disposal of such water.

At age 75, I'm among a growing number of consultants and members of the oil and gas community in their older years, but I intend to remain active in developing our oil and gas resources in the future. Time is always of the essence in obtaining permits for injections or disposal wells, but particularly for those of us watching a time clock, and I greatly look forward to a more timely process of obtaining permits for Class II wells. I believe

the proposed rule set, 2017-17, will provide a comprehensive update for regulating and administrating injection wells which will -- and disposal wells which will also hopefully lead to the ability for the State to assume primacy for these wells. Thank you.

MR. ARMBRUSTER: The next commenter is Ben Brower.

MR. BEN BROWER: Good evening. My name is Ben Brower and I work for a company called Jordan Exploration up in Traverse City, Michigan.

REPORTER: Could you spell your last name, please?

MR. BEN BROWER: My last name is spelled Brower.

So thank you for letting us come here tonight.

A couple of things. I wanted to share -- some of it is consistent with what you've heard tonight -- but my company operates over 400 producing wells in Michigan and some 25 or so injection wells; many of those were drilled a number of years ago but in the last five to ten years we have applied for a handful of injection wells and certainly have met with a lot of resistance from the EPA to get those approved. So as I read through the rules -- the proposed rules from the OGMD office here, it seemed like they're certain stringent. Certainly it seemed like they're maybe overkill for what we would like or expect. However, like the previous speakers have said, we certainly don't like the duplicity and dealing with the EPA has been extremely

difficult. I'll give you one example.

We applied about a year ago for an injection permit from them, and although we got to the early stage of it quickly, we still haven't received it. For one reason, they tell us they can't hold a public hearing because they can't get funding from the federal government to book a venue and have their staff travel up to Michigan to host a hearing. And so here we sit for six months waiting for a budget or for a continuing resolution, as they call it, to get a budget to come up and host a hearing. So I'm pretty sure that wouldn't happen at the state level and so that's just one reason why we would certainly like to have primacy transferred to the DEQ.

Again, it certainly seems stringent to us and onerous, rule changes, but we would much rather have -- our company would much rather have the rules in your shop, because, number one, we work with you a lot and deal with you guys and understand -- you understand our program and how we operate. So I think that's a benefit. Plus it's just the timing of it. We think it would be much better for our company.

So those are the main reasons that we support these rule changes and thank you very much.

MR. ARMBRUSTER: Tim Baker.

MR. TIM BAKER: Name is Tim Baker, B-a-k-e-r. I

represent West Bay Exploration,

engineering and operations and I'm here tonight to express our support for the State's obtaining primacy. For the most part, a number of our issues have been previously stated, but let me get our -- the high points with respect to our concern.

We support UIC primacy in Michigan because we feel that the MDQ -- the MDEQ personnel undergo extensive training and continuing training. They hold degrees with respect to their job responsibilities and that experience arises from our experience with both the MDEQ and the EPA. We've been waiting for seven years for a permit that the EPA has chosen to give standing to the opposition based on nebulous science issues. We believe that the Michigan staff is much better trained and can address these issues and is much more open to discussion. We have not had that experience with the EPA in Chicago.

We believe the MDEQ personnel possess comprehensive understanding of the local geology, the hydrology, well bore design, and implementation. They have witnessed the drilling and completion of wells. They understand how it's done. They understand the mechanisms and they also understand the environment of the area. They interface with the state -- other state agencies quite well;

that would be wetlands and the groundwater groups and the environment -- various environmental groups as well.

They're open to elected personnel and discussions with them.

So it's our feeling that it will foster a much better business relationship for us. These days you must have a relationship with the local groups in order to get anything done in Michigan, and we believe having everything on the local level will foster a better relationship which will transfer into a better result for us.

 $$\operatorname{MR}.\ \operatorname{ARMBRUSTER}$:$$ The next commenter is Dave Farner.

Aside, though, from the oil and gas experience, I

mean, I'm also here, I guess, on the record as a citizen, taxpayer, resident of Michigan. I think that's equally as important as all of us who are members of the industry, but, you know, protection of the groundwater is very important to me, my family. We have property on Torch Lake, cherish it. It's been in the family for over 50 years, a water well that we use for drinking water, and so groundwater is a big deal to my family and myself and, like many other Michiganders, like the fish, rivers, streams, lakes. So I strongly support this movement to get the primacy of these rules with the state of Michigan. I just -- I trust the MDEQ more than I do out-of-state federal EPA folks to look after this.

I'm also concerned, obviously, like the rest of the folks here in the oil industry. We've seen and had experience with delays and, you know, what we feel are simple permits that take forever to get processed. To be honest with you, and like many in this room, we've seen EPA officials -- you know, they ask the wrong questions. I've been -- heard complaints that they have a lack of staff.

Just -- just not getting things done in a timely manner.

We all know disposal wells are an important part of the process of producing oil and natural gas in Michigan and nationwide. The wells cut down on truck traffic.

They're a safe alternative to carrying this produced waste on our roads. I've operated many disposal wells and know

these provide a safe and proven means of handling wastewater from our wells.

It's my understanding that 43 states have primacy over Class II injection wells, and the way I see it, that to me says a lot. I mean, the fact that you've got regulatory staff in all these other states that have come to the point where they feel managing these rules at a state level is more important I think speaks volumes. And so -- so I strongly support State of Michigan being granted primacy for administrating the UIC program and the sooner the better. Thanks for the opportunity.

MR. ARMBRUSTER: Our next commenter is James R.

Neal.

MR. JAMES R. NEAL: My name is James R. Neal and my address is

16 . I --

REPORTER: Spell your name, please?

MR. JAMES R. NEAL: N-e-a-l. I assist companies in seeking regulatory approval to inject fluids into reservoirs for enhanced oil recovery. I share the comments that have been made today and ask that this rules package pass with regard to strengthening and clarifying requirements for the construction, operation, and monitoring of wells used to inject fluids associated with oil and gas.

In my particular case, the injection of fluids is

focused on production; the injection of CO2 and water and
natural gas to enhance oil production. We urge that you
concentrate regulatory functions in that regard in one
agency, the DEQ. We feel that the DEQ has all the
administrative experience of to administer the program in
an efficient and effective way to avoid inefficiencies,
duplication of effort, and waste of time. We ask that you
move forward and adopt the Class II injection rules as soon
as possible. Thank you.

MR. ARMBRUSTER: The next card, they didn't mark either way whether they wanted to make a statement, so I will offer it up, and I'm sorry if I get the last name wrong. Jeff Ostahowski?

MR. JEFF OSTAHOWSKI: Yes, hello. My name is Jeff Ostahowski. I'm with Michigan Citizens for Water Conservation.

REPORTER: Could you spell your name, please?

MR. JEFF OSTAHOWSKI: Sure. O-s-t-a-h-o-w-s-k-i. We appreciate the opportunity to make comments on your proposed changes governing the operation of injection wells in Michigan, and we believe that you're tinkering around the edges of a largely inept and failing system. The U.S. EPA has permitted 1800 wells in region five -- 1700 are in Michigan -- and that's only in part related to the oil and gas industry that's here.

Basically, what my comments will say is that we need to stop using freshwater for oil and gas enhancement activities. We need to use oil -- we need to use the brine water that is used throughout much of the West, and, frankly, in many states, using freshwater for oil and gas enhancement is prohibited by law. We don't have enough. We don't have enough water to support continuous operation for oil and gas recovery.

Okay. Let me get back to this. We do recognize this will be a major change, but it's long past due and you only need to go to many of the other states and their oil and gas enhancement activities and see the trucks standing there with the brine that they will be using to increase their production.

The next problem that we have with your program deals with the unlimited nature of your permitting. Once a well gets permitted, it really doesn't matter how many days it seems to run. So, in essence, by not having a limit according to new science that was issued by the U.S. Geological Survey in March of 2016, at some point in time you almost guarantee that there will be an earthquake. It may be 40 or 50 months from now or it may be 40 or 50 months from now. But unlimited disposal without regulation of the total amount will, in fact, produce the changes that physics will demand.

So the second point in that is that there are a number of wells -- injection wells that are within a quarter mile, half mile, or two miles. It doesn't matter. Most of this stuff everyone believes will spread out at least two miles. But if you have two wells within two miles -- two injection wells, you don't necessarily double the physics and probably are hastening an earthquake at some point in time. I don't have to tell you what's happened in Oklahoma. Twenty years ago they may have had one earthquake. They've been averaging three to four a day for the last two years, and you know it and I know it. And we don't need that in Michigan.

Okay. The next issue deals with the earthquake that Michigan had in May of 2015, and you know it was right around the Kalamazoo area. It was a 4.2 earthquake on the Richter scale. Geologists say that anywhere within a 200-mile radius a 4.2 earthquake can affect the strata. You have not taken into consideration and have not done the well samples that are needed to assure that the confining strata is intact. You need to do that, and you need to make a comment, in my opinion -- in our opinion -- on every well that's in the Lower Peninsula, because every well was virtually within that 200 mile radius.

I'm skipping stuff, because it's kind of long, but
I will leave this with you so you have whatever benefit or

1 non-benefit it might be.

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The next deals with import of waste from other states, injection well import of waste from other states. First, we believe that all that needs to be tested before it gets put into permanent storage underground in our state, and it's not being tested currently. There are no manifests that tell what is exactly going down and there needs to be a manifest system that handles the identification of the contaminants from its source to the well if, in fact, it gets to be disposed. In terms of radioactivity, that's another issue you're trying to address with these, but our position is radioactivity -- radioactive waste should not be disposed of in injection wells that have no containerization. So if you're going to have an injection well and permit radioactive waste, you need to have an engineer containerization that is suitable to protect those wastes.

 $$\operatorname{MR}.$$ ARMBRUSTER: I'm sorry. I'm going to have to stop you there, and if we have time at the end I'll be happy to --

MR. JEFF OSTAHOWSKI: Okay. We will do that.

MR. ARMBRUSTER: -- offer to bring you back up.

MR. JEFF OSTAHOWSKI: Okay. You can have this for what it -- what value you may possess it.

MR. FITCH: Is there other commenters?

1 MR. ARMBRUSTER: There are a few more commenters,
2 yes. Our next commenter is Peggy Case.

MS. PEGGY CASE: I'm Peggy Case, C-a-s-e, president of the Michigan Citizens for Water Conservation. We have right now noticed that -- of course, that the EPA is completely dysfunctional, so, you know, the issue of primacy is kind of a weird issue right at the moment, but we're hoping that that will be a -- not a permanent position. We're hoping that eventually they will, in fact, start functioning again.

We do not support primacy for the DEQ primarily because we don't see that the DEQ has done the work that it needs to do on these injection wells so far. If you have changed the rules so that there are stronger rules, we would certainly support a lot of those rules. We've looked at some of them. We think perhaps some of them will make things better, but currently the DEQ simply doesn't do the job that we think they need to do with the injection wells. They -- it has not designed any permits that we're aware of. You have not been willing to do more than just do what the industry has asked you to do and grant these permits in a rapid way. We don't -- we're not really interested in the speedy permitting of an injection well if you have not examined the area around it; if you have not examined where the old well bores are.

In the one township that we sent you data on a long time ago, showing that there were 115 old well bores in the area where an injection well was being proposed, it didn't seem to matter. Most of us -- many of us have wells. We get our drinking water from wells. I live up in Benzie County. We're all pretty much dependent on wells. And so the issue of having an injection well, you know, with that taking toxic waste, perhaps from Pennsylvania, and putting it down below our aqua filters when there's all these other -- this pincushion effect already -- the holes are already there -- and you're not willing to examine the condition of those old well bores and didn't even know about most of the ones that we reported to you.

So we're hopeful that the DEQ will do its job better. We would really like to support you in doing that, but right now we don't see that that's happening with the injection wells. So we don't -- we don't really want to grant primacy. We think that the DEQ, in fact, should be listening more to the people who are ones that you are supposed to be serving under the Public Trust Doctrine. It's the people in Michigan. It's their water. The drinking water belongs to them. It doesn't belong to the oil and gas industry; and, therefore, it should not be threatened by the oil and gas industry. And so your job is to work for us. That's who we want you to work for.

So we're in favor of strengthening the rules and it looks like in some cases you've done that with your new -- with your new rules, but there are some pieces of it that are not quite right yet. There's some things about the radioactive waste -- and we're going to be submitting a second set of comments pretty soon that will hopefully pinpoint some of those places. It doesn't really address the issue of out-of-state waste properly and the testing of that waste. We don't think you should accept out-of-state waste in the first place.

And then there's another issue about the FOIA. This new set of rules seems to limit our ability to get information and the public deserves the ability to get information. So we don't want any rules that will limit our ability to ask you what's going on with the wells in our neighborhood. What do you know about the injection wells that are up where I live? More of them are being suggested for permits. I want to know what you know about the one in my township that's about to go in, and if I don't have the right through FOIA, I don't have the right to do anything about it. So I think that's it for me. Thank you.

MR. ARMBRUSTER: Our next speaker is Karen Turnbull.

MS. KAREN TURNBULL: I'm going to pass. Thank you.

MR. ARMBRUSTER: Okay. Our next commenter is Wendy Nystrom.

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MS. WENDY NYSTROM: Hello. I'm Wendy Nystrom, N-y-s-t-r-o-m. Do you need any other information? I'm a board member on the Michigan Citizens for Water Conservation I became involved when they were going to put them also. in -- well, they did, where you allowed an injection well to go in Barry County where everyone is on well water there; even the schools, the businesses. And I don't find the permit process very strict on protecting the water, and what I would like to see in the rules change is a moratorium on all injection wells right now, new injection wells, so that you can go and take the time to test and monitor and check the safety of the water and the strata, as Jeff talked about earlier, of the current inject -- 17 -- over 1700 injection wells currently in operation. I have spoke to people at the DEQ and they have told me they don't have the personnel to check. We -- they trust the energy companies.

Also, as -- the EPA says the same thing. "We don't have enough staff to check." Why? I don't -- I don't want Michigan to turn into a dump site. I don't know why we're encouraging Michigan with the most water in the country out of -- it is the most valuable resource, and we need to strengthen all the rules for protecting the water, and these companies will come here no matter what. And

telling them "you've either got to follow" -- we need to redo our water protection rules. It's not going to last forever if we continue to allow this toxic dumping below ground, and we already have lots of damaged water that we haven't fixed. Not all of it, I'm not saying, is from the energy companies, but we really need to reevaluate this Type II and we cannot allow toxic waste to come into the state to be dumped here. We need to protect the water at all costs; otherwise, my children and my grandchildren -- if I ever have any -- will not have any clean water. Thank you.

MR. ARMBRUSTER: The next commenter is Pamela Gilbert.

MS. PAMELA GILBERT: Gilbert, G-i-l-b-e-r-t,
Pamela. I'm on the board of Michigan Citizens for Water
Conservation. Unlike some of those that have spoken before
me, I'm here as a citizen. I know they are also. But I'm
here to protect the water of our state. Twenty-one percent
of the freshwater of the entire world is here, and I
appreciate what you do. I really do, because without you
making the laws and the rules and the regulations, we
wouldn't have something that we all need in order to
survive. And so let it be known they are appreciated, but I
agree that our rules need to strengthen and very much so.
I'll read to you just a little bit of what I've prepared
here.

Twenty years ago in the state of Oklahoma they had no earthquakes. Ten years ago in the state of Oklahoma they had four earthquakes. And for the past three years, the state of Oklahoma has had more than 1,000 earthquakes. All of them are produced by unregulated, long-term disposal of toxic brine in Class II injection wells. That's what I'm hearing are some reasons why they want primacy. I'm thinking maybe we need you on board a lot firmer than what you are now.

So in March of 2016, the United States Geological Survey made the scientific finding that injection wells can cause earthquakes. The DEQ must change this injection well policy, allowing for the unlimited permanent disposal of contaminants and toxic brine in the DEQ-permitted injection wells. There must be a finite maximum disposal amount and a finite operational time period for the operation of an injection well in Michigan. As it presently stands, allowing for continued operation of an injection well without a total maximum amount insures that most -- insures that at some point in the future the injection well will induce an earthquake. It may take 20 years or 50 years, but continued disposal will eventually cause an earthquake.

Michigan does not need to be an Oklahoma in waiting.

The DEQ needs to place maximum allowable disposable amounts on every disposal well in Michigan.

There also should be consideration given to the operations permitting for a defined period, perhaps ten years, for operational permits. Most freshwater aquifers are found between the surface and 600 feet down. Most injection wells are below 2,500 feet and many are considerably lower the distance between the injection well area and the bottom of the aquifer. A serious problem is that a 4.2 scale earthquake can affect the strata anywhere with a 200-mile --within a 200-mile radius. The effect could be to destroy the confining number of the strata exposing the aquifer to the disposal contaminants.

We can find no factoring in of this earthquake by the DEQ. It appears as though the DEQ position is to disregard the possible effects of this earthquake and trust that the confining strata before it issues the permits for injections wells that's there. Trusting that the confining strata have not been affected by this earthquake is a response -- is irresponsible or not even a responsible position for the DEQ to take.

MCWC asks that the DEQ comment on the condition of the confining strata on every future injection well permit located in the Lower Peninsula of Michigan. Thank you for listening.

MR. ARMBRUSTER: Now, that was the end of the registration cards I have. Before I offer to bring -- and

T	Τ.Ι	m going	to	mess	your	name	up	again,	T . W	sorry	

Ostahowski? Before I offer to give you five more minutes,

3 are there any additional registration cards or comments?

No?

MR. JEFF OSTAHOWSKI: I'll leave my hat up here this time.

MR. ARMBRUSTER: That's fine.

MR. JEFF OSTAHOWSKI: Thank you very much. My name is Jeff Ostahowski again; same guy. The first comment I would have is that hopefully this won't be the last public hearing that you have on this matter. This is a critical set of rules that you are considering, and obviously there's a lot of people here who are cognizant of it, but there's also a lot of people who, in my opinion, would love to comment on these rules. So that's the first question that I would have is hopefully you can have another hearing, and perhaps even extend the comment period for another 30 days.

This is a serious issue. It deals with many sites, not all injection wells, but it has to deal with what's called flow or transfer lines from existing operations that are contiguous. There's no maps. You don't have a map. The EPA doesn't have a map, and the Public Service Commission -- the Public Service Commission does not have a map. No one knows where these flow lines or no regulatory body knows where these flow lines are. It's my

understanding that once a year you'll request -- the industries say that they've checked the lines and the safety blow back preventers have been changed if they needed to be changed, but a lot of these safety valves have urethane rings and they are susceptible to actually be integrated by SO2 gas and other corrosive gases. So it's not an issue that should be taken lightly, and it's our opinion -- Michigan Citizens for Water Conservation -- is that you can do no regulation on this area without knowing where it's at. So we ask that you develop with the industry -- because I'm sure you're going to need their help -- maps that you can actually do your own monitoring from if, in fact, it needs to come to that.

Okay. One of the other issues has to deal with the trend in the industry for injection wells to be serviced by secondary companies. We will call them contracted companies. A great many of them are LLCs. Limited liability corporations, by definition, limit liability. And our understanding is currently you have a \$250,000 operating bond that is basically for plugging a well, and that's really all the bonding that you do. These LLC companies aren't bonded, and if they're not operating the well but transporting the well and operating the injection well, the contamination needs to be protected, and LLCs are not going to protect the aquifer if, in fact, it gets spoiled, and

there are a list of spoiled aquifers that you can get from the DEQ. You have a whole list of them, and many of them are gas and oil related. So it's not like it can't happen, it does happen.

Now, how you go about establishing some kind of bonding or enough bonding to protect -- I do believe that also get into the whole issue of risk. If you have a well that's right on top of a small city and that small city does not have an -- any public option for other water, you may want to require a different site. We do know that in spite of the rules for only examining wells within a quarter mile, that most of the contamination, given the operation of any length of time, will go out much further than that; two, three, four miles easy. So there's a lot of potential here and you're not covering enough of those kinds of considerations. How you factor in and how you evaluate risk, I think you need a whole departmental issue to take that up and consider it in its entirety, because it's a huge issue, and I think it affects the future in big ways.

I'm just about done, believe it or not. There are numerous safety issues that we will be responding to in a separate letter under the comment period. We do appreciate the opportunity to speak before you today. We do request that you have another public hearing and perhaps extend the extension period for comments. But, irrespective, this is a

Τ	good opportunity and we appreciate it very much. Thank you.
2	MR. ARMBRUSTER: Okay. Having no further
3	speakers, this public hearing is concluded. Thank you for
4	your comments and cooperation. We appreciate your interest
5	in the proposed Part 615 Administrative Rule revisions and
6	that you took the time to be here today.
7	As previously mentioned, the public comment period
8	ends Friday, March 16th, 2018. In order to be included for
9	consideration, comments must be received, not postmarked, by
10	5:00 p.m. on March 16th, 2018. Please submit any additional
11	comments in writing to DEQ-OGMDpubliccomments@michigan.gov.
12	This hearing is now closed. Thank you again.
13	(Proceedings concluded at 7:08 p.m.)
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