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Ms. Eurika Durr, Clerk of the Board
Environmental Appeals Board
U.S. Environmental Protection Agency
1201 Constitution Avenue, NW
WJC East Building, Room 3334
Washington, DC 20004

Via Electronic Mail Filing

RE: Filing of Petitioner Reply Brief to EPA Response to Petition No. UIC 19-02 – Permit No.
MI-035-2R-0034

Dear Ms. Durr:

Enclosed, please find Proof of Service and Petitioner Reply Brief to EPA Response to Petition No. 19-02 regarding the above referenced matter.

Please do not hesitate to contact me with any questions and concerns you should have.

Sincerely,

Emerson Joseph Addison III
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ENVIRONMENTAL APPEALS BOARD

-----)
IN RE:)
)
Muskegon Development Company)
Mount Pleasant, MI)
Holcomb 1-22 Facility)
)
Underground Injection Control)
PERMIT NO. MI-035-2R-0034)
-----)

UIC Appeal NO. 19-02

PETITIONER REPLY BRIEF
TO
EPA REGION 5 RESPONSE
TO
PETITION FOR REVIEW, UIC APPEAL NO. 19-02
UIC PERMIT MI-035-2R-0034

CERTIFICATE OF SERVICE

10 December, 2019

I hereby certify that copies of the foregoing PETITIONER REPLY BRIEF TO EPA REGION 5 RESPONSE TO PETITION FOR REVIEW, UIC APPEAL NO. 19-02 UIC PERMIT MI-035-2R-0034 Clare County, Michigan Issued to Muskegon Development Company (Permit No. MI-035-2R-0034), Holcomb 1-22 Well, were served by Electronic Mail (email) the following persons, on the day of 10 December, 2019.

By electronic filing to:

*

Clerk of the Board

U.S. Environmental Protection Agency

Environmental Appeals Board

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Washington, DC 20460-0001

By electronic mail to:

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DATED: 10 December, 2019

Sincerely,

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Response Brief: ORDER TO SHOW CAUSE WHY PETITION SHOULD NOT BE DISMISSED FOR LACK OF JURISDICTION Draft Class II Permit in Clare County, Michigan Issued to Muskegon Development Company (Permit No. MI-035-2R-0034), Holcomb 1-22 Well 10 – 11, 14 – 20

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61111 Report of Loss or Spill 2017-06-01.pdf

61111 Record of Well Completion 11-08-2015.pdf

EPA Region 5's Response to Petition for Review.pdf

PSE__Cement_Failure_Causes_and_Rate_Analaysis_Jan_2013_Ingraffea.pdf

Response Brief for Oder to Show Cause MI-035-2R-0034.pdf

Revised Response to Comments on Draft Class II Permit in Clare County, Michigan, Issued to Muskegon Development Company (Permit No. MI-035-2R-0034), Holcomb 1-22 Well.pdf

Revised Petition for Review and Petitioner Response to EPA Revised Response to Comments on Draft Class II Permit in Clare County, Michigan Issued to Muskegon Development Company (Permit No. MI-035-2R-0034), Holcomb 1-22 Well.pdf

STATEMENT OF COMPLIANCE WITH WORD LIMITATION

This brief complies with the 7,000-word limitation found at 40 C.F.R. § 124.19 (d)(3).
See 40 C.F.R. § 124.19 (d)(1)(iv).

PETITIONER REPLY BRIEF TO EPA REGION 5 RESPONSE TO PETITION FOR REVIEW
UIC APPEAL NO. 19-02 UIC PERMIT MI-035-2R-0034

Contrary to what EPA Region 5 argues in its Response to the Petition for Review, the Petition for Review of Permit MI-035-2R-0034, filed on 25 October, 2019, has successfully demonstrated a number of contradictions in EPA policy, flaws in oversight, regulation, monitoring, inconsistencies in EPA arguments, and, most importantly, erroneous findings of fact and conclusions of law that warrant exercise in EAB discretion and policy consideration. Together, these flaws constitute grounds for remand of this permit.

It is undeniable that there is very poor monitoring of these wells, despite the claims in the EPA mission statement that “Federal laws protecting human health and the environment are administered and enforced fairly, effectively and as Congress intended” (EPA mission statement).

Indeed, EPA Region 5 inadvertently admitted this when it introduced statistics on well monitoring and oversight to these proceedings:

In federal fiscal year 2017, EPA inspected 518 wells, reviewed 13,560 monitoring reports, witnessed 226 mechanical integrity tests, reviewed reports from 32 well mechanical integrity or geologic reservoir tests, and issued four information collection orders.

- Revised Response to Comments on Draft Class II Permit in Clare County, Michigan, Issued to Muskegon Development Company (Permit No. MI-035-2R-0034), Holcomb 1-22 Well (page 22)

As I have previously argued, these numbers are insignificant when one considers that the EPA is responsible for overseeing over 900,000 active oil and gas wells:

518 inspections out of 900,000 wells is insignificant. Reviewing 13,560 monitoring reports out of 900,000 is about 1.5%, which is also insignificant. Those are the best number the EPA puts up in the monitoring department, and those are just reports. Not on-site inspections or technical analysis. 226 mechanical integrity tests out of 900,000 is even less significant than the 518 inspections. 32 report reviews from mechanical integrity or geologic reservoir testing is pathetic. And only 4 orders for information collection? To put that one in perspective, the odds of being struck by lightning in a given year in the United States are approximately 1 in 700,000 (Google). From the

perspective of an oil and gas operator, the odds of being struck by lightning over a 4 year time span are significantly higher than the odds of being asked for more information in any single given year.

- Response Brief: ORDER TO SHOW CAUSE WHY PETITION SHOULD NOT BE DISMISSED FOR LACK OF JURISDICTION Draft Class II Permit in Clare County, Michigan Issued to Muskegon Development Company (Permit No. MI-035-2R-0034), Holcomb 1-22 Well (pages 11 – 12); Revised Petition for Review and Response to Revised Response to Comments (pages 14, 15).

In its response to the Petition for Review, EPA Region 5 argues that its response to comment 20 was adequate, stating that it went beyond the requirements of 40 C.F.R. 124 for public participation. It argues that conditions in the final permit will effectively protect USDWs upon which the public relies. (pages 8 - 13)

Unfortunately, this is an impossible statement to make. How many times has the EPA issued a permit with the expectation that there will be problems? That a well will experience a failure of some kind? That it will leak, endangering the public? Or that human error in well operation will endanger the public? If the EPA expected problems, leaks, failures, or other such occurrences, would it still issue a permit? Is the public to believe that the EPA routinely and knowingly allows dangerous wells? That it routinely issues permits that it knows will not protect the public? Of course not. If problems were expected, then hopefully, no permit would have been issued. Yet problems occur.

In its response to the petition, EPA Region 5 argues that the well is designed with multiple barriers, steel casings, cements between casings, injection through steel tubing, annuls fluid to monitor and contain any future leaks from the tubing. Unfortunately, most wells contain these safeguards, yet accidents happen. (EPA REGION 5'S RESPONSE TO PETITION FOR REVIEW, pages 9 – 11, 14)

EPA also argues that the geology of the site contains multiple formations of impermeable rock to prevent upward migration of fluid leaks. This is simply not true. Perhaps the geology of the area *used to* contain multiple layers of impermeable rock, but then some people drilled a damn hole through these multiple formations of impermeable rock, meaning the rock has now been permeated. And there are other wells in the area, where other people drilled other holes through what used to be multiple layers of impermeable rock. So basically, the rock is no longer impermeable (EPA REGION 5'S RESPONSE TO PETITION FOR REVIEW, page 9).

EPA Region 5 next lists the various technical and operational specifications for this well (EPA REGION 5'S RESPONSE TO PETITION FOR REVIEW, pages 9 – 11). And that's great. The problem is that every well has technical and operational specifications that are designed to prevent accidents from happening, yet accidents still occur. But if (when?) accidents happen in this community, which the EPA – through its use of the EJ Screen tool – has already acknowledged is poor, the people aren't going to have the money to deal with it, or to even properly test their own drinking water wells so that they can know what they've been exposed to or whether or not their water has been affected.

On page 11 of its Response, EPA Region 5 claims that “petitioner dismisses these safeguards as ‘bureaucratic regulation and technical specifications’ without explaining why these technical regulatory requirements are not sufficient to protect against endangerment.”

There are lots of things that can go wrong. Thus, it should be the EPA and Muskegon that have the burden of explaining why “bureaucratic regulation and technical specifications” fail to prevent 5% of wells from having failures. Those wells have technical specifications, too. Every well that gets drilled has a bunch of “bureaucratic regulation and technical specifications” that are designed to prevent problems, yet over 1 in 20 have failures. Why is this? If EPA regulations are sufficient, why is the failure rate so high? 1 in 20 is bad odds when you're risking the safety, well-being, and peace of mind of a community. But EPA Region 5 is doing it anyway.

Indeed, the fact that so many people attended the various public participation meetings and gave comments should tell you that the community is not OK with this. EPA Region 5 knows this, as it claims to have gone above and beyond to include the public.

Adding insult to injury, EPA Region 5 repeatedly cites *In re Jordan Development Co.*, 18__E.A.D. (EPA REGION 5'S RESPONSE TO PETITION FOR REVIEW, pages 11 – 17). Well, since the EPA brings up the recent Jordan Development case (a case I know something about), I'd like to bring it to the attention of the EAB that on 6/1/2017 at 19:30 hours, a spill occurred at Jordan Development Grove 13-11 (61111 Report of Loss or Spill 2017-06-01). It was a “loading / unloading release.” If I'm not mistaken, the permit for this well (and the very recently-issued new permit allowing it to be converted into a disposal well) contained the same sorts of “bureaucratic regulation and technical specifications” that we're now being asked to trust regarding the Muskegon well.

Wonderful. Oh well, hopefully this well will fare better and no accidents will occur this time. But we can't assume this. The nearby Jordan well, which, in only 4 years of operation has already had

an accident, demonstrates that clearly EPA regulations are not infallible. And for the record, I would like to request the EAB officially note the irony of EPA Region 5 citing a case for a nearby well that recently had a spill as part of its effort to assuage public doubt for the Muskegon well.

I would also like to note that the Jordan Grove 13-11 well was completed in 2015 (61111 Record of Well Completion 11-08-2015). It's a recent well. Indeed, it makes me wonder if Jordan ever intended this as a production well, or if they just wanted to dig a toilet in our community. Come to think of it, is Muskegon planning to turn this one into a toilet when they are done with their "enhanced" oil recovery? I know, this is beyond the jurisdiction of the EAB.

Although EPA Region 5 has argued that the high rate of failures in the Marcellus Shale region is irrelevant to the Muskegon well or to other wells in this area, in making this argument, EPA Region 5, again, inadvertently acknowledged that there are some serious problems in the Marcellus Shale region due to oil and gas activities (EPA REGION 5'S RESPONSE TO PETITION FOR REVIEW, pages 14, 16 - 17). Did the EPA expect these problems when issuing the permits for those wells? Do the EPA and oil and gas operators ever expect serious problems? People make mistakes. Casings fail. Wells leak. In plain English, stuff happens and everyone knows it.

Because unexpected problems do occur, both the EPA and the State of Michigan recommend additional testing for drinking water wells when there are new oil and gas operations nearby. These tests cost money. Again, this is a poor area, and the EPA knows it, which is why the EPA took additional measures to include the community as part of its Environmental Justice efforts. All of this is part of the record of this challenge. Moreover, these facts demonstrate considerable inconsistency in EPA policy. On the one hand, the EPA acknowledges the community is poor. On the other hand, EPA approves a project that will require the residents to spend additional money (which many of them do not have) for additional testing.

I'd also like to note that as previously argued, many people in the community lack college (or even high school) degrees, and therefore might have serious difficulties researching exactly what additional testing to have done.

Clearly, these facts demonstrate "a finding of fact or conclusion of law that is clearly erroneous," and therefore warrant "an exercise of discretion or an important policy consideration that the [EAB] should, in its discretion, review." (The Environmental Appeals Board Practice Manual, pages 54 – 55)

EPA Region 5 also argues that, due to differences in geology, and type and function of the wells, the Ingraffea study is not applicable (EPA REGION 5'S RESPONSE TO PETITION FOR REVIEW, pages 14, 16 – 17). This is simply not true. As previously argued in both the Petition for Review and in the Reply Brief to demonstrate jurisdiction, the study largely concerns matters of well construction and design, and that these aspects of injection wells are done according to industry standards which apply to most wells. Thus, most of the problems that can occur in fracking wells (and many, many problems have occurred in the Marcellus Shale region) can occur in regular injection wells, as well (pun intended).

Furthermore, differences in geology between this area and the Marcellus Shale region are not the sole determinant of possible problems. Any well can have a casing failure. Any well can be drilled incorrectly. Any well can leak or have an accident (again, the Jordan well recently had a spill and it had NOTHING to do with the flaws discussed in the Ingraffea paper). The Muskegon Development well is not immune.

Additionally, as I have argued in the Petition for Review and the Reply Brief to the Order to Show Cause, I personally spoke with Professor Emeritus Ingraffea. He said I'm right. Moreover, he gave me permission to include his phone number so you can ask him yourself. Here is his number again so that you don't have to look it up: 607-351-0043. As previously noted in every document I have submitted in this case, Professor Ingraffea is eminently qualified to render this judgment on the Muskegon well. He is a Professor Emeritus of Civil and Environmental Engineering from an Ivy League University (Cornell). Please call him. He told me he would be happy to clear this matter up. He was more than happy to speak to me, and I'm just one citizen who has no power or authority in this matter whatsoever. He is happy to speak to the EAB, as you are the final authority in this. (Revised Petition for Review and Response to Revised Response to Comments, pages 13 – 14; Response Brief to Order to Show Cause, pages 10, 13)

I would now like to go back to page 11 of Region 5's Response Brief, where it is argued that "on matters that are fundamentally technical or scientific in nature, the Board typically defers to the permit issuer's technical expertise and experience..." Well, Professor Emeritus Ingraffea has a great deal of technical expertise and experience, I suspect far more than the Permit Issuer. I promise you, he's published more papers on this subject. So doesn't it make sense to ask his opinion (which happens to contradict EPA Region 5's)?

EPA Region 5 continues to argue that my real challenge is to the sufficiency of UIC regulations (EPA REGION 5'S RESPONSE TO PETITION FOR REVIEW, pages 15 – 18). This is a mischaracterization of my argument, and as such, is not true.

Again, if the community had money, it wouldn't be nearly as big of an issue. And again, EPA Region 5, by its actions in going above and beyond the call of duty in providing additional opportunities for participation under its Environmental Justice policy, has admitted that the community doesn't have money:

Specifically, with respect to public participation, the Region explained that it went beyond the requirements of 40 C.F.R. part 124, allowing for two comment periods, an additional public meeting, and an extension of the comment period to meet the needs of the community.

- EPA Region 5's Response to Petition for Review, page 9

My own personal views on the sufficiency of EPA regulations are not the issue. Nor is the sufficiency of EPA regulations in general. This particular problem is, and what I've been arguing, that due to the low income status of this community, the safeguards in the permit are insufficient. It is not specifically about the sufficiency of EPA regulations. Nor am I arguing that the regulations are insufficient for all low income communities. I do not know the details of all wells in all poor communities – I am only familiar with this well and this community. As such, the fact that EPA Region 5 claims to have basically bent over backwards to accommodate this community under its Environmental Justice policies should be evidence that there are some very serious economic concerns in play here that do not apply to other communities. Thus, the actions of EPA Region 5 demonstrate that this particular community is an exceptional case. EPA Region 5 does claim to have taken considerable measures to include the community.

The fact that EPA Region 5, by its own argument, would go out of its way to the lengths that it did because of the poverty in the area, when coupled with guidelines and recommendations for additional (expensive) testing of private wells (which are the only source of drinking water in this community) seems to be a serious flaw in logic.

According to the Practice Manual, "the petition must show that the permit condition in question is based on "a finding of fact or conclusion of law that is clearly erroneous," or "an exercise of discretion or an important policy consideration that the [EAB] should, in its discretion, review." (The Environmental Appeals Board Practice Manual, pages 54 – 55)

I submit that the actions of EPA Region 5 regarding this case are evidence that both of the above conditions for review have been met.

EPA Region 5 also argues that “Petitioner failed to demonstrate that the Region’s response to comment 24 on remand is clearly erroneous or otherwise warrants review” (EPA REGION 5’S RESPONSE TO PETITION FOR REVIEW, page 13). On page 14, when addressing the subject of well casing failures, EPA Region 5 argues that it “included conditions in the reissued permit consistent with the regulatory requirements to prevent against such failure.” The first problem with this statement is that it implies that there is a difference in conditions between the original draft permit and the reissued permit. There isn’t. The EPA admits as much in its Revised Response to Comments:

After consideration of all public comments, EPA has determined that none of the comments submitted have raised issues which would alter EPA’s basis for determining that it is appropriate to issue Muskegon Development a permit to operate the Holcomb 1-22 injection well. Therefore, EPA is issuing a final permit to Muskegon Development. No changes have been made to the final permit from the draft permit.

- Revised Response to Comments on Draft Class II Permit in Clare County, Michigan, Issued to Muskegon Development Company (Permit No. MI-035-2R-0034), Holcomb 1-22 Well (page 22)

EPA Region 5 argues that the permit requires permittee to demonstrate mechanical integrity, no significant casing leaks, that annulus fluid pressure be used to monitor casing leakage, that the annulus pressure, multiple well casings, and cement between casings provide a barrier to contain leaks, that mechanical integrity testing be performed every 5 years or when certain conditions occur, and can be required by the region at any time, and that if there is a loss of integrity, injection must cease and the EPA must be notified, and that further mechanical integrity testing be performed before resuming operations. (EPA REGION 5’S RESPONSE TO PETITION FOR REVIEW, pages 9 – 11, 14).

Again, as previously argued, this is all standard regulatory procedure, and this kind of language is common in the injection permits the EPA issues. Yet the failure rate remains at least 1 in 20, and there are many areas of the country where injection activities have seriously impacted USDWs. Yet accidents continue to happen and well casings continue to leak.

The Ingraffea study is brought up again on page 14, and EPA Region 5 argues that “the Region has considered this study, and concluded that the injection activity discussed therein is consistently different from the permitted activity... and that the conditions in this Permit are consistent with

regulatory requirements to prevent against risk of endangerment of USDWs due to well casing failures” (EPA REGION 5’S RESPONSE TO PETITION FOR REVIEW, page 14).

Thus, EPA Region 5 again claims the Ingraffea study doesn’t apply. Again, I maintain that it does. I actually spoke to Professor Emeritus Ingraffea. He agrees with me. Please call him and ask (607-351-0043).

By erroneously dismissing a study that is about design and construction flaws – rather than geology or type of injection activity – EPA Region 5 has given grounds for review and remand of this permit. Clearly, EPA Region 5 has committed what qualifies as “a finding of fact or conclusion of law that is clearly erroneous,” and this warrants “an exercise of discretion or an important policy consideration that the [EAB] should, in its discretion, review.” (The Environmental Appeals Board Practice Manual, pages 54 – 55).

As if the above erroneous interpretation of an important scientific study wasn’t grounds enough for review and remand, on page 15 of its Response Brief, EPA Region 5 again mischaracterized the study, claiming it involves “different injection activity in another part of the country.”

I feel the need to point out that the Marcellus Shale region was not the only area of the country to provide data for this study, nor was fracking the only type of injection activity examined. Ingraffea’s study includes data from many different types of wells in many different locations, including offshore wells, nearly 315,000 onshore wells (As of May 1, 2017, there were only about 129,587 active oil and gas wells in Pennsylvania, though at the time of this study, there were far fewer. The EPA should already have records of this, as the EPA is responsible for monitoring and overseeing these wells, after all). The study also included wells from New York, Wyoming, and Alberta, Canada. Again I will point out that the Ingraffea study deals with construction and design techniques that are standard throughout the industry, and not unique to one specific type of well in one specific area of the country. If you don’t believe me, please call Professor Ingraffea. He was happy to talk to me about the study, despite having no idea who I was and no idea I would contact him. He explicitly gave me permission to invite you to call him. And Professor Ingraffea can tell you far more about his study than either I or EPA Region 5 council can. I beg the Board to use its discretion to take a few minutes and contact Professor Ingraffea to clarify this matter.

EPA Region 5 also argues that “petitioner’s additional argument based on alleged self-reporting deficiencies in the oil and gas industry should also be rejected, as if falls outside the bounds of the UIC regulatory program (EPA REGION 5’S RESPONSE TO PETITION FOR REVIEW, page 15).” This is

a flawed interpretation of both my argument and of EPA regulatory authority. As noted on page 9 of Response Brief: ORDER TO SHOW CAUSE WHY PETITION SHOULD NOT BE DISMISSED FOR LACK OF JURISDICTION Draft Class II Permit in Clare County, Michigan Issued to Muskegon Development Company (Permit No. MI-035-2R-0034), Holcomb 1-22 Well, as well as in the EPA Mission Statement, the EPA is tasked with ensuring that “Federal laws protecting human health and the environment are administered and enforced fairly, effectively and as Congress intended,” and the EPA is also responsible for ensuring that “National efforts to reduce environmental risks are based on the best available scientific information.”

I argue that, if failure rates are under-reported – as they are – and since the EPA is responsible for overseeing and monitoring these wells – as it is – by reviewing “monthly operating reports and reports on periodic testing as required of the permittee by the conditions of the permit and 40 CFR Part 124. EPA inspections and oversight verify the accuracy of the facility’s self-monitoring and reporting, and the facility is subject to penalties and sanctions for failure to comply with its obligations (Revised Response to Comments on Draft Class II Permit in Clare County, Michigan, Issued to Muskegon Development Company (Permit No. MI-035-2R-0034), Holcomb 1-22 Well, page 22),” then there is a serious problem.

Specifically, the EPA is responsible for overseeing these wells. To do this, the EPA relies largely on self-reporting by the operators of these wells. But, if there is an issue with under-reporting problems (as there is), then it makes it virtually impossible for the EPA to fulfill its obligation to provide oversight. I argue that this apparent contradiction provides grounds for review and remand of this permit, especially since, as this is a low-income community that is completely dependent on USDWs, it is far more reliant and in much greater need of EPA oversight. Moreover, should problems occur, this community will be more heavily impacted than other communities in a similar situation due to the high level of poverty present in this community. Both individually and collectively, these facts constitute “a finding of fact or conclusion of law that is clearly erroneous,” and warrant “an exercise of discretion or an important policy consideration that the [EAB] should, in its discretion, review” (The Environmental Appeals Board Practice Manual, pages 54 – 55). Thus, the Board clearly has grounds for review and remand of this permit and ample reason not to dismiss the Petition for Review.

EPA Region 5 concludes this portion of its response by, once again, arguing that Petitioner’s real challenge is about the sufficiency of the regulations themselves, and as such, that this challenge cannot be brought before the Board (page 16). However, this is an incorrect interpretation of my

challenge. The contradiction here between oversight responsibilities, the EPA mission statement, and the reliance on self-reporting does create grounds for discretion. Moreover, because this is a poor community, as already acknowledged by the EPA through its copious attempts to ensure Environmental Justice for this community through additional meetings prior to this permit being granted, it is affected more heavily by these contradictions. They don't have the money to do this themselves, and many people in the community don't even have the money for additional testing. Again, this situation creates grounds for Board discretion to review and remand the permit.

EPA Region 5 argues that Petitioner's assertion that EPA Region 5's response to comment 25 is inadequate, and should therefore be rejected on the same grounds as comment 24, rests on the same flawed reasoning. EPA Region 5 argues that well failure rates are no higher than 5% in Michigan, and that the types of failures that do occur are less serious (pages 16 – 17). Once again, EPA Region 5 misrepresents the Ingraffea study. EPA Region 5 argues that the Board lacks jurisdiction and that, "as with respect to Comment 24, Petitioner's argument... appears to be challenging the sufficiency of the underlying UIC regulations" and that "the Board is not the proper forum for such a challenge" (page 17).

This is a flawed argument. To begin, since there is an under-reporting problem, the 5% failure rate in Michigan is likely an underestimate because, again, these statistics rely largely on self-reporting. Moreover, the contrast between the stated mission objectives of the EPA to provide oversight and the questionable self-reporting upon which the EPA largely relies, when coupled with the low-income status of this community, create additional risks which warrant Board discretion, as previously argued. Again, this provides grounds for review and remand of the permit.

Lastly, EPA Region 5 addresses Comment 26 by attempting to hide behind arguments regarding lack of jurisdiction (EPA REGION 5'S RESPONSE TO PETITION FOR REVIEW, page 18). But there is a problem with this. Apart from claiming lack of jurisdiction, the EPA also attempts to assuage doubts as to safety and monitoring. EPA Region 5 gave statistics on its oversight, statistics which, when one also considers that one of the roles of the EPA is to provide oversight, reveal a problem. Indeed, as evidence of its ability to perform oversight, EPA Region 5 lists its oversight figures for 2017:

In federal fiscal year 2017, EPA inspected 518 wells, reviewed 13,560 monitoring reports, witnessed 226 mechanical integrity tests, reviewed reports from 32 well mechanical integrity or geologic reservoir tests, and issued four information collection orders.

- Revised RTC on draft (page 22)

But once again, there is the problem of quantity and odds. Although these numbers may sound significant, they are insignificant considering the number of active wells the EPA is responsible for overseeing (more than 900,000... though according to many sources well over 1 million. I encourage the EAB to consult its records as to the exact number). In its Response Brief, it would appear that EPA Region 5 acknowledges the insignificance of its oversight. Specifically, it makes this acknowledgment by not even attempting to argue that it is capable of adequate oversight. Though one might expect EPA Region 5 to defend its use of statistics, it doesn't even try. No, such a defense is conspicuously absent. Instead, it hides from the argument and changes the topic by claiming a lack of jurisdiction (page 18). I've already pointed out that the odds of being struck by lightning over a 4 year period – say, during a high school or college career (assuming you make it through in 4 years) are higher than the odds of the EPA actually requesting more information:

To put that one in perspective, the odds of being struck by lightning in a given year in the United States are approximately 1 in 700,000 (Google). From the perspective of an oil and gas operator, the odds of being struck by lightning over a 4 year time span are significantly higher than the odds of being asked for more information in any single given year.

- Response Brief: ORDER TO SHOW CAUSE WHY PETITION SHOULD NOT BE DISMISSED FOR LACK OF JURISDICTION Draft Class II Permit in Clare County, Michigan Issued to Muskegon Development Company (Permit No. MI-035-2R-0034), Holcomb 1-22 Well (page 12)

I would now like to point out that the average lifetime odds of being struck by lightning are about 1 in 3,000 (Google: “Flash facts about Lightning” – National Geographic). If the odds of this well being monitored seem good to you, then I recommend you invest your pension fund in lottery tickets and penny stocks. If your lottery tickets and penny stocks don't pan out, you won't have the money to retire on a golf course, so at least your odds of being struck by lightning will go down. It's a win-win either way!

EPA Region 5 then claims Petitioner's challenge is really about whether regulatory requirements are sufficient to protect USDWs (page 18). Again, this is a mischaracterization. It's a poor community and many people living here don't have the money to perform extra water testing for their private drinking water wells, which, again, are the only source of drinking water in this

community. This is an Environmental Justice issue. As such, it warrants the discretion of the Board. Perhaps if Muskegon Development (or the other companies engaged in gas and oil operations in this community) would pay for water testing for everyone living near the wells, it wouldn't be an issue. But this is unlikely to happen, so as it stands now, the people in this community don't have the money to do the extra testing for their own wells, and EPA Region 5, by inadvertent admission in its own pathetic arguments, is clearly incapable of proper oversight. This is a big problem, and it goes against the mission statement of the EPA and the spirit of its Environmental Justice policies.

CONCLUSION

Contrary to what EPA Region 5 argues regarding Permit No. MI-035-2R-0034, Petitioner has successfully demonstrated a number of contradictions in EPA policy, flaws in oversight, regulation, monitoring, inconsistencies in EPA arguments, and, most importantly, errors of law and fact regarding this permit.

Regarding review and remand of permits, the EAB practice manual states “the petition must show that the permit condition in question is based on “a finding of fact or conclusion of law that is clearly erroneous,” or “an exercise of discretion or an important policy consideration that the [EAB] should, in its discretion, review.” (The Environmental Appeals Board Practice Manual, pages 54 – 55)

The inability of the EPA to monitor this well goes against its mission statement. This warrants the discretion of the Board and also demands reconsideration of policy. Moreover, citing the small number of wells the EPA monitored in 2017, while neglecting to mention that the EPA oversees literally about a million wells, certainly qualifies as “a finding of fact or conclusion of law that is clearly erroneous.” This warrants discretion of the Board.

There is also the issue of the fallibility of EPA regulations regarding these wells. By its own admission, about 1 in 20 wells in Michigan have issues. There is also an under-reporting problem (thus, the number of problematic wells could be much higher). When coupled with the high poverty levels in this community and its total dependence on USDWs, this creates an Environmental Justice problem. By ignoring said Environmental Justice concerns now, despite the fact that it was bending over backwards to accommodate Environmental Justice as the permit was being applied for through additional public meetings and public inclusion efforts, EPA Region 5 is demonstrating remarkable inconsistency in its application of policy. This inconsistency is significant enough to allow the Board

to review and remand the permit based on “an exercise of discretion or an important policy consideration that the [EAB] should, in its discretion, review.”

Additionally, by misrepresenting an important scientific study as not being applicable because much of the data (though not all) came from a different geological region with an abundance of fracking wells, as opposed to regular injection wells, EPA Region 5 has committed an “erroneous finding of fact” because the study in question was about design and construction flaws, not geology or type of well.

EPA Region 5 misinterpreted a scientific study that is clearly relevant to this project.

Again, this study was about how wells are constructed and designed, not what they are used for or where they are located. But don’t take my word for it – call Dr. Ingraffea, Cornell University Professor Emeritus of Civil and Environmental Engineering. When I spoke to him, he gave me permission to give you his phone number so that you could ask him about his study. Once again, his cell phone number is: 607-351-0043. (Or, if you feel more comfortable calling his office at Cornell University: 607-255-3336.)

For these reasons, the EAB should not dismiss the Petition for Review of Muskegon Development Co. Permit No. MI-035-2R-0034, and should, accordingly, review and remand the Permit.

Respectfully,

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