

Attachment 5

To: Allan Batka
U.S. EPA, Water Division (WP-16J)
batka.allan@epa.gov

**Re. Proposed permit modifications, Michigan Potash Operating, LLC,
MI-133-11-0004, MI-133-11-0005, and MI-133-11-0006**

Hello Allan,

I am writing regarding Michigan Potash & Salt Company's application to change their operating depths, injection pressures, and other terms of their three permitted waste-wells in Osceola County, Michigan. I have a few questions/comments regarding the proposed changes to these permits.

It's my understanding that the EPA's purpose in establishing Areas Of Review (AOR's) for proposed waste-wells is to inform the agency as to where to look for old well-bores which could potentially facilitate the upward migration of pressurized injected wastes into sources of drinking water. Such well-bores may have been improperly plugged and abandoned and/or deteriorated with age.

In light of the changes being considered for the three waste-wells permitted to Michigan Potash & Salt Company (MPSC):

Q: Are these wells being permitted for use only one at a time? If they are intended to be used simultaneously, then I believe there is a serious flaw in your delineation of a combined AOR. Given that the fluids being injected are incompressible, I cannot fathom how those coming from one of these closely-spaced wells will have zero effect on the flow characteristics of fluids injected by its neighbors. Yet that appears to be the underlying assumption for the model you're using here where, for three wells spaced half a mile apart, three circular AOR's were simply piled on top of each other (see drawings below). **In those drawings, I've included what I believe to be a more realistic approximation of what your combined AOR should look like. It's also considerably larger than the one which you are using.**

This error does not make much difference as long as MPSC's wells remain situated below their 900-foot thick confining formation (Detroit River Group) as

currently permitted. This is due to the fact that nearly all of the well-bores existing at that depth are contained within your currently defined AOR. But that is almost assuredly not the case with the more heavily drilled Dundee formation which the company now wants to utilize for its waste-disposal. **For this reason, I urge you to modify the size and shape of your combined AOR accordingly.**

Q: Does the EPA's issuance of this draft decision indicate that you currently favor permitting these requested changes?

Q: Has the EPA, a/o MPSC, made any effort to inventory old well-bores which penetrated the Dundee formation during this area's many decades of intense oil and gas exploration activity?

Q: What efforts have you, a/o MPSC made to verify the integrity of those old well-bores and their ability to resist upward migration of wastes?

I have a few questions regarding methods favored by the EPA to assess the likelihood of upward waste-migration:

Q: What technologies does the EPA favor for searching out old well-bores within an AOR?

Q: What technologies does the EPA favor for evaluating the integrity of old well-bores and for assessing the probability of pressurized fluids migrating up through them?

Q: What steps does the EPA take to remedy the situation if, and when problematic old well-bores are found?

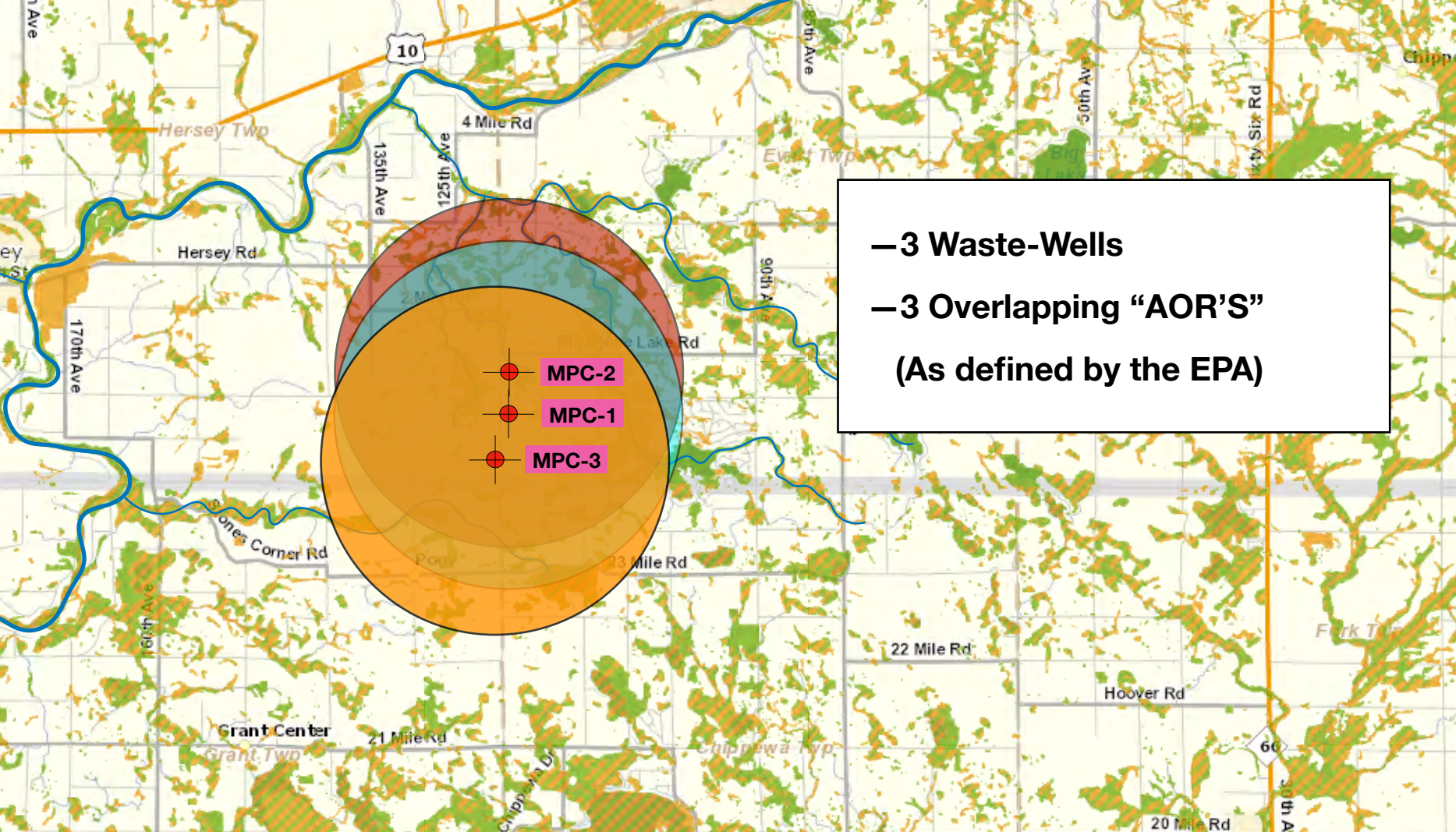
Q: Given the amount of past oil and gas exploration this area has experienced, what level of confidence do you have in your ability to locate and accurately assess the integrity of every one of those old wells and to assure us that none of them will allow waste-injection to destroy the sole source of potable water available to residents of this area?

Q: Who normally pays for costly exploration and assessment work to be performed?

Q: Under what circumstances does the EPA ultimately decide that a proposed waste-injection location simply poses too much risk to drinking water sources?

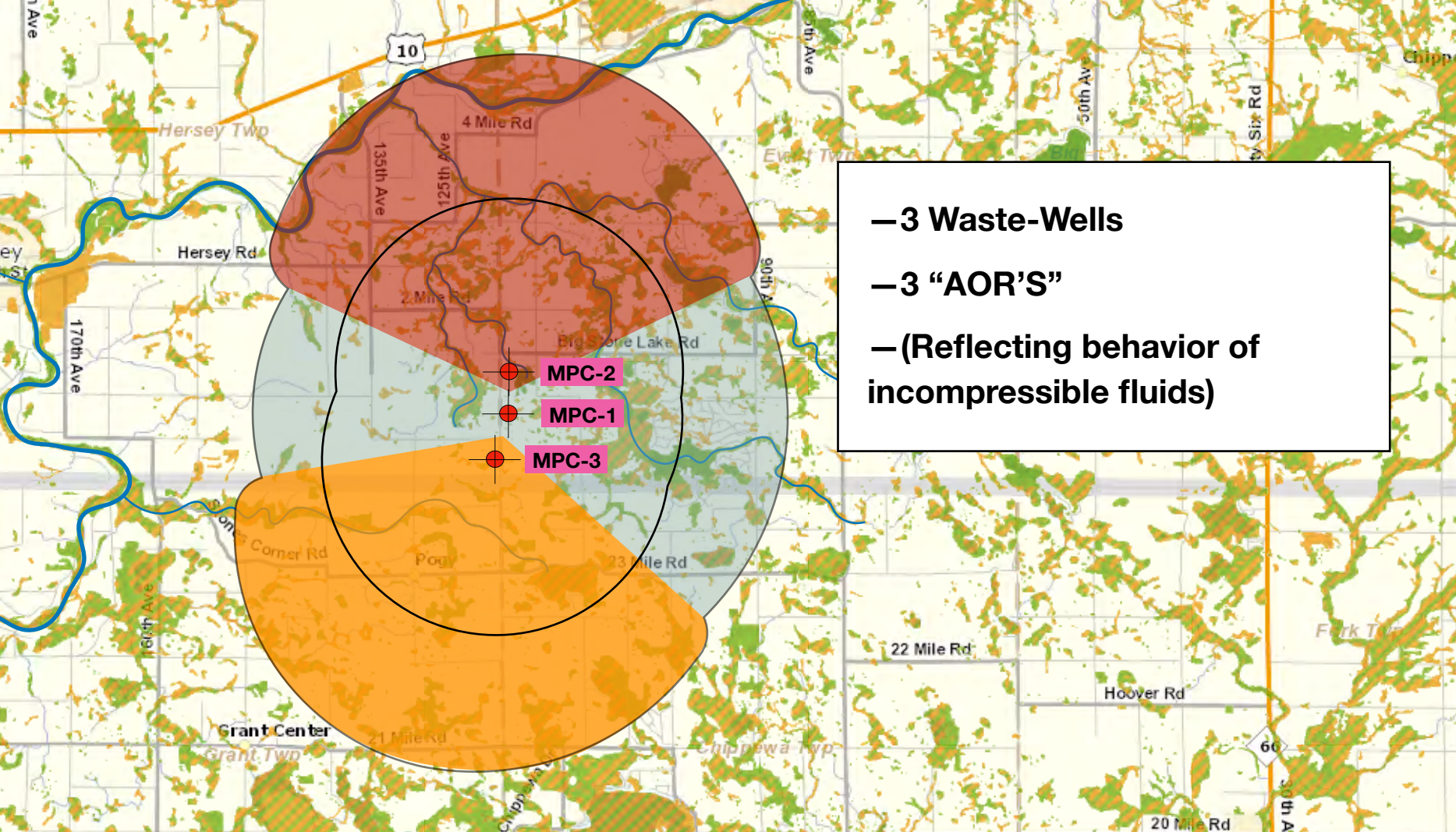
Sincerely,

Douglas C. Miller
1421 Cody Trail
Hersey, MI 49639
231-734-2563



—3 Waste-Wells

**—3 Overlapping “AOR’S”
(As defined by the EPA)**



—3 Waste-Wells

—3 “AOR’S”

—(Reflecting behavior of incompressible fluids)