PUBLIC HEARING WRITTEN TESTIMONY

PUBLIC INFORMATION HEARING
PurFrac, LLC
April 19, 2016

Johnne Smalley, E9760 Tower Rd. (780 Av), Colfax, WI 54730 (Received 4/24/16)

Please accept these comments for consideration as part of your permit application review process for PurFrac, LLC, Cooks Valley Properties Nonmetallic Mine Reclamation Plan.

Groundwater chemistry will be analyzed for the above listed analytes for a period of two years. It is proposed that after the second year of testing (and in all subsequent years) Chippewa County will consider reducing the number of analytes tested and/or the frequency of testing based on the results of waste materials and groundwater testing performed over time. Strong consideration will be given to reducing groundwater testing for analytes for which: concentrations in waste materials and groundwater are under the detection limits of analysis; or concentrations in groundwater have not increased over time, and are below the Preventative Action Limit (PAL) as listed in Wis. Admin. Code Ch. NR 140. The Operator will test for analytes in accordance with a final list approved by the County. (P. 10)

Recent groundwater studies show a greatly increased recharge rate where mining is occurring and soil is disturbed but not compacted. This increases the chance of groundwater pollution especially as the mining gets closer to the water table. Also, as mining progresses, more water is exposed to the heavy metals found some of the layers of sandstone mined. Groundwater chemistry analysis is needed much more after the initial two year start-up period and should be continued even beyond the life of the mine.

Section 2.3 No mention of when or if silt fences will be removed. There should be reference to when these will be removed and by whom. There should also be be checks done post removal to be sure the landscape is stabilized even after silt fence removal (often the removal of these fences if they have not been properly maintained will cause erosion).

Stormwater ponds and detention areas capable of managing a 100-year, 24-hour precipitation event, will be constructed at the lower elevations of the processing area (Figure 12). (P.16)

This has been proven inadequate in the past. The neighboring mine to the one proposed by PurFrac, LLC had to enlarge their stormwater pond recently because the 100-year, 24-hour precipitation event criteria is inadequate. 10 day accumulative precipitation events are not taken into consideration. This has proved to be catastrophic in the past.

2.9.2 Stormwater Management
Wet pond water quality inspections will be completed quarterly, using WDNR Quarterly Visual Inspection-Field Sheet Form 3400-176A (Appendix X, or current edition). Diversion channels, man-made swales, and culverts will also be inspected quarterly to ensure they are free from blockage and/or adequately vegetated to control on-site water flow. Records of inspections and measurements from pressure transducers will be submitted to the County within the annual site report or upon written request.

Testing of stormwater runoff for heavy metals and other possible contaminants needs to be done before release of water to watershed. The disturbed area(s) may expose stormwater to heavy metals or other contaminants.

Katherine Stahl, Colfax, WI (Received 4/24/16),

To Seth Ebel and Dan Masterpole:

The following are comments I respectfully submit for the PurFrac public hearing.

The numbers for their financial assurance calculations do not make sense. How can you add $49,300 to $616,230 and get $624,350? Also, good luck in accomplishing what you have listed for that amount of money.

Given the use of a filter press, how are the filter cakes from the filter press to be disposed? There is no address of this issue if the filter cakes include pollutants.

Recognizing NR 103.01 (3) reference to protection of biological diversity and maintenance of hydrologic cycle by way of wetlands, what assurance do we have that the accumulative impact of two adjoining sand mines on our wetlands won't be deleterious? There is no mention of the accumulative impacts of potentially altering wetlands on two large adjoining frac sand mines. It is important to have some assurance that each sand mine is not considered in isolation of the other relative to wetland preservation.

The FHTCS will not indicate whether there are threatened or endangered species present. And most land has not been surveyed for threatened or endangered species. In essence, PurFrac has given no or will not be giving any assurance that threatened or endangered species are or are not present.

The plan indicates they will generally maintain a separation from water table of 60 feet. What is the absolute minimum they will maintain from the water table? There is no specific definition of what separation they will assure and the impact that will have on infiltration.

Since metal deposits can vary from one spot to the next and water pollutants can be accumulative, it is recommended they not discontinue water testing after two years. Instead they should continue through the life of the mine and the reclamation period.

Stormwater design for a 100 year, 24 hour event has already been proven to be ineffective in the adjoining frac sand mine, given the August 2014 discharge. There have been storms within the past two years that are greater than the 100 year, 24 hour figure in addition to multiple day storms that result in saturation creating the same results as a major 24 hour rain event. Their design for 100 year 24 events is not adequate to meet the weather conditions that we have experienced in the area.

Their conceptual prairie seed mix includes seeds that are not native to our area, such as prairie dock and purple coneflower. PurFrac would be well served to use an ecologist who understands the ecology of our area rather than rely on NRCS mixes that cover a whole state wide area. Similarly Shagbark Hickory is not native to this area. Again, PurFrac would be well served to consult with a forester for their woodland reclamation planning.

Since it takes some prairie seeds years to germinate, it is unclear why ag pasture lands are monitored for 10 years and prairie lands are monitored for only 5 years. Have the land owners been advised that they will be responsible for prairie burns once the reclamation period has been closed?

Water wells are within 660 feet of the proposed mining site. If there is blasting, there is no mention of reparations if neighboring water wells are damaged or if the wells are dewatered.

Lee Boland Elk Mound, WI (Received 4/25/16)

Hello Seth and Dan,

It is noteworthy that the PurFrac application in its narrative is nearly identical (often word-for-word) to the earlier Albertville Valley / Northern Sands document. Therefore, my critique of the latter of August, 2015 is made part of this testimony unless modified by the specifics listed below or by obvious differences related to the separate locations:

Section 1.4 Wetlands

The application contains the statement "wetlands will be avoided during mining; if wetlands cannot be avoided, PurFrac will work with state and federal agencies to obtain permits for allowed wetland disturbances and will forward all permit paperwork to the County upon approval." This is an obviously duplicitous statement that needs clarification prior to any permit approval and with full public participation and concurrence. In cold water trout stream areas such as this, wetland mitigation to remote locations is simply not appropriate and does nothing to alleviate the potential and highly predictable trout waters destruction.

This particular paragraph of the application narrative is an example of how critical policy decisions are being asked to be deferred until after a permit is issued and mining is underway. These policy issues are of paramount importance to those of us who comprise "the public" and they must be exposed to public consideration, comment and consent prior to approval.

Section 1.6 Soils

How are we to be assured that one soil type won't be "reclaimed" to a different type? The importance of this sort of consideration is totally diminished by this part of the Application. No attempt has been made to assure us that this is not a critically important area of concern. Even the treatment of A and B horizon soils as related to their replacement in the "reclaimed" landscape is cavalier at best; there is no definite commitment to keeping these horizons separate in the reclamation efforts.

Section 1.9 Landscape

Here, again the landscape is described as unglaciated. This is obviously incorrect and does not confer a lot of confidence in the Applicant's ability to reclaim anything in such an area.

Section 1.10 Cultural/Historical Resources

No effort has been made by the Applicant to do on-the-ground searches for such resources. Such research by the Wisconsin Historic Preservation Database personnel has been accomplished on the ground on less than 5% of Wisconsin locations. Once clearing or other aspects of mining commences it is too late to do this research appropriately.

Section 2.2 Groundwater Management.

The proposed mine plan indicates a mine floor of 1100 feet AMSL. The top of the groundwater table is reported to be approximately 1040 feet AMSL. This does not reconcile with the wetland surfaces on site shown as high as 1080 feet AMSL. The test boring logs indicate what appears to be Wonnewoc formation well below the 1100 foot AMSL floor. These logs fail to indicate where groundwater was encountered. Inasmuch as wetland perimeters are likely to intersect the lower levels of the groundwater surface elevation

and considering that groundwater normally slopes upward following rising ground surface slopes we are left with no good information about mine floor / water table separation. This despite the claim by the Applicant that 60 feet will be maintained between mine floor and ground water surface. This issue requires substantial clarification for all mining phases PRIOR to Application approval.

Section 2.3 Surface Water and Stormwater Management

As was the case in the Albertville Valley Application, no mention is made of storm water testing for water chemistry--especially for metals. I assume this permit, if granted, will contain the same or similar language as that outlined in your permit Addendum for Albertville dated February 4, 2016.

While I recognize your Department's limitations regarding the 100 year / 24 hour storm water event designs, I take this opportunity to once again remind you and the Applicant that highly reliable records exist attesting to at least three (3) storm events in the immediate area during the past 19 months, all of which far exceeded that intensity and volume. Those events resulted in significant impairment of two class II trout streams. Those occurrences were regarded with a general outrage by citizens of the area. EOG/DS management got the message and they have constructed a storm water holding pond / infiltration basin reportedly capable of containing a 500 year / 24 hour storm run off.

In regard to the EOG/DS runoff, this current Applicant claims to be able to handle that through internal drainage design. The first issue here is that this Application is about two years out of date before any permit is even granted. Another issue is that the glauconitic clay that bedevils all of these holding ponds / infiltration basins / evaporation ponds--call them whatever, is not going away as a storm water problem. It simply does not permit very much infiltration. To complicate this clay issue there seems to be no good method to remove it from pond bottoms effectively. In addition to the removal problem, there is no mention in the Application about how or where to dispose of such clay liner materials. And further complicating everything is the inconvenient fact that this clay is largely derived from the aquitard layers of the lower Tunnel City formation and is known to contain sulfides and other possibly nasty constituents that may be harmful wherever they end up--be it in groundwater or surface waters.

Again, as in the Albertville Valley Application, this Applicant has the following to say about infiltration: "In the event that the expected rate of infiltration in any given basin decreases, the Site Manager will work with the County to implement changes to increase the infiltration rates to the original prescribed levels. This may include removal of sediment build-up in ponds. . ." Not a hint is offered about how this may be made to happen or how often it might happen. And it implies that storm water will already have escaped into the stream systems with the likely result being something similar to the Running Valley Creek / 18 Mile Creek impairment. None of that is acceptable.

This entire section needs to be revisited thoroughly.

Section 2.4 Mineral Resources

Including process reject materials this proposed mine plans to handle nearly 40 million tons of sand. If one part in 10,000 escapes as sediment or fugitive dust that's 4,000 TONS that somebody, somewhere has to deal with. This reclamation plan should be required to tell us how this Mining Company plans to reclaim these nuisance materials from our air, our properties and our streams. It does not do that.

Section 2.9 Provision for Intermittent Mining

Nothing is planned for control of sand / dust drift during periods of mine shut-down. Fugitive dust blow needs to be totally prevented by stockpile covering or effective and continuous watering.

Thank you for considering these concerns. We should all continue to look for ways to have meaningful citizen input to the mining operations after commencement of operations.

Brad Schwartz, 1103 W. Spruce Srteet, Chippewa Falls, WI (Received 4/25/16)

Hello Seth,

I would still be interested in the URL for the Purfact Mine Reclamation Plan (although I know I am late for reading it thoroughly).

Just a couple quick comments to meet the comment deadline this aftermoon.

1) I think there should be a requirement that no organic material be removed (or sold) from the site except maybe with the exceptions of the logs.
Require: the "A" horizon must be complete returned to the site, and any other orgainc material originating there.

2) This comment encompasses reclamation and other place funds are needed due to the mining process. There should be a tax on the amount of material removed (since it is a natural
resource) and these funds be used for reclamation, or other costs that the mining company may not cover to return the site to its original splendor.
Any excess funds could be used to create a park or other wildlife restoration or recreation area.

Thanks for your time.

Patricia Popple, Summit Avenue, Chippewa Falls, WI (Received 4/25/16)

To: Dan Masterpole, Seth Ebel, Chippewa County Department of Land Conservation and Forest Management

Re: Pur Frac, LLC, Application for Non-Metallic Mining Operation

Comments:

1. While Computer Monitoring Programs appear to be useful tools when designing the applications for non-metallic mining operations, one glitch in the program could cause untold damage and unresolved problems for years. Therefore, while the program looks “nice”, it is suggested that “in addition to the standard practice of providing computer projections predicting that state water quality problems be met”, that steps of measuring actual pollution created in this and all mines and their holding/storm water ponds in Chippewa County be fully measured and reported out to the public on a frequent basis. [See the report published in the Wisconsin State Journal and the Leader Telegram, April 25, 2016 from the Tribute News Service entitled “Developer Must Take Extra Step of Measuring Storm Water Pollution.”]

2. There are 7 storm water holding ponds noted in the plans. Recent announcements indicate that planners should be providing ponds designed to hold overflows for 500 year 24 hour rainstorms due to scientific climate change findings supported by millions around the globe. The ponds should be designed for larger rainfalls that the 100 year 24 hour storms; furthermore, the berms, holding pond

designs etc. should be designed for the alternate freeze/thaws that occur here in Wisconsin and given the changing climate conditions which are becoming more severe.

3. The storm water ponds hold stagnant water. As the climate changes and we have the additional burdens of disease etc. caused by climate change including the potential of the Zika virus carried by mosquitos, the potential for these ponds to become breeding grounds for these and other disease carrying insects appears great. Provision must be made to protect the people living near stagnant pools such as these from having children with birth defects as per reports emanating from South and North America. While WI appears not to have been hit, Minnesota, its close neighbor, has recently reported 12 cases. We can't risk the potential of populating the area with children with birth defects that could cause billions of dollars over the years to rear due to lack of planning to prevent occurrences.

4. While it appears there will be monitoring wells required around the mine and frequent samplings for heavy metals will be taken, the question still remains: if heavy metals are discovered, what requirements does the County have to mitigate the problems associated with heavy metals in the water supplies and what will be done to require the mining company to change procedures or clean up the problems they have created? How will be the people who have a problem with their wells or water supplies be assisted so they do not have to be burdened for many years to come trying to live on bottled water? Will the County ban operations or stop the mining operator from going any further so as to clean up the water issues? Who is ultimately responsible for the issues regarding water so that people have immediate relief from the fear and actual impacts of polluted water supplies?

5. There is a potential for heavy metals to be leached out into the water supply both during the mining operation as well as during and after the reclamation procedures. It has been suggested that heavy metals be kept out of the aquifers and wells by putting in clay liners into each and every mine out area before reclamation occurs, or that all pits be lined with plastic. We know that all pits leak eventually. The area in the Town of Cooks Valley has a great deal of the Tunnel City Formation. It has proven to hold sulfides. The combination of sulfides, low pH levels in the water, and oxidation caused by opening up the deposits is proven to cause the leaching out of heavy metals into the water supplies. While the DNR is about to study the problem associated with leaching of heavy metals, the County should be prepared to deal with any problems associated with this problem. Many could be affected and at great cost to the county and to the taxpayers throughout the county. Ordinances to protect all should be written and enforced rigorously until methods are devised to perform these operations safely and without danger to citizenry, particularly the children of the county.

6. The Red Cedar River and the Chippewa River are already compromised in terms of water quality by continual erosion and the breaches that have caused spills into the creeks that empty into these rivers. Every effort must be taken by the mining company as well as Chippewa County to assure that waters in the county are no longer compromised even though the County believes that mining is a valuable part of the county's existence. Either that attitude must change, or there need to be more staff added to the Land Conservation Department to monitor and to clamp down on these operations. There must

be money in the budget that will allow additional staff to be added. Even when mines are shut down due to a bust in the economy for oil/gas/mining operations, there are many difficulties that can occur inside the mines without maintenance and management workers and adequate supervision to catch problems when they occur. This is a critical issue that must be dealt with immediately so we do not have to ruin the environment of this county and its rivers and water supply!