

# ESR Committee Report

October 28, 2017

The ESR committee and others met with the DNR on October 6, 2017. There we discussed the items on the agenda, with the results as noted.

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## WWMD / DNR Agenda

October 6, 2017

### **1. Introductions and Agenda Repair**

### **2. Ammonia Options (Discussion of status)**

- a. Anaerobic Oxidation (Dr. Cuhel study) – *Testing not showing results. Not promising*
- b. Waste Management Facility – *See below*
- c. Stabilization (Magnesium Ammonium Phosphate) - *Results still pending*
- d. Volatilization and Capture – *Not practical, off the table*
- e. Use of state lands – *Still in play. The DNR still needs details of land use. This is an administrative, not policy decision, so it has less strings attached.*

### **3. Other Topics (Confirmation of decisions and/or discussion of status)**

- a. LHE Punch List – *see attached*
- b. Public hearing on low hazard exemption – *Meeting already conducted and no additional meetings need to be held.*
- c. Conditional low hazard exemption authorization – *We are not opting for a conditional permit, as it would be a permit in name only. We would still have to complete all the items on the checklist to the DNR's satisfaction before we could begin anything.*
- d. Research funding from DNR – *The DNR has agreed to pay Dr. Cuhel's study cost.*
- e. Draft project timeline – *Anything at this point would be speculative.*

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## **BACKGROUND**

### Sheer volume

There is about 500,000 cubic yards of sediment to be disposed of. That equates to 0.97 square miles (6" deep), 620 acres of farmers fields (6") , 13,500,000 cubic feet, 100,988,000 milk jugs or filling the seating bowl of Lambeau field to with 30 feet of the top.

There have always been several paths that this project could proceed along as far as the disposal of material: Farmers fields, land fill and gravel pits.

### Farmers fields

First the sediment would have to be dewatered to the constancy of day old coffee grounds with the water being returned to the river. The dewatered material would then be taken to fields for disposal. As noted above, its estimated that it would take over almost a square mile of land to accommodate the

entire. Then there are restrictions as to rate, amount and timing of application and what the land could be used within so certain time limits being put in place. Originally rejected as not being practical.

### Gravel Pit

The second option is to put it into the gravel pit along Hy 20. Because we can put it 20-30 feet deep, it reduces the land area to 20-30 acres. To be able to do this, we must be eligible for a Low Hazard Exemption (LHE) permit:

- At ~ 13 ppm, our sediment is high in ammonia (NH<sub>3</sub>) per state regulation NR140.
- Per item 1 on the "Punch list", we need the NH<sub>3</sub> concentrations to be below the Preventative Action Limit (PAL) of ~1 ppm.
- If that is "not technically or economically feasible ... requesting an alternative limit below the enforcement standard" (ES) of ~10 ppm). Thus, if were under 10, another limit can be considered. Remember that we are at 13.
- A 2-foot clay line must be built to act as a barrier between the ground and the sediment.
- 5,700 yards must be truck to a land fill because of high arsenic concentrations.
- The material still must be dewatered.
- We must still meet all the other requirements of the "Punch List"
- As noted on the agenda, several possibilities to lower the current concentrations do not look promising.

Thus, unless we get below ~10 ppm, we cannot even begin to be considered for the LHE.

### Land Fill

If we cannot get the LHE permit, an option is landfill disposal. That is, dredging, dewatering, trucking and disposal. Abandoned long ago as way to costly, it is again being investigated.

- New information from Waste Management (WM) indicated they have a process for dewatering that could work.
- We're looking at alternate dewatering sites that would shorten the route (and costs) of the ~40,000 - 50,000 truckloads of material.
- Currently there are disposal fees of \$27/ton (one ton approximates 1 cubic yard of dewatered material). The DNR and WM are looking to reclassify the material to eliminate the states \$13/ton environmental fee which is part of this cost.

## **STATUS**

As it stands now, the WM option is being considered as to its economics, engineering feasibility and the acceptability to all parties involved. We have put the LHE & pit option on the side burner for now, considering the amount of work needed to continue that route.

While landfilling seems to be a lot simpler to execute, it comes with a much higher cost. What that cost is can't be nailed down as WM has not given us a proposal and fees have not been determined. They are looking at this from many angles; the volume of material, how can it be used, what does it need, when does it need it, the economics of using it, and their existing contracts for like material. Then remember that they are out to make a profit on the entire project.

We do not have a contract with WM, or paid them to develop a proposal. They are not beholden to us to meet our time table. The results will come when they are ready.

The committee understands this point as normal business practices, and will not interfere with the work being done. However, it has instructed Graef to provide all assistance necessary to keep this moving and touch base with the DNR & WM as they deem appropriate.

Respectfully Submitted

The ESR Committee

## **“Punch List”**

### **Waterford Waterways Management District - Low Hazard Exemption (LHE)**

**(Summary of previous project correspondence dated 5/19/2017, 6/2/2017, 6/27/2017)**

*The below items provide a summary list of the minimum items that should be addressed with any future Low Hazard Exemption (LHE) Submittal to the department’s Waste and Materials Management Program. This “punch list” was prepared using previous correspondence sent to the applicant by the department as noted above, which can be referred to for further information. Please note that additional items may be required and requested by the department.*

- 1) Demonstrate through leach testing (i.e. MET, SBLT) that all sources of contamination (i.e. Ammonia, Arsenic, Manganese, etc.) meet their respective Preventative Action Limits specified in NR 140.10, Wis. Adm. Code. Additionally, the contaminated sediment must also meet the Residual Contaminant Levels (RCL’s) demonstrated through testing results.
  - a) If achieving the Preventative Action Limit is not technically or economically feasible, then further information will be required from the applicant to explore the possibility of requesting an alternative limit below the Enforcement Standard.
  - b) The LHE may be conditionally granted with a performance based condition relevant to meeting the Ammonia standard limit described above.
- 2) Identify the locations and setback distances for any private wells and demonstrate that they are greater than 300 feet from the disposal location.
- 3) Provide PE Stamped plans from a geotechnical engineer in the event the soil impoundment described in the December 2016 LHE submittal (i.e. quarry embankment) is utilized at the Super Mix disposal location.
- 4) Provide an evaluation of the geology and hydrogeology of all disposal locations to demonstrate the groundwater elevation, groundwater flow and how the project will impact the hydrogeology of each disposal location. Please note groundwater monitoring wells will need to be installed and a plan depicting their locations/construction details submitted in advance of the LHE submittal to the department for approval. Final groundwater monitoring results will then be required as part of the LHE.
- 5) Provide clay liner details to be utilized as part of the project including designs consistent with NR 504.06(2), Wis. Adm. Code and a detailed quality assurance plan, construction details and timeline.
- 6) Provide a Certified Reclamation Plan approved by Racine County that is consistent with the proposed Super Mix disposal location LHE project details. This plan may also be addressed as a condition of granting the exemption.
- 7) Demonstrate that the project achieves a minimum of 3 feet of separation to the high groundwater level for all elements of the project including any installed liner.
- 8) Provide details (i.e. dewatering plan, landfill destination, schedule, etc.) and confirmation that the areas of high arsenic (i.e. S-1, S-38, S-72, S-38D, any over 15 mg/kg) will be excluded from the Low Hazard Exemption project and instead handled separately and sent to a licensed landfill for disposal.
- 9) Provide details regarding potential Owner Financial Responsibility consistent with the methods identified under NR 520.06, Wis. Adm. Code.
- 10) Provide detailed plans identifying the dewatering methods, construction and timeframes.
- 11) Provide detailed plans identifying the final cover materials and vegetation of the disposal location to address infiltration into the materials and address potential for any direct exposure concerns.