

Mineral Licensing Board Minutes
02-20-07
Bridgewater Township Hall
10900 Clinton Manchester Road
Clinton MI

Roll Call: Randy Klager; Earl Carver; Doug Parr; Pamela Herzog; Russ Lutton
Call to Order 7 PM

Others Present: Chip Tokar; David Faust

Review the Agenda: Additions? None

Motion to accept minutes by Lutton, seconded by Klager passed unanimously.

Review the Minutes:

Need to establish dollar amount for reclamation.

Motion to approve the minutes by Carver, seconded by Lutton, passed unanimously.

Application status:

Documentation and completeness: Discussion on paperwork that might be added to the application. Hicks study, Tokar's domestic well study, well logs, etc.. Need to add information as it becomes available. The more complete the application the better.

SLU Status: PC did adopt a motion to approve the SLU with Conditions. A prompt public hearing would be good so that we can have more time to address the needs raised. So the public hearing would be in March?...

Discussion about the public hearing notices. What is the radius? Refer to page 18 of Ord 59. 2000' radius.

Rendering a decision: Method according to page 18 of the Ordinance 59 , Section 8.01;
Render a Decision.

Permanence of decision: Five year increments

Hayes Report:

Township paid for it out of Stansley escrow.

Hayes suggests that we should find out if there are two aquifers present on site. He also recommends pump tests for draw down vs. the slug tests that have been done.

Tokar has just gotten the report, feels that there is only one aquifer. He feels that the slug tests are adequate as are the number of wells.

Pump vs. slug ?

Tokar describes slug tests: tell the soil permeability around the well zone. If you know the static water level, you instantaneous drop a weighted tube. With electronics, we can measure drop of water level over time. Pump test are the same thing in reverse. You are basically dewatering. In some areas there is finer sand, soil varies. I tested all the locations. So we have an average. Parr: the same answer would be arrived.? Tokar: yes. In addition, the rising head and the falling head were both measured in the slug tests. The data matched each other. The recommended pump test. Is 24 to 48 hrs. this would be a huge amount of water.

Public Hearing Scheduling discussed and March 13th looks like it would work:
**Afterwards-if has been found that the hall is in use on the 13th and the public hearing will have to be on the 20th.

Anticipated questions and format of public hearing as follows:

Anticipated questions: Comparison to London operations. Domestic well protection.

PowerPoint presentation by Tokar (to be used at the Public Hearing):

Hydrogeological cycle.

Ground water table is where the water is. The ground water flow will typically mimic the topography. It will flow to river or lake. When an artificial water body is created, we must maintain balance between inflow and outflow.

Recharge area is large, the aquifer that we are in is large. The River Raisin watershed is the recharge area.

Soil types: Glacier deposit features. We are in an outwash plain, typically sand and gravel. Near a moraine, a dumping ground of soil types.

Water table reactions we have a model of two lakes. First lake higher than second lake. Will flow to second lake. What makes other lake lower? The natural water table. A gradient will be established. The lake level control structures prohibit lower lake from exceeding banks.

Lake cross section:

Lake A is set at 852 to protect the wetland on our property (between the two lakes)

Lake B is 835' River Raisin water table is 810'. First domestic well is at 68'.

MW 8a and another 25' deep near it.

Lake A is permitted to go 110' deep. Currently at 45 and we plan on going the distance (mining).

Lenses can be identified by soil borings. The corner of Willow and Hogan there is a well that hit clay at 30 or 40 feet. So I set piezometers at that corner of our property. We did not find clay. So the clay was not continuous.

Soil variability, well construction, including screens, pumps and filter packs are discussed. There is natural, parent sand pack around our well terminations. The bore hole is 8" and 2" casing, natural sand pack at casing termination.

Stansley feels confident that we will not impact anybody's well. If we do impact someone's well, we have devised the replacement plan as outlined in the application.

Hayes recommends no golf courses etc.

Stansley has **no** interest in development.

The buffer zone around the lake. It was decided that we were overstepping our bounds a bit because this part has no impact on the mining.

Parcel leased for thirty year lease with thirty year renewal.

Time length of mining: About 5 years.

Stansley product goes to local areas, Detroit, Lenawee, Washtenaw, 99 percent goes to cement plants, in state.

Moscow dry mining operation is also Stansley's. and mention is made on the unattractiveness of the berms. They are uncut.

Mining operations (future) Mining operations at the same rate in the new lake area. We mine over time. So sand and gravel will not be taken out all at once. Water will not fill all at once.

:London Twp mining operation: there was sand over bedrock. So once the sand was gone, they dewatered to mine the bedrock. Limestone is porous, fractured. Many million gallons a day were pumped out and removed.

The stream gauges average 180 million gal a day in Manchester.

Bedrock at site is over 120' deep, shale bedrock. Probably 150-200' deep.

The monitoring wells are around the perimeter.

Lake Dynamics: and calculations: Set weir, a flume and daily observations, sampling for sediment, annual review by DEQ for permit. Hayes asked to recalculate, this is sort of insulting to DEQ. They have looked at this for 3 years now. We essentially made the lake a pumping well when we calculated.

Township's responsibility is to the public. People need something that will ease their minds.

Stansley can say with confidence that their wells will not dry up.

Lake water elevation of the two lakes is planned to be 17' different from each other. Lakes are planned to be 1600' from each other horizontally.

There are lakes in the area, Kilarney Lake and Cambridge Lake are 20-25 feet different. Lake LeeAnn.

Wetland to the northwest is equal to the Lake A elevation, it follows the water level of the Lake, but on a lag time.

Product (anticipated) out of Lake B is 1.754 million ton.

Tour scheduled for March 10th at 8:30 AM

Motion to accept application with addition of supplements when needed by Klager supported Carver, carried, Lutton excused.

Tokar: Public hearing questions and comparison to London operations. Express confidence in domestic well protection.

Carver: I would like to see Hayes credentials.

Herzog: Google it, it will come up.

Motion to adjourn by Carver, seconded by Klager, carried. 9:30 PM.