From: Richard Sloat [mailto:sloat57@sbcglobal.net]
Sent: Monday, March 31, 2014 7:30 PM
To: 'BAILEYJ@michigan.gov'
Subject: Public Comment - Permit No. GW1810162

Hi Steve and Jeanette,

Steve, I've been thinking about what you said about rain water at the public comment period. It may or may not be true implying the rain water leaches beneficial minerals out of the soil. I'm sure it does at a limited scale. So for the sake of no argument let's agree there is leaching of beneficial minerals out of the ground during rain and let's also assume the water with the beneficial minerals are deposited into the aquifer and ground water.

But just think about this. It takes a 1" of rain on the surface of 4 square feet to accumulate 1 gallon of water. That would mean a 1" of rain would have to fall on 400,000 square feet, almost 10 acres, of ground surface to create 100,000 gallons of water seeping into the ground assuming there was no run-off.

There are not many times we get 1" rain falls. And I do not foresee the Yellow Dog Plains receiving 1" rainfalls on a daily basis for 5 to 10 years. Comparing natural rain to un-natural discharge of water from the treatment plant is not a good argument.

The point I am trying to make is that if the treatment plant at the proposed Eagle Mine discharges 100,000 gallons of water per day, a conservative estimate, into the ground the water that leaches beneficial minerals out of the ground for 5 years could possibly eliminate all beneficial minerals remaining in the ground where the treated water is discharged. So what will be the effects of the water discharging from the seeps have on plant and animal life? There are no studies, which I am aware of, of the cumulative effect of this type of water treatment on the flora and fauna. And imagine the effects if Lundin discharges 5 times the amount, 500,000 gallons. There is only so much that can be leached.

Can this discharged water when leaving the seeps leach beneficial minerals from plants when absorbed and animals when the water is ingested?

According to Part 632 everything permitted in the proposed Eagle Mine was suppose to be proven not to harm the environment.

With no studies indicating what the cumulative effect of the discharged water will be in the scenario I have laid out I feel the proposed Eagle Mine should not be allowed to extract any ore or place any more material of any kind in the TDRSA or allow any more water into the Contact Water Basins until it is proven the environment will not be harmed with the treated water.

Also during public comment there was mention of understudied hydrology. Can anybody say for certainty where the water is going to go? Where will the damage occur?

Do not ease the limits for the permit. Stop the discharge.

In fact the whole permit should be void. I say this after reading Jack Parker's comments which is attached. Please accept the attachment as part of my comment together with this e-mail as well as my oral comment.

Thanks.

Richard Sloat

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WATER IN THE MINE !

There's a fair amount of fussing in the air concerning water to be disposed of by Lundin at the Eagle Mine.

One aspect is concerned with the quantities involved, and where they come from.

Another is the quality of the waters, before and after treatment.

Nobody seems to be concerned about the strong possibility that a sudden collapse of the mine structure would drain the wetlands, the aquifers and the Salmon Trout river very, very quickly.

That possibility was brought up in the court proceedings which began in 2006, and again many times since then, but it has been studiously ignored by Kennecott, by Rio Tinto, by Lundin and by the regulating agency – MDEQ.

I haven't heard from the insurance people yet.

Our basic contention was that the design data for the mine had been fudged, and that can be proved easily, provided that the regulating agency and their courts do not collude in the fraud.

But there is the safety issue. If mined as planned the structure has a safety factor lower than one, and is therefore predicted to be unstable. Currently ignored. The plan is to handle the situation by mining upward, assessing conditions as they go, and stopping if conditions so indicate. That sounds halfway practical except that they refuse to learn from case histories.

Not far away, near Negaunee, the Athens mine collapsed through some 1700 feet of hard rock – and it happened overnight, on the weekend – so nobody was killed. Google will bring you several well-written accounts.

The current operators' claim that the geology there is different from that at the Eagle is in part correct, but in the most crucial aspect they are wrong, possibly fatally wrong.

At both operations the stressfield (forces holding the rock together) is tensile, tending to pull apart). That at the Yellow Dog has been so described in the literature. Although recommended years ago stresses have not been measured.

The long, straight, vertical dikes running the length of the Yellow Dog plains are the best indicator. They came up from great depth because there was very little compression North-South. The collapse at the Athens mine was controlled by similar dikes, near vertical, with slippery wet contacts, allowing "plug failure" as soon as a certain area had been undermined.

The prognosis for the Eagle, if mined as planned, is for sudden, unexpected collapse and flooding.

Jack Parker, Mining Engineer/Geologist,
Baltic MI 49963, 3/28/2014.