From: <u>Lindsay Newland Bowker</u>

To: <u>Craig Terrell</u>

Cc: DEP, MiningComments2016; Mercer, Paul; Livesay, Nicholas; Stebbins, Mark N; Crawford, Jeff S

Subject: Re: Stop the Clock on Chapter 200 rules and publish Testimonies!

Date: Sunday, September 18, 2016 11:46:11 AM

Craig,

I am copying the miningcomments2016 as means of offering further technical information on the official public record and for the benefit of our fellow citizens serving us as members of the BEP.to your excellent point on the infeasibility of restoring a wetland to anything resembling its pre mining function and character as is mandated by the statute (PL 2011 c 653)

Your voice shows the power and value of individual citizens with individual gifts and expertise looking at the same information and seeing different layers and different implications. I had not previously connected the dots as you have done to the false information presented by Policy Director Crawford on removal of tailings impoundments at closure, the completely made up and never properly defended or explained concept of wet mine waste units, and the statutory standard of approximating pre mining conditions.

Just to help BEP members understand the context and connections you correctly point to, I offer the following as technical documentation intended to elucidate and further affirm your comment.

1. The only feasible site for a tailings impoundment at Bald Mountain (other than lake dumping which is where I fear this bad regulatory language may be intending to go) is the wetland you know so well. This fact is well known to DEP Mining Coordinator Mark Stebbins who was coordinator for both DEP and LUPC on the reviewed the Black Hawk Mining Application.

Yes, you are correct that the expert tailings siting work done by Jack Caldwell way back when identified only one viable site and iyou are right that it does involve using the wetland as the site of the impoundment ..out of more than 25 sites examined all others at Bald Mountain were too damaging to the surrounding environment to be seriously put forward (there is no way to line a tailings impoundment to prevent seepage and leaks but that is covered under the statute's allowing contamination within the mining area).

Nothing has changed that, except the possibility of lacustrine or riverine tailings dumping that seems to be looming behind these latest rules. T

There have been absolutely no new developments in bio remediation or wetland reclamation since this Blackhawk review as undertaken. The geochemistry of Bald Mountain has not changed since then..t is fixed and has its own inherent risks.

The BEP should be provided with all documents on the Black Hawk Application and a proper description and explanation by Mark Stebbins of his questions and concerns expressed on behalf of many different divisions within DEP.

2.bio remediation and in particular the use of wetlands as reclamation has very serious limitations which include no proven efficacy in dealing with the arsenic and sulphur levels at Bald Mountain as the statute specifically requires in returning the mine site to its pre mining state. A wetland receiving the inevitable seepage from any tailings impoundment has no capacity to spontaneously re generate.

A very famous state of the art mine, the Kaunisvara, looked at the capacity of peats and bogs to "co remediate "as seepage occurred. This is a form of a remediation technique called "bio remediation". **The finding was it could not work as a co-remediation technique.**

The state of the art in bio remediation, (a man made or natural wetland is a major form of "wet mine waste unit") is also extremely limited in the types and concentrations of metals and other contaminants that can be successfully taken up into plant life. The problem at Bald though is that there is no proven technique for taking up arsenic at the levels that would be present in a huge part of the 33 million tonnes of problematic waste that would be generated there.

So you are correct that the absurd repeated representation by Policy Director Crawford that tailings impoundments are removed at closure has the additional absurdity that there would be no feasible way to return the wetland in which the impoundment is located to anything resembling the statutorily mandated condition of approximating the pre mining state.

You will note the draft rules systematically avoid this all important statutory standard while concurrently asserting that the whole purpose of the rule is to eliminate gaps between current rules and current statute.

Thank you Craig for your fidelity to this issue over the long haul along with your wife Betsy Bishop whose family is honored in many of the place names around and potentially impacted by any mining at Bald Mountain under this statute and these draft rules.

With Gratitude, respect and appreciation,

Lindsay

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On Sun, Sep 18, 2016 at 10:26 AM, Craig Terrell < cterrell51@yahoo.com> wrote:

Jeff Crawford BEP/DEP

Please "Stop the Clock on the Chapter 200 rules" this is based on false information peddled by DEP with the sole intention of passing an unobtainable goal, as ludicrous as wet mining wastes being restored to its natural condition. This is impossible. Making a tailing's pond out of our wet lands and then restoring them isn't possible. I have reclaimed an uplandwetland for a Golf course who needed a reclamation and have an idea of what it takes the bio diversity in the area of Bald Mt would take God himself to recreate. If you know of a Company that carries all the wet land plants insects and microflora that it would take, I would love to visit them.

Please also make all the testimony from 9/15 available so I can compose my additional amendment letter to my testimony as we have all learned so much!

Thanks in advance for taking immediate action and Stoping the Clock!

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