

Johnson, Bill H (DNR)

From: Peter J. Hinck <[REDACTED]>
Sent: Monday, April 15, 2013 12:23 PM
To: Johnson, Bill H (DNR)
Cc: Tina Pint
Subject: Re: Clarification on EPA Comment

Yes, we will respond ASAP.

Peter Hinck
Barr Engineering
[REDACTED]
[REDACTED] (office)
[REDACTED] (cell)

On Apr 15, 2013, at 12:19 PM, "Johnson, Bill H (DNR)" <[REDACTED]> wrote:

Got it. Peter, delivery pending?

From: Tina Pint [[mailto:\[REDACTED\]](mailto:[REDACTED])]
Sent: Monday, April 15, 2013 12:18 PM
To: Johnson, Bill H (DNR)
Cc: Tina Pint; Peter J. Hinck
Subject: Re: Clarification on EPA Comment

Bill-

You did not miss the response, we just didn't get a response pulled together for the draft we were trying to send in on Friday.

Tina Pint
Barr Engineering Company
[REDACTED]

Sent from my iPad

On Apr 15, 2013, at 12:13 PM, "Johnson, Bill H (DNR)" <[REDACTED]> wrote:

Tina and Peter, we did get clarification for comment 8 from EPA. Did I miss the response for this one? Thanks. Bill.

From: Johnson, Bill H (DNR)
Sent: Friday, April 12, 2013 3:11 PM
To: 'Sedlacek, Michael'; Fay, Lisa (DNR); [REDACTED]
Cc: Grimes, James
Subject: RE: Clarification on EPA Comment

Thanks Mike for the clarification.

On a separate but related note I will be sending out an appointment for Tuesday, April 16, for the meeting to discuss the Co-leads perspectives on the EPA's comments on the GoldSim model and results.

It will be coming out shortly. Bill.

Bill Johnson, Mining Section Lead
Environmental Policy & Review Unit
MDNR Division of Ecological & Water Resources

From: Sedlacek, Michael [mailto:]
Sent: Friday, April 12, 2013 2:40 PM
To: Johnson, Bill H (DNR); Fay, Lisa (DNR);
Cc: Grimes, James
Subject: RE: Clarification on EPA Comment

Bill,

Please see below for clarification on your original question:

The Barnes' program calculates the average of the actual samples and then calculates how much that average could vary at the 90% confidence level. This is what is inputted into GoldSim to create the "Average Sample" (PolyMet/Barr terminology) that is used for each realization.

Presuming the arithmetic average, median, and mode are the same number (or fairly close), this would mean that half the "individual samples" are above the average and half the "individual samples" are below it. (Adjustment would need to be made if the average, median, and mode are to different.)

In determining violations, the model only takes into consideration the "Average Sample" value and does not take into consideration the spread of the "individual samples". "Individual samples" would probably be violating the limits long before the "Average Sample" violates the limits. Subsequently, one cannot determine how long the mine has been in violation (the difference between when the "individual samples" violate and when the "Average Sample" violates).

As the model presently stands, it is indicating the mine is performing better than it probably actually is.

Sincerely,

Mike Sedlacek
Environmental Scientist
NEPA Implementation Section
U.S. Environmental Protection Agency
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Chicago, IL 60604
Phone: (312)
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From: Johnson, Bill H (DNR) [
Sent: Wednesday, April 10, 2013 5:36 PM

To: Sedlacek, Michael

Cc: [REDACTED] Fay, Lisa (DNR)

Subject: Clarification on EPA Comment

Mike, we need additional clarification on this particular comment that was provided as part of EPA's model review:

"Use of Average Samples

The use of average samples in determining when there is a violation of standards is questionable. By the time the average sample show a violation, half of the actual samples would have been in violation and there is no way to determine when the first actual violation occurred."

This is offered under the heading "Use of the GoldSim Model Geochemical Data Files Within the Model."

Any additional perspective that can be provided is appreciated. If needed please contact Tina to flesh this out.

Thanks in advance. Bill J.

Bill Johnson, Mining Section Lead
Environmental Policy & Review Unit
MDNR Division of Ecological & Water Resources