

Personal privacy

From: Johnson, Bill H (DNR) [mailto: [REDACTED]]
Sent: Thursday, March 28, 2013 11:52 AM
To: Sedlacek, Michael; Grimes, James
Cc: [REDACTED] Hingsberger, Thomas J MVP [REDACTED] Hale, Thomas A -FS [REDACTED]
Bruner, Douglas W MVP [REDACTED] Colvin, Steve E (DNR); Fay, Lisa (DNR); Al Trippel
[REDACTED] David Blaha [REDACTED] Cory D. Anderson [REDACTED]
Peter J. Hinck [REDACTED] [REDACTED]
Subject: ATTN: NorthMet Mine Site Sensitivity Analysis - Version 2

Mike and James, attached please find PolyMet/Barr's memorandum summarizes the initial phase of the sensitivity analysis for the NorthMet Mine Site GoldSim Model. It has been reviewed by ERM for the Co-leads and reflects their input.

Please recall that a screening-level sensitivity analysis was performed on the Mine Site model in order to assess the degree to which uncertainty in the input parameters would affect the model outcomes. Specifically the sensitivity analysis addresses how sensitive the model is to inputs that impact the water quality in the Partridge River and Colby Lake.

Also please recall that Barr was to perform an initial screening sensitivity analysis using the majority of the uncertain inputs to the Mine Site model, run at their maximum (99th percentile) and minimum (1st percentile) values. The results of this analysis are included here as tornado diagrams showing the relative sensitivity of the Partridge River concentrations to each model input. Based on this analysis, Barr has proposed a shorter list (31 model inputs only) for more-detailed analysis, if requested.

In general Barr reports that the model results are fairly insensitive to most Mine Site-related input parameters and are more sensitive to the background flow and water quality in the Partridge River.

I believe the next steps are for the USEPA team to review the results in preparation for a call between the Co-leads, PolyMet/Barr, and USEPA regarding the next round of more-detailed analysis. We can do a doodle poll to assess availabilities and work from there. Either myself or Tom Hingsberger will connect with you on keeping the process moving.

That's it. Please share this with your team as required. Bill J. for the Co-leads Project Managers (Hingsberger; Hale; Johnson; Fay)

Bill Johnson, Mining Section Lead
Environmental Policy & Review Unit
MDNR Division of Ecological & Water Resources, Box 25
500 Lafayette Road
St. Paul, MN 55155

[REDACTED]

[REDACTED].