

**Subject:** RE: PolyMet NorthMet Probabilities Modeling

**Date:** Friday, January 10, 2014 3:43:37 PM CT

**From:** Johnson, Bill H (DNR)

**To:** Paula Maccabee (pmaccabee@justchangelaw.com)

**CC:** Bruner, Douglas W MVP (Douglas.W.Bruner@usace.army.mil), Fay, Lisa (DNR), Jimenez, Michael -FS (mjimenez@fs.fed.us), Doneen, Randall (DNR)

Paula, below please find the Co-lead Agencies' responses to your information request detailed below. Specifically, you requested SDEIS and reference citations regarding the "probabilities modeling" of: 1) aquifer conductivity, and 2) containment systems for the Mine Site Category 1 Waste Rock Stockpile and the Plant Site Flotation Tailings Basin.

1. For probabilities modeling of aquifer conductivity:

Mine Site

SDEIS: Pages 5-106 through 5-112  
Water Data Package (PolyMet 2013i) Sections: 5.2.3.3; 6.2.5; 6.2.6; Attachment J;

Plant Site

SDEIS: Pages 5-167 through 5-174  
Water Data Package (PolyMet 2013j) Sections 5.2.1.3.1; 6.5.2; 6.5.3; Attachment B, Table 1-1;  
Attachment H

2. For the two containment structures listed, which are the Mine Site Category 1 Waste Rock Stockpiles and the Flotation Tailings Basin, the modeling for these two features was deterministic, not probabilistic. Specifically, see:

Mine Site Category 1 Waste Rock Stockpile

SDEIS Pages 5-94 through 5-101  
Water Data Package (PolyMet 2013i) Sections 5.2.2.2; 6.1.2.1; Attachment B, Table 1-1;  
Attachment J

Plant Site Flotation Tailings Basin

SDEIS Pages 5-158 through 5-160  
Water Data Package (PolyMet 2013i) Sections 5.2.2.3; 6.5.2; Attachment B, Table 1-1;  
Attachment H

Thank you for your inquiry. Bill J. for the Co-lead Agencies Project Managers (Bruner; Jimenez; Fay; Johnson)

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**From:** Johnson, Bill H (DNR)  
**Sent:** Monday, January 06, 2014 1:03 PM

**To:** 'Paula Maccabee'  
**Cc:** Bruner, Douglas W MVP (Douglas.W.Bruner@usace.army.mil); Fay, Lisa (DNR); Jimenez, Michael -FS (mjimenez@fs.fed.us); Doneen, Randall (DNR)  
**Subject:** RE: PolyMet NorthMet Probabilities Modeling

Good afternoon Paula. I hope you are well.

This message is to confirm the Co-lead Agencies' receipt of WaterLegacy's request for SDEIS and reference citations regarding the "probabilities modeling" of aquifer conductivity and containment systems for the Mine Site Category 1 Waste Rock Stockpile and the Plant Site Flotation Tailings Basin.

MDNR will be the lead for compiling the requested information. I believe this can be accomplished by the end of the week, if not sooner. That will certainly be the goal.

Thank you for your inquiry. Bill J. for the Co-lead Agencies Project Managers (Bruner; Jimenez; Fay; Johnson).

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**From:** Paula Maccabee [<mailto:pmaccabee@justchangelaw.com>]  
**Sent:** Thursday, January 02, 2014 2:40 PM  
**To:** Johnson, Bill H (DNR)  
**Cc:** Bruner, Douglas W MVP; Ken Westlake; Michael Sedlacek  
**Subject:** PolyMet NorthMet Probabilities Modeling

Dear Bill:

WaterLegacy has been reading through the PolyMet NorthMet SDEIS and, in some cases, referring back to supporting documents. I have personally fielded a number of questions about the SDEIS analysis.

As noted in the email string below, to answer a question I was asked about probabilities, I read portions of the NorthMet Mine Site Water Modeling Work Plan. This Work Plan document suggested that the performance of engineered systems and aquifer conductivity are among the model inputs that should be subject to a probabilistic analysis due to uncertainty.

I've been unable to identify any place in the SDEIS where a probabilistic analysis pertaining to these assumptions is described, and I'm not familiar enough with the thousands of pages of technical background documents to know if this analysis may be reflected in documents outside the SDEIS. It is important as we review the PolyMet environmental report to determine how variability in the model inputs regarding aquifer conductivity and seepage containment would affect predicted water quality outcomes.

WaterLegacy would make the following requests to obtain information regarding the probabilistic analysis of aquifer conductivity and of the containment systems proposed by PolyMet for the Category 1 waste rock pile and the tailings pile containment. For aquifer conductivity at both the mine site and plant site, for the Category 1 waste rock pile containment system and for the tailings pile surface and groundwater seepage collection system, we would request:

1) Please ask ERM to identify where a probabilistic analysis of these model inputs is provided in the SDEIS (referencing any specific pages). If no such analysis is contained in the SDEIS, we would appreciate an explanation why that information has not been provided.

2) Please ask ERM to identify any documents other than the SDEIS which contain such a probabilistic analysis (identifying both the document and page numbers). If any such documents are not among the references specifically cited and provided as references to the SDEIS (which we have already received from the MDNR on CD) please also provide electronic copies of any such documents.

Please do not hesitate to contact me if you have any questions about the nature of our request for information.

Thank you very much for your assistance.

Sincerely yours,

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Counsel/Advocacy Director for WaterLegacy

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