

Johnson, Bill H (DNR)

From: Tina Pint <[REDACTED]>
Sent: Monday, December 10, 2012 5:58 PM
To: 'Melinda Todorov'
Cc: Al Trippel; Johnson, Bill H (DNR); Jim Scott ([REDACTED])
([REDACTED])
Subject: RE: FW: NorthMet Required Model Updates

Melinda-

Thank you for the additional comments. Houston is correct in that everything he list needs to be done, however I'm not sure they are all model changes that need to be made as part of our next update. I think only Plant Site #1 falls under that category. The rests are additional requests for information. The distinction may not really matter since we still need to address all of the items. I've added a few comments in blue to Houston's list below.

Thanks,
Tina

Tina Pint, PG

Senior Hydrogeologist

Minneapolis office: [REDACTED]

cell: [REDACTED]
[REDACTED]

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resourceful. naturally.



From: Melinda Todorov [mailto:[REDACTED]]
Sent: Monday, December 10, 2012 3:56 PM
To: Tina Pint
Cc: Al Trippel; [REDACTED]
Subject: FW: FW: NorthMet Required Model Updates

Hi Tina,

I just received the email below from Houston concerning your list of model changes. Please let me know if these items will be in the updated model.

Thank you,
Melinda

Melinda K. Todorov

Environmental Resources Management
200 Harry S. Truman Parkway, Suite 400
Annapolis, Maryland 21401

Phone: [REDACTED]

Fax: [REDACTED]

Email: [REDACTED]

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From: Houston Kempton [<mailto:>]
Sent: Monday, December 10, 2012 4:14 PM
To: Melinda Todorov
Cc: John Adams () Fred Marinelli
Subject: Re: FW: NorthMet Required Model Updates

Melinda,

In addition to the list of model changes in Tina Pint's email, I have the following items that Barr was going to include in their revised GoldSim model runs:

Mine Site

- 1) Include estimates of groundwater solute concentrations at (or adjacent to) the Partridge River in the spreadsheet results (raw data is in the ver 4 output, but the lookup formulas were not included for stations at the River).
I would like to discuss this further, potentially during the Issues call tomorrow. I have some concerns with this request.
- 2) Conduct some simulation that is long enough to allow the peak concentrations of unattenuated solutes in groundwater to reach the Partridge River.
The current model simulation is long enough that the peak concentrations of unattenuated solutes have reached the Partridge River. We have proposed to provide plots of sulfate concentrations in groundwater adjacent to the Partridge River in order to demonstrate this.
- 3) Include predicted concentration of antimony along the groundwater flow paths at some point (may be an intermediate evaluation point added to the model) that is close enough to the sources to illustrate the peak concentrations that will occur in groundwater.
This is included in the list of position papers that are being drafted at the request of the MPCA. My understanding is that this document, once accepted by the MPCA, will be passed on the ERM for their consideration in drafting the SDEIS.

Plant Site.

- 1) In file "SW_NonDeg_MaxVals_PlantSite.xlsx", sheet "MaxConc_PM13", all 3 time periods are shown as "Operations" when in fact they should be "Operations," "Reclamation," and "Closure." Also, these sheets don't include solute names in the headers--would be helpful to add these.
This was a model reporting error that we were not previously made aware of; we will correct this for the next submittal of model results.
- 2) Conduct some type of simulation that runs long enough to show peak concentrations of unattenuated solutes in groundwater to reach the Embarras River.
Our previous analysis focused on the north groundwater flow path discharging to Mud Lake Creek. This flowpath was selected because it has the highest lead concentrations (the primary solute that has a peak). If we need to consider the other flow paths please let us know as this will likely require even longer model run times.

Thanks,

Houston

On Fri, Dec 7, 2012 at 10:07 AM, Melinda Todorov <[REDACTED]> wrote:
FYI..

Melinda K. Todorov

Environmental Resources Management
200 Harry S. Truman Parkway, Suite 400
Annapolis, Maryland 21401

Phone: [REDACTED]

Fax: [REDACTED]

Email: [REDACTED]

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From: Al Trippel
Sent: Friday, December 07, 2012 10:19 AM
To: David Blaha; Melinda Todorov
Subject: Fw: NorthMet Required Model Updates

W/ attachment

From: Tina Pint [[mailto:\[REDACTED\]](mailto:[REDACTED])]
Sent: Friday, December 07, 2012 02:51 PM
To: Al Trippel; Kunz, Michael (DNR) <[REDACTED]> Johnson, Bill H (DNR) <[REDACTED]>
Carlson, Erik (MPCA) <[REDACTED]>
Cc: Jim Scott ([REDACTED]) ([REDACTED]) <[REDACTED]> Cory D.
Anderson <[REDACTED]> Peter J. Hinck <[REDACTED]>
Subject: NorthMet Required Model Updates

During our meeting on Wednesday, it was requested that Barr prepare a list of changes that need to be made to the NorthMet GoldSim water quality models the next time they are updated. Attached is the current list of changes we are aware of. If there are other changes that you believe need to be made, please let us know ASAP as we will be updating the models early next week.

Thanks,
Tina

Tina Pint, PG

Senior Hydrogeologist

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[REDACTED]

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