

Louie

Subject: Fw: BHP Ekati Expansion -- Follow up to August 25 Meeting

Date: Mon, 13 Sep 1999 21:11:28 -0600

From: "Louie Azzolini" <louiea@internorth.com>

To: <lazzo@internorth.com>

SEP 16 1999

-----Original Message-----

From: Ramsey, John <jramsey@NRCan.gc.ca>

To: 'Louie Azzolini' <Louiea@internorth.com>

Date: Monday, September 13, 1999 6:42 AM

Subject: FW: BHP Ekati Expansion -- Follow up to August 25 Meeting

>Louie

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>Hope this one gets through

>

>John

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>> -----

>> From: Ramsey, John

>> Sent: Friday, September 10, 1999 4:24 PM

>> To: 'Louie Azzolini'

>> Cc: Burgess, Margo; Hogan, Charlene; Kasemets, Juri; Johnstone, Rob;

>> Bourgon, Michel

>> Subject: BHP Ekati Expansion -- Follow up to August 25 Meeting

>>

>> Hello Louie

>>

>> In response to your request, Natural Resources Canada (NRCan) is pleased
>> to forward you the following comments:

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>> With reference to your first request, it would appear that the
information

>> on project components listed in Table 1 (i.e. summary of components as
>> reported in BHP's February 1999 Project Description), does not include
>> certain elements of the development that are, in fact, mentioned in the
>> Project Description. These are:

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>> * tailings disposal management (including impacts on or modification
>> to Long Lake Containment Area)

>> * granular sources (for roads or reclamation of littoral zones)

>> * follow-up/monitoring program requirements / modifications to
>> existing plans

>> * cumulative effects

>> * reclamation plans and activities / modifications to existing plans

>>

>> With respect to your second request, the comments provided in our August
>> 23, 1999 e-mail were points that we felt should be addressed in the EA
>> report, and thus should be incorporated into the guidelines. Those
>> comments were generated without the benefit of the Project Description.

>> Our previous comments were also based on prior experience and knowledge
of

>> the BHP and Diavik environmental assessment reviews. The guidelines from
>> those two projects would no doubt be an excellent basis for initiating
the

>> drafting of the guidelines for the Ekati Expansion Project.

>>

>> Given that all three of the new new pipes will be open pit mined, a
>> revised version our bullet information of August 23rd follows. A few
>> additional points have been added based on the information in the Project
>> Description; other points have been consolidated.

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>> Surficial geology, permafrost, drainage, geotechnical etc.

>>

>> * baseline distribution and thickness of surficial materials

>> * rock types

>> * slope stability of pit walls

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- >> * aggregate source for road building
- >> * reclamation of used pipes
- >> * drainage effects of spoil
- >> * water chemistry of spoil
- >> * chemistry of pipes and stability of kimberlite byproducts
- >> * permafrost temperatures and ground ice conditions at mines and roadways, and in material being moved
- >> * thermal effects of mining
- >> * drainage of lakes/disposal of lake waters and sediments to access kimberlite
- >> * is there enough aggregate for construction? is source crushed rock or unconsolidated materials
- >> * information on remedial actions at minesite (waste dumps, tailings)
- >> * where landfill/aggregate will come from
- >> * what waterways/watersheds are affected, and how extensive
- >> * how will disturbance to the environment (including thermal milieu) be limited
- >> * sensitivity of boggy/wetland terrain to drainage and thermal alterations (notably in relation to Pigeon Pipe development)
- >> * amount of overburden and rock to be removed, and its effects.
- >> * acid rock drainage potential and its remediation (including sub-aqueous disposal option)
- >> * baseline permafrost physical conditions and thermal regime
- >> * effects of pit mining activities and infrastructure on permafrost regime and changes to physical strength characteristics/ hydrogeological regime.
- >> * capacity of existing and/or proposed tailings/mine water facilities
- >> * capacity/impacts on existing frozen core dams
- >> * massive ground ice and granular resource extraction - limitations on volumes of resource material and minimizing terrain disturbance associated with ground ice thaw
- >>
- >> Hydrogeological and hydrogeochemical
- >>
- >> * Baseline depth profiles of lake/stream sediment geochemistry with emphasis on heavy metals.
- >> * Effects of pit dewatering on the water table and surface drainage.
- >> * Expected post-closure modifications to regional groundwater chemistry and flow patterns caused by flooded mining excavations.
- >> * Quantity and quality (salinity, phosphate, nitrogen, heavy metal content) of mine discharge waters; provisions for disposal and mitigation.
- >> * Quantity and quality of waters (including suspended sediments) draining waste rock and tailings facilities; and provisions for mitigation.
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- >> Explosives Factory and Storage
- >>
- >> * Information regarding use of existing explosives facilities or construction of new facilities (e.g. explosives magazine for the Sable Pit -- size of the magazine and its distance from a waterbody)
- >>
- >> Seismic activity
- >>
- >> * low probability hazard from nearby earthquakes
- >>
- >> Waste Rock and Sediment Management
- >>
- >> * Additional information on geochemical characterization program
- >>
- >> General
- >>
- >> * Expanded discussion of cumulative effects on winter road, other infrastructure and ecology in light of Ekati, Diavik and potential future mining activity.
- >> * Additional follow-up monitoring and reclamation requirements

>> * *Final abandonment, restoration and reclamation plans*

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>> *If you have any questions, I would be pleased to discuss them with you.*

>>

>> *John Ramsey*

>> *Senior EA Officer*

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>> *Corporate Services Sector*

>> *Natural Resources Canada*

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