



Giant Mine Environmental Assessment

IR Response

Round One: Information Request – Yellowknives Dene First Nation #03

May 31, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: YKDFN #03

Date Received:

February 28, 2011

Linkage to Other IRs:

Alternatives North #11 (a-c)
City of Yellowknife #8.2
YKDFN #5

Date of this Response:

May 31, 2011

Request

Preamble:

Four options for pit remediation were considered. The decision to select a specific option was conducted during a series of closed meetings with technical advisors in 2003 and 2004. It should be noted that no information is provided on the meeting attendees and overall there is limited discussion pertaining to the criteria that was used to select the pit remediation options that were provided in the DAR.

Consequently limited discussion was provided in the DAR with regards to the how the selected pit remediation option will impact future land use and redevelopment. It is unclear if future land use and land redevelopment was considered in the criteria for selection of the preferred pit remediation option. Further, it is unclear how desires from land users were considered in the pit remediation option analysis.

Question:

1. It is requested that additional details are provided with regards to the selection criteria and weighting used to assess the preferred pit remediation options. From the list of criteria presented, it is requested that specific details regarding future land use and land redevelopment are provided, as well as, what specific stakeholder input factored into the options analysis.
2. It is requested that any cost estimates to support the selection of the preferred pit remediation options is provided.
3. It is requested the Proponent detail how the selected pit remediation option will impact land users (e.g., YKDFN) in the area. Further, it is requested that specific recommendations are provided on how land user impact will be minimized.





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4. P6-53: “At that time, the slopes of the [b3] pit will be pushed in to partially fill the excavation and re-vegetated” & the walls of the B4 pit will also be regarded to shallower slopes. It is requested that the proponent explain the use of this option in these pits, as it is not listed under 6.4.2?

Reference to DAR:

S.6.4 Open Pits

Reference to the EA Terms of Reference

S.3.2.4 (7) Development Description

S.3.2.4 (14) Development Description

Summary

The pit closure options were discussed by the Giant Mine Remediation Project Team but no formal options ranking or weighting was performed. The response presented summarizes the discussions more completely than was presented in the DAR.

The selected remediation options will severely curtail future access to the pit areas, and will hinder through passage. The Project Team plans that measures to minimize these impacts on future land uses will be discussed during the consultation process.

Response 1

The options considered and the reasoning that resulted in the selected pit remediation measures were summarized in Section 6.4.2 of the DAR. There was fuller discussion amongst the project team, but no public consultation and no formal selection criteria or weightings. The following paragraphs provide a more detailed summary of the discussions.

As noted in the DAR, the option of backfilling the larger pits with borrow material was discounted because of the lack of suitable material. Use of natural soil or rock would result in the creation of new borrow pits or quarries, very similar in scale to the current pits, with little or no net benefit in terms of safety, impact or land use impairment. The use of tailings for pit backfill was also considered and found to be unattractive because: handling of the tailings could lead to dispersion of tailings dust if done in the dry, or would require lengthy consolidation times if the tailings were moved as a slurry; the footprint of the relocated tailings would be contaminated soil, creating another area to be remediated; the tailings cannot be stacked, meaning they would only fill the pits to level and the high rock walls would remain exposed.

The option of allowing the pits to flood was discounted primarily because it would produce contaminated pit lakes. Other reasons were that the high rock walls would remain exposed, and that





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drowning in pit lakes is one of the most common causes of fatality at abandoned mines¹, indicating that flooded pits located near to population centers constitute “attractive hazards”.

Combinations of backfilling and flooding were examined but found to carry all of the above risks.

Surrounding pits with berms or fences are both accepted closure methods under the NWT Mine Health and Safety Regulations. Clearly they will obstruct through passage, and thereby hinder some land uses. Other concerns identified in public consultation on other northern mine closures include that people riding snow machines have difficulty seeing berms or recognizing that they can have very steep pit walls behind them, and animals (caribou) can become entangled in fences.

Despite these limitations and concerns, the project team believed that combinations of fencing and berms would be the most appropriate closure measures for the large pits. It was felt that with proper location and design, the risks associated with these measures could be minimized. INAC is committed to discussing these measures in its consultation process and taking under advisement any further concerns or suggestions made by stakeholders.

Response 2

The discussion of pit closure options did not include development of cost estimates.

Response 3

The fences and berms will restrict access to the pit areas. They will also hinder travel or passage of people and wildlife across the western portion of the site. The lack of material to backfill means that the pit areas will remain open indefinitely.

Measures to limit impacts on future land uses are still to be determined. This is an area where stakeholder input will be encouraged and future consultation will be required.

Response 4

Pushing the soil walls in to partially fill the B3 and B4 pits will establish a stable slope and landscape the area to conform to the surrounding topography. This is a common and reasonable remediation method because the pits are very small, with relatively low walls and have no benches as compared to the larger open pits. The north wall of B3 Pit is a natural rock slope and will remain as is.

¹ United States Department of Labor, Mine Safety and Health Administration, Previous Fatal Accident Summaries. <http://www.msha.gov/SOSA/previousfatalstats.asp>

