

Meeting Notes from the Giant Mine Remediation Project (EA0809-001) Issues Scoping Session

Date of meeting: Tuesday, June 17, 2008

Location: Tree of Peace Community Hall, Yellowknife, NT

These are the meeting notes from the issues scoping session held on the Giant Mine Remediation Project environmental assessment (EA). The notes provide a summary of issues and should not be considered as verbatim transcripts. If you feel there are any factual errors in this document, please contact Tawanis Testart, Environmental Assessment Officer, with your concerns by email at ttestart@mveirb.nt.ca or by phone at (867)766-7066. The Review Board encourages the submission of additional scoping documents up to, and immediately after, the forthcoming scoping hearing to be held on this file (refer below for details).

The scoping session was held in the following three sittings at the Tree of Peace Community Hall in Yellowknife:

1. A morning session where the EA process was described by Review Board staff, the purpose of the scoping session was identified, and the developer was offered an opportunity to present its proposed project.
2. An afternoon session where parties and members of the public were asked to identify issues they believe the Review Board needs to consider in the EA.
3. An evening session set aside for parties and members of the public who could not attend the daytime session to air their concerns. NOTE: As no parties or members of the public attended the evening session, the event was adjourned early.

As is customary, the scoping session was facilitated by Review Board staff; no Board members were present. The Scoping Session will be followed by a Scoping Hearing conducted by the Review Board itself, on July 22 & 23, 2008, at the Explorer Hotel in Yellowknife. Following the hearing the Review Board will make a determination on how to proceed with the file and it will identify the issues that merit further scrutiny in the process.

Attendees to the scoping session are listed in the attached Appendix A.

MORNING SESSION – 10am-11:30am

The scoping session was brought to order at 10am. A presentation was provided by Review Board staff on the purposes of scoping sessions and the general EA process. A question and answer period followed.

One participant asked who the responsible ministers are for this EA. Review Board staff noted they have not been determined for this EA yet, but that they typically include responsible federal government departments such as the Department of Fisheries and Oceans, Environment Canada, and Indian and Northern Affairs Canada (the “federal minister”), as well as the Government of the Northwest Territories. Responsible ministers are asked to define themselves through the Review Board’s *Request for Party Status* forms. Because they self identify through this format, there is no time limit on that. They can identify themselves throughout the entire process, although the Review Board encourages them to apply early. The participant requested that this determination be confirmed as soon as possible.

A participant asked if the Review Board is going to retain any outside advisors or experts for the EA process. Review Board staff identified that this has not yet been decided, but in cases where an EA file has complex technical issues, it is common for the Review Board to retain independent technical advisors.

The developer then provided an overview of the proposed development in a Powerpoint presentation. This presentation is available on the public record at <http://www.mveirb.nt.ca/registry>.

A participant asked whether all the images on the developer’s presentation were contained in the Remediation Plan. The developer responded that most of the diagrams were contained within the remediation plan, but some are from supporting documents that are publicly available.

A participant asked the Review Board staff whether the scope of this EA will go beyond the original scope determined by the Giant Mine Remediation Team. Review Board staff responded that neither the scope of the development nor the scope of issues to be considered in this assessment has been already set by the Review Board. It was further mentioned that the purpose of this scoping session and the subsequent scoping hearing are to better define these aspects. Parties and members of the public are free to raise any issues and ask different questions in these sessions.

A participant asked if there is going to be participant funding available for this EA and could a response to a previous letter on the public record from May be provided by the Review Board? Review Board staff stated that currently there is no capacity to give out participant funding, but noted that it is an issue that is raised each year during negotiations between INAC and the Review Board. Review Board staff acknowledged that it is difficult for people to participate in EAs without financial assistance and affirmed that a response in writing to this concern would be sent soon.

LUNCH BREAK – 11:30-1pm

AFTERNOON SESSION – 1pm-5pm

The purpose of the afternoon session was outlined by Review Board staff as an opportunity for parties to identify, in a preliminary fashion, what issues they felt needed to be covered in the forthcoming environmental assessment. This included invitations to identify:

- Which of the proposed activities in the current Giant Mine Remediation Plan (GMRP) need to be considered inside the scope of development for the EA
- Which additional activities not currently identified in the GMRP need to be considered inside the scope of development
- Which alternatives ways of accomplishing the development goal need to be compared against the currently proposed activities
- What are appropriate temporal (time) and geographic boundaries for the assessment of impacts during this EA
- What potential development-environment interactions need to be considered closely during this EA
- Whether the existing consideration of past, present and likely future impacts of the proposed development, in combination with other developments that may (or may already have) impact on the receiving environment, has been adequate.

Participants were invited to raise their issues and concerns. Those concerns are listed here by category rather than in the order they were raised. A taped record is available on the Review Board public registry for this EA at www.mveirb.nt.ca/registry/ for certain parts of the meeting.

No attribution of comments from any party to specific issues is identified here, although in some cases the developer's response has been indicated. Parties will have another opportunity to raise the issues they feel are most important at the July 22 & 23 Scoping Hearing at the Explorer Hotel in Yellowknife.

The scoping session highlighted the fact that there is a large amount of information available about the past and current impacts of the Giant Mine on its receiving environment and all of the factors (data?) that went into developing the current GMRP. It also established that some of this information is not perceived by some parties to be readily available or effectively communicated. Review Board staff noted that it is the developer's responsibility (and that of parties, when they have access to information not otherwise readily available) to provide all pertinent information to the Review Board for the public record. The sooner that this information is brought forward the better; parties are encouraged to fill some of the information gaps identified during the scoping session and highlighted here.

The issues raised are arranged into the following categories:

- Cumulative effects/legacy issues
- Scope of development and assessment
- Arsenic management alternatives
- Monitoring systems with emphasis on perpetual care
- Surface reclamation issues
- Socio-economic issues and traditional land usage
- EA process issues

Cumulative effects/legacy issues

SCOPE OF CUMULATIVE EFFECTS ASSESSMENT

- Concerns were raised that the developer's current assessment of impacts relates only to the activities proposed for future reclamation activities. While noting that it is well understood that the developer, INAC, was not the party that created the environmental impacts of previous mining and the proposal is to improve the environment, it was also noted that a more complete understanding of the past effects of the mine must be understood in order to fully address the cleanup; this must include a better understanding of baseline conditions.
- Parties felt that the EA should consider the cumulative impact of past contamination, starting with the 1930 (commencement of gold mining) and continuing onwards. This was requested in order that the historic baseline for contaminants of interest and valued biophysical components be taken into consideration.
- It was stated that people want to know that the area around the mine is safe going into the future; they also want to know just exactly how much damage has been done in the past and whether human health or ecosystem health mitigation is required.

HUMAN HEALTH

- Concerns were expressed that cumulative effects have not been a focal point of studies conducted by the developer to this point. Cumulative effects concerns centre around historic human and ecosystem health effects associated with waterborne, windborne and soil deposition of arsenic laden materials from the mine.
- It was stated that local people have health concerns going way back that have not been answered adequately to this point. There are particular concerns that the health impacts of the "high emissions" era of the 1950s and early 1960s have not been adequately identified. These people are becoming elders now and better clarity on how arsenic loads affected them is required.
- There needs to be greater clarity in terms of how arsenic and fifty years of mining might have affected people's health in N'Dilo, Dettah, and Yellowknife.

- Looking at the present and into the future as well, concerns were raised that information on potential health impacts of fishing, camping and berry picking in Yellowknife Bay, Vee Lake and the Yellowknife River needs to be provided.
- A 1978 Canadian Public Health Association report on the impacts on arsenic on human health in the Yellowknife area was cited as a missing piece of information that is not yet on the public record.

SPECIFIC INFORMATION NEEDS FOR CUMULATIVE EFFECTS ASSESSMENT

- There is an information gap about air-borne transport of particulate matter (roaster stack emissions) and the seasonality of those emissions, as well as change over time in their distribution and their effects on human and ecosystem health.
- Historic, current and likely future airborne dust was raised as a concern., particularly that there doesn't seem to be an understanding of the air born transport of arsenic, including tailings dust, especially that which occurred during the early operations of the mine. It was further noted that there are quite a lot of stories about the seasonal flush of arsenic into then environment and where that material went to.
- A concern was raised about what happened to the mercury that was used in gold processing during the first number of years of the mine.
- It was stated that birds, fish, small mammals, berries, plants, caribou, and the general ecosystem are all biophysical concerns that merit deeper assessment – particularly but not limited to long-term effects of arsenic and other contaminants.
- It was stated that, where applicable, additional evidence from previous studies should be brought forward by the developer and parties (e.g., a 1980's study on Back Bay water quality was mentioned).
- Water quality was cited as a concern, specifically the extent of the current effects on water from the mine, as well as how will it change over time. Water contamination issues as they relate to future use of area waters and lands by the city and citizens were also raised.
- Additional incorporation of traditional knowledge was called for, going back to the pre-mining baseline status of the environment. It was identified that the YKDFN did contribute to a traditional knowledge study with the developer concerning the mine; a document on this matter is available among the Remediation Plan's supporting documents.

LEGACY ISSUES

- It was expressed that the history of mine and its relationship to the community needed addressing. It was hoped that the assessment could provide an opportunity to speak about those things.
- It was mentioned that there should be a lessons learned aspect to the assessment in order to ensure that there are laws and systems in place to prevent a repeat of similar problems.
- One attendee questioned whether any long-term mine life cycle cost-benefit analysis has ever been fully implemented to see whether, given the high back end reclamation costs and perpetual care requirements, the Giant Mine will be an

economic net gain to the city of Yellowknife and NWT as a whole. Participants would also like to know who benefited most from the mine.

Appropriate scope of development and assessment

SCOPE OF DEVELOPMENT

- It was suggested that the EA be focused principally on the underground arsenic management issue and the soil remediation objectives.
- It was noted that surface work associated with the remediation plan is generally straightforward, such as the removal of hazardous materials or the demolition of buildings. The plans proposed and technologies available to the developer have enough credibility that most parties didn't express concerns that these demolition activities will create significant impacts. Some attendees felt these activities should not be main issues of concern and should not be delayed by the assessment.
- Other participants countered by saying that by not considering the surface issues, a proper EA will not be conducted. However, it was also noted that if there are surface remediation components that do not limit achieving a higher standard of clean up, then perhaps it doesn't have to be in the scope of development for the EA.
- Demolition and remediation of the potentially highly contaminated roaster facility might require a more in-depth examination than other surface activities.
- Leaving pits unfilled in the long term was identified as a concern.
- It was stated that the re-alignment of the Ingraham Trail and any future bypass road should be included as part of the scope. It was suggested that there may be potential effects caused by the establishment of a new road alignment. There were questions about whether to scope in the entire proposed realignment of the Ingraham Trail (much of which is being examined by the GNWT independently and has no relation to this development), or only that portion required by activities at the Giant Mine site.

GEOGRAPHIC SCOPE OF ASSESSMENT

- It was expressed that limiting the scope of the assessment to the surface lease may limit potential impacted areas which are beyond the lease boundaries, such as "hot spots". It was suggested that the effect of the mine likely extend well beyond lease boundaries.
- It was noted that the scope of the remediation considers areas well beyond the lease lands, particularly in examining human health risk, which considered the potential impacts of people in N'dilo and Dettah.
- It was expressed that areas affected by airborne contaminants, including pollution from the stack, as well as tailings, do not seem to be addressed in the plan. There isn't enough information regarding where the exhaust may have gone.
- It was stated that there has been a number of studies conducted to identify and delineate the extent of arsenic in the Yellowknife area such as studies of Back Bay and Yellowknife Bay that were conducted in the 1970s.

TEMPORAL SCOPE OF ASSESSMENT

- It was suggested that the temporal scope of the assessment should start with the beginning of operations.
- It was stated that a future opportunity to reassess the remediation plan be considered in the temporal scope, in order that the project can be re-examined in light of new technologies or new policies that will come along in the future.

Arsenic management alternatives

- It was stated by a participant that the frozen block remediation plan is not a “true” closure and reclamation plan; instead it is more of a holding pattern. It was suggested that there be set periodic reassessments of the project in order that if new technologies emerge, a more permanent solution – an “end point” where arsenic management is no longer required – can be implemented.
- It was stressed that the chosen arsenic management alternative should minimize long term care in order to avoid long term dependence on perpetual care and maintenance.
- While no other specific arsenic management alternatives were raised by attendees, concerns were expressed about how the decision was made to promote the frozen block method originally. One attendee stated it is important to understand what the alternatives are and what sort of trade offs exist in those alternatives, what values and criteria were used and how they were weighted by the developer when evaluating the alternatives. For example, it is especially important to minimize long-term and perpetual requirements – was this parameter used when assessing the 12 original arsenic management alternatives?
- An opinion was offered that suggested that the selection of the frozen block method was more driven by cost rather than the issues that need to be faced. If cost was a primary factor, the acceptability of this criterion as a priority was called into question.
- It was stated by an attendee that the overall suite of alternatives needs to be discussed and examined, not just incremental changes to INAC’s preferred approach. It was argued that the arsenic management plan should be discussed among the communities and the criteria needs to be done in consultation with the Aboriginal people. It was noted that many people are going to disagree about how to deal with the arsenic, and that such disagreement stems from the different values and perspectives on the trade offs implicit in the selection of alternatives. Those different values, it was felt by some, did not get considered in the original decision.
- One party asked for a “due diligence” reassessment of the remediation plan and chosen arsenic management alternative funded by the developer but done independently by a third party consulting firm.
- Attendees also expressed concern that no detailed contingencies planning document, in case things go wrong, is available, and that the Review Board should consider what the worst case scenario might be (e.g., a sudden release of a large quantity of arsenic) and what kind of impacts this sort of catastrophic failure might have.

- A worst case scenario needs to be considered both during implementation of the remediation plan and during long term operations.

Monitoring system with emphasis on perpetual care issues

- Some parties stated they felt the frozen block alternative chosen by the developer may be an acceptable short-to-medium plan for arsenic management, but that it is a “holding pattern”. Currently, with the frozen block alternative and its perpetual care requirements, the temporal scope of assessment has no end point. Participants were uneasy about this given that the possibility of failure of any plan spread toward infinity is absolute.
- It was expressed that people don’t want to have a technology that leaves the arsenic in a holding pattern as there is a risk that it could fail at some point in the future.
- It was asked if we have the technology to have a walk away plan now. The developer confirmed they believe their plan is the best available one at this time and probably for a long time, but allowed that there might be better methods to deal with the arsenic in future years. However, the condition of the stopes and chambers may deteriorate and make it extremely difficult to deal with even as new technologies become available.
- It was stated that in order for some parties to accept the frozen block alternative, there needs to be three things in place: a proper monitoring plan, a commitment to ongoing research and development to find an acceptable permanent arsenic management solution (there should be money put in place by the developer to support and encourage that), and independent oversight of the project monitoring and adaptive management system.
- It was also stated that monitoring without action is useless and that it is important for the Review Board, through its process, to identify appropriate evaluation cycle timelines at the end of which stakeholders must come together again to consider any future remedial actions. Regular periodic re-evaluations can be used in case there is some new best available technology can better address the arsenic problem.
- It was stated that there are concerns about the certainty of long term funding for perpetual care of the site and questions were raised about whether the developer will have to put up a security deposit with the MVLWB. Establishing funding certainty was identified as a key issue for the EA to cover.
- Parties wanted to know how information about what is happening at the site will be relayed back to the communities. Having a “right to know” is considered important; not having enough information properly communicated to potentially impacted groups is perhaps why some people are unsure about the project. The sheer quantity of the information can be hard to sift through for a small organization with small staff. Being able to sift through and extract the important things can be a lot of work. The community has to trust the person that they are getting information from.
- Parties want to ensure that traditional knowledge is implemented into the remediation planning, implementation and monitoring.

- Parties stated that currently there is limited information on the specifics of proposed monitoring systems. One participant asked whether the Giant Mine Remediation Plan meets the requirements of INAC's own Closure and Reclamation Policy Guidelines for the NWT.
- It was stated that some adaptive management thresholds/triggers need to be set so that if monitoring shows problems (e.g., increased arsenic loading in water), changes to management will occur rapidly.

Surface reclamation issues

- Expressions of concern for surface reclamation were linked to the following (see below for details):
 - Two unfilled pits and associated potential health hazards;
 - General site cleanup (removal of batteries and other hazardous materials as well as all infrastructure) – although many attendees felt assessment of this work is not essential to the EA;
 - Reclamation of the roaster facility and its surroundings;
 - Identification and remediation of “hot spots” for contamination, on and off the lease lands; and
 - The appropriate level of soil remediation, expressed by one attendee as “how clean is clean” – should it be to the proposed industrial standards or to another criteria such as recreational or residential standards? Much of this depends on what land uses will be considered acceptable and preferable in the future at and around the Giant Mine site.
- One participant was concerned about leaving two open pits unfilled over the long run. The developer did note that the rationale for leaving them open was that there isn't enough material available to fill all pits, so filling the pits would require excavating another elsewhere.
- Uncertainty was expressed about future uses for the site and a question was posed as to why the entire site should only be cleaned up only to the industrial standard when there might be opportunities for residential or other uses. Some participants felt that a determination of the appropriate maximum level of arsenic in site soils is an open question for the EA to consider.
- It was noted that the City of Yellowknife, through its development plan, is seeking to use the site for potential development and expansion and as such, both perpetual care requirements and surface reclamation standards are issues that may conflict with future City goals.
- A question was posed about how really acceptable are the standards being used and that there was a need to do some examination of the GNWT contaminated soil standards as they apply to the Giant Mine site.
 - One participant suggested a prior study on Yellowknife Soil Arsenic Remediation be found and put on the public record
- It was noted that the Review Board may be interested to learn more about how the land is proposed to be used in the future by both the City of Yellowknife and traditional users as it is within the municipal boundaries.

- Concerns were raised about whether there was consultation between the developer and interested parties on the prioritized end-use of the site or portions therein – was there consensus on the goal of the soil remediation?
- One participant raised the issue that because the land is proposed to only being restored to industrial standards, it assumes that other future users, such as the YKDFN or the City of Yellowknife, will have to pay for that any subsequent restoration to either recreational or residential standards.

Socio-economic issues and traditional land usage

- Concerns were raised concerning historic, current and future infringements on the aboriginal right to hunt, harvest and camp in the mine site area and how this would be addressed in the EA.
- It was stated that aboriginal parties were interested to see the socio-economic and cultural baseline extend back to the pre-mining phase, to approximately 1930, to establish what prior land usage was. This traditional use study would be important for setting final land use goals.
- The ability for aboriginal people to return to the site to practice their rights to harvest was noted as an important goal for a successful remediation plan. The EA should help establish what areas are, or will be in the future, suitable for traditional harvesting. For example, people wanted to know if and when it would be safe to return to pick berries and trap small mammals, and how this would be communicated. Community involvement in monitoring and the role of traditional knowledge were cited as important considerations.
- In relation to monitoring of the health status of country foods, one participant suggested there could be a broad vegetation survey, including medicinal plants and berries.
- One participant stated there are underlying and unfinished property rights issues, because the site is within a territory without a settled land claim.
- A concern was expressed about the property taxes that should be going to the City of Yellowknife for services provided, but which are not being recognized by the GNWT and INAC.
- The developer's policy toward allocation of employment and contracts, particularly any preference towards aboriginal persons and northerners, was mentioned as an issue for the EA to consider. A more general question was how benefits to the most affected groups will be maximized. INAC representatives noted that they have certain legal limitations on procurement related to Treasury Board Guidelines that must be met.
- Pre-mining archeological sites were presented as an issue of concern; there are three sites recorded by the Prince of Wales Northern Heritage Centre within the lease limits and the possibility of more was raised.

EA Process Issues

- It was asserted that the Review Board should take responsibility to identify the goal of the EA as being the identification and imposition of the outcome (the

remediation plan) that will likely provide the greatest environmental benefit over the long term.

- It was noted that the role of the various responsible ministers, including INAC and GNWT, in both the EA proper and the acceptance of the Review Board's recommendation, needs to be fleshed out in the near future.
- A request was made for the Review Board to confirm whether participant funding will be available for the EA. It was noted by Review Board staff that historically the Review Board has not been able to provide participant funding for EAs, despite the fact that it is an issue that is brought to INAC on a yearly basis. It was further noted that the Review Board will respond in writing to the public record to the question of participant funding for this project.
- It was suggested that in lieu of participant funding, the Review Board could hire a pool of independent technical experts that the public could access.
- It was requested that the Review Board, or another agency, compile an annotated bibliography of all available documents related to Giant Mine based on the public record kept by the Giant Mine Remediation Team. A party later stated that they felt this was more likely the responsibility of the developer.
- It was expressed that trust in the process is an important issue for the Giant Mine remediation plan. It is particularly an issue as people are unable to read every detail in the massive public record, and don't want just a display of the information "at the local mall". Instead they want someone to be able to tell them the issues and to be able to trust what they are hearing.
- One party stated their general impression that the remediation plan is a good idea and that it needs to start as soon as possible, but they still have a few questions and, therefore, they would like to keep the EA short and focused to allow people to carry on with their work.

Appendix A:

MACKENZIE VALLEY ENVIRONMENTAL IMPACT REVIEW BOARD PUBLIC ISSUES SCOPING SESSION SIGN-IN SHEET INAC-Contaminants & Remediation Directorate's proposed remediation plan for Giant Mine	
Location: Yellowknife	Meeting Date: June 17, 2008
Facilitator: Mackenzie Valley Environmental Impact Review Board Staff	Place/Room: Tree of Peace Hall
Name	Organization
1. Bruce Holburn	SENES Consultants
2. Carl Conkin	Gen. of Coun - Justice Canada
3. Heather Frederick	" "
4. Pat Duxbury	MVEIRB
5. Todd Stock	YKDFN
6. Louie Azzolini	YKDFN
7. Jennifer Drygeese	YKDFN
8. KATRINA NAKLESBY	SRK CONSULTING
9. Deb Bain	INAC
10. Kerry Penney	city of YK
11. Kevin O'Reilly	Private Citizen
12. Trace Crowe	PNWSC
13. Erika Ayyssonen	GNWT - ENR
14. JOEL HEDER	GNWT - ENR
15. LINDA DUFOUR	GNWT - ENR ^{Giant Project Team}
16. Ray Ortiz	GNWT - ENR
17. Krystal Thompson	INAC - E&C
18. MARY HEWITT	FLAT RIVER CONSULTING

**MACKENZIE VALLEY ENVIRONMENTAL IMPACT REVIEW BOARD
PUBLIC ISSUES SCOPING SESSION SIGN-IN SHEET**

INAC-Contaminants & Remediation Directorate's proposed remediation plan for Giant Mine

Location:	Yellowknife	Meeting Date:	June 17, 2008
Facilitator:	Mackenzie Valley Environmental Impact Review Board Staff	Place/Room:	Tree of Peace Hall
Name	Organization		
19.	Bill Mitchell	INAC	
20.	Daryl Hockley	SRK	
21.	DAN KEWITT	SRK	
22.	TRISH McFAUL	MACA - GNWT	
23.	Sheryl Griene	NSMA	
24.	Morgan Cooper	?	
25.	Bev Chamberlain	?	
26.	Steve Schultzy (phonetic)	?	
27.	Tom Brown	INAC-CARD	
28.	Louis Philibert-Monissette	L'Aiglon	
29.	Herb Mathison	WNSL	
30.	Alan Ehrlich	MVEIRB	
31.	Tawana Testart	MVEIRB	
32.	Emily King	MVEIRB	
33.	Jessica Simpson	MVEIRB	
34.	Alistair MacDonald	MVEIRB	
35.	Nicole Spence	MVEIRB	
36.			