



Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #01

June 17, 2011

INFORMATION REQUEST RESPONSE TEMPLATE

EA No: 0809-001

Information Request No: Alternatives North #01

Date Received

February 28, 2011

Linkage to Other IRs

NSMA IR #02

YKDFN IR #25, 26, 27

Date of this Response

June 17, 2011

Request

Preamble:

It is important to understand exactly who the Developer is, how conflicting mandates may be dealt with and the roles and responsibilities of other bodies such as the Oversight Committee and the Independent Peer Review Panel.

Question:

Please provide the following:

1. A list and rationale for federal and territorial Ministers that will serve as —"Responsible Ministers" under the *Mackenzie Valley Resource Management Act* for the purposes of this Environmental Assessment.
2. On pg. 1-8 of the DAR, INAC describes a number of potentially conflicting roles and responsibilities including environmental assessment decision-maker, regulator, inspector, Aboriginal interests, economic development and capacity building. How will these potentially conflicting responsibilities be dealt with in the context of the Remediation Project?
3. Meeting summaries for the Oversight Committee established under the Giant Mine Cooperation.
4. What role if any, did other federal or territorial government departments (e.g. Natural Resources Canada, Environment Canada, or others) play in the preparation of the Developer's Assessment Report? Please provide any reviews or correspondence that demonstrates such input and how it was dealt with.





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5. The Independent Peer Review Panel was active in 2003 and 2004. Did it have any role in the preparation of the Developer's Assessment Report? If so, please provide any reviews of correspondence that demonstrates such input and how it was dealt with.
6. The Developer intends to retain the Independent Peer Review Panel. Have the members agreed to continue to serve and what will be the terms of reference for this body in relation to the Development?
7. Has INAC and GNWT given any consideration to transforming the Independent Peer Review Panel into an independent oversight body that reports to a representative multi-stakeholder group?

Reference to DAR (relevant DAR Sections)

DAR, s. 1.1.4 Project Proponents

Reference to the EA Terms of Reference

S.3.2.2 Developer

Response 1

Responsible Ministers under the *Mackenzie Valley Resource Management Act* (MVRMA) who have decisions to make with respect to the proposed Giant Mine Remediation Project include:

- Minister of Aboriginal Affairs and Northern Development;
- Minister of Environment;
- Minister of Fisheries and Oceans; and,
- Government of the Northwest Territories Environment and Natural Resources.

For further information on the roles and responsibilities of the above Ministers and the rationale for why these Ministers are expected to be RMs please refer to North Slave Métis Alliance Information Request #2 and Yellowknives Dene First Nation Information Request #26.

Response 2

For a complete response to this question, the reader is respectfully referred to the response to North Slave Métis Alliance Information Request #02.

Response 3

Please see the attached meeting summaries from Giant Mine Oversight Committee from August 2005 to April 2011.





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Response 4

For a complete response to this question the reader is respectfully referred to the response to the Yellowknives Dene First Nation Information Request #26.

Response 5

The Developer's Assessment Report (DAR) is a continuation of the Remediation Plan; the conclusions of the Independent Peer Review Panel are presented in section 1.5.3 of the DAR. The DAR is based in part on the Closure Plan which was reviewed by the Independent Peer Review Panel (IPRP) and subsequently submitted to the Review Board.

Response 6

The Independent Peer Review Panel established in 2002 will be continued and consulted as needed throughout the Giant Mine Remediation Project.

Response 7

For a complete response to this question the reader is respectfully referred to the response to the Yellowknives Dene First Nation Information Request #25.



Giant Mine Oversight Committee Meeting August 12, 2005

In Attendance:

GNWT

Bob Bailey
Emery Paquin
Brian Austin
Debbie Delancy

DIAND

Lorne Tricoteux
Kate Hearn
Mark Liskowich
Bill Mitchell
Diane Walsh (notes)

Agenda Items:

Update on Bankruptcy Proceedings

- Giantco has been assigned into bankruptcy
- Bill Mitchell named Inspector of the bankruptcy
- Section 39 will be operative as soon as Water License is returned to the board
- The quitclaim of land leases, Water license and mineral leases expected to be first actions of the trustee

Oversight Committee Terms of Reference

- GNWT has sent letter outlining their membership on Oversight Committee
 - DIAND will identify its membership to the Oversight Committee by letter
 - GNWT has not had time to review the Terms of Reference as copies were received from DIAND the morning of the Oversight Committee meeting
- **Recorded Decision**
Terms of Reference moved off the agenda until next meeting

GNWT Positions within Interim Office

- Draft of Senior Project Engineer and Environmental Assessment Specialist job description provided by the GNWT
 - Due to staffing changes in interim office DIAND uncertain of need for senior project engineer
 - GNWT considers Engineer to be key senior position
 - DIAND suggested secondment of the two GNWT positions to Interim Office while GNWT concerned over accountability of seconded staff
 - Further discussion required to work out staffing requirements and how to proceed
- **Recorded Decision -**
Agreement on need for Environmental assessment specialist position, Emery Paquin and Bill Mitchell to discuss the engineer position further and provide recommendations to Oversight Committee at next meeting

Interim Office Re-location

- GNWT indicated it previously agreed with plans to re-locate at site. DIAND has several internal matters to resolve before move can take place.

Communications Protocol

- GNWT had some outstanding issues that have been incorporated in the most recent version
- Both parties are comfortable with current protocol
- **Recorded Decision:**
Communications Protocol approved
Agreed that there should be a standing item at all meetings on new issues relative to communications

Land Tenure

- Letter sent to DIAND from GNWT offering a Reservation by Notation as Land Tenure Instrument
- Issue tied directly to the bankruptcy proceedings.
- Further investigation and discussion required on what would be the appropriate tenure instrument
- DIAND has had discussions with PWGSC regarding PILT
- Key issue with GNWT is whose responsibility is it for new assets/liabilities - existing ones covered by Agreement
- Communication with the City is required
- **Recorded Decision:**
DIAND will contact Brian Austin to identify a way forward once PILT information is received from PWGSC.

Working With City and First Nations

- General agreement that a joint ministers' response to the City's letter of May 11, 2005 should be drafted for approval by both parties. Letter is to reflect terms of Agreement re: bilateral nature and cleanup to industrial standards.
- Oversight Committee also to draft letter to City to reiterate and elaborate on the joint ministers' response letter
- Similar letter to YKDFN to be developed
- Time frame for letters - one month

Highway Re-alignment

- Department of Transportation has prepared five preliminary options for highway re-alignment
- Option B determined to be preferred choice - largely avoids mine property, could generate quarry material that can be used on site, but considerably higher in cost
- Option B preliminary cost of \$9.8 million reflect DOT out-of-pocket costs only
- Current infrastructure dollars cannot be used as already identified for specific highway projects
- Could open land to meet multiple objectives - Should have early discussions with the City
- Need to ensure information does not become public knowledge until meeting with City officials
- Consultation with Aboriginal Affairs (Akaitcho Interim Measures) required
- **Recorded Decision:**
GNWT will invite Larry Purcka (DOT) to meet with Oversight Committee to discuss preliminary options and next steps

Mine Heritage Society

- Society is proceeding with restorative stabilization work on A shaft headframe
- As part of overall remediation, the Interim Office would remove asbestos, cap the shaft and address other potential environmental and safety liabilities. Mine Heritage Society responsible for all other restorative costs

- Future of headframe cannot be resolved until Land Tenure issues are resolved
 - A residence and the Yacht Club currently receive power from the "A" transformer on the mine electrical grid. Notifications must be sent on the "A" boiler is being shut down and power is being cut.
- **Recorded Decision:**
Oversight Committee to write letter to EC&E re: the need for them to work with Mine Heritage Society because work is proceeding to remediate liabilities

NEXT MEETING

- Tentatively set for September 30, 2005
- Two weeks prior members to determine if progress has been made with respect to tasks.

**Giant Mine Oversight Committee Meeting
December 11, 2006
8th Floor Bellanca Building**

In Attendance:

GNWT

Bob Bailey
Emery Paquin

DIAND

Bob Overvold
Bill Mitchell
Michele Boriel
Diane Walsh (notes)

Agenda Items:

Minutes of Last Meeting

- Minutes reviewed and accepted.

Water License Application and EA Issues

- The draft final Remediation Plan is now complete. The draft for the Water License Application has been prepared. INAC HQ and Water Resources Division in the Region have made suggestions for two addendums to the Water License Application. The first is a cross reference to the (geology) documents contained in the Remediation Plan with a possible addition of the socio-economic impact. The second addendum is the Remediation Plan itself. HQ wants to ensure this is a coherent package and each federal department is clear on their roles and responsibilities.
- The GNWT requested an opportunity to provide input into the application process before it is finalized by INAC. INAC agreed to this request.
- The water license application is expected to be submitted to the Mackenzie Valley Land and Water Board by the end of March 2007.
- The Oversight Committee could benefit the process and add input.

➤ **Recorded Decision:**

A more detailed review of the application process and the next steps will be presented to the Oversight Committee at the next meeting.

Communications

- Michele Boriel is working on the Communications Strategy for the Remediation Project and has prepared a draft document.
- Bill Mitchell met with the City early in December and gave them an overview of the Remediation Plan. The issue of contaminated sediment at the boat launch was of concern. Bill Mitchell suggested the possibility of performing random water sampling next summer when the boat launch is active.

- A need was identified for Community consultation (specifically YDFN) to provide updated information prior to the submission of the water license application.

➤ **Recorded Decision:**

Emery Paquin will give the Communications Strategy document to his communication group for review. They will work directly with Michele Boriol to complete the document.

The Oversight Committee will consider of the draft final communications plan at their next meeting.

Highway Realignment

- The Department of Highways has formed a Steering Committee which has agreed that Option B (yellow) is the preferred option for the highway relocation.
- The Steering Committee is preparing to request approval-in-principle from GNWT Cabinet for the project.
- The GNWT recommended that \$400K required for Phase 1 of the project (corridor analysis: geotechnical, hydrological and habitat studies and analysis; conceptual design and costing) be eligible for funding from the GNWT Giant Mine Remediation Liability Account.
- Concern was expressed that linking the highway realignment too closely with the remediation project may trigger an environmental assessment of the highway project. GNWT agreed to de-link the projects to the extent possible.
- GNWT feels this project would not require an Environmental Assessment because it is all on Commissioner's Land, however there is some uncertainty about this because of the watershed.
- Phase 1 is estimated to take six months to complete, with initial construction work on the highway potentially beginning in the summer of 2008
- The GNWT will produce a separate document to be used during the public consultation phase of the project.

➤ **Recorded Decision:**

The Oversight Committee approved the request to have the \$400 K applied to the GNWT Giant Mine remediation liability account to enable Phase 1 to proceed. Emery Paquin will draft a letter to the Department of Transportation and Bill Mitchell will review it. The letter will be signed by Bob Overvold and Bob Bailey on behalf of the Oversight Committee.

Update on B2 Dam

- On November 1, 2006 there was a piping failure in the B-2 pit dam at the junction of the pit and the overburden. Water was leaking through the dam at a rate of approximately 40 gallons per minute as a result of the failure.
- A temporary dam was put in place across Baker Creek to prevent the creek from

flowing past the compromised dam structure and water is being pumped to a point further down into the creek. Water leakage into the pit immediately ceased. A new water retaining structure will be designed and constructed upstream of the existing B-2 pit dam.

- Geotechnical investigations using auger drilling is underway to determine extent of native clay material upstream of the existing B-2 pit dam. The new water retaining structure will be "keyed" into the impervious native clay or on to bedrock.
- Construction of new dam to be started in January. Dam must be completed before freshet.

NEXT MEETING

- February 5, 2007 at 9 am, 6th Floor Scotia Centre

Giant Mine Oversight Committee Meeting
February 5, 2007
Scotia Centre 6th floor boardroom

In Attendance:

INAC

Bob Overvold, RDG
Kate Hearn, Director CARD
Bill Mitchell, Manager GMRP
Michele Boriel, Comms Officer

GNWT – ENR

Bob Bailey, DM
Emery Paquin, Director Env. Protection
Kathy Mercure, Comms Planning
Specialist

GNWT – MACA

Debbie DeLancey, DM
Andy Tereposky, Director Lands Admin.

Agenda Items:

1. Minutes of Last Meeting (December 11, 2006)

- Minutes reviewed and approved by all.

2. Site Land Management (Joint)

- Oversight committee agreed in principle not to allow land administration & property tax issues get in the way of moving forward with clean up activities.

It was recommended that INAC & GNWT establish a Site Management Committee or Working Group comprising MACA and INAC staff to deal with land administration issues such as third party leases.

- **Recorded decision:** It was agreed that a Site Management Committee be established and terms of reference developed. It was agreed that land issues related to the work of the committee will be a Standing Agenda item for the Oversight Committee henceforth. It was also agreed that the Committee set up a meeting with the City Administrator to discuss property tax issues.

3. Water License Application and Process (INAC)

- A draft water license application is complete and will be reviewed by the Technical Advisor. INAC is also working on two addenda: A cross-reference check list will be added to Addendum 1 that will also include a list of all required permits, and the IPRP Report on its review of the Remediation Plan. Addendum 2 is the Remediation Plan and an additional supporting document that describes the structural geology of the site was added based on HQ's recommendation.

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February 5, 2007
Scotia Centre 6th floor boardroom

- It was noted that there have been no substantive changes to the Remediation Plan since last fall only minor corrections of typos. The Remediation Plan is the same plan that was approved by the GNWT.

Recorded decision: The GNWT will have an opportunity to review the application and addenda prior to submission to the MVLWB.

4. Communications Plan (INAC)

- The Communications Strategy was circulated to attendees. The Key Messages still need to be approved and specific Key Messages need to be developed for INAC and for GNWT; a message for cases of disagreement also needs to be drafted.
- On the issue of spokespersons, it was agreed that Bill Mitchell will speak to technical issues directly related to the Remediation Project and Emery Paquin will speak to GNWT issues – or identified spokespersons within other GNWT departments as appropriate. It was re-iterated that INAC and GNWT's public face needs to be one of co-operation and agreement.

It was noted that the highway re-alignment should be disconnected from the project in terms of communications (see #5).

- It was noted that the public/media do not yet understand the role of the Joint Office and that they think Bill Mitchell is a spokesperson for INAC, not for the Joint Office. The GNWT has some concerns about the appearance of the logo on all the comms products in case the media/public misunderstands. The question was raised on whether or not GNWT wants its logo on the cover of the Remediation Plan. No decision was made as it will depend on how the logo will be used on the comms products. It was suggested that INAC and GNWT could make their joint roles clear at GMCA, media technical briefings and other information meetings.

No decision has been made by the MO on the care and maintenance contract announcement.

- INAC believes that there is no requirement to consult with the North Slave Metis, and it was noted that the North Slave Metis Alliance has a representative on the Giant Mine Community Alliance.
- **Recorded decisions:** The Comms Strategy and Q's & A's are to be reviewed by all for endorsement at the next Oversight Committee meeting. INAC will provide GNWT with a copy of the new design concept for GMRP products for review. INAC NWT Region to apprise INAC HQ regarding Legislative Assembly situation.

Giant Mine Oversight Committee Meeting
February 5, 2007
Scotia Centre 6th floor boardroom

5. Highway Realignment (GNWT)

- A letter to DOT from the Oversight committee indicating that \$400K from the GNWT liability account would be provided to DOT for a Feasibility Study on the preferred highway routing was approved by Bob Bailey and Bob Overvold. With GNWT Cabinet approval, the feasibility study can be initiated in the spring/summer 2007.
- Discussion ensued on whether or not the realignment will be subject to an EA and it was agreed to reserve judgement until the GNWT actually decides on the location of the highway. There needs to be a strategy in place to manage this issue should the highway realignment be referred to an EA and the question was raised about the Oversight Committee making an official enquiry. It was pointed out that pending changes to the MVRMA would automatically give the responsible minister authority; in which case it wouldn't be MACA that would determine whether or not an EA is required.

On the question on whether or not the water license provides leeway to capture the highway realignment it was reiterated that the solution is to delink the two processes in the mind of the MVLWB

It was agreed that MACA needs to keep a standing watch on this issue.

- Once a route is chosen the Department of Transportation will prepare a booklet on the highway realignment for public consultation and will be circulated to INAC for comment.

➤ **Recorded decision: None**

6. GNWT Obligations under the Cooperation Agreement (GNWT)

a) Interim Office

- The GNWT Department of Finance has indicated that there is uncertainty in the Co-operation Agreement regarding the \$250K per year for interim office support in that the agreement does not specifically indicate that this is for 3 years only. INAC confirmed its understanding that the funding for the interim office was for a three year period only.

b) Environmental Assessment Specialist Position

- The Environment Assessment position hasn't been staffed due to the fact that this isn't the right timing for it. It was noted that the position will definitely be required as the RP undergoes regulatory process and that they would be looking for someone soon. It was noted that the job description has been written and evaluated, and that the Staffing Committee will comprise Emery Paquin and Bill Mitchell. INAC and the GNWT are in agreement that the position is required; it's just a question of timing.

Giant Mine Oversight Committee Meeting
February 5, 2007
Scotia Centre 6th floor boardroom

➤ **Recorded decision:**

Agreement that GNWT funding for the interim office is for a period of three years only.

7. **Next Meeting**

- The next meeting is tentatively scheduled for Friday, March 16, 2007 @ 0900 in the sixth floor boardroom in the NWTel building. Debbie DeLancey will host; INAC will chair.

Giant Mine Oversight Committee Meeting
June 29, 2007
Bellanca Building, 8th floor boardroom

In Attendance:

INAC

Zoe Raemer, A/RDG
Kate Hearn, Director CARD
Bill Mitchell, Manager GMRP
Dawn Curtis, Comms Officer

GNWT – ENR

Bob Bailey, DM
Emery Paquin, Director Env. Protection

GNWT – MACA

Andy Tereposky, Director Lands Admin.

Agenda Items:

1. Minutes of Last Meetings (February 5th and March 16, 2007)

- Minutes of March 16, 2007: reviewed and approved.
- Minutes of February 5, 2007: Reviewed and approved with a request from GNWT subsequent to the meeting for a minor amendment, agreed to by INAC. Consequently, the Minutes are amended to read, "*Oversight Committee agreed in principle not to allow land administration and property tax issues to get in the way of moving forward with clean-up activities.*"

2. Update

Water License Application & Remediation Plan Progress Update

- The current draft water license application form was discussed. GNWT to respond with any suggested revisions by July 13, specifically in regard to the highway reference in the paragraph on Remediation Plan sections 5.11 and 5.12.
- GNWT-ENR indicated a need to brief their Minister on the Remediation Plan prior to submission. It was also noted that the Plan continues to be the version that was previously approved by Cabinet and Treasury Board, with only minor changes.
- Remediation Plan: Final items to pull together; now on third SENES draft of Cumulative Impact Assessment. Printing. GNWT requested a copy of the Impact Assessment before it is finalized. Submission of Remediation Plan and water license application targeted for late July / early August pending appropriate briefings with INAC staff.
- INAC met with SRK in June to evaluate the environmental effects/impacts of the Remediation Plan, identifying small dusting issues related to tailings, etc. A report on the environmental impacts of the Remediation Plan is to be included as a supporting document.

Other site activities

- Work crews are currently removing more of the asbestos-containing utilidors at the town site, near the boat launch. Arrangements have been made with the City to have the area cordoned off to the public while the utilidor removal is underway.
- Signage: The Giant Mine Community Alliance has recommended signage for the site indicating that this is a remediation project and a contact number for queries. Signage must be put through PWGSC per federal process through formal recommendation. GNWT-ENR indicated that they will facilitate sign printing and construction once the design has been finalized.

3. Communications Plan

- General agreement that communications plan is now acceptable.
- Suggestions to hold a joint GNWT / INAC internal staff briefing on the Remediation Plan prior to submission within the same time frame. Identified MACA, ENR, Health and INAC key people to attend. Briefings should also be offered to the City of Yellowknife and Chiefs of Dettah and Ndilo. It was also suggested that a Lunch 'n Learn would be useful for others that are interested. INAC will prepare a presentation and will look into securing a venue.
- Media – Technical briefing: There was discussion on the merits of holding a media technical briefing at the time of the submission.

4. Consultation Issues

- Covered in discussion of Communication Plan - no additional consultation issues identified at this time.

5. Highway Re-Alignment

- ENR briefed the Oversight Committee on the status of the Highway re-alignment project. Distribution of map and Communications Plan to those present. Comments on the draft plan to be provided to Emery Paquin before July 19th, 2007.

6. Report on Land Management Working Committee (MACA)

- Andy Tereposky reported on existing third party interests on the site. MACA is planning to issue short term leases. No additional third party interests would be allowed to use the site until the remediation is substantially complete.
- The City has approached MACA regarding subleases in the Townsite area and a condition of renewal would be that leaseholders be made aware of possible access restrictions during remediation.

- The City of YK has provided a letter to the GNWT-ENR Minister seeking payment of the PILT which is just over \$300K asking if there would be consideration to whether the GNWT could cover the cost using funds set aside for the project.
- It was noted that MACA had approached the ADM in Ottawa regarding PILT to determine the possibility of applying PILT payments towards the GNWT Giant Mine Liability account.

7. Other Business

- Nothing identified at this time.

8. Next Meeting

The next meeting is tentatively booked for Tuesday, July 31st from 1:00 – 3:00 p.m. in the Scotia 6th Floor Boardroom.

Meeting adjourned at 2:40 p.m.

Giant Mine Oversight Committee Meeting
July 31, 2007
Scotia Centre 6th floor boardroom

In Attendance:

INAC

Zoe Raemer, Acting RDG
Kate Hearn, Director CARD
Bill Mitchell, Manager GMRP
Michele Boriel, Comms Officer

GNWT – ENR

Bob Bailey, DM
Emery Paquin, Director Env. Protection

GNWT – MACA

Debbie DeLancey, DM
Andy Tereposky, Director Lands Admin.

Agenda Items:

1. Minutes of Last Meeting (June 29, 2007)

- Minutes reviewed and approved by all.

2. Water License Application – Remediation Plan – Proposed timing of submission to MVLWB

- Additional Supporting Documents on Environmental Effects and Cumulative Impacts completed and forwarded to GNWT-ENR for comments.
- A proposed timeframe was circulated with an outline of proposed important dates for meetings and information sessions in accordance with the submission of the water licence application and Remediation Plan. The timeframe included the briefing for the INAC ADM in Ottawa August 15th and the intent to submit the Remediation Plan to the MVLWB September 7th.
- A briefing with Minister McLeod will take place on August 9th. A subject for discussion will be the need to brief local MLA's prior to submission of the license application.
- Due to scheduling conflicts, GNWT noted that submission of the Remediation Plan may need to be postponed. GNWT to provide further comments on the timeframe.

3. Cover Letter for Submission

- A draft Cover Letter to Mr. Willard Hagen of the MVLWB was circulated and GNWT-ENR will provide comments.

Giant Mine Oversight Committee Meeting
July 31, 2007
Scotia Centre 6th floor boardroom

4. Letters to Chiefs and City

- Letters to YKDFN Chiefs and City were presented for signature but a slight error in wording requires correction before signing.
- It was also noted that letters should be distributed to the North Slave Métis Alliance and Tlicho as an update and to offer information sessions.

Recorded decision: Two additional letters to the North Slave Métis Alliance and Tlicho will be drafted for signature by the OC.

5. Highway Realignment (GNWT)

- GNWT provided INAC with copies of letters sent from DOT to local governments and stakeholders regarding the highway realignment.
-
- The proposed poster and public information brochure was distributed and comments are requested to ENR by Friday, August 3rd. Comments will be forwarded to the Department of Transportation. It was also noted that the Department of Transportation has begun their public information sessions with regards to the realignment.
- It was noted that the public/media have gained a slightly better understanding of the Joint Office, though some media inquiries are still being redirected to the proper Department.

6. Report on Site Land Management Working Committee (MACA)

- GNWT is still waiting for response from INAC regarding the proposal to have GNWT pay back property taxes to the City and have it recognized as part of the overall GNWT contribution. This issue continues to be a substantial concern for the City.
- It was noted that there are two explosives sites, one company has provided their permits, and the other is working on providing their permit information. Both explosive companies and the propane company have requested land tenure. The Land working group has recommended to the Committee that we provide the 3 companies with a one year lease with a one year renewal option available.
- Sludge from Nicholas Lake that has been stored at the site will be disposed of at the Northwest Tailings Pond. The sludge meets the GNWT's leachate criteria for solid wastes eligible for disposal in a municipal landfill.
- It was noted that the City has agreed to explore the concept of a Municipal services agreement to recover costs of services provided to the site such as fire and ambulance, as an alternative to a Payment in Lieu of property tax. The Land Management Committee members will continue to pursue this approach with the City.

Giant Mine Oversight Committee Meeting
July 31, 2007
Scotia Centre 6th floor boardroom

7. Communications

- Communications Strategy was tabled for review and approval.
- INAC noted that there will be a Departmental News Release rather than release through the Giant Mine Community Alliance and the Backgrounder will be submitted for approval some time this week. The Kit Folders / Fact Sheets will be in next week but won't be distributed until after submission and after Minister McLeod's briefing.
- Website is to be readied to go live at the time of Water License submission.

8. Other Business

None noted.

9. Next Meeting

The next Oversight Committee meeting has been scheduled for Tuesday, September 4, 2007 from 1:30-3:30 p.m. in the 8th Floor boardroom of the Bellanca building.

**Giant Mine Oversight Committee Meeting
October 10, 2007
Precambrian Building, 5th Floor Boardroom**

In Attendance:

INAC

Zoe Raemer, A/RDG
Kate Hearn, Director, CARD
Bill Mitchell, Manager GMRP
Michele Boriel, Comms. Officer

GNWT - ENR

Bob Bailey, DM
Emery Paquin, Director Env. Protection

GNWT – MACA

Debbie DeLancey, DM
Andy Tereposky, Director Lands Admin.

Agenda Items:

1. Minutes of Last Meeting (June 29, 2007)

- Reviewed and approved by all.

2. Water License Application – Remediation Plan Proposed Timing of submission to MVLWB

- Remediation Plan is printed and ready to be submitted to the MVLWB.
- Water License Application is currently being reviewed by Justice - may cause a possible delay. DOJ has expressed some concern with the care and maintenance work being carried out under Section 39 of the Water Licence. Justice also questions about the necessity to acquire Land Use permits.

Action Item: MACA will look into this under Section 53

Action Item: Bill will advise of the outcome

- Date of submission set for the 18th of October, 2007.

3. Cover Letter for Submission to MVLWB

- Discussed inserting a request for a 25 year water license into the cover letter: There was general agreement that the cover letter should not indicate a specific time frame

Action Item: The next version will be circulated by e-mail.

4. Letter to Chiefs and City

- Letters were sent out to the Chief and City
- NSMA & TliCho letters were not sent as of yet. Feeling was NSMA are in the Community Alliance already and the TliCho – did not require letter from Giant that ATI had recommended.

5. Highway Realignment (GNWT)

- The City of Yellowknife, TliCho, and YKDFN were flown over the proposed highway corridors to make them aware of the possible options.
- DOT website has the poster in it of the proposed sites

- Next step – Newspaper insert for November public meeting at Northern United Place that will be part of the Community Consultation
 - Jacques Whitford – has been awarded the contract for engineering and the review of the proposed corridors and routes
 - DOT is willing to brief Oversight Committee any time
 - Question – Is there a goal date for final decision? – No
- Concern raised by INAC is the issue of perceived *Project Splitting* with one of the options.

6. Report on Site Land Management Working Committee (MACA)

- City Sub leases for Town Site are being worked on by MACA. MACA is also looking at existing third party interests, (Propane and Explosives) and with what conditions their leases should be issued. 1 – Propane and 2 Explosives Company. Use of the leases will be limited to existing parties and no expansion to existing facilities or additional companies will be entertained until the remediation is complete
- Possible Windmill Site to establish local wind regime –Yes although any work would have to conform to the Mine Health & Safety Act.
- Issues of Cities back property taxes – Zoe commented that a One-time resolution with future Fee for Service is possible that would lead to a Municipal Services Agreement with the City

Action Item: Debbie D. to put proposal in writing to Zoe.

7. Communications

- Full package of communications materials was distributed to attendees.
- News Releases will need Premier's name – Probably will go out Oct. 16th.
- Need GNWT on 22nd of November at site for Media.
 - a. Who will be there for the media technical briefing?
 - b. Who is the public face –INAC manager represents Project but GNWT should be present in case questions arise.
 - c. Contact names for Departmental Spokespersons
 - i. INAC CARD Director to cover SMC, ENR Director to cover WCB.
 - ii. Suggested to hold a briefing with those people for consistence of information for clarity

8. Other Business

Bob: Thank you to Bill for GNWT Deputy Minister Briefing. They were interested in project.

9. Next Meeting

- a. The next proposed meeting is for 9:30 on November 15th, Scotia 6 Boardroom.

**Giant Mine Oversight Committee Meeting
February 29, 2008
Bellanca Building, 8th Floor Boardroom**

In Attendance:

INAC

Trish Merrithew-Mercredi, RDG
Kate Hearn, Director, CARD
Bill Mitchell, Manager GMRP
Deb Bain, Comms. Officer

GNWT - ENR

Bob Bailey, DM
Gary Bohnet, ADM, Programs
Ray Case, Director Env. Protection

GNWT – MACA

Andy Tereposky, Director Lands Admin.

Agenda Items:

1. Minutes of Last Meeting (October 10, 2007)

- Reviewed and approved by all.

2. Update on Water License Application

- Remediation Plan submitted to the MVLWB October 19, 2007.
- Public comment period granted an extension to January 21, 2008.
- Verbal indication was received from MVLWB last week, followed by confirmation in writing this week that the Board has recommended that the project proceed to regulatory Water licensing. A copy of the MVLWB decision was circulated to meeting participants.
- Next steps: Board wants input from the project team on developing the work plan, to review each of the components of the Remediation Plan in detail, after which the Board would hold public hearings, then draft a Water Licence, for review by appropriate parties.
The final water licence would be forwarded to the Minister of INAC for approval.
- Estimated timeline for the regulatory water licensing process is 12-14 months.
- Bill noted that MVLWB still has power to call it up for EA.

3. Discussion on Section 18.1 of Cooperation Agreement

- a. Pursuant to section 18.1 of the Cooperation Agreement there is a requirement to review the status of the Agreement on its third anniversary of March 15, 2008. It was recommended that the Oversight Committee should continue with same Agreement and that a record of their decision be entered into the minutes.

Decision Item: INAC and GNWT agree to continue with the Cooperation Agreement.

4. Cooperation Agreement Article 10.1 (c): GNWT Payment of \$1M/year

- a. Bill noted that GNWT has been paying fuel, power & propane to Site at approx. \$1.3M/year as the GNWT share of the care and maintenance costs. Excess of \$1M was then billed to INAC and paid to the GNWT.
- b. Recommendation: The GNWT has completed its payment of \$1.0 million per year for the first 3 years of the agreement as outlined in section 10.1 (c). It was suggested that INAC/PWGSC take over the fuel and power payments effective April 1st.

Decision Item: Agreed, payments taken over by INAC/PWGSC effective April 1st, 2008. Suppliers will be notified of the change by INAC/PWGSC.

5. Use of Joint Letterhead for future communication with Boards

- Not discussed at previous OC Meeting, Bill mentioned that the Water Licence Application was submitted by Trish Merrithew-Mercredi and Bob Bailey using joint letterhead. In response to public comments, Bill used INAC letterhead as Oversight Committee hadn't previously discussed action on joint letterhead last meeting.
- GNWT participation on responses to comments will be headed by Dr. Ray Case (new Director of Environmental Protection).
- Public meetings – INAC and GNWT will participate by joint proponent message.

Decision Item – Both parties agree to the use of Joint Letterhead when responding to Boards and the public.

6. Update on bankruptcy of Miramar Giant Mine Ltd.

- Miramar GML entered into bankruptcy in July 2005. It was anticipated that the bankruptcy proceedings would proceed quickly but was not the case. City of YK petitioned for taxes owed by Miramar to the bankruptcy Trustee but it was rejected.
- Bankruptcy file then had to go for review where all fees were to be determined and declared. Lawyer's involved in the bankruptcy must have their fees taxed, before the bankruptcy can be finalized. INAC is pursuing a quick resolution and the Trustee has committed to endeavour to finalize the bankruptcy proceedings by March 31, 2008.

Action Item: INAC will seek quick resolution of the bankruptcy and update the OC on the bankruptcy.

7. Land Management Committee - MACA

- a. Leases – Andy circulated Giant Mine LWG meeting reference details.

Leases are required for 3 existing sites: Dyno Nobel, Explosives Ltd and Superior Propane; lease sketches in progress. Dyno Nobel site will need to be moved once remediation commences: Explosives Ltd. may not be required to move. It was noted that the Superior Propane storage site is for propane storage only, not other junk. No new commercial leases on the Giant Reserve will be allowed until the Remediation is complete – someone who wanted to put up a test windmill at the site is no longer interested. NWT Mining Heritage Society would still like to lease around “A” head frame.

- b. City taxes – DM of MACA sent a letter to INAC requesting agreement to pay \$396K to City from GNWT liability account. INAC is of the opinion that City of YK has no claim to taxes from INAC’s and will prepare response to MACA. INAC inquired about how the tax bill is now \$396K and wants assurance that if this amount is paid to the City by MACA the City will not expect further payment of taxes for the Giant mine property. INAC would also like to see the proposed Municipal Services Agreement (MSA) before agreeing to proceed with the proposal to allow MACA proceed with payment of the back taxes and charging the payment to the GNWT Giant Mine Liability Account.
- c. Municipal Services Agreement (MSA) – Andy’s handout indicated that the City is working on the MSA; Director of Public Safety has been tasked to take it on. Jeff will follow up but is currently away.

8. Update on Highway Re-Alignment (GNWT)

- Ray received a Briefing Note from Kevin McLeod requesting information and input regarding the Site. Nothing identified except emphasis that Fred Henne Park be preserved or improved. There is additional proposed alignment work on all three corridor options that Jacques Whitford will be engineering. DOT is anticipating completion of work plan by the summer.
- Suggestion that if the Environmental Impact Review Board (EIRB) does not request an EA, GNWT may want to meet with the Dept. of Transportation (DOT) about getting an earlier re-alignment as Giant Mine’s timeline has now been pushed up.

Action Item: ENR to communicate with DOT in formal setting with regards to MVLWB’s decision.

9. Communications

- Deb Bain, INAC communications officer noted that there was some media coverage from the Open House sessions in October. Up Here magazine also published an article in their January 2008 issue about Giant Mine. Canadian Business Magazine contacted INAC with some questions and responses were given, though there may be additional follow-up.

- Deb indicated that there is already some interest being generated with regards to the MVLWB and their decision.
- There will be updates to the Giant Mine website over the next few months.

10. Additional items / Oversight Committee Membership

Let the records show that:

- Trish Merrithew- Mercredi will be taking over for Zoe Raemer - INAC Rep.
- Emery Paquin has retired and Ray Case is the Director for Environmental Protection (GNWT-ENR).
- Gary Bohnet will take the place of Mr. Bob Bailey in the interim and possibly for the long term, Mr. Bailey's last day with GNWT-ENR is March 20, 2008.

Trish to Bob: Given thanks for all the work Mr. Bailey has done. This meeting adjourned at 2:40 p.m.

The next meeting is scheduled for Friday, April 4th in the 6th floor boardroom of the Scotia Centre, from 2:00 – 4:00 p.m. Ken Hall will attend in Ray Case's absence.

**Giant Mine Oversight Committee Meeting
June 10, 2008
Bellanca Building, 8th Floor Boardroom**

In Attendance:

INAC

Kate Hearn, Director, CARD
Bill Mitchell, Manager GMRP
Deb Bain, Comms. Officer

GNWT - ENR

Gary Bohnet, ADM, Programs
Ray Case, Director Env. Protection

GNWT – MACA

Andy Tereposky, Director Lands Admin.

Agenda Items:

10:00 a.m. - Bill circulated a revised Agenda with 12 items.

Added to Agenda – Brief update on Giant Mine Manager position

Added to Agenda – Communications Items

1. Minutes of Last Meeting (February 29, 2008)

- Reviewed and approved by all.

2. Public Scoping Workshop – June 17, 2008

- Purpose is to direct people on how to prepare submissions for scoping hearing on July 22nd. Board has asked Giant to make a presentation. A first draft of a presentation for the June 17th workshop was circulated it covers the history of mine, how we got here, contamination issues, development of Remediation Plan, options, public consultation throughout the process and details of specific elements of underground and surface elements of Plan.
- Trying to get tech. advisor group - Steve Schulz, Darryl Hockley and Bruce Halbert to attend. Hopefully the same group attend the scoping hearing session.

3. Public Scoping Hearing Session(s) – July 22, 2008 and 23rd (if needed)

- Takes place at the Explorer Hotel on July 22nd. and if required July 23rd. The work plan lays out the time frame as well. Copies of the MVEIRB work plan were circulated, and are also available on MVEIRB's website.

Action Item – Ray and Andy to provide Kimberly with list of who in GNWT (ENR and MACA) will attend.

4. Respective government roles during scoping

- Clarify that GNWT and INAC's roles are as co-proponent, want to ensure INAC and GNWT are on the same track as under the Cooperation Agreement. Some confusion early on with MVEIRB as to how both gov'ts would handle their normal roles as intervener in the process.
- It was noted that GNWT DMs have been briefed on approach. Environmental Protection section will effectively be involved. Gavin's division will distribute the information coming out of the Board process to reach all of the GNWT departments.
- INAC indicated that in a letter to Board re: roles, we state explicitly that INAC's role in first 3 phases (scoping, developing Environmental Impact Statement, etc) is only that of proponent and we don't want to leave it up to the Board to decide. Need to clarify we are co-proponents but we are also acting as intervener.
- INAC offered that if the NT Dep't of Health wants more information on health aspects, they are welcome to contact Health Canada people and consultants that prepared the health risk assessment.

5. Crown Consultation – Section 35

- Reminder that this aspect needs both government's participation.
- A Suggestion was made to strike a sub-committee under Oversight similar to the Land Management Committee.
- It was noted that some of the consultation requirements can be met through the Board's EA process.

Action Item – Kimberly to follow up by e-mail to Andy, Ray and Gary on joint Sub-committee on consultation to develop joint consultation plan.

6. Letter of Response on Draft Work Plan

- A draft letter of response to the MVEIRB on the proposed work plan was circulated to the OC. The letter should be on joint letterhead. It was agreed that GNWT will review the response and provide comments.

Action Item – Ray, Andy and Gary to review and follow up with Bill.

7. Update on City Municipal Services Agreement

- Bill got a response from the City – they sent a Draft outline of the Municipal Services Agreement. Passed it by the DOJ who question whether the City has the authority to enter into a Municipal Services Agreement for a property that is within the municipality. Went back to City with that question and also how they arrived at the \$75K/year lump sum for the cost. City responded last week that they do feel they have the authority and provided their calculations to the costs. The City response was forwarded to DOJ for comments.
- Andy – MACA is awaiting response on letter on taxes sent to INAC February 26th.

- Next steps? After DOJ has looked at issue in light of concerns with setting precedents relating to claimed back taxes, INAC will decide if it can move forward with MACA's proposal outlined in MACA's February 26 letter.
- It was noted that it would be worthwhile for Debbie and Trish to get together on this particular issue.
- In any event it was noted that the GNWT Financial Management board might not allow the payment of back taxes using Giant Mine Remediation suspense account.
- There is also uncertainty about allowing a charge of back taxes against the Federal Contaminated Sites action plan funding because this is the only funding we receive.

Action Item – GNWT to check if the charge can be made against its suspense account.

8. Information & update session with City Councillors

- Bill and Bob Bailey presented at the City Council meeting in March 2008 when, the council voted unanimously to refer the GMRP to environmental Assessment.
- Because City Councillors seemed poorly informed about the GMRP, it was suggested that the offer be made to give City Council a thorough briefing and possibly site tour before the scoping hearing.

Action Item – Andy expressed interest in participating in a tour.

9. Addition of GNWT position on Giant Mine Remediation Project Team

- The project team requires someone to help coordinate with the EA and info distributor. The possibility of a secondment for someone in MACA was discussed.

10. Highway Re-alignment

- The Dept. of Transportation in setting up another public meeting later this summer. They anticipate being in a position this time next year to commence contracting for construction.
- INAC noted that the funding issue needs to be settled first. Will they attend the Oversight Committee to make recommendations?

Action Item – Andy can talk to the working group to get more information.

Action Item – Andy will invite DOT working group to next Oversight Committee meeting for formal presentation before DOT goes public.

11. Land Use Permits

- DOJ has been looking into the interim activities under care and maintenance at the site and question whether any of these activities require any water licences or land use permits. DOJ doesn't have clarity.
- MACA noted that they do not believe that a land use permit is required for work on the site. GNWT Justice sent inquiry to JEP (Feds) in Ottawa but no response yet after many years.

12. TOR Review

- Terms Of Reference for the OC were developed in 2005 and Trish has suggested it may be time to review the TOR to determine if they are still relevant now that the EA process is underway.

Action Item – Bill will send TOR to Oversight Committee and will coordinate responses. GNWT respond on TOR with any edits they feel are necessary. Revised TOR can be distributed at next meeting.

13. Giant Mine Manager Position

- Bill is leaving and a staffing process has been started. Description has been updated and will be advertised aggressively in Globe & Mail, Northern Miner, Info Mine, etc. This is a director-level position and INAC welcomes GNWT's participation or input on staffing.

14. Communications Items

- Signs – A new Giant Mine Remediation Project sign indicating that this is a joint federal Territorial project is being planned for the site.

Action Item – Deb will circulate design and wording with everyone once she receives it.

- Media Coverage – CBA aired a discussion on blowing dust from tailings ponds. Also Trail Breaker piece with Jamie Bastedo – very positive piece on the development on the site. Also a picture of a grayling caught in Baker Creek.
- Following up on community meetings further to discussion around crown consultation letters were sent to the YKDFN in September and in December 2007, In addition e-mails were sent to Melissa McKenzie at the Yellowknives Dene office in March offering to go into the communities and discuss the Remediation Plan. It was noted that we have not heard back.
- Householder update is slated to be distributed before the scoping sessions begin.
- Regarding blowing dust – ENR director was interviewed by Richard Gleeson who asked why ENR hadn't declared an emergency under the Environmental Protection Act.

Next meeting will be scheduled towards the end of the month. By this time we'll have had the meeting with Dep't of Transportation, chance to review the Terms of Reference, attendance at the Scoping Session and have some of the Communications items underway.

Meeting adjourned at 11:00 a.m.

**Giant Mine Oversight Committee Meeting
November 14, 2008
Bellanca Building - 8th Floor Boardroom**

In Attendance:

INAC

Trish Merithew-Mercredi – RDG
Kate Hearn – A/ARDG
Teresa Joudrie - A/Director, CARD
Bill Mitchell – Manager, Giant Mine Project
Trish McFaull – E.A. Coordinator
Jodi Woolam – Communications Officer

GNWT – ENR

Gary Bohnet – ADM, Programs
Ray Case – Director, Env. Protection

GNWT – MACA

Bev Chamberlin – Director, Lands

City of Yellowknife (2:00)

Max Hall
Carl Bird
Dennis Marchiori

Trish Merithew-Mercredi chaired meeting.

1) Approval of Minutes of June 10, 2008 Meeting

Minutes approved with addition of “March 2008” to be added to item #8.

2) Additions to the Agenda

Agenda accepted as presented.

3) and 4) Recap of MVEIRB Scoping Workshop and Scoping Hearing / Response to Undertakings and Response to Questions on Freeze Study

MVEIRB held the scoping workshop in June 2008 and the scoping hearing in July 2008.

INAC and the GNWT provided responses to five undertakings:

Undertaking #1 – Overview of the Proposed Freeze Optimization Study
Undertaking #2 – Response on GNWT Highway Re-alignment Project
Undertaking #3 – Availability of Participant Funding
Undertaking #4 – Independent Expertise for the Board

Undertaking #5 – Legal reasons for the Exclusion of the Interim Activities from the Environmental Assessment (EA)

The Project Office, at the Board's request, also provided an additional submission on the freeze optimization study. Bill noted the Board's delay in posting this additional submission to the public registry and recommended that INAC send a letter to the Board requesting that the submission be posted without further delay.

Bill noted that the draft Terms of Reference was supposed to be completed in July 2008 but has not yet been received. Bill provided copies of the project schedule and noted that given these delays, the project will likely not commence until 2012.

5) Next Steps – Review of EA Terms of Reference

Bill noted that it will be important to review the terms of reference carefully and address any issues with the Board.

Bill also noted that when the terms of reference are finalized, the Project Office will need to begin work on the Developer's Assessment Report (DAR). It is possible that much of the information required for the DAR is included in the Remediation Plan. However, more work may be required if the Board decides to expand the temporal or spatial scope of the EA. Additional work will also be required if the GNWT's highway re-alignment project is included in the EA.

6) and 8) Proposal to include City of Yellowknife and Yellowknives Dene First Nation Representation on Oversight Committee / Modify Terms of Reference for Oversight Committee

Bill provided an outline of the proposal to the group. The Project Office is proposing to include representatives from the City of Yellowknife and the Yellowknives Dene First Nation (YKDFN) in the Giant Mine Oversight Committee. The representatives could not be full voting members since the Oversight Committee's structure is derived from the Cooperation Agreement however, it may be beneficial for the City and the YKDFN to be included as observers and be allowed to raise their particular issues with the members of the Oversight Committee.

There was general agreement of the merit of including the City and the YKDFN however many questions were raised about how to structure the Oversight Committee to include these representatives. Also discussed was the potential need to include the GNWT Department of Municipal and Community Affairs (MACA) and the federal department of Public Works and Government Services Canada. It was agreed that further review of the Cooperation Agreement and the terms of reference of the Oversight Committee and Giant Mine Community Alliance is required.

It was decided that a small committee be established to conduct this review. The committee to include Ray Case, Teresa Joudrie, Trish McFaull (with Bill Mitchell and Kate Hearn as advisors).

7) Municipal Services Agreement (City of Yellowknife Presentation)

Introductions: Max Hall, Carl Bird and Dennis Marchiori

Max provided a document titled 'Giant Mine – Tax Issue'. Max noted that the City and INAC have been in discussions regarding entering into a Municipal Services Agreement for the fire and ambulance services that are being provided by the City to the Giant Mine site. Max proposed that the City disregard the property taxes and instead have the Municipal Services Agreement retroactive, back to 2005. Max noted that the \$75,000 per year that the City put forth in the draft agreement is not based on a property tax calculation.

Bill noted that INAC's legal counsel from has advised INAC that if the calculations are based on property taxation INAC would not be able to enter into the agreement as a determination of the non-applicability of the *Payments in Lieu of Taxes Act* has been made.

Max noted that the City is anxious to see a resolution to this issue.

(City representatives depart)

There was general agreement that the amount proposed by the City is reasonable for the services provided as long as the agreement clearly states that the amount is not based on property taxation. It was determined that the payment could be made from INAC's Giant Mine project budget as a service. Bill to contact the City to request a detailed written proposal.

9) Highway Re-alignment – Update from GNWT

Ray noted that the GNWT Department of Transportation is currently working on the potential road re-alignment options but are waiting to receive the Board's scoping decision. Kate asked what the implications would be if the road re-alignment project is included in the Giant Mine EA and the GNWT decides to cut funding to the project. Ray said that he did not think the project funding would be cut.

10) Report of the Land Management Working Committee

Bill noted INAC and MACA are currently working on leases to cover the third party interests located on the Giant Mine site. The third party interests include Dyno-Nobel, Northwest Explosives and Superior Propane. Bill also noted that the Project Office recently learned that we are currently supplying power to one of these parties. Bill noted that INAC has begun to meter the company's power usage and will be sending the company a letter shortly advising them of INAC's intention to no longer supply power to their building.

11) Communications

Jodi noted that an eight foot square sign has been erected on the mine site. The sign states that the site is under remediation, jointly managed by INAC and the GNWT.

Jodi noted that the work on the website is continuing and should be completed by March 31, 2009. Jodi stated that the changes will make the website easier to navigate through.

Jodi provided a mock-up of the Giant Mine project newsletter that will be sent to all Yellowknife and Dettah residents. Jodi noted that the mail out of the newsletter will be timed to coincide with the release of the terms of reference.

12) Next Meeting

Teresa committed to having a first draft of the committee review of the Cooperation Agreement and the terms of reference for the Oversight Committee and the Giant Mine Community Alliance completed by mid December 2008.

The next meeting of the Oversight Committee will take place on January 23, 2009 at 1:00 PM in the GNWT's Department of Environment and Natural Resources Boardroom.

**Giant Mine Oversight Committee Meeting
January 23, 2009
6th Floor Boardroom – Scotia Centre**

In Attendance:

INAC

Trish Merithew-Mercredi – RDG
Martin Gavin – Manager, Giant Mine Project
Tricia McFaull – E.A. Coordinator
Dawn Curtis – Communications Officer
Karen Wright-Fraser – Admin. Proj. Coordinator

GNWT – DOT

Kevin McLeod
Larry Purcka

GNWT - ENR

Gary Bohnet – Deputy Minister
Ray Case - Director, Env. Protection

GNWT – MACA

Bev Chamberlin – Director, Lands
Jeff Polakoff – Deputy Minister

Gary Bohnet chaired the meeting.

1) Approval of minutes of November 14, 2008

Minutes approved.

2) Review of Agenda

No additions.

3) Environmental Assessment – Update

Martin Gavin noted that the Mackenzie Valley Environmental Impact Review Board (MVEIRB) has issued its decision on the scope of the EA and that the Project Team is now gearing up with the Technical Advisor to respond to the Terms of Reference (T of R) once issued by the Board.

Ray Case noted that the ENR's Environmental Protection Division is available to help with the Project Teams' response to the T of R.

4) Report of Committee Reviewing Options for Increasing the Participation of the City of Yellowknife and Yellowknives Dene First Nation in the Project.

Tricia noted that the Committee has prepared a draft discussion paper but has not yet met to discuss the paper. The Committee will be meeting shortly to discuss the paper and will provide options and recommendations to the Oversight Committee at their next meeting.

5) Municipal Services Agreement - Update

Martin Gavin said that INAC has agreed to pay a lump sum of \$227k and \$65k per year for the next five years to the City for the municipal services used at the site. Bill Mitchell is currently working with Department of Justice on the municipal services agreement.

6) Cooperation Agreement – Financial Contributions Schedule

It was noted that the GNWT has provided \$1.0M per year for three years to the Giant Mine Remediation Project (as outlined in the Cooperation Agreement). Trish MM thanked the GNWT for its contribution to the project.

The Oversight Committee decided that the GNWT's Year 4 contribution of \$6.0M should be delayed until implementation of the project begins.

7) Report of Land Management Working Committee

Martin noted that INAC has written a letter to the owner of the explosives plant located on the Giant Mine site which has been using the site's power free of charge. The company said that they understand that they must pay INAC for their power usage and asked for a few days to prepare their own cost estimates. Martin will contact the owner again early next week.

INAC's plan is to deal with Explosives Ltd's power usage first and then hold a meeting of the Land Management Working Committee to determine the best way to proceed with the other two companies that are located on the mine site.

8) Communications

Dawn noted that Giant Mine newsletters were recently mailed out and that extra copies of the newsletter were sent to Iqaluit in error but are now on their way to Yellowknife.

Dawn also noted that work needs to be completed on the Giant Mine Communications Plan and that the updates to the Giant Mine website should be done by March 31, 2009

9) Highway Re-alignment – Update from GNWT – DOT

Kevin McLeod and Larry Purcka joined the meeting.

Larry provided the Committee with information on the highway re-alignment options and the consultations conducted to date. Larry noted that DOT held a public information session in 2007 and was planning to hold another session in the fall of 2008 but decided to hold off because it looked like the MVEIRB was going to issue its scoping decision in fall 2008.

Larry stated that since MVEIRB has determined that the GNWT's highway re-alignment project will not be included in the Giant Mine EA DOT will continue its work on the project. DOT is planning to hold another public information session in March/April 2009 and is hoping to have the engineering work completed by August and the design by October 2009.

Trish MM stated that INAC is prepared to pay for the shortest re-alignment route (which INAC has estimated at \$4.0M) and will not contribute any more funding than the \$4.0M to the larger GNWT project. Kevin noted that he understands INAC's position and added that DOT will continue working with its various partners, such as INAC, ITI, Denton'Cho and the City to determine the best route for the area over the long term.

Larry noted that \$55k in the budget will not be expended this year. This money was to be used for the second public consultation session but was that session was postponed due to the anticipated release of MVEIRB's scoping decision.

10) Next Meeting

Early April 2009. Staff from the Project Office will set up the meeting.

Meeting adjourned 3:55

Giant Mine Remediation Project

Oversight Committee Meeting

Friday July 17, 2009 – 3:30 pm

NT6 DM Boardroom

Agenda:

Meeting is to discuss the Giant Mine site Municipal Taxation Issue with the objective of determining a mutually acceptable path forward.

Issue:

City of Yellowknife seeks compensation for what it considers to be outstanding past and future municipal property tax revenue.

Background:

- Pursuant to the Cooperation Agreement between GNWT and Canada respecting the Giant Mine Remediation Project, GNWT Department of Municipal and Community Affairs (MACA) established a reserve (R662T) in the Reserve Register in favour of the Department of Indian Affairs and Northern Development (DIAND) to provide unrestricted access to DIAND to carry out site stability and remediation efforts at site. The reserve covers the area set out in the former surface mine lease that was surrendered to MACA by the bankruptcy trustee following the assignment of Miramar Giant Mine Ltd into bankruptcy in July 2005. The GNWT retains surface ownership of the site (administration and control).
- In December 2005, Canada determined that Payments in Lieu of Taxes (PILT) do not apply in this situation because the site is not federal real property. Written confirmation of this determination was made to the City at this time. INAC's interest in the surface lands of Giant Mine is not federal real property and therefore PILT legislation cannot and will not apply to Giant Mine
- During the negotiations of the Cooperation Agreement, the issue of municipal taxes was discussed and the GNWT tabled an offer to pay municipal taxes. Unfortunately, this proposal was not incorporated into the final Cooperation Agreement. INAC had subsequently explored ways to deal with the tax and municipal services issue by various means including a municipal services agreement; however this approach proved problematic with regard to PILT Legislation. Consequently, Giant Mine Remediation Project staff approached MACA staff in December 2008 to determine if the original offer of payment of the municipal taxes by the GNWT could be revisited.
- The municipal services agreement that INAC considered for certain services proved to be problematic because the agreement proposed by the City was in essence

another method to recover and account for lost property taxes. This option would in effect violate and circumvent Canada's determination that PILT under the *Payments in Lieu of Taxes* (PILT) Act cannot apply in the case of Giant.

- In the meantime the City of Yellowknife, who maintains their longstanding position that they are owed back and future property taxes for the site, appears to be increasingly frustrated because the matter remains unresolved for them. The City is required under the municipal by-laws to provide certain services within the municipal limits, yet the City has not received any taxes for the Giant Site since 2005 when Miramar Giant Mine Ltd. was assigned into bankruptcy. This issue must be resolved and positions must be made clear or it will continue to be a political issue that will likely create negative public perception impacts on the project, especially during the EA process. Such impacts have the potential to undermine the co-proponents' overall goals for the project and may lead to unnecessary risk for both DIAND and the GNWT.

Meeting Discussion Point:

Explore GILT with the GNWT

At this meeting INAC intends to explore with the GNWT the GNWT's Grants in Lieu of Property Taxes (GILT) policy, to determine whether this is an option that could resolve the outstanding tax issue.

Giant Mine Remediation Project

Oversight Committee Meeting Notes

Friday July 17, 2009 – 3:30 pm

NT6 DM Boardroom

Attendees:

Jeff Polakoff
Bev Chamberlin
Ray Case
Kate Hearn
Martin Gavin
Bill Mitchell

This Oversight Committee Meeting was to discuss the Giant Mine site Municipal Taxation Issue with the objective of determining a mutually acceptable path forward:

- Kate Hearn initiated the discussion by indicating that the issue had been clearly set out in the agenda note (attached). Kate provided an overview of the municipal taxation issue for Giant Mine and confirmed that Canada had made the decision that payment of PILT for Giant Mine is not applicable. It was also recognized that the City of Yellowknife had been pursuing the taxation issue since 2005 and were becoming frustrated at having to provide municipal services while not receiving any municipal tax revenue from the site. Kate indicated that as outlined in the agenda, INAC was requesting that GNWT explore the possible application of their GILT policy as a way to compensate the City.
- Jeff Polakoff indicated that the GNWT would like more information on the reasons for the decision that PILT does not apply.
- It was noted that a Reservation by Notation is not considered the same as a lease and the site is not federal real property.
- Bev Chamberlin indicated that GILT would not apply because no GNWT government services were being delivered from the site. Bev indicated that GNWT could not use their authority under the PILT policy to pay the taxes.
- Some general discussion ensued on the Cooperation Agreement and the fact that during the negotiations of the Agreement, the GNWT had tabled a proposal to pay municipal taxes but that this proposal had not made it into the final agreement. The question of amending the Cooperation Agreement to allow payment of taxes by the GNWT was discussed.
- Jeff Polakoff indicated that the GNWT would have to brief ministers for permission to amend the Cooperation Agreement to allow the GNWT to pay taxes from their

liability account. Although it was agreed that the GNWT would prepare the briefing materials, there was no further discussion on whether the GNWT would further evaluate the possibility of making payment of taxes either through the GNWT GILT policy or by making an exception to the policy in this specific instance.

**Minutes of Giant Mine Oversight Committee Meeting
November 3, 2009 9:00 AM
Bellanca Building, 8th Floor Boardroom**

In Attendance:

INAC

Trish Merrithew-Mercredi,
Regional Director General
Annette Hopkins,
Acting Regional Director General
Martin Gavin, Manager, GMRP
(via teleconference)
Trish McFaull, Recorder

GNWT - ENR

Gary Bohnet, Deputy Minister
Ray Case, Director, Environmental Protection
Bill Mitchell, Director, CARD

GNWT – MACA

Mike Aumond, Deputy Minister
Bev Chamberlin, Director, Lands Administration

PWGSC

Mark Cronk, Senior Project Manager (via teleconference)
Lisa Dyer, Project Manager

Trish Merrithew-Mercredi chaired the meeting.

Giant Mine Freeze Optimization Study

Bill Mitchell provided an update on the release of arsenic that occurred in the early morning of Thursday, October 22, 2009:

- The drilling that was taking place on the site was for the Freeze Optimization Study. The purpose of the Study is to provide information on the spacing of the freeze holes, the types of drills that are most effective and to inform the environmental assessment (EA) process. The Study will also enable INAC to develop with more accuracy the Class A estimates that are required for Effective Project Approval by the Treasure Board.
- The Study is being conducted on Chamber 10, near the Mill Pond.
- The release occurred when the contractor was drilling the instrumentation holes into the chamber. The independent Peer Group reviewing the Study strongly recommended that instrumentation holes be drilled into the arsenic trioxide dust in order to more effectively monitor the advance of the freezing front into the dust.
- The drill contractor had drilled nine holes through the crown pillar into the top of chamber but not into the arsenic trioxide dust without incident. The contractor subsequently began to deepen the drill holes that had been drilled the crown pillar by drilling into the arsenic trioxide dust. The first of the nine holes to be drilled through the dust to insert instrumentation was Hole #35. It was while drilling Hole 35 that a small amount of dust was released from Hole #S26, located underneath the drill rig and a worker became exposed to the dust (see attached sketch).
- The worker was decontaminated, showered, checked for acute exposure and after a urine sample was taken he returned to work. The worker was wearing full

personal protective equipment including specialty fit respirator, waterproof suit and nitrile gloves.

- The drill contractor informed the site superintendent and then spent the next day evaluating the dust that had escaped. They found that the dust was confined to the area near Hole #35 and S26.
- Samples were taken of the Mill Pond and the puddles near the study area. The samples showed that the arsenic levels in the Mill Pond were lower than before the Study commenced (0.5 PPM in spring 2009 and 0.3-0.35 after release).
- A Niton portable XRF analyzer was used to evaluate the area. Readings showed that the contamination was confined to the area around the drill holes and to the restricted access area of the drill pad.
- The Spill Line was not called until 5:15 PM on Friday, October 24, 2009. PWGSC are still investigating.
- INAC had an engineer review the incident. The engineer reported that the event was minor and that 1 kg (or slightly less) arsenic trioxide was released. (A copy of the engineer's report was distributed to meeting participants)
- Inspectors were not notified until Saturday morning (October 24th). An Inspector contacted the Site Superintendent to determine the status of the situation and the actions which had been taken.
- Inspectors visited the site on Monday (October 26th) and instructed the site to complete certain tasks.

Bill Mitchell noted that it is very important to get the project started again because Arctic Foundations are scheduled to come to the site next week to install the thermosyphons and seven more instrumentation holes still need to be drilled. Once these seven holes are complete, there will be no further drilling into the arsenic chamber.

Mark Cronk noted that the drilling contractor would need to remobilize after Arctic Foundations complete their work in 1 to 1.5 weeks. Then the contractor will need to complete the remaining drilling which will take approximately one week. All drilling, including the underground drilling work for supply lines, should be completed by the end of November.

Action Item – Lisa Dyer to provide the work plan and schedule for the Freeze Optimization Study, including the underground drilling work required for the supply lines.

Deton'Cho / Nuna Joint Venture

Mark Cronk noted that PWGSC is currently investigating the actions taken by the Contractor but he believes the Study was much more complicated than the care and maintenance activities typically undertaken by the site contractor and that the delays in reporting were caused by a communication gap between the day and night shifts operating at the site. Mark provided the following account of the reporting that occurred following the incident:

- The incident happened during the night shift and it should have been handed over to the day shift drilling manager.

- The site treated the incident as minor until they did further investigation and learned that it was arsenic trioxide dust that was released.
- The site notified PWGSC that a spill had occurred mid afternoon on Friday, October 23rd. Mark stated that the information provided to him suggested that the event was minor.
- PWGSC and INAC were notified about the release by email after 5:00 PM on Friday.
- The Spill Line was notified but technical difficulties with opening of the PDF document delayed reporting. There were calls between the site and the Spill Line on Saturday, October 24th at 9:00 AM.

Annette Hopkins confirmed the timing of the various events and clarified the details of the reporting of the event to the Spill Line.

Trish Merrithew-Mercredi asked why INAC was not made aware of the release until Saturday morning (October 24th).

In response, Mark Cronk noted that the email sent by the site was also copied to INAC's Manager of the Giant Mine Remediation Project, Martin Gavin. Martin Gavin confirmed that he received the email from the site at 5:46 PM on Friday, October 23rd but that he thought the incident was minor.

Lisa Dyer noted that typically Spill Contingency Plans state that spills are to be reported to site security who then reports the incident to the site's Environmental Coordinator and the Mine Manager. Lisa noted that the site is currently looking at their procedures and that there is definitely room for improvement.

Trish Merrithew-Mercredi asked when PWGSC would be bringing these improvements back to the Oversight Committee for their review.

Mark Cronk stated that PWGSC should have some information by next week.

Gary Bohnet asked what type of air monitoring is conducting at the site. Bill Mitchell stated that INAC conducts air quality monitoring on the site and that both high and low volumes systems are used to monitor air quality. Bill noted that air quality monitoring is only conducted in the summer months.

Ray Case asked if it was a larger release and windy conditions could this have been a more serious incident. Bill stated that he did not think so because the workers immediately shut off the air pressure on the drill rig and, in the future, caps on the drill holes will be securely welded on.

NWT Spill Line

There was discussion about the technical problems associated with the Spill Line which is operated by the GNWT, the possible lack of monitoring when spills are reported by email and the Spill Line Committee's work but it was determined that the problem in this case was that the Oversight Committee was not notified once the spill was reported.

Gary Bohnet asked for an overview of the linkages between PWGSC and INAC. Bill Mitchell explained that PWGSC holds the contract with Deton'Cho/Nuna Joint Venture for the care and maintenance activities at the site and that they look after all items related to the contract and contractor at INAC's request.

Strategic Plan and Governance – Giant Mine Remediation Project

Although hesitant to present this draft of the strategic plan and governance structure before it had been fully reviewed and discussed with senior management, it was deemed appropriate to present the draft plan at this meeting, Martin Gavin provided the following information on the draft Strategic Project Plan:

- Draft Strategic Project Plan has been completed with staff in Ottawa and PWGSC staff in the region. It has not been shared with senior management in the Region.
- The Strategic Plan is Step One in a three-step process. It will form part of the submission to the Treasury Board.
- The current governance structure of the Giant Mine project works well while the project is in care and maintenance phase however the project will become a large remediation project in 2012.
- The draft Strategic Plan has not been reviewed yet internally. The plan was to begin the review of this document in November 2009.
- There is also a Project Implementation Plan that PWGSC is preparing that forms part of this work.
- INAC and PWGSC staff looked at the Sydney Tar Ponds (STP), Faro and the 2010 Olympic Village projects as examples of major capital projects. Staff also looked at the needs of the co-proponents, aboriginal groups and the Community Alliance in preparing this plan. (Terms of reference for the STP were circulated to Oversight Committee)
- Staff are proposing that the current structure would remain unaltered during the EA and regulatory phases of the project.

The Committee members advised that while they believe it is a good idea to prepare a project plan, the composition and role of the Oversight Committee is governed by the Cooperation Agreement which can only be amended by the two Ministers. Committee members also noted that it is important to look at the monitoring functions so that it meets the needs of the public.

Action Item – Martin Gavin to provide a Strategic Project Plan and revised terms of reference for all parties, including the Oversight Committee, by December 1, 2009.

Terms of Reference – Giant Mine Oversight Committee

(Item covered in previous section)

Other Issues

The Committee noted the need to resolve the issue with the City of Yellowknife regarding property taxation. Trish Merrithew-Mercredi noted that she had raised this issue several times and Mike Aumond suggested that Trish Merrithew-Mercredi and he meet to discuss this issue as he has a possible solution to this issue.

The issue of the third party companies currently located on the site was also raised.

Action Item – Martin Gavin to provide a written update to Trish Merrithew-Mercredi on the third party companies issue. Trish Merrithew-Mercredi will distribute the update to Committee members.

The Committee members stated that they expect to be informed should any similar events happen on the site.

Next Meeting

Next meeting will be scheduled for December 2, 2009.

Meeting adjourned at 10:30 AM

**Minutes of Giant Mine Oversight Committee Meeting
December 2, 2009 8:30 AM
Scotia Centre, 6th Floor Boardroom**

In Attendance:

INAC

Trish Merrithew-Mercredi,
Regional Director General
Bill Mitchell, Director, CARD
Martin Gavin, Manager, GMRP
Trish McFaull, Recorder

GNWT - ENR

Gary Bohnet, Deputy Minister
Ken Hall, Manager, Environmental Protection

GNWT – MACA

Sheila Bassi Kellett, Assistant Deputy Minister
Bev Chamberlin, Director, Lands Administration

PWGSC

Cheryl Bartell, Regional Director General,
Western Region (via teleconference)
Mark Cronk, Senior Project Manager

Gary Bohnet chaired the meeting.

Review of Minutes of November 3, 2009 Meeting

Committee members to review minutes and provide comments.

Giant Mine Freeze Optimization Study – Status and Work Plan

Mark Cronk provided the following update on the Freeze Optimization Study:

- The spill response plan for the site has been updated.
- Michael Martin (Water Resources Officer, INAC, NT Region) has conducted inspections of the spill area.
- The spill area has been excavated and soil samples have been sent for analysis.
- The two feet deep excavated area has been backfilled.
- Drilling for the Study is currently being conducted on the site. The drilling should be complete in one week's time.
- The freeze plant and sub-station will be delivered to the site.
- The design for connecting the freeze pipes to the freeze plant is in process.

Report of Land Sub-Committee – Untenured Occupants

Bev Chamberlin provided the following update on the untenured occupants currently located on the site:

- There are currently three companies located on the Giant Mine site. Two are explosives companies (Dyno-Nobel and Explosives Ltd.) and the third is Superior Propane.
- Martin Gavin and Bev Chamberlin have discussed a plan to instruct all three companies to vacate the property by June 30, 2010.
- Initially, INAC and the GNWT thought the best way to proceed was to enter into short-term leases with the companies and to notify them that they will have to vacate at the end of the lease however the short-term leases were not entered into.
- Dyno-Nobel and Explosives Ltd are quite compact and could be relocated without much hardship to the companies. However, Superior Propane will be more challenging to relocate.

Bev Chamberlin stated that notice must be given to the three companies but asked what the reasons were for the June 30, 2010 date.

Martin Gavin responded by stated that INAC had wanted to the companies to vacate by June 2009 but the companies requested that they be given a year's extension to this deadline. Martin Gavin added that INAC has received a legal opinion from Department of Justice Canada which states the three companies should vacate the site before remediation begins.

Trish Merrithew-Mercredi agreed, adding that it is important to give notice to all three companies and have the companies removed prior to remediation.

Sheila Bassi Kellett explained that Superior Propane has more significant infrastructure and will therefore require a plan to relocate their business. Sheila Bassi Kellett added that there are also a number of residences that depend on Superior Propane for their propane supply.

Trish Merrithew-Mercredi stated that INAC would support an extension of three months to the June 2010 deadline but that this extension would have to be in writing.

Bill Mitchell noted that it is possible to be flexible with Superior Propane and that it is more important that the explosives companies vacate the site.

It was agreed that MACA would be responsible for providing notification to the three companies. It was also agreed that the notification should be a joint letter from INAC and MACA to the companies.

Action Item – Bev Chamberlin to provide the draft notification letter to Martin Gavin by December 4, 2009.

Strategic Project Plan and Governance

Martin Gavin explained that the need for the strategic planning document can be attributed to the need to update the Terms of Reference for the Oversight Committee and INAC's need to return to the Treasury Board Secretariat within three years for Effective Project Approval. Martin Gavin further explained that the Strategic Project Plan

needs to address the Oversight Committee's Terms of Reference but must also include the governance items that the Treasury Board requires for Major Capital Projects.

Trish Merrithew-Mercredi agreed and added that she would like to keep the Cooperation Agreement in place. Trish Merrithew-Mercredi noted that while she is supportive of the idea to add Public Works and Government Services Canada to the Oversight Committee, she is not sure about the idea of including INAC Headquarters staff on the Oversight Committee.

Gary Bohnet agreed and added that we should not propose too many changes to the Cooperation Agreement. Gary Bohnet asked if Ray Case (Director, Environmental Protection) has been involved in the development of the Strategic Project Plan. Gary Bohnet added that he is concerned that the development of this plan may be going on without the input of the GNWT.

Martin Gavin responded by stating that the plan is still in the development stages and has just recently been submitted to Trish Merrithew-Mercredi for her review.

Cheryl Bartell stated that Treasury Board Secretariat will be looking for a well-organized approach to the project governance when they review the submission. Cheryl Bartell added that it is a matter of making sure all aspects of the projects are brought together and that there is clarity regarding this committee and the committees below it. Cheryl Bartell asked if the draft Strategic Project Plan will be available for the Committee's review by the next meeting on February 4, 2009.

Martin Gavin responded by stating he thought that would be possible. Trish Merrithew-Mercredi added that she just received the document and would like to review it in detail before sending it to the rest of the Committee.

Cheryl noted that it will good to get clarity regarding this Committee and the project committee by the end of this fiscal year.

Status of the Developer's Assessment Report – Timing of Submission

Marin Gavin stated that the Giant Mine Remediation Project Team received the draft Developer's Assessment Report from the consultant at midnight on November 30th and that it has not yet been distributed to the GNWT for their review. Martin Gavin stated that he did not have an exact date but that the Developer's Assessment Report should be submitted to the Review Board by the first of the fiscal year.

Emergency Services Agreement

Trish Merrithew-Mercredi stated that INAC does not believe it owes property taxes to the City of Yellowknife and that INAC will be spending a large amount of funding to remediate the site which the City will be able to use for industrial purposes in the future. Trish Merrithew-Mercredi further stated that INAC is willing to pay for fire and ambulance services going forward but will not make any retroactive payments to the City.

Gary Bohnet asked if INAC has met with the City. Trish Merrithew-Mercredi said that INAC does not want to meet with the City until it has a draft agreement to present to the City.

Independent Monitoring / Environmental Oversight

Gary Bohnet explained that the Department of Environment and Natural Resources has received letters requesting independent monitoring and oversight for the Giant Mine Remediation project. Gary Bohnet noted that his department is well aware of the negative aspects of independent monitoring bodies but was wondering if this would not be linked to the Strategic Project Plan / Governance structure for the project. Gary Bohnet added that the Oversight Committee previously discussed ways in which the City of Yellowknife and the Yellowknives Dene First Nation's roles could be increased with respect to this project.

Martin Gavin responded by stating that INAC looked at other Remediation Projects such as the Sydney Tar Ponds when preparing the Strategic Project Plan document. Martin Gavin stated that Sydney Tar Ponds has a Regulatory Review Group which provided an audit function for the project. Martin Gavin noted that the Giant Mine Remediation Project also has another group, the Community Alliance, which includes representation by all but one of Parties to the environmental assessment. Martin Gavin also noted that an Aboriginal group was established for the Sydney Tar Ponds and Faro Projects. Martin Gavin stated that the intent is to create a very transparent governance structure but the challenge with the letters received on this topic is that INAC needs to look at the needs of the public and these individuals want funding to provide a monitoring function.

Trish Merrithew-Mercredi agreed stating that INAC received a request from Mr. Kevin O'Reilly, the City of Yellowknife and the Yellowknives Dene First Nation for large sums of money to create a body that would have veto powers. Trish Merrithew-Mercredi stated that INAC declined this request and will not entertain such a request until the best model for the project is determined.

Gary Bohnet agreed and added that the GNWT is not interested in going down that path either. Gary Bohnet stated that he is looking forward to reviewing the Strategic Project Plan and asked if Ray Case has been involved in its development.

Martin Gavin stated that he has had telephone conversations with Ray Case and Ken Hall but that there is a need for them to meet again.

Next Meeting

February 4, 2010, 1:00 PM - 8th Floor Boardroom, Bellanca Building

Minutes of Giant Mine Oversight Committee Meeting
Feb. 4th, 2010 9:00 am
Bellanca Building – 9th floor Boardroom

In Attendance:

INAC:

Trish Merrithew-Mercredi,
Regional Director General
Bill Mitchell, A/Director – CARD
Paula Isaak (on the phone) Director General
Natural Resources & Environment Ottawa
Marin Gavin, Manager – GMRP
Carmon Bessette, Recorder

PWGSC:

Cheryl Bartell, Regional Director General,
Western Region
Mark Cronk, Senior Project Manager

GNWT –

Bev Chamberlin, Director – Lands Administration, MACA
Mike Aumond, Deputy Minister MACA
Ray Case, Director ENR

Trish Merrithew-Mercredi chaired the meeting

Review of Minutes of December 3, 2009 Meeting

Committee members reviewed minutes with no changes or additions to the minutes, with the condition that Ray should have the opportunity to review and comment when he arrives and has time to review.

Agenda Accepted as presented

Update on Emergency Services Agreement – Bill

- INAC decided that the best way to deal with the provision by the City of emergency services for Giant is through a contribution agreement that would provide funds for municipal services (infrastructure support).
- DOJ is well advanced with the terms and conditions and have a deadline so we can respond to the City by Feb. 15th, 2010.
- The agreement will cover the provisions of fire, emergency and ambulance services at the sight by the City of Yellowknife.

4. Environmental Assessment – DAR Update - Martin

- The first draft of the Developers Assessment Report was received and circulated for comment to DOJ, GNWT, Dept. of Fisheries and Ocean, Environment Canada, INAC, GIANT Team and PWGSC. Over 740 comments were received that fall into the following broad categories:
 - 1) Clear messaging – some inconsistencies in the messaging
 - 2) Procurement strategies – which is a gap we are working to address
Financial assurance to complete the program – another gap which we are working to get through as well
 - 3) Consultation and communication strategy – with respects to First Nations and non First Nations communities.

Target date for completion of DAR remains April 30th

5. Update on Arsenic Trioxide Spill on FOS Site – Martin

- 1) Spill has been cleaned up to the satisfaction of the inspector who has issued a letter recommending file closure.

Comments/Questions on the letter and/or spill report:

Cheryl - PWGSC: Our contractor has modified the processes to ensure proper and timely notification.

As requested, a copy the inspector's letter is appended.

6. Freeze Optimization Study (FOS) Update – Mark

General status update:

- The drilling is completed and no additional surface activities are planned for the FOS until work resumes in late Spring
- Delivery of the 2 major freeze plants is expected in the next 2 to 3 weeks
- The file design drawings are being generated and the term is on going for the balance of the surface material. .

Contractor has downsized our crews and terminated some employees.

We expect to reactivate the FOS as soon as the weather changes in the spring and hope to have the facility up and running by mid summer – June.

In response to a question it was noted that the FOS will start to generate useful data in 2010 that could be fed into the EA process.

In response to a question on “When are we going to get back into the EA process.” it was noted that the project is still in the EA process and the Developer's Assessment Report (DAR) will be submitted in April unless there are any unforeseen complications.

General discussion followed on the EA process, timing and when full remediation work can commence. Martin noted that the technologies involved in the FOS are well known but utilizing them all at the same time has never been done before.

Trish indicated that INAC and PWGSC are planning a technical briefing for the press likely next month in advance of the public sessions and hearings for the EA..

Mike Aumond noted that the more that we can get the public messaging out about making progress and we are firming up the plan we will be better able to defend.

7. Draft 3 year Financial Plan:

Martin reviewed the current financial approvals under the Preliminary Project Approval from Treasury Board and indicated the need to seek timely Effective Project Approval for project implementation before PPA funds are exhausted. Among other activities including the DAR/EA process the PPA funds go towards maintaining the site in regulatory compliance, at approximately \$7 – 10 million dollars a year.

Cheryl Bartell stated that PWGSC and INAC are planning a Joint Terasury Board submission for project and acquisition approval

8. Project Management

Martin indicated that the project team is looking at other projects in both private and public sector for ideas/and best practises.

There was discussion on the \$750,000 that the GNWT had committed under the Cooperation Agreement for supporting the interm office, how it can best utilized to support interaction at the project level

9. Cooperation Agreement: Martin Gavin

It was noted that the terms of reference and the cooperation be gone over to ensure they are up to date and reflective of the current situation.

Martin and Ray met in December and went through the cooperation agreement and concluded that for the current project definition phase there is no need to modify the terms of reference or the agreement. The recommendation is to leave it as is.

10. Report of Land Management Working Committee: - Bev Chamberlin

Recommendation is that the two explosives companies and the Superior Propane be sent a letter indicating that they should vacate the site no later than June 30th. It was noted that there may need to be some flexibility in the date on which they are required to vacate the site particularly in regard to a Superior Propane because it is a large operation and is going to take some logistical effort on their part to relocate from the mine site. Some

concern was expressed on the timing of the move particularly in regard to Superior Propane and the fact that disruptions to supply of customers should be avoided.

A formal request has not been made to any of these companies to date. Letters are to be completed and delivered to each of these companies with the knowledge that more time may be required for Superior Propane. Letters are to be out by the end of the week after they are signed off by both Mike and Trish.

11. Highway Re-alignment – Ray Case

No real progress - Consultation on highway alignment corridors needs to be taken with:

- a) YK Dene
- b) Public Input

There are 3 original corridors with 2 considered the best options. These best options are based on all info as well as public input. DOT is hoping to meet with the YK Dene by the end of February for their involvement as well. Concern is how all of this is going to be funded, GNWT is willing to put some resources towards this and there may be Federal resources available as well. However the remediation project may be expected to contribute as well.

Bill expressed concern that this issue could become a critical item in terms of the schedule for remediation because critical work will be delayed until the highway is realigned.

12. Future Staff Requirements – Martin/Ray

Preliminary staffing plan;

INAC –

PWGSC – is to develop a staffing plan

GNWT – and their level of involvement and where best to staff

Henry Westerman is the PWGSC Director for the Giant Mine Project. Mark Cronk is still the Project Manager in Yellowknife but Henry will be the Director located in the Edmonton office. He has a strong environmental engineering background and has spent many years in the North.

Martin and Bev will coordinate signing of the letters to go out to the three companies occupying sections of the GIANT mine site.

Gary will chair the next meeting

Minutes of Giant Mine Oversight Committee Meeting
July 9th, 2010 3:00 pm
Bellanca Building – 9th floor Boardroom

Meeting Participants:

Gary Bohnet – Chair
Bev Chamberlain
Ken Hall
Cheryl Bartell – by phone
Mike Aumond

Trish Merrithew-Mercredi
Mark Cronk
Adrian Paradis
Martin Gavin
Angela Rogers

Meeting commenced at 3:10pm, July 9, 2010

1. Approval of minutes of last Oversight Meeting
Trish had made comments on last minutes but they have been updated.
2. Review of Agenda
No additions / deletions of agenda
3. Environmental Assessment – Developers Assessment Report (DAR) Update - Martin
Martin referred this to Adrian.

Adrian said DAR had not been submitted on June 30th and a letter was faxed to Mackenzie Valley Environmental Impact Review Board (MVEIRB) informing them that it would be delayed. There are sections of DAR being revised.

It was proposed by Industry, Tourism and Investment (ITI) that we can include a procurement strategy. Full and careful discussion to develop the procurement strategy is required before the Government of Canada & Government of the Northwest Territories (GNWT) can endorse. The level suggested was disagreed too and the Giant Mine Remediation Project Team (GMRPT) was directed to include a high level discussion in the DAR that mirrored the co-operation agreement.

Trish met with Yellowknives Dene First Nation (YKDFN) earlier this week and they were not happy with the procurement strategy in place for Tundra and have threatened legal action against the Tlicho Government and Indian Northern Affairs Canada (INAC).

Gary said the devil is in the details and we will have to answer eventually.

Mike said we will have to reiterate what is in the co-operation plan with some additional details.

Cheryl joined by via teleconference

4. Community Meetings - Martin

The GMRPT met with the City of Yellowknife City Council in April. The meeting was positive with many questions from the City Councillors.

The GMRPT held open house sessions in April at the Tree of Peace. Open houses were held during the day and specific topics were discussed during the evenings. Kevin O'Reilly brought up independent monitoring and asked about offsite impacts from roasting. CBC were there for three of the sessions.

In May the GMRPT held community meetings in Dettah and N'Dilo as well. There was plenty of discussions regarding compensation for loss of land. Chief Sangris tried to focus the meetings on the remediation. Chief Tsetta set the stage for the meetings in N'dilo. The team received questions regarding historical events.

In June the GMRPT had a community session in Hay River with the NWT Metis Nation. There was many comparisons to Tamerlane. The presentation was a "101" on Giant project. Many of the questions focused on Independent monitoring, offsite impacts were discussed.

5. Freeze Optimization Study (FOS) Update – Mark

Mark said three of the four projects are out to tender now and the fourth one is closed. The three projects will close over the next two to three weeks. The fourth is closed and is under budget. The contractors have asked for more time and they have been given a month extension due to industry being busy. The FOS construction will be completed by September. The site work will start sometime in the next two weeks. Mike suggested do a formal media briefing before starting the FOS.

6. Land Management – Bev

Superior Propane is closing a sale for the new location this week and is fully confident they will be moved by September. The fire marshall is currently reviewing their designs. GNWT has not heard from Dyna Nobel. Mark said they seem to be winding down their activities on site. Martin suggested posting a notice on their trailer. Explosives Ltd. is fully engaged on site and they were notified back in May to vacate the site. Their operations are substantially larger than expected and include a plant with storage and bagging. They have had licence problems due to limits on the amount of explosives allowed on a single site. It is a big operation to move and have asked the GNWT for an extension but

have not provided an estimate for when they can vacate the site. Mike asked what are we going to do in September. Do we want to take legal action? By September 30th all parties will be offsite and we expect the same.

7. Highway Re-alignment – Ray

The Department of Transportation (DOT) has re-assessed their options. There is an uncertainty if the highway will be completed by September 2012. DOT is planning for consultations for August 2010. Detailed options to be developed by 2010. Gary committed to getting a hold of DOT and confirm the schedule.

Cheryl said the scope will be different depending on which route is chosen and it may impact the scheduling. Gary said him and Mike will have a meeting with Transportation.

8. Additional Items

Section 98 of the (*Mackenzie Valley Resource Management Act*) – Operations is working on resolving the issue of land use permits.

Geotechnical investigations will have to occur in the upcoming year to support the environmental assessment.

9. Next Meeting

Mike suggested to meet before the media briefing. Sometime in August.

Meeting adjourned at 3:40pm, July 9, 2010



Giant Mine Environmental Assessment

IR Response

Round One: Information Request -Alternatives North #02

May 31, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: AltNrth #02

Date Received

February 28, 2011

Linkage to Other IRs

Date of this Response:

May 31, 2011

Request

The DAR references a number of management plans, designs and strategies as follows:

- Procurement strategy;
- Socio-Economic Benefits Strategy (on pg. 1-18);
- Detailed design for remediation of Baker Creek;
- Revegetation Plan;
- Diffuser and outfall design;
- Environment, Health and Safety Plans for emergency/spill response, dust management, protocols for vegetation surveys;
- Water Management;
- Wildlife Management Plan;
- Archaeological Resource Management protocol;
- Traffic Management Plan; Audit protocol; and
- Improvements to the frozen block method and review or alternative technologies.

Many if not all of these, are essential to the Review Board and all parties understanding the effects of the Development, proposed mitigation measures and the significance of any residual effects. Little if any detail is available on these items in the DAR.

1. Please provide details on the format and content of the above plans, design, studies and protocols.
2. If there are specific targets, criteria or guidelines, and thresholds or triggers for adaptive management, please provide them.
3. If drafts of these are available now, please provide copies or a schedule of when these will be available. Please indicate whether there will be an opportunity for public review and comment.





Giant Mine Environmental Assessment

IR Response

Round One: Information Request -Alternatives North #02

May 31, 2011

Reference to DAR (relevant DAR Sections):

S. 15.3 List of Commitments Table 15.3.1

Summary

The requested Environmental Management Plans have not yet been developed as the design work for the Remediation Project is still underway. It is anticipated that the Plans will be included in the Water Licence, MV2007L1-0031. As such no specific targets or criteria can be provided at this time. The Plans will form part of the overall Environmental Management System (EMS) for the Project, which the Project Team will be developing over the next couple of year. There will be public consultation throughout the development of the EMS.

Response

The Environmental Management Plans for the Remediation Project are anticipated to be included in the Water Licence, MV2007L1-0031. During the development of the management plans, the Project Team plans an extensive public review process for each plan. Draft management plans are beginning to be developed at this time and will be submitted in draft to the Mackenzie Valley Land and Water Board (MVLWB) to begin the regulatory process.

The Project Team will utilize existing policies or guidelines cited in Section 1.7.2 of the DAR to develop the management plans and other guidelines including:

- *Guidelines for Designing and Implementing Aquatic Effects and Monitoring Programs for Development Projects in the Northwest Territories*, INAC, June 2009
- *Northern Land Use Guidelines Access; Pits and Quarries*, INAC, January 2010
- *Guidelines for Developing a Waste Management Plan*, MVLWB, March 31, 2011;
- *Water and Effluent Quality Management Policy*, MVLWB, March 31, 2011;
- *Guidelines for Spill Contingency Planning*, INAC, April 2009;

At this time, no specific targets or criteria for the individual management plans have been developed, as design work for the Project is still taking place. Where appropriate, the MVLWB will approve monitoring plans prior to implementation; however, the Project Team will be developing the Environmental Management System (EMS) over the next couple of years and will be consulting the public throughout on its development. The intent of the consultations regarding the EMS and its adaptive management programs shall include:

- developing agreed upon targets and criteria for individual plans;
- developing mitigation measures and strategies;
- providing a coordinated approach to analysis and interpretation of monitoring data; and
- where applicable, facilitate collaboration with First Nations, regulators and others.





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #03

June 17, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: Alternatives North #03

Date Received

February 28, 2011

Linkage to Other IRs

YKDFN IR #24, 27

City of Yellowknife IR #03

Alternatives North IR #03

Date of this Response

June 17, 2011

Request

Preamble:

There is no mention in the DAR of the applicability of the *Mackenzie Valley Land Use Regulations* or any municipal by-laws to the Development. The former would require a land use permit with terms and conditions that can be attached regarding waste disposal, fuel storage, erosion control and many other environmentally significant matters. Without a land use permit, it is not clear how these aspects of the Development will be regulated, inspected and enforced. Municipal by-laws, such as the Zoning By-law, Building By-law, Emergency Response By-law and others may have some relevance to the Development and allow some measure of local control over aspects of land use, heritage preservation and other matters of interest to citizens.

Question:

1. Please provide the Developer's views on the applicability of the *Mackenzie Valley Land Use Regulations* and of municipal by-laws to the Development.
2. If the Developer is of the view that these do not apply to the Development, please describe how inspection and enforcement activities may be carried out in relation to those matters that would normally be regulated by these regulations and by-laws.

Reference to DAR (relevant DAR Sections):

S.1.1.4 Project Proponents

S.1.7.2 Key Environmental Legislation and Regulations





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #03

June 17, 2011

Reference to the EA Terms of Reference

Ts.3.2.2 Developer

Summary

The Giant Mine Remediation Project Team (Project Team) has not applied for permits or authorizations pursuant to the *Mackenzie Valley Land Use Regulations* (MVLURs) because of an outstanding joint determination required under s.98 (2) of the *Mackenzie Valley Resource Management Act* (MVRMA) by the Mackenzie Valley Land and Water Board (MVLWB) and the Territorial Minister. Until such a determination is made, the Giant Mine Remediation Project (Remediation Project) continues to be impacted by jurisdictional uncertainty and the application of the MVLURs to the site remains unclear. The Remediation Project will not be making an application for any land use permits pursuant to the MVLURs until the joint determination has been made. The legislative regime also includes more than Indian and Northern Affairs Canada. A list of permits and subsequent applications appearing in the Developer's Assessment Report (DAR) Table 6.13.1 demonstrates that the regulatory regime is comprehensive, and that the Giant Mine Remediation Project is subject to terms and conditions, scrutiny and inspections under other federal and territorial legislation.

Response 1

To date, the Project Team has not applied for land use permits pursuant to the MVLURs because of an outstanding joint determination required under s.98 (2) of the MVRMA. The MVRMA requires that the MVLWB and the Territorial Minister make a joint determination regarding regulatory jurisdiction within municipal boundaries. Until such a determination is made, the Remediation Project continues to be impacted by jurisdictional uncertainty and the application of the MVLURs to the site remains unclear. As noted in previous correspondence to the Review Board dated May 29, 2009, the Project Team will not be making application for any land use permits pursuant to the MVLURs until the joint determination has been made. There was no deliberate attempt by the Project Team to exclude the City of Yellowknife permitting under the City's Zoning and Building Bylaws.

The legislative regime includes more than Indian and Northern Affairs Canada, and the Giant Project is subject to terms and conditions, scrutiny and inspections under both federal and territorial legislation. This includes authorizations issued by MVLWB; Fisheries and Oceans Canada, Natural Resources Canada; and through Territorial legislation administered by the Chief Inspector of Mines, Workers' Safety and Compensation Commission and departments of Municipal and Community Affairs, Environment and Natural Resources and Public Works and Services.

For further information on the regulatory regime and other relevant permits and authorizations for the Remediation Project, the reader is referred to the DAR Section 1.7.2 and DAR Table 6.13.1.





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #03

June 17, 2011

Response 2

With respect to inspection and enforcement activities, there is material on the roles and responsibilities of Indian and Northern Affairs Canada contained in other Information Request Responses including Yellowknife Dene First Nations Information Request Responses #24 and #25. As outlined in Response 1 above, inspections of the Giant Mine site are common and frequent under federal and territorial legislation and regulations.





Giant Mine Environmental Assessment IR Response Template

Round One: Information Request - Alternatives North #04

May 31, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: AltNrth #04

Date Received

February 28, 2011

Linkage to Other IRs

Date of this Response:

May 31, 2011

Request

Preamble:

Some history is provided of the Giant Mine site based on the following information sources:

- Monthly operation reports to company board of Directors, stored at the Prince of Wales Northern Heritage Centre;
- Published papers; and
- Selected correspondence in files located at Giant Mine.

In reading the DAR, it becomes evident that past record keeping left a lot to be desired. For example, surface disposal took place of captured arsenic trioxide dust from July 1949 to February 1950 but the exact location was not recorded (pg. 4-11). There are many other instances where accurate and organized record keeping would assist with current remediation efforts. Records related to Giant Mine were found at the following locations:

1. Prince of Wales Heritage Centre, Finding Aid N2001-014

<http://pwnhc.learnnet.nt.ca/databases/DigitalResources/Archives/N-2001-014/N-2001-014.pdf>

This accession consists of 3.5 meters of textual material, 328 photographs including 197 colour transparencies, 25 colour prints, 50 colour negatives, 4 black and white transparencies, 2 black and white glass slides and 50 black and white prints. In addition, there are 18 architectural plans, blueprints, site plans and flow charts. The majority of the textual material dates from 1944-1999 and includes monthly operational reports and reports from the President, underground operations, diamond drilling and treatment plant for Giant Yellowknife Gold Mines Ltd. There are also meeting minutes, by-laws and constitution for the Giant Recreation Association and 10 Year Club, as well as menus and dinner invitations from 10 year club celebrations. There are also copies of the Giant Mine newsletter Baker Creek News. The remaining textual material includes correspondence and monthly operational reports for the Salmita Mine, Taurcanis (Bulldog) Mine and Tundra Gold Mine. The architectural plans show





Giant Mine Environmental Assessment

IR Response Template

Round One: Information Request - Alternatives North #04

May 31, 2011

buildings and mine site layout for Taurcanis Mine. There are also blueprints, site plans and milling flow sheets from Giant Mine. The photographs date from the 1950s to 1991 and include aerial views of Giant Mine, headframe buildings, tailings retreatment plant, tailings ponds, employees at work both above and underground, pouring of the 10,000 gold brick and safety awards. In addition, there are photographs of the Akaitcho Mine, Salmita Mine, Tundra Mine and Crestaurum Mine. There are also several black and white prints that were taken by George Hunter in the 1950s documenting activities at Giant Mine.

2. Northwest Territories Geoscience Office, *Giant Mine File 016266*, Scanned Images 238 MB in 211 files. Reports as PDF. Maps as JPEG.

This file contains many different items related to Giant Mine including early work on the AES Claims at Akaitcho/Supercrest, geochemical studies at the mine and varying era's of sections, plans and underground drawings. Material in these reports was acquired by the Northwest Territorial Geoscience Office (NTGO) from a variety of donors. The collections were received in varying condition, and degrees of completeness.

Many other files are also available on Giant Mine through the Gateway database search engine.

3. Library and Archives Canada (Ottawa), Government of Canada Files searched using ArchiviaNet at: http://www.collectionscanada.gc.ca/archivianet/020105_e.html

A limited search turned up the following files:

RG29, National Health and Welfare, Volume 2977

File: 851-5-2

Parts: 1=1951/05-1974/11 2=1975/01-1975/03 3=1975/04-1976/07 4=1976/07-1977/01

File Title: Arsenic

Outside Dates: 1951/05-1977/01

Finding Aid number: 29-143

RG85, Northern Affairs Program, Series D-1-A, Volume 40

File: 139-7, Arsenic Surveys, NWT - Accounts

Outside Dates: 1950-1954

Finding Aid number: 85-1

RG22, Indian and Northern Affairs, Series A-1-a, Volume 233

File: 99-2-39, Parts: 1 Giant Yellowknife Gold Mines Limited - General

Outside Dates: 1939-1959

RG22, Indian and Northern Affairs, Series A-1-a, Accession 1995-96/693, Box 32

File: 99-2-39, Parts: 2 Giant Yellowknife Gold Mines Ltd. - General

Outside Dates: 1960-1969/10

Finding Aid number: 22-46





Giant Mine Environmental Assessment

IR Response Template

Round One: Information Request - Alternatives North #04

May 31, 2011

RG85, Northern Affairs Program, Series D-2-a, Volume 1529

File: 16803-G Clippings and metallurgical reports - Giant Yellowknife Gold Mines

Outside Dates: 1946/10-1951/08

RG85, Northern Affairs Program, Series D-2-a, Volume 1531

File: 53259, [Audit reports - Mining companies - Giant Yellowknife Gold Mines] Notes: Title based on contents of file.

Outside Dates: 1950/08-1950/12

A limited review of some of the above materials has been made.

It will be very important to provide a consolidated inventory of documents, studies, plans and other information related to Giant Mine for current and future management, including the work proposed as part of this Development. This information management system will need to be accessible to future generations forever.

Question:

1. Please provide a file list or inventory of records that currently exist at the Giant Mine site as discussed in Chapter 4 of the DAR.
2. If no such listing or index is available, please describe the records that are available (corporate or company files or any government records) that may be at the site, the general volume of records, current storage condition.
3. Please provide details on the overall information management system that the Developer intends to use including any plans for consolidating known information sources, collaboration with other record holders, digital imaging and other methods of creating a permanent set of records regarding site history, site development and regulatory history.
4. In chapter 4 of the DAR, Giant Mine site records were used to make the following statements:
 - page 4-10, a May 1949 study on the effects of arsenic pollution;
 - page 4-11, according to the records, surface disposal of arsenic trioxide dust occurred in July 1949 and February 1950, but the disposal location is not recorded in any of the documents reviewed;
 - page 4-11, the sand plain option was abandoned due to a high water table, and the Department of National Health and Welfare (the responsible regulatory authority) would not consider the Veronica Lake option until more information was available;
 - page 4-11, in a letter dated July 21, 1950, the Department of National Health and Welfare stated that it regarded the use of concrete vats on surface as the safest method of storage.

Please provide a copy of these specific records and any other relevant document held at the Giant Mine site related to understanding how the arsenic pollution and its effects on people and the environment





Giant Mine Environmental Assessment

IR Response Template

Round One: Information Request - Alternatives North #04

May 31, 2011

were initially identified and managed, and how the decision was made about underground storage of the arsenic dust.

Reference to DAR (relevant DAR Sections):

Section 4 Site History

Reference to the EA Terms of Reference

Response 1

The records in Chapter 4 provide a historical context for the Giant Mine Remediation Project (Remediation Project). To fully understand the proposed Remediation Project, it is necessary to describe the circumstances that contributed to Giant Mine's history. Chapter 4 provides a general account of mine's history from the pre-industrial period, the mine's operational phase and eventual transfer of the mine to the Government of Canada and the Government of the Northwest Territories in 1999.

A general inventory of the records currently available at the mine site and Giant Mine Remediation Project Office is included as an attachment to this Information Response for reference.

Response 2

Please see find records referenced in 4-10 and 4-11 of the Developer's Assessment Report (DAR) attached.

Response 3

The Remediation Project intends to create an information management system to support consultation tracking the Project Teams responsiveness and changes made in direct response to Aboriginal and public concerns. The information system may be expanded as required.

Response 4

Please find the noted attached the records referenced on page 4-10 and 4-11 of the DAR, previously submitted to Mr. Kevin O'Reilly on February 24, 2011. However, the remaining records requested are not included in this response. The Giant Mine Remediation Project does not intend to research the historical records relating to the decision to place the arsenic trioxide into the underground stopes and chambers.

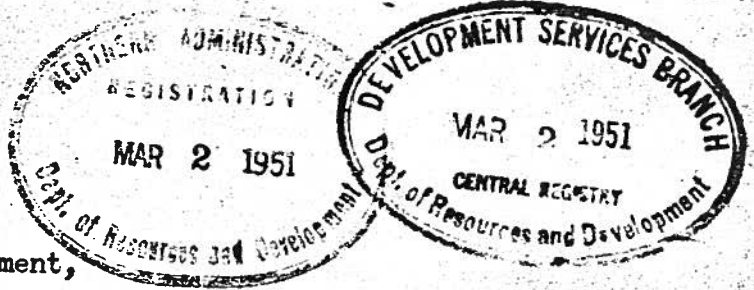


Recall for H Christie

OLIVER L. STANTON, B.A., M.D.
YELLOWKNIFE
N.W.T.

*chgd to Mr. Bishop
1-3-51
and now chgd to the
Director 3-3-51*

Notes
February 27, 1951.



Mr. G.E.B. Sinclair,
Director Lands & Development,
Services Branch,
Dep't. Resources & Development
Ottawa, Ontario.

Dear Mr. Sinclair:

Re: Arsenic disposal Giant Yellowknife Mines

I have recently discussed the above with Mr. Muir and Mr. Pitcher of Giant Yellowknife Mines. Their proposal of storing the arsenic in underground stopes, well away from the mine workings, and completely surrounded by permafrost appears to me to be an excellent method for safe disposal. The engineering problem should be very simple and I cannot see how there could be any leakage through permafrost. To me, this underground storage is much safer than any form of storage or disposal on surface; and, unless some very definite contra-indication can be pointed out it has my complete approval.

Yours very truly,

O.L. Stanton M.D.

OLS/mb

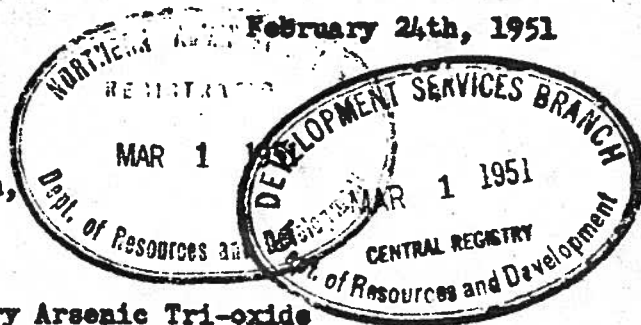
GIANT YELLOWKNIFE GOLD MINES LIMITED

(NO PERSONAL LIABILITY)

**YELLOWKNIFE, N. W. T.
CANADA**

1 1951

**G. E. B. Sinclair, Esq.,
Director,
Northern Administration and Lands Branch,
Department of Resources and Development,
Ottawa, Ontario.**



**Underground Storage of Dry Arsenic Tri-oxide
Your File: 53124**

Dear Mr. Sinclair:

The question of the safe and economic disposal of the dry arsenic tri-oxide which will be collected by our new Cottrell plant has been carefully studied by officers of your Department and the Department of National Health and Welfare, and by members of this Company's staff, both at the mine and in Toronto.

As a result of an examination made by Mr. K. J. Christie, Chief Mining Inspector, followed by test excavations made by the Company, the proposal to bury the material in the sand plain west of the Yellowknife Airport was abandoned. These excavations showed the water table to be a few feet below the surface in this area.

Disposal in Veronica Lake, which lies in the granite to the northwest of the plant, was carefully studied by Dr. Kay, of the Department of National Health and Welfare, and our staff. While this method was of definite interest, it was felt by Departmental officers that much more information would have to be available before consideration could be given to this means of disposal. This opinion was given to us in Mr. R. A. Gibson's letter of July 21st, 1950. We agreed with this opinion and, as the time element would prevent the accumulation of the necessary data on physical conditions, run-off and precipitation, before the Cottrell plant came into operation, it was decided to concentrate our investigations, which were already under way, on the possibilities and economics of surface storage in tanks and on storage underground.

In his letter of July 21st, 1950, Mr. Gibson stated that, while the officers of the Departments concerned regarded the use of concrete vats on surface as the safest method of storage, they did not want to put the mining companies to unnecessary expense and therefore favoured the proposal for underground storage, provided certain requirements were fulfilled. This practical and reasonable approach encouraged us in our efforts to locate suitable areas for satisfactory underground storage.

Two of the major requirements for effective disposal locally are that the storage selected must last indefinitely and that large capacity must be obtained at an economic cost and in a relatively small area. Our studies of surface storage included wood, steel and concrete tanks. Wood

tank staves contract on drying and are difficult to support in any reasonable size. Steel tanks, while relatively easy to construct in large sizes, would corrode and we were advised by the Chemical Division of Canadian Industries Limited that they knew of no permanent lining or coating that would last indefinitely.

The use of concrete tanks was investigated in detail and our Mill Superintendent and myself made trips to Northwestern Quebec to inspect the concrete storage at Consolidated Beattie Gold Mines. While reasonably safe storage can be provided by this method, the cost of such vats erected in Yellowknife would be excessively high and tankage of the largest economic size would hold our Cottrell plant output for a surprisingly limited period. For example, a rectangular reinforced concrete vat, 60' x 100' x 24' high, with a capacity of 144,000 cu.ft., would cost \$50,000.00 erected, and would have sufficient capacity for about 2½ years at our current milling rate and for a little over one year at a milling rate of 1,000 tons per day. Thus, in addition to the high cost of such structures, it would be necessary to carry out an almost continuous construction program, requiring a large surface area for suitable tank sites and substantial quantities of form lumber, reinforcing steel and cement.

As mentioned in my letter of July 8th, 1950 to Mr. Gibson, we were then giving serious consideration to underground storage. This method was also being studied at Negus Mines, and Mr. J. G. McNiven, Manager of that Company, had written your Department reporting favourably on this means of disposal. At Giant Yellowknife we re-studied drill core logs and other data on sub-surface conditions in various parts of the property, isolated from the mine workings. As a result of this study we were convinced that permanent, safe storage could be obtained in an area of relatively massive rock in the Cottrell plant area. Most importantly, this area was believed to be in the "permafrost" zone to a depth of at least the second level (250 ft.) of the mine workings and it was isolated from any underground openings.

The area was explored on the second level by driving a new drift and crosscut for a distance of 650 feet from the closest mine opening, followed by the drilling of horizontal and inclined diamond drill holes from the crosscut. Relatively good ground conditions were indicated in these holes, which were drilled in permanently frozen rock. Two surface holes were then drilled in the same area, both of which showed that the proposed excavation would be in permafrost. It was then decided to proceed with the necessary stope preparation and to make a start on mining the proposed block, in order to expose ground conditions and check on the permafrost condition.

It is our experience in all working places in the permafrost zone that active mining operations tend to thaw the surrounding walls for a very limited distance, possibly a few inches, due chiefly to the heat generated from blasting. However, within a few hours of the cessation of active work, the working places again become completely frozen. In the closest mine working (208 Stope) on this level to the proposed excavation,

all faults and fractures were found to be ice-filled. As stoping progressed, some thawing took place, but since operations were completed recently, the stope is again completely frozen.

Based on our experience to date, it is our opinion that an excavation in the permafrost zone would provide the safest possible storage in perpetuity. Within reason, it can be said that no seepage or migration of water would occur in such an area. We feel that the area already tested by drilling and active mining would fulfill these conditions. In this way the presence of permafrost, which is a considerable handicap in other phases of our operations, would be made to serve a particular and important purpose.

An important advantage of the area selected near the Cottrell plant is that direct mechanical conveying from the precipitation units can be effected; thus eliminating any handling and transportation by truck or other means which would be required should surface storage be necessary. Also, within the area which can be serviced by the type of conveyor to be installed, there is adequate space to excavate the underground chambers required for many years.

Excavation of these chambers can be carried out at less than half the cost of surface concrete vats of equal capacity and the waste rock broken will be available for mine fill. Compared to the problems involved in the construction of concrete vats, excavation of these underground chambers is relatively easy as the stoping operations would be a part of the regular mining routine.

A raise will be driven to surface where a tight concrete collar would be installed and the chamber would be properly vented to take care of possible development of arsene. Provision will be made during the winter months to blow cold surface air into the chamber as an additional means of ensuring permafrost conditions.

The attached plan shows the location of the proposed storage chambers with reference to the Cottrell plant and the closest mine workings. Each crosscut from which the chambers would be excavated would be sealed with a tight concrete bulkhead so that there would be no possible contact with the existing workings. It might be mentioned that these workings are now completely frozen and that the new drive on the second level to the proposed storage area was in permanently frozen ground for its entire length of 650 feet.

It is realized that there is no absolutely safe means of arsenic disposal. With storage in surface tanks there is always the possibility of leakage through the development of cracks, and even sabotage, which would be much less practicable in an isolated underground storage. Shipment out of the district would entail the normal risks of container breakage. We would emphasize that the arsenic tri-oxide will be produced in the dry form and that it should remain perfectly dry and stable in permanently frozen ground.

The methods studied have been discussed with Mr. E. V. Neelands, Consulting Engineer, and Messrs. C. W. Dowsett and W. G. Hubler, Consulting Metallurgists for the Company. Underground storage under the permafrost conditions described above is recommended by these consultants. A letter from Mr. Hubler is attached outlining the several methods investigated. Dr. O. L. Stanton, Medical Health Officer, has been fully advised of developments and, we understand, has written you giving his approval of the underground storage project.

Mr. K. J. Christie, Chief Inspector of Mines, has recently studied the data on which we are basing our decision to recommend this method of disposal.

You will be glad to know that shipment of the Cottrell plant steelwork is now being made from Winnipeg to Peace River. Design and fabrication of this steel was seriously delayed by the Winnipeg flood last year, as the Manitoba Bridge Company had originally promised delivery by September 1st at Waterways. Arrangements have been made for the transportation of this material to Hay River via the Mackenzie Highway and thence by truck and tractor across Great Slave Lake to Yellowknife. While the freighting cost will be at least twice that on the river route, erection of the building will be greatly expedited and it is hoped that at least two months will be gained in completion of the Cottrell plant.

We trust that this letter will give you the information required and that we have furnished satisfactory evidence that underground storage here will reasonably meet the requirements of the Departments concerned. We are enclosing copies of this letter for the Department of National Health and Welfare, and for Mr. Christie. A copy is also being forwarded to Dr. Stanton. As I shall be in Toronto for the next two weeks, I would be glad if you would get in touch with me at our office there, should any further information be required.

Yours very truly,

GIANT YELLOWKNIFE GOLD MINES LIMITED



A. K. Muir
General Manager

AKM/bp



Giant Mine Environmental Assessment

IR Response

Round One: Information Request – Alternatives North #05

June 17, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: Alternatives North #05

Date Received:

February 28, 2011

Linkage to Other IRs

Review Board IR #18

Date of this Response

June 17, 2011

Request:

Preamble:

There is some discussion in the DAR of underground infrastructure and waste, demolition of buildings on the surface, and removal of contaminated materials on the surface into pits or possibly underground. There is no overall inventory of waste on site and what its ultimate disposition will be as part of this Development.

Question:

1. Please provide a current inventory (quantities and location) of infrastructure, equipment and waste materials found underground and how this will be disposed of as part of this Development.
2. Please provide an inventory (quantities and location) of anticipated demolition debris from the surface infrastructure and any contaminated materials on surface (including how such materials will be classified as hazardous or non-hazardous). Indicate what the ultimate disposition of this material will be including where it will be located and how it will be managed.
3. In discussing the calcine pond on site (pg. 5-48), it is not clear whether excavation removal was considered as a closure option for this mine component. Please provide details on the closure options for the calcine pond, and how and why the option of leaving the calcine sludge in place was reached.

Reference to DAR (relevant DAR Sections):

S.5.2.3 Underground Infrastructure and Equipment;
S.6.6.8 Calcine Pond





Giant Mine Environmental Assessment

IR Response

Round One: Information Request – Alternatives North #05

June 17, 2011

Reference to the EA Terms of Reference:

S.3.2.3 (9, 10) Description of Existing Environment;
S.3.2.4 (7) Development Description

Response 1 Summary

The infrastructure, equipment and types of waste materials underground are described in general terms in accordance with the Terms of Reference (ToR) s.3.2.3 (10b). The underground locations where hazardous materials might still be present have been identified. There are small quantities of hazardous waste in the active maintenance shops on and above the dewatered 750 Level that vary as work is performed. Prior to allowing areas to become inaccessible, the hazardous materials are removed.

Response 1

Section 5.2.3 of the Developer's Assessment Report (DAR) identifies the equipment and types of waste materials underground. The infrastructure is described in general terms in accordance with ToR s.3.2.3 (10b). Salvageable equipment in the maintenance shops on the 1500 and 1650 Levels has been removed and the remaining equipment drained of fuel and oil prior to the flooding of these Levels.

The DAR identifies the locations in the underground mine where hazardous materials might still be present. The Giant Mine Remediation Project Team (Project Team) will proceed to do an inventory and remove the hazardous materials prior to allowing the areas to become inaccessible. Areas to be inspected are the maintenance shops, fuel/oil storage areas, explosives storage and electrical systems. There are small quantities of hazardous waste in the active maintenance shops on and above the dewatered 750 Level that vary as work is performed. The underground diesel storage facilities located on the 750 Level has been removed. There are also small varying quantities of lubricating and hydraulic oils in dedicated facilities adjacent to the active maintenance shops and the volumes vary with maintenance requirements.

Since much of the remaining underground electrical system dates from the period when PCB compounds were extensively used, small electrical components may potentially contain PCB's. For example, most of the lighting in the maintenance shops is provided by fluorescent strip lights. Depending on the date of manufacturing, the light ballasts may contain small amounts of PCB compounds in solid form.

Section 6.12.2 of the DAR commits to handling and disposing of such hazardous materials in accordance with applicable regulations as set out in the *Guideline for the General Management of Hazardous Waste in the NWT*. The disposal methods are further discussed in the response to Question 5.2.

Response 2 Summary

The Giant Mine Remediation Project includes the demolition and removal of site structures and utilities as well as the collection of surface debris. On site wastes include non-hazardous materials (wood,





Giant Mine Environmental Assessment

IR Response

Round One: Information Request – Alternatives North #05

June 17, 2011

demolition rubble, concrete), as well as hazardous materials (asbestos, mercury, PCB containing electrical equipment, arsenic containing materials and chemicals, etc.). The long term management program for the non-hazardous wastes, asbestos wastes, as well as sludge generated from the Waste Water Treatment Plant (WTP) includes the disposal of these wastes in an engineered landfill constructed on the property. All arsenic trioxide dusts will be managed by transporting the wastes underground into one of the arsenic containing chambers that is planned to be frozen. Once underground, this material will be managed and monitored according to the programs established for the frozen blocks. All other hazardous wastes (PCB, mercury, leachable lead, etc.) will be hauled offsite for disposal according to federal and territorial regulations. The preliminary design includes the construction of an onsite engineered landfill on top of the Central Tailings pond. This location was chosen for the following reasons including:

- Central location on site and close to major mine infrastructure to minimize haul distances for disposal.
- An eastern site location is preferred to minimize or reduce haul roads crossing Highway No. 4.
- The Central Tailings pond provides a single location with enough area to be able to accommodate the volume of waste requiring disposal that could blend into the natural topography and provide adequate drainage pathways.

Currently a geotechnical engineering evaluation is being completed to determine if this location is capable of supporting a disposal cell that is suitable for the long term management of waste. In the event that this site cannot provide adequate environment protection and cannot be utilized, an alternate location will be selected.

Management of the landfilled wastes will include routine inspections of the containment berms, landfill cap and the surrounding drainage ditching. If deficiencies are noted, repairs/improvements will be completed in areas that show signs of erosion or settlement. In order to confirm that there is no detrimental impact to the environment, groundwater monitoring wells will be installed. Upon completion of the final design the location of monitoring wells, the monitoring frequency, and the monitored parameters will be determined.

Response 2

Summary of Demolition and Site Debris Wastes

The Giant Mine Remediation Project includes the demolition and removal of all site structures and utilities as well as the disposal of surface debris. To identify landfill disposal requirements, an estimate of the wastes that would be generated from the demolition of onsite buildings as well as from the removal of all surface debris was completed. This estimate was developed based on a survey of the buildings, identification and quantification of hazardous materials, and the collection and analysis of building materials. Wastes are separated into two main waste types (non-hazardous, including, wood, demolition rubble, concrete), as well as hazardous (asbestos, mercury, PCB containing electrical equipment, arsenic containing materials and chemicals, oils, etc.). The following table presents a summary of the estimated demolition and debris wastes at Giant Mine.





Giant Mine Environmental Assessment

IR Response

Round One: Information Request – Alternatives North #05

June 17, 2011

Table 1: Summary of Waste Volumes

Non-Hazardous Wastes	Hazardous Wastes				
General Demolition Waste (m ³)	Oils/Fuels/Liquids (m ³)	Asbestos (m ³)	Chemicals, PCBs, Mercury, ODS (m ³)	Leachable Lead Amended Paint (m ³)	Arsenic Dust/Wastes Impacted with Arsenic (m ³)
66,533	309	3,234	133	674	8,279

Classification Criteria

Wastes at the Giant Mine site are classified as being hazardous or non-hazardous by the following regulations and guidelines.

- 1. Asbestos** - Materials containing asbestos greater than one percent (1%) by weight are considered asbestos containing materials in accordance with the Northwest Territories *Guideline for the Management of Waste Asbestos, September 1998*. Disposal of asbestos waste is governed by the *Environmental Protection Act – R.S.N.W.T. 1988, c. E-7, Guideline for the General Management of Hazardous Waste in the NWT* and the *Guideline for the Management of Asbestos Waste*.
- 2. Mercury Containing Equipment** - Disposal of mercury waste falls under the *NWT Environmental Protection Act 1988* and the *Guideline for the General Management of Hazardous Wastes in the NWT*. According to the *General Safety Regulations* of the Northwest Territories, special precautions are required during demolition activities to ensure that worker exposure to mercury does not exceed the limits outlined in the regulations. Mercury is commonly found in pressure regulated valves, switches, thermostats, high intensity lamps and fluorescent light tubes.
- 3. Ozone Depleting Substances** - The federal guideline for the use and disposal of ozone depleting substances (ODS) is the *Canadian Environmental Protection Act, Ozone Depleting Substances Regulations, 1998*. The Northwest Territories regulation related to ODS is the *Guideline for Ozone Depleting Substance, 1998*.
- 4. PCB Containing Equipment** - According to the *Canadian Environmental Protection Act*, equipment and paints containing PCBs with a concentration of greater than 50 ppm are considered to be PCB containing. PCB containing items need to be treated as hazardous wastes and will require disposal at an approved location.
- 5. Lead Materials and Lead Amended Paints** - Disposal of lead waste falls under the *NWT Environmental Protection Act – R.S.N.W.T. 1988 c. E-7, Guidelines for the General Management of Hazardous Wastes in the NWT and Guideline for the Management of Waste Lead and Lead Paint*. For additional information purposes, selected paint samples were also analyzed for leachable lead toxicity characteristic leaching procedure (TCLP method) in order to confirm leachable levels. There are currently no NWT acts or guidelines related to the disposal of wastes that contains leachable lead. Waste disposal regulations in many jurisdictions in Canada dictate that waste that contains leachable lead concentrations greater than 5 µg/L needs to be considered as hazardous waste. The remedial project is currently evaluating whether the guidelines adopted in other jurisdictions are applicable to the Giant Mine site.





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- 6. Non-Hazardous Wastes** - Non-hazardous wastes consist of solid waste that, when disposed of in a landfill or re-used, is not expected to undergo physical, chemical or biological changes to an extent as to produce substances that may cause an adverse effect. Non-hazardous wastes at the Giant Mine site consist of demolition debris, scrap metal, wood, glass, concrete, fibreglass insulation, paper products, etc.

Opportunities for material recycling and salvage are being identified and will be included in the final design.

Waste Disposal

The Giant Mine Remediation Project includes the construction of an on-site engineered landfill. Currently the preliminary design of an onsite landfill is being completed. The preliminary design includes the construction of a landfill on top of the Central Tailings pond. This location was chosen for many reasons including:

- Central location on site and close to major mine infrastructure to minimize haul distances for disposal.
- An eastern site location is preferred to minimize or reduce haul roads crossing Highway No. 4.
- The Central Tailings pond provides a single location with enough area to be able to accommodate the volume of waste requiring disposal that could blend into the natural topography and provide adequate drainage pathways.

Currently a geotechnical engineering evaluation is being completed to determine if this location is capable of supporting the proposed waste disposal facility. The main objective of the investigation is to determine the subsurface soil/groundwater conditions, the engineering properties of the underlying tailings, and to provide geotechnical recommendations to support the design and construction of the landfill. The soil testing program will include particle size distribution (sieve analysis), Atterberg limits, moisture content, density, shear strength parameters, permeability, and consolidation.

The landfill will be designed based on the volume estimates for the following materials:

Non-hazardous Demolition Waste and Surface Debris

All on-site buildings will be demolished and wastes will be moved for permanent disposal in the new on-site engineered landfill. Hazardous materials removed during demolition will be segregated from the non-hazardous waste and disposed of following territorial and federal regulations.

Within the mine lease boundary there are numerous areas with surface debris which include barrels, tires, pipe and used mine and mill process equipment. All non-hazardous surface debris located within the mine lease boundary will be collected and disposed of in the on-site engineered landfill.

Asbestos Wastes

All materials containing asbestos will be removed prior to the completion of the building demolition program. All asbestos wastes will be double bagged and placed in a dedicated portion of the new on-site engineered landfill.





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Arsenic Trioxide Dusts

Arsenic trioxide dusts are known to exist in some of the onsite structures. Prior to building demolition, this dust will be collected and removed. All material surfaces will be cleaned to allow for the disposal of the waste materials to be disposed of in the on-site engineered landfill. All recovered arsenic trioxide dust, as well as materials impacted with arsenic trioxide dust that cannot be cleaned, will be placed underground in one of the existing arsenic trioxide storage chambers of the frozen zone. All water that is impacted with arsenic trioxide will be treated prior to discharge to the environment. Detailed design will determine which chamber will be utilized for the disposal of this material and how it will be transported underground.

WTP Sludge

As part of the water treatment process, sludge containing iron hydroxides with ferric arsenate, ferric antimonite, and calcium sulphate will be generated. This waste material will be deposited in a separate stand-alone facility or in a separate cell located within the on-site engineered landfill. The detailed design of this cell will be completed once the characteristics of the waste material are confirmed.

Contaminated Soils

Surficial materials around the mine infrastructure show impacts of the operation and are contaminated with arsenic and other metals (antimony, chromium, copper, lead, nickel, vanadium and zinc) as well as petroleum hydrocarbons. Soils that are identified as being contaminated above federal industrial standards and confirmed through analytical testing to be non-hazardous will be placed in the landfill as intermediate fill. Any soils classified as containing metal concentrations at hazardous levels will be hauled off site for disposal.

The following table presents a summary of the proposed disposal methods for each waste type.

Table 2: Proposed Disposal Methods

Waste Type	Proposed Disposal Method
Arsenic Trioxide Dust	On-Site – Underground Frozen Block Zone
Asbestos	On-Site - Engineered Landfill
Leachable Lead Painted Materials	Off-Site - Approved Facility
PCB containing materials and PCB amended paint products	Off-Site - Approved Facility
Chemicals and liquids including oils, greases, fuels, mercury, ozone depleting substances,	Off-Site - Approved Facility
Fuel/oil	Used on site, recycled and/or disposed offsite
Non-hazardous demolition and surface debris including; wood, steel, glass, brick, concrete, plastic, etc.	On-Site - Engineered Landfill
Water Treatment Plant Sludge	On-Site - Engineered Landfill

Note: Due to government regulations, approved offsite facilities, located outside of the NWT, will be utilized for the disposal of hazardous wastes that cannot be landfilled on the property.





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Landfill Design

- Waste will be placed inside a bermed area.
- Intermediate fill consisting of granular material or contaminated soil will be used between each layer and to fill voids in the placed material. Lifts of waste will not exceed 2 m and will be compacted.
- Surface water run-off from the landfill cap will be directed to ditches surrounding the landfill. Surface water in general will be directed away from the landfill by the use of permanent ditching and berms to prevent flooding of the landfill development area. Surface water run-off and run-on will be handled in the same ditch system. Final engineering design will determine the size/capacity of the ditch system, ditch slopes as well as areas requiring armouring to prevent erosion.
- All non-hazardous lead painted debris will be placed in a dedicated portion of the landfill. To prevent infiltration through this area, a geo-membrane will be utilized as part of the landfill cap design to help prevent the migration of water into this area.
- Once all the waste is placed within the landfill it will be capped. The landfill cap will consist of a minimum of 1 m of granular material and will tie into the top of the surrounding berms.
- The final capped elevation will be limited to fit into the existing surrounding topography.

Monitoring and Long Term Management

Routine inspections of the containment berms, landfill cap, and surrounding ditching will be required to identify areas of erosion, settlement and slope failure. Ongoing maintenance will be required to address these areas.

In order to confirm that there is no detrimental impact to the environment, groundwater monitoring wells will be installed to monitor groundwater levels. Upon completion of the final design, the location of monitoring wells, the monitoring frequency and the monitored parameters will be determined.

Response 3 Summary

The calcine material is to remain in place as it is not considered a major source of current or future arsenic loadings to the creek. Should it be determined during closure activities that the clayey silt overburden material is required elsewhere on the site or that remediation options selected for Baker Creek require it, the calcine layer could be excavated and disposed with other soils identified as contaminated.

Response 3

Section 6.6.8 of the DAR presents the current proposed measures for the Calcine Pond. The bulk of the Calcine Pond and its contents were removed several decades ago and the area covered with clay material 1 to 11 m thick (DAR s.5.5.4). Studies have shown that, although the remaining material is a potential source of arsenic and antimony, the soluble concentrations of these elements are moderate, and seepage flows to Baker Creek are low due to the low permeability of the surrounding soils. The acid-





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base accounting indicates that the calcine is unlikely to be acid-generating, and that major changes to the chemistry in the future are unlikely. Therefore, the calcine is not considered a major source of current or future arsenic loadings to the creek (DAR s.5.5.5.3).

The calcine material is to remain in place as it is not considered a major source of current or future arsenic loadings to the creek. However, some of the options under consideration for remediating the adjacent reach of Baker Creek would require excavation of the Calcine Pond. Also, should it be determined during closure activities that the clayey silt overburden material is required elsewhere on the site, the calcine layer could be excavated. The calcine material would then be disposed with other soils identified as contaminated.





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IR Response

Round One: Information Request - Alternatives North #06

May 31, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Alternatives North Information Request #06

Date Received:

February 28, 2011

Linkage to Other IRs

Review Board IR #18

Review Board IR #20.4

Environment Canada IR #10

Date of this Response:

May 31, 2011

Request

Preamble:

This section of the DAR describes ice blockages in Baker Creek that causes water infiltration in C1 pit. It appears that human intervention may be required forever to maintain Baker Creek.

Minewater has been directly discharged into Baker Creek (with or without treatment) for many years. It is not clear what will happen to Baker Creek's fish and fish habitat if and when minewater discharges are not made directly into this stream as it could completely dry up in the summer months.

Question:

1. What options and designs may there be to remediate Baker Creek that reduce or eliminate the chance of ice blockages or other events that require human intervention?
2. It appears to be predicted by INAC that Baker Creek may dry out completely in the summer months. Now that fish exist in Baker Creek and fish habitat have been created within Baker Creek, how will this be affected if the minewater discharges into Baker Creek are discontinued?

Reference to DAR (relevant DAR Sections):

S. 5.8 Baker Creek

S. 7.1.2.1 Study Site Area

Reference to the EA Terms of Reference

S.3.2.3 (5) Description of Existing Environment





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IR Response

Round One: Information Request - Alternatives North #06

May 31, 2011

Summary

The remediation of Baker Creek would address the traverse structures that currently cause ice blockages.

Reaches of the remediated Baker Creek may run dry by in late summer, but that will represent a return to natural conditions.

Response 1

The existing Baker Creek channel is traversed by seven structures that either form a hydraulic control or limit the natural behavior of the system. These include old mine infrastructure, mine road crossings, debris, as well as one crossing of the GNWT Ingraham Trail (Highway 4). Some of these features cause ice blockages. These features would either be removed or the creek re-aligned.

The re-aligned creek may also suffer from ice blockages, similar to what occurs in natural channels. In such cases, the creek floodplain would need to be sized to pass spring flows even with the thalweg blocked by ice.

Once the restoration process is complete and mine water discharges into Baker Creek are discontinued, it is possible that reaches may become dry in late summer. As stated in the response to Environment Canada Information Request #10, the drying up of Baker Creek in the summer months is not viewed as an adverse effect because flows will be returned to their natural levels.

Section 14.2 of the Developer's Assessment Report (DAR) describes a comprehensive-Environmental Monitoring Program that will be established for the Giant Mine Remediation Project. The program will be used to: a) verify the conclusions presented in the DAR that adverse effects are not anticipated; and b) identify any emerging adverse environmental trends so that appropriate actions can be taken. As shown in Table 14.2.1 of the DAR, monitoring of Baker Creek will represent a major component of the program.

Response 2

Under the current operating regime, out migration of the fish happens before the Effluent Treatment Plant discharges to Baker Creek due to the warm water temperature of the creek. The depth of "Baker Lake/Pond" suggests that the water level will be lower but there will be enough water for resident fish. Currently there are no fish in upper Baker Creek between Martin Lake and Baker Pond. As stated above, the drying up of Baker Creek during summer months is not viewed as an adverse effect; such periods of low or no flow have been observed in Baker Creek in recent years.





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IR Response

Round One: Information Request – Alternatives North #07

May 31, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: AltNrth #07

Date Received:

February 28, 2011

Linkage to Other IRs:

Review Board IR #19

Date of this Response

May 31, 2011

Request:

Is there any intention on the part of the Developer to initiate and/or fund active research and development into a more permanent solution for the underground arsenic stored at the Giant Mine that would reduce or eliminate perpetual care requirements? If not, please provide a detailed rationale.

Reference to DAR (relevant DAR Sections):

Section 6.2.2 of the DAR provides an overview of the process that was used to assess alternative approaches to remediation, including a section entitled "Future Re-Consideration of Alternatives" (Section 6.2.2.4).

Reference to the EA Terms of Reference

Section 2.3 of the Terms of Reference (Temporal Scope) – "As the contaminant will continue to exist on the site, the risk of potential contamination may exist in perpetuity. To predict impacts in the future, assumptions must be made about future events and conditions" (p. 7).

Section 3.2.2 of the Terms of Reference requires the Developer to provide: "A description of project feasibility including financial feasibility. Include discussion of funding certainty for the development and related monitoring" (p.10).

Summary:

- INAC undertook a detailed and exhaustive, peer reviewed process in order to identify the most suitable approach to remediating the Giant Mine site for the long term.





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IR Response

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- INAC and the GNWT consider the Frozen Block Method as the most suitable long-term management option for the site that requires involvement in perpetuity.
- The Developer has no current intention to initiate or fund additional research and development into alternatives to the Frozen Block method.
- However, as stated in the DAR, INAC and the GNWT remain open to the consideration of alternative emerging technologies in the future. Technology reviews and evaluations will be conducted as part of the Giant Mine Remediation Project Adaptive Management Plan (AMP) that is currently being developed.

Response:

Due to the detailed and exhaustive approach that was used to identify the remediation method, and the nature of the site (i.e., no quick fixes or walk away options), INAC is confident in the Frozen Block Method and has no intention to initiate or fund research and development into alternative approaches. As stated in the DAR, INAC and the Government of the Northwest Territories (GNWT) consider the Frozen Block Method to be the most suitable long-term management option for the underground arsenic dust. This method was selected from 56 possible options, subjected to extensive peer review, and has not been found lacking in effectiveness or permanence. Once frozen, the level of effort to maintain this condition is expected to be minimal (e.g., monitoring, water treatment, operations and maintenance).

The Governments of Canada and the Northwest Territories, in selecting the preferred remediation option for the site, have recognized and accepted that the Giant Mine Remediation Project includes long-term care, maintenance and monitoring. The DAR also states clearly that several elements of the project will be required to be addressed in perpetuity. Long-term care, maintenance and monitoring are essential components of the remediation approach at the Giant Mine site that will protect human and environmental health and safety and ensure the integrity of Canada's investment.

The DAR also notes (Section 6.2.2.4) that INAC and the GNWT remain open to considering alternative emerging technologies in the future. The intention is to review advances in technologies rather than fund active research through the remediation project. Technology reviews and evaluations will be conducted as an element of the Giant Mine Remediation Project Adaptive Management Plan (AMP) which is currently under development.





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IR Response

Round One: Information Request - Alternatives North #08

May 31, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: AltNrth #08

Date Received:

February 28, 2011

Linkage to Other IRs

Review Board IR #7, 5

Date of this Response:

May 31, 2011

Request

Preamble:

Although INAC chose the frozen block method for managing the underground arsenic to afford greater redundancies in protecting against uncontrolled releases, the frozen shield method (without injecting water into the arsenic chambers) may provide another alternative that may be easier to intentionally thaw.

INAC has also not yet chosen the preferred method of the implementing the frozen block as it may involve a hybrid or non-hybrid system. This choice may have implications for the reversibility of the frozen block method.

Question:

Please discuss the methods, risks (including probabilities and severity of potential effects), costs, advantages and disadvantages of each of the following with regard to reversibility:

1. frozen block versus frozen shield methods of containing the underground arsenic
2. hybrid versus non-hybrid systems for the frozen block method
3. backfill alternatives for the current arsenic storage chambers as discussed in the DAR (i.e. coarse rock, cemented aggregate and foam cement, pg. 6-12)
4. secondary coolant options as discussed in the DAR (i.e. brine, ethylene glycol and propylene glycol, pg. 6-26)

Reference to DAR (relevant DAR Sections):

S.6.2 Arsenic Containment (Pg. 6-5 to 6-46)

Reference to the EA Terms of Reference:





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S.3.3.9 Arsenic Containment

Summary

Methods and risks of a planned thaw of a frozen block are discussed in the response to the Review Board's IR#5.

Choices of hybrid vs. non-hybrid systems, and secondary coolant have no impact on the reversibility of freezing. Cemented backfill would be preferable to uncemented backfill.

Response 1

Methods and risks of a planned thaw of a frozen block are discussed in the response to the Review Board's IR #5. As noted in that response, a number of assumptions need to be made before the method of thawing frozen blocks can be described. The most important assumption is that the purpose of the thawing would be to allow extraction of the dust. When the thawing and extraction methods are seen in combination, the risk profile is very different than one might expect from considering only thawing.

Over the long term, temperatures inside the frozen shells would end up being very similar to those within the frozen blocks. The only difference would be that much of the dust within the frozen shells would be drier than that within the frozen blocks. The difference would be a result of the wetting step that is part of the frozen block option, but would not be part of a frozen shell option.

The consequence of the differences in frozen water content is that less energy would be required to thaw the dust. Another is that there would be less water available for escape during thawing.

However, as also noted in the response to the Review Board's IR #5, extraction of the thawed dust would require the use of water and energy. Therefore, assuming that the purpose of the thaw is to allow extraction, there would be less difference between the frozen block and frozen shell options than the initial water content would suggest. There would be need for energy addition in both cases, and there would be a need to control water in order to prevent releases of dissolved arsenic. The relatively small differences in the amounts of energy and water involved will not lead to significant differences in risk.

Response 2

The hybrid system is an alternative to active freezing, and this would be used only during the creation of the frozen blocks. Once the frozen blocks have been established, the plan would be to convert either the hybrid or the active system to a passive system. As a result, there would be no difference in how a planned thaw would proceed.

Response 3





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IR Response

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As noted in the response to the Review Board's IR #5, the use of uncemented backfill would add to the cost and risk associated with a controlled thaw. The use of cemented backfill, either cemented tailings or cemented aggregate would not add costs or risk to a controlled thaw. Foam backfill would not be sufficiently strong to resist the water jet that would be used in dust extraction.

Response 4

Secondary coolant will only be used during the creation of the frozen blocks. Therefore the choice of coolant will not affect a controlled thaw.





Giant Mine Environmental Assessment IR Response

Round One: Information Request - Alternatives North #09

May 31, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: AltNrth #09

Date Received:

February 28, 2011

Linkage to Other IRs

YKDFN IR #8
Review Board IR #4-6

Date of this Response:

May 31, 2011

Request

Preamble:

The DAR describes the initial frozen wall as follows:

The objective of the first step will be to create a frozen zone around each storage area that is wide enough to prevent any outflow of water or soluble arsenic trioxide when the chamber or stope is flooded. The current design criterion to reflect that objective is a ground temperature colder than -10°C over a distance of at least 10 m around and below each chamber and stope. (pg 6-28)

Question

1. What is the rationale behind these design criteria?
2. What are the contingencies if these criteria are not reached?

Reference to DAR (relevant DAR Sections):

S. 6.2.6 Initial Freeze (pg. 6-28)

Reference to the EA Terms of Reference:

S.3.3.1 Arsenic Containment

Summary

The criteria for initial freezing were selected to be conservative. The criteria of a -10 °C temperature over a width of 10 m are the same as were adopted at the McArthur River uranium mine in northern





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #09

May 31, 2011

Saskatchewan. If the criteria are not met within the planned duration, there would be an extension of the initial freeze period.

Response 1

The design criteria rationale for the frozen block method is described in Section 3.2 of the report, "Conceptual Engineering for Ground Freezing" (Supporting document J1 of the Remediation Plan).

The initial criteria are the same as were adopted at the McArthur River uranium mine in northern Saskatchewan. There, ground freezing is used to provide a "freeze curtain" that isolates the mine working from an adjacent rock layer containing high pressure groundwater. The report outlines differences between the McArthur and Giant sites that indicate the conditions at Giant Mine are more favorable to freezing. The main differences are:

- There will be no significant influence of groundwater flow as the Giant Mine will be dewatered during the initial freezing process;
- The freeze wall depths at Giant Mine are typically 100 m, much shallower than the 530 to 600 m depth required at McArthur River;
- The high grade uranium ore at McArthur River creates heat; there are no heat sources present in the ground at Giant Mine;
- Initial temperatures at Giant Mine (typically between -2 and +5 °C) are much cooler than the +5 to +25 °C initial temperatures at McArthur River.

The differences suggest that applying the McArthur River criteria to the Giant Mine ground freezing will be conservative.

Response 2

If the initial criteria of -10°C over a distance of 10 m are not met within the planned duration, there would be an extension of the initial freeze period. Additional contingency measures include:

- If any, replace defective components;
- If required, install additional freeze pipes;
- Extend the duration of the active or hybrid freezing and delaying the transition to passive operation;

In the long term, once the chamber and stopes are completely frozen, the time to repair the damaged freezing system will not be critical, as it would take many years before the thawing reached the dust. Further details on thaw time predications are available in the "Conceptual Engineering for Ground Freezing".





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IR Response

Round One: Information Request - Alternatives North #10

May 31, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: AltNrth #10

Date Received:

February 28, 2011

Linkage to Other IRs:

Date of this Response:

May 20, 2011

Request

Preamble:

Few details could be located in the DAR on maintenance and replacement of the thermosyphons that would be required in perpetuity as the passive freezing system for the frozen block method.

Question 1:

Please provide the anticipated maintenance and replacement requirements for the thermosyphons along with justification for the same.

Question 2:

Please provide details on the monitoring and inspection regime to keep the thermosyphons functioning properly including indicators and triggers for maintenance and replacement, public reporting on performance, expected costs for maintenance and replacement, ease of maintenance and locating replacement materials (including any additional tools, equipment and specialized skills required).

Reference to DAR (relevant DAR Sections):

S. 6.2.7.2 Maintaining the Frozen Block
S.14.2.1 Frozen Ground Monitoring

Reference to the EA Terms of Reference:

S. 3.3.1(e)





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #10

May 31, 2011

Question 1 – Summary

No codes or standards have been identified for the design of thermosyphons. Maintenance would include periodic recharging of the carbon dioxide operating fluid and repairing of leaks either owing to failure of the pipe, fittings, or vandalism. Replacement will depend on the performance of the thermosyphon remaining relatively constant. If the performance declines over time, a decision will need to be made to repair or replace the thermosyphon.

Question 1 – Response

Thermosyphons have been used for over 40 years in Alaska and northern Canada. No codes or standards for the design of thermosyphons have been identified. Current design preference is to charge thermosyphons with carbon dioxide as the operating fluid. Failures of thermosyphons have been reported with ammonia as the operating fluid but not with carbon dioxide as the operating fluid. Other failures (leaks) have been reported owing to defects in the welded pipe and/or charging valves, or to vandalism.

A percentage of construction costs will be carried in the cost estimate for thermosyphon maintenance each year. Over time, this amount may be changed as actual maintenance data and operating life data is collected. Maintenance will include ensuring that the carbon dioxide charge in the tube is appropriate for operation and the radiator surfaces are not damaged. Replacement will likely be based on whether the thermosyphons continue to operate as designed. If a thermosyphon exhibits reduced performance, a decision will need to be made to repair or replace it.

Question 2 – Summary

Thermosyphons installed to maintain the frozen blocks at Giant Mine will be monitored and performance will be evaluated through instrumentation and long term monitoring. A maintenance plan will be developed to scope and execute the required repair work.

Question 2 – Response

A monitoring and inspection program will be developed as part of the detailed design and construction phases of the freeze program. In general, temperature sensors will be used to monitor performance of thermosyphons. Temperature probes below grade will indicate performance of the evaporator sections and temperature probes above grade will indicate performance of the radiator sections. Not all thermosyphons will be instrumented and monitored as part of the freeze program. Data will be retained and long term trends monitored and examined for indications of change in performance.

Non-performing thermosyphons will be inspected and repaired as required. One common cause of degraded performance is loss of carbon dioxide. Records will be kept showing performance of thermosyphons to track performance issues. When maintenance costs exceed replacement cost, consideration will be given to replacement.





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #10

May 31, 2011

Expected maintenance costs are based on an allowance of a small percentage of construction cost to be set aside each year for maintenance. Replacement costs will include thermosyphon fabrication, shipment to Giant Mine, removal of the non-performing thermosyphon, and installation of the new thermosyphon. The total estimated replacement cost per thermosyphon will depend on the number of thermosyphons that need to be replaced at one time. Sufficient time will be available to develop a replacement plan to optimize replacement costs.

The ongoing design of the freeze pads and the layout of the mechanical, electrical, and instrumentation systems will allow vehicle (equipment, support vehicles, cranes) access to the individual freeze pipes to aid in ongoing maintenance and replacement activities as required in the future.

At this time, thermosyphon materials are not considered difficult materials to source. Maintenance and replacement of thermosyphons could be included in future service contracts for the freeze program. Workers employed to maintain and replace the thermosyphons will be expected to meet quality control and safety requirements.

Performance of the freeze system will be reviewed and reported at least annually.





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IR Response

Round One: Information Request - Alternatives North #11

June 17, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: Alternatives North #11

Date Received

February 28, 2011

Linkage to Other IRs

YKDFN IR #02, 03, 04

Date of this Response

June 17, 2011

Request

Preamble:

The remediation options that were considered for the pits are:

- Backfilling and covering;
- Allowing flooding to form full depth pit lakes; and
- Partially backfilling and flooding to form shallow pit lakes or wetlands.

Backfilling and covering the pits would produce a surface that could allow a variety of future land uses. The main issue is the availability of backfill material. The available amount of clean backfill is very limited and is also in demand for other remediation activities. Two sources of material for backfilling the pits are the tailings and the contaminated soils from elsewhere on site. Both of these materials contain high levels of arsenic. Measures to limit release of that arsenic would need to be included in the backfill design.

Establishing pit lakes might provide additional aquatic habitat. However, the pits are connected to the underground mine workings. Therefore, any water allowed to accumulate in the pits would be contaminated for as long as the mine water itself was contaminated.

Partially backfilling all the pits could minimize the contact between the contaminated mine water and the shallow pit lakes or wetlands. However, any leakage through the backfill could result in Baker Creek drying up during low flow periods. The lack of sufficient clean backfill is also a problem for this option. After consideration of these options, it was decided to proceed with a combination that makes use of the limited available backfill, reduces physical hazards associated with mine openings and pit walls and prevents the formation of contaminated pit lakes. (pg. 6-51 and 6-52).





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #11

June 17, 2011

Question:

1. Please provide a systematic review of the reclamation alternatives considered for each pit on site including cost, perpetual care requirements (including fences, berms, water treatment), risks, and uses and any other matters considered.
2. Please indicate whether perimeter blasting and sloping was considered as an option and whether it might eliminate the need for fences and firms.

Reference to DAR

s.6.4.2 Method Selection, Alternatives and Preferred Alternative

Reference to the EA Terms of Reference

s.3.2.4 (7) Development Description

Response 1 Summary

The analysis of options for the pits has been addressed elsewhere. References are provided below.

Response 1

Section 6.6.6 of the Developer's Assessment Report (DAR) and the response to the Yellowknives Dene First Nation Information Request #03 address this request.

Response 2 Summary

The use of drilling and blasting as an alternative to berms and fences is discussed in more detail.

Response 2

Perimeter blasting and sloping as a method of remediating pit walls were not documented as a viable alternative to fencing and berms, due to NWT Mining Health and Safety Regulations as well as practical limitations. The Regulations specifying open pit security are:

- Surface Openings: Section **1.128**. The manager shall ensure that surface excavations or openings are securely fenced or otherwise protected against inadvertent access; and
- Cessation of Work: Section **17.03**. (1) Where work at a mine or exploration site is stopped for a period exceeding 30 days, the owner or manager shall cause the entrances to the mine or exploration site and all other pits and openings that are dangerous by reason of their depth or otherwise, to be suitably protected against inadvertent access within the time limit specified by the chief inspector.





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Round One: Information Request - Alternatives North #11

June 17, 2011

The requirement to prevent inadvertent access, i.e. fencing or berms, would still be needed even though the pit walls were drilled and blasted to make to a stable slope. The excavation would become considered an extension of the pit. Perimeter blasting and sloping the walls of a pit would not change the potential hazard of settlement of the pit floor, or failure of a pillar between underground workings and the pit.

The practical limit to sloping the pit walls can be illustrated by assuming that the blasting and sloping will result in a long term stable slope of 2.5 to 1 (horizontal to vertical) for unconsolidated material, like blast rock. Blasting the pit walls back to that slope would result in the top of the walls extending quite a distance beyond the existing pit walls. Some practical constraints to making a 2.5 to 1 slope would be (from south to north):

- A2 Pit: an excavated slope on the east side would encounter A Shaft and the underground mine excavations beneath the hill near A shaft. The excavation would also pass through a power line, Baker Creek, leaving no place for the creek to flow, Highway 4, the Mining Heritage Society site, and possibly out into Great Slave Lake. Excavation on the west side would encounter a high rock hill and an electrical power line. Excavation on the south side may cause instability in the DWC Stope area.
- A1 Pit: as with A2 Pit, the excavation on the east side would pass through a power line, Highway 4 and Baker Creek. Excavation on the west would encounter a water diversion channel that diverts surface water past the pit, a high rock hill and an electrical power line.
- C1 Pit: an excavated slope on the east side would pass through a power line, Highway 4 and a possible future location to relocate Baker Creek. On the south and west sides, an excavated slope would pass through Baker Creek. On the west side a high rock hill and electrical power line would be encountered.
- B2 Pit: an excavated slope on the east side would pass through the four AR1 arsenic storage chambers, Baker Creek, Highway 4 and possibly the AR2 arsenic storage area. On the north side the slope would pass through Baker Creek and B Shaft. A high rock hill and Brock mine workings would be encountered on the west side.
- B1 Pit: this pit is to be backfilled, however fencing or berms may still be required to prevent entry as failure of underground mine openings could lead to unsafe conditions.
- B3 Pit and B4 Pit: as with the above pits, drilling and blasting would be a major change to the landscape and environment surrounding the pits.





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #12

June 17, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: Alternatives North #12

Date Received

February 28, 2011

Linkage to Other IRs

Review Board IR #10

Date of this Response

June 17, 2011

Request

Preamble:

The DAR discusses placing a cover on the various tailings ponds on site, construction of gullies and drainage channels through the tailings, and some cut and fill work on the Northwest Pond. The DAR also states on page 6-57:

“Many areas that produce dusting problems cannot be reached due to the wet and soft nature of the tailings.”

This raises issues of trafficability on the tailings, or the ability to use equipment without the risk of it sinking. The highly erodible and toxic tailings also raise issues around how to design and maintain physical works to control drainage during the tailings cover placement and afterwards in perpetuity.

Question:

1. Please provide information on the trafficability of the various tailings ponds where cover placement and drainage works are to be constructed.
2. What if anything has been learned from the test plots on the Northwest Pond in relation to trafficability and cover design?
3. What special design and construction techniques will be adopted to avoid erosion and ice build up in or on any of the tailings remedial works?
4. Please describe the perpetual care requirements and costs for the covers, drainage channels, dams or other features that will form the remedial work on tailings.





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Reference to DAR (relevant DAR Sections)

DAR, s. 6.6 Tailings and Sludge

Reference to the EA Terms of Reference

ToR s.3.2.4 (8) Development Description

Response 1 Summary

Portions of the ponds are currently trafficable to light construction equipment. Primarily, the central portion of the North Tailings Pond and Northwest Tailings Pond are currently too soft for construction equipment. Dewatering the ponded water on the ponds should improve trafficability. Re-grading of the surface of the ponds will also help to improve the trafficability by pushing drier and coarser grained material to the soft areas. If the softer areas of the ponds still remain too soft for cover construction, a combination of construction in the winter and more aggressive drainage measures will be taken to allow the construction of the cover to be completed.

Response 1

Significant portions of the tailings pond areas are currently trafficable for light construction equipment meaning construction of a cover over these areas would be possible at this time. This includes most of the South and Central Tailings Ponds and large portions of the North and Northwest Tailings Pond areas (areas away from the permanently ponded water). Areas adjacent to and beneath ponded water are too soft for any construction equipment at present.

Once the surface water ponds in the North Tailings and the Northwest Tailings pond areas are drained as part of the remediation plans for the site, trafficability in all areas of the ponds would improve. A larger portion of the ponds will then be trafficable year round, which would include most or all of the South, Central and North Tailings Ponds. After the ponds are drained, all areas of the former ponds would be trafficable in the winter.

It is anticipated that the central areas of the Northwest Tailings Pond and North Tailings Pond (current water storage areas) will remain too soft for construction activities for several years, without extra efforts to drain and dewater the tailings and increase the trafficability of the surface of these areas. Re-grading is required for several reasons, including to achieve a more uniform surface slope on the ponds, to minimize erosion and infiltration, to prevent water ponding on the surface and to direct surface water flow to closure spillways to be developed at both sites.

The more trafficable areas will be the starting point for re-grading efforts on the ponds, as these areas will typically need to be excavated to a lower elevation to enable drainage in closure. Re-grading of the pond surfaces will help to increase trafficability by pushing drier and coarser material to the center of





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the ponds. Once re-grading is complete, the cover will be constructed on the more trafficable areas of the ponds, to help minimize dusting from these drier areas.

Based on information from investigation programs on the tailings containment areas, there are standard construction techniques that will be used that will allow re-grading efforts and construction of the tailings cover to be completed. These measures may result in the construction activities being carried out over several seasons in a staged construction approach.

Response 2 Summary

The three seasons of monitoring completed has yielded consolidation settlement data as well as ground temperature and moisture content data.

Response 2

The scope of the cover trials is to monitor the performance of the proposed cover configurations and the amount of consolidation settlement to be expected, which will allow for the optimization of the final cover design. The tailings cover test plots study was not intended to provide information about trafficability. The test plots were constructed in areas of the pond where trafficability was understood. Trafficability was investigated during field studies for preliminary design undertaken in March 2011 geotechnical investigations. The investigation report will be available prior to the technical sessions.

The first three seasons of monitoring (2008, 2009, and 2010) yielded consolidation settlement data as well as ground temperature and moisture content data. Estimates of tailings consolidation have not yet been generated. As described in Review Board Information Request #10 response investigations to advance the design are ongoing.

Response 3 Summary

Design and construction techniques that will be used to minimize erosion and build-up of ice include grading the tailings surface, channels and spillways to angles that minimize erosion while promoting water flow and preventing ponding of water. Vegetation in key areas will be promoted on the tailings cover to help reduce erosion. Channels and spillways will be constructed to a larger capacity than required for the discharges predicted from limited catchment area of the ponds to minimize the potential for water to spill over the sides of the spillway as a result of ice build up.

Monitoring of the performance of the cover will be included in the long term maintenance plans for the site, including monitoring for erosion damage to the cover and the condition of vegetation growing on the cover. Some repair of erosion and planting of vegetation is planned for in the long term maintenance plans.





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Response 3

The amount of water flowing over the tailings cover and through the drainage channels is predicted to be relatively small, as the catchment area is limited to the area of the ponds. The amount of ice build-up within channels is also expected to be relatively small, as water flow will decrease significantly under freezing conditions (there is no upstream source of water) and the spillways will be constructed with sufficient slope gradients to minimize build up of ice.

The pond surface and drainage channels will be graded to a range of slope gradients designed to minimize ponding of water in the channels and spillways. The channels would be developed to manage the flow of water at rates that would minimize erosion. Spillways and channels will be constructed larger than required for the predicted water flow to be able to accommodate ice build up without water spilling over the sides of the channels. The use of wide channels or step benches will reduce the risk of concerns with ice build up. Drainage outlets will have velocity controls, in the form of instream structures, installed to keep flow velocities low and minimize erosion in the outlet channels.

Vegetation growing on the tailings cover, in key areas, will be a significant component in limiting erosion. Other erosion protection measures, such as placement of coarse rock, will be constructed at key low points or at the proposed locations for drainage channels.

The cover and channels will be monitored for signs of erosion as part of the regular maintenance of the site. It is anticipated that some erosion of the cover will occur in the initial years after closure construction is completed but maintenance will be required to repair these areas. Maintenance will also be required to maintain the vegetation growing on the cover, especially in the first few years after construction. This maintenance is to be included in the maintenance plans and costs for the project.

If significant damage to the cover or vegetation on the cover as a result of motorised vehicles is noted, access for these vehicles may have to be restricted.

Response 4 Summary

The tailings facilities will be monitored and inspected on an ongoing basis. These monitoring and inspection programs will provide the information required to determine any repair activities that are required. The program will be initially defined for a set number of years, with the requirement that the monitoring and inspection program for the next period be determined prior to the end of the current period. It is anticipated that there will be a moderate amount of repair required in the first few years after construction, with declining requirements after this. It is also anticipated and in the budget for periodic, larger scale repairs or reconstruction.

Response 4

Perpetual care requirements for the tailings containment areas will consist of two main components, monitoring / inspection and as well as maintenance / repair. The monitoring and inspection program





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will be clearly defined for the first five years after construction and the requirements for further monitoring and inspection will be determined based on the results of those annual inspections. Monitoring will be done regularly, while an annual inspection will be carried out by a qualified geotechnical engineer. It is anticipated that the requirements for both monitoring and inspection will decline with time. Maintenance and repair activities will be mostly determined from the results of the monitoring and inspection program.

The monitoring program will include monitoring and potential replacement of instrumentation installed in the facilities (such as piezometers, monitoring wells, and similar instrumentation) and may include sampling and testing of water flowing from the tailings containment areas. The sampling and testing of water flowing from the tailings containment areas will include both seepage downstream of the dams, and water flowing through / over the facility spillways. The seepage will be pumped back into the ponds if unsuitable for direct discharge. It is expected that seepage volume will decline with time and improve in quality with time. The water flowing through the spillways will initially be discharged into the underground storage system until it is deemed suitable for direct discharge off site.

Inspection activities will include inspection of dams (while these inspections are deemed necessary), inspection of the tailings cover, vegetation on the cover, drainage channels and related spillways. These inspections will include visual observations and physical investigations where required. Physical investigation, if needed, would typically involve shallow test pits to monitor the performance of the cover, but may include deep investigations as required. Deep investigations would typically only be required if there is evidence of instability of one of the dams. Long term instability of the dams is less of a concern as the stability of the dams will increase with time as the ground water level within the tailings in the facilities decreases to a lower level as a result of draining the ponds.

It is anticipated that repair of the tailings cover and channels to be most intense in the first few years after construction. The expected areas that will need repair include filling in of settled areas, excavation and repair of areas where tailings may have migrated through the cover, repair of the cover due to erosion, reseeding or planting of vegetation, in key areas, including application of organics or fertilizer if required. Minor re-grading of channels may be required, or clearing of minor debris from within the channels.

Repair of the cover material and replacement of vegetation, in key areas, may be required in areas damaged by motorized vehicles, if access can't be restricted.

It is also anticipated that periodic larger scale repair or reconstruction may be required early in the post closure period and this is included in the average annual perpetual care cost noted below. It is anticipated that in time the risk of this being required decreases.

Costs for perpetual care, covers, drainage channels, dams and other associated works are currently being evaluated in preliminary design.





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IR Response Template

Round One: Information Request - Alternatives North #13

May 31, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: AltNrth #13

Date Received:

February 28, 2011

Linkage to Other IRs

Review Board IR #12

Date of this Draft:

May 31, 2011

Request

Preamble:

The following statements are found in the DAR regarding mine reflooding:

The resulting groundwater level will be at roughly 2/3 of the distance between the top and bottom of most of the arsenic chambers and stopes. Only one chamber (B230) will be completely submerged, and three (11, 12, and 14) will remain completely above the water table. (pg. 6-32)

The alternative to surface storage is to store contaminated water in the underground mine workings. However, the combination of seasonal water treatment and underground storage would require large fluctuations in the minewater level during the year, repeatedly flooding and draining mine workings on several levels (approximately 100 m). Large fluctuations in the water level are likely to increase the release of arsenic from sources such as tailings and waste rock backfill, and could even cause uncontrolled movement of backfill and ground stability problems. (pg. 6-68 and 6-69)

Allowing for the risk of much larger than normal freshet inflows may require drawing water down as far as the 425 Level. Although the mine pumping and water treatment systems will be designed to handle a range of flow rates, the mine must be used to store significant amounts of water on a temporary basis each year, in order to smooth the flow through the water treatment system and avoid the need for storage of contaminated water on surface. (pg. 6-71)

It appears that there is the potential for seasonal water level changes in the underground workings. The frozen blocks may be continually submerged and then dry again with some risks in nearby areas





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IR Response Template

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where backfill and ground stability. This may become an issue and affect the ability to intentionally thaw out the frozen blocks.

Question:

1. Please provide a rationale for submerging the frozen blocks versus keeping the minewater below the lowest frozen block at all times.
2. Please provide a risk assessment for seasonal submergence and then lowering of minewater levels below the frozen blocks
3. Please consider and discuss the implications for seasonal fluctuations of minewater on the reversibility of the frozen block method.

Reference to DAR (relevant DAR Sections):

DAR s.6.8.2 Method Selection, Alternatives, and Preferred Method
6.8 Site Water Management

Reference to the EA Terms of Reference:

ToR s. 3.2.4(9)

Response 1 Summary

Current design criteria are to keep the groundwater elevation below the bottom of the arsenic chambers/stopes.

Response 1

Currently, mine water is controlled near the 750 level of the mine which is more than 100 m below the bottom of the arsenic chambers and stopes. At this level, seasonal fluctuations vary within about one metre of elevation. The design will be based on maintaining the mine water at the current level. Operating experience shows there is suitable mine water storage for current and future water treatment operations.

Response 2 Summary

Design criteria are to keep the mine water elevations relatively stable in the long term and below the arsenic chambers / stopes. Short term fluctuations will not negatively impact the frozen blocks.

Response 2

Maintaining the mine water elevation below the arsenic chambers/stopes and within a stable range will be the basis of design. There may be higher risks from large seasonal fluctuations of the mine water on





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the stability of non-arsenic underground openings than to the frozen blocks. However, underground instability could eventually impact the frozen blocks.

Response 3 Summary

The design criteria are to maintain the mine water at about the current elevation near the 750 level. Mine water at this level will not reach the bottom of the chambers/stopes because of sufficient storage capacity within the mine for seasonal fluctuations. The seasonal fluctuations of mine water will not impact the reversibility of the frozen block.

Response 3

The design is to maintain the mine water at a relatively stable elevation at the 750 level, well below the arsenic chambers / stopes. Seasonal fluctuations at the current mine water elevation has been limited to about one metre over the past several years indicating suitable storage volume exists. Maintaining the mine water elevations at the current level will not have an impact on the reversibility of the frozen block.

The frozen blocks could be intentionally thawed at some point in the future. The drift plugs will be designed to withstand the full saturated hydrostatic head of arsenic water to ground surface and arsenic dust in the chambers/stopes with no water outside the plug.





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IR Response

Round One: Information Request Alternatives North #14

May 31, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: Alternatives North #14

Date Received

February 28, 2011

Linkage to Other IRs

Review Board IR #24
Environment Canada IR #16
NSMA IR #8
YKDFN IR #12

Date of this Response:

May 31, 2011

Request

Preamble:

The DAR discusses the design of the proposed new water treatment plant, its outputs and the year-round use of an outfall and diffuser into Yellowknife Bay. The following quotes from the DAR highlight some of the issues raised in this IR:

- The new plant will use best available technology for the separation of precipitates from the treated water and, therefore, the final effluent quality is expected to be slightly better, on average, than achieved in the existing system. (pg. 6-75)
- Further investigation of alternative diffuser locations and the associated on-land and offshore pipeline alignments is still required. The design of the diffuser will be dependent on the results of these investigations. (pg. 6-77)
- The fish habitat has been characterized as marginally to moderately suitable spawning habitat for northern pike, white sucker, longnose sucker, and possibly lake trout and lake whitefish. There is considerable tailing (silt) deposits from earlier mining activities in the substrate which may affect spawning activities and fish egg survival. (pg. 8-21)

Question:

1. Please provide data and predictions on the water quality at end of pipe discharge for the old versus new water treatment plant for the chemical and physical parameters currently measured at the Giant Mine.
2. Please provide some discussion and predictions regarding the potential for stirring up the contaminated sediment near the diffuser and how far those effects are expected to spread.





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- It appears that some fish habitat will be destroyed through the construction, placement and operation of the outfall and diffuser. There will also be a mixing zone where the effluent will be above water quality guidelines for the protection of fish. Is INAC of the view that a Fisheries Authorization is required for this part of the Development? Have there been any discussions to date on this issue with the Department of Fisheries and Oceans? If so, please describe any outcomes to date.
- Please provide further details on the research for the design of the diffuser and when it is expected to be completed.

Reference to DAR (relevant DAR Sections):

S.6.8.5 Water Treatment and Sludge Disposal

Reference to the EA Terms of Reference:

S.3.2.4 (9)

Response 1 Summary

The discharge from the existing effluent treatment plant meets the requirements outlined in its former Water License N1L2-0043, and the new water treatment plant is expected to meet and surpass these requirements at the end of pipe discharge location.

Response 1

The following table summarizes the water quality from the existing effluent treatment plant between 2009 and 2010, and the predicted water quality from the new water treatment plant (WTP). For comparison purposes, the Mine's former Water License N1L2-0043 is shown in the table. Total arsenic, TSS, and pH values within the effluent from the new WTP are predicted to improve as compared to the existing plant. Further, parameter concentrations in effluent from the new WTP will be substantially less than regulatory requirements outlined within the former Water License N1L2-0043.

Parameter	Unit	Existing License Maximum Average Concentration ^(a)	Existing License Maximum Concentration of Any Grab Sample	Existing Treatment Plant Effluent (2009-2010 data)	New Treatment Plant Effluent (Predicted)
Ammonia	mg/L	12	N/A	0.005 – 0.067	No change
Arsenic (total)	mg/L	0.5	1.0	0.205 – 0.418	0.2 target
Total Suspended Solids	mg/L	15	30	<1.0 - 14	<5 (target)





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Nickel	mg/L	0.5	1.0	0.0234 – 0.0687	No change
Cyanide	mg/L	0.8	1.6	<0.002 – 0.0145	No change
Copper	mg/L	0.3	0.6	0.0054 – 0.0162	No change
Lead	mg/L	0.2	0.4	<0.0001 - <0.00025	No change
pH	units	6.0-9.5	6.0-9.5	6.24 – 8.96	7.5 – 8.0 (target)
Zinc	mg/L	0.2	0.4	0.0028 – 0.0713	No change
Oil & Grease	mg/L	5	5.0	0.005 - <2.0	No change

(a) Maximum rolling average of four consecutive results

The design of the new WTP will be based on the best available technology, which will produce high quality effluent better than the maximum average concentration values as shown in the table. It is expected that the new water treatment process will be able to treat the influent contaminated water so that the average effluent arsenic concentrations at end of pipe are 0.2 mg/L or less 90% of the time, 0.4 mg/L or less 95% of the time and 0.5 mg/L or less 100% of the time.

Response 2 Summary

The diffuser will be configured to minimize entrainment of bottom sediment.

Response 2

The diffuser exit ports will be located above the bottom of the bay (1 to 1.5 m above) to minimize sediment entrainment. With the ports at this height, velocities generated by the diffuser near the bottom of the bay would be very small or negligible. Movement of sediment (i.e. lifting of the sediment followed by settling), if any, would occur only within a few meters surrounding the diffuser. An analysis will be conducted during the detailed design stage to determine the optimum distance above the bottom of the bay for the diffuser ports to minimize sediment entrainment.

Response 3 Summary

Discussions will be undertaken with regulatory authorities on the mixing zone defined for the project, potential impacts from the construction of the diffuser, and mitigation measures to minimize the effect of the project on fish and fish habitat.

Response 3

The mixing zone defined for the Giant Mine Remediation Project will be provided to regulatory authorities for review and approval. The construction method for the diffuser has not yet been finalized but will consider a number of factors including the effects on fish and fish habitat. The final diffuser construction method will be discussed with DFO to determine if an Authorization is required under the *Fisheries Act* and will include mitigation to minimize the effects of the project on fish and fish habitat.





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Response 4 Summary

The diffuser design includes several tasks, for which the results will be summarized in the preliminary design report expected for the fall of 2011.

Response 4

Tasks undertaken for the preliminary design of the diffuser have consisted of 1) determining the required dilution of the effluent in order to meet water quality criteria that includes drinking water quality criteria and CCME criteria for the protection of freshwater aquatic life, or being within 10% of ambient water concentrations (i.e., when ambient concentrations of a given substance is above drinking water and CCME criteria); 2) establishing the characteristics of the effluent and ambient waters (*e.g.*, effluent volume, water depth in the bay, water currents, water temperature and chemistry); 3) modeling several diffuser configurations to allow selection of a configuration that will achieve the required dilution of the effluent; and 4) determining the alignment and hydraulic characteristics of the pipeline connecting the proposed new water treatment plant to the diffuser. The water quality criteria must be met by the diluted effluent within a mixing zone in Yellowknife Bay, and the design of the diffuser would minimize this mixing zone. Results will be presented in the preliminary design report expected for the fall of 2011.





Giant Mine Environmental Assessment IR Response

Round One: Information Request - Alternatives North #15

May 31, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: Alternatives North #15

Date Received:

February 28, 2011

Linkage to Other IRs

Review Board IR #11
YKDFN IR #03

Date of this Response:

May 31, 2011

Request

Preamble:

The DAR description of costs is limited to two tables with little supporting evidence or detail.

Question:

1. Please describe the difference between 'direct' and 'indirect' costs set out in Table 6.13.4.
2. Please describe how the contingency figures in Table 6.13.4 were calculated and any justification to support such calculations.
3. What assumptions and unit costs were used in preparing the calculations in Table 6.13.4 and 6.13.5? Please provide justification for same.

Reference to DAR (relevant DAR Sections):

S. 6.13.6 Financial Resource Requirement
Table 6.13.4
Table 6.13.5

Reference to the EA Terms of Reference

S.3.2.4 (14) Development Description



Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #15

May 31, 2011

Summary

The cost estimates presented in the Developer's Assessment Report (DAR) follow standard definitions of direct estimate, indirect estimate and contingency. They involve several hundred inputs, which were selected and reviewed by professional engineers with extensive experience in northern mine closure.

Response 1

Direct costs in Table 6.13.4 are costs that are attributable to specific activities. Indirect costs are costs that are not attributable to specific activities, *i.e.* they are for items that are shared amongst activities. The estimate of costs for closure of the tailings ponds provides an example that might help to clarify these distinctions.

Estimates of direct costs were developed for each of the South, Central, North and Northwest Ponds. In each case, the direct cost estimates included the costs of regrading each pond's surface, placing and vegetating the various layers of soil cover, and constructing spillways. Each of those estimates was built up as a series of line items, one for each individual task. So, the estimates of direct costs for the soil cover included line items for placing geotextile, placing the coarse soil or rock layer, placing the fine-grained layer, seeding and fertilizing. Each line item included all relevant material costs, equipment costs, and labour costs.

Once all of the direct costs estimates were completed, it was possible to identify additional costs that would be incurred. These included costs for mobilization and demobilization of the equipment fleet, field office utilities and supplies, contractor profit and home office overhead, insurance, bonding, design engineering, site engineering, surveying, and quality assurance. These additional items are not attributable to particular remediation activities, but rather would be shared over the entire tailings closure portion of the Giant Mine Remediation Project (Remediation Project). Therefore they were all included in the indirect category.

These distinctions generally follow standard definitions, such as those provided by *AACE International Recommended Practice No. 10S-90 Cost Engineering Terminology* (Association for Advancement of Cost Engineering, 2004):

- Direct costs account for "... installed equipment, material and labour directly involved in the physical construction ... usually included are:
 - a) Input materials
 - b) Operating, supervision, and clerical payroll
 - c) Fringe benefits
 - d) Maintenance
 - e) Utilities
 - f) Catalysts, chemicals and operating supplies
 - g) Miscellaneous (royalties, services, packaging, etc.)"
- Indirect costs are "... all costs which do not become a final part of the installation, but which are required for the orderly completion of the installation and may include, but are not limited to, field





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administration, direct supervision, capital tools, start-up costs, contractor's fees, insurance, taxes, etc;”

The estimates in Table 6.13.4 were initially developed to support INAC's internal approval processes. They were updated and presented in the DAR as a basis for assessing the Remediation Project's economic effects. More detailed estimates are being developed as the engineering design progresses and will be used to support Treasury Board approvals and project procurement.

Response 2

The AACE practice guideline noted above defines contingency as:

- An amount added to an estimate to allow for items, conditions, or events for which the state, occurrence, and/or effect are uncertain and that experience shows will likely result, in aggregate, in additional cost. Typically estimated using statistical analysis or judgment based on past asset or project experience. Contingency usually excludes; 1) major scope changes such as changes in end product specification, capacities, building sizes, and location of the asset or project (see management reserve), 2) extraordinary events such as major strikes and natural disasters, 3) management reserves, and 4) escalation and currency effects. Some of the items, conditions, or events for which the state, occurrence, and/or effect is uncertain include, but are not limited to, planning and estimating errors and omissions, minor price fluctuations (other than general escalation), design developments and changes within the scope, and variations in market and environmental conditions. Contingency is generally included in most estimates, and is expected to be expended.

The contingency estimates shown in Table 6.13.4 were derived as percentages of the total direct and indirect costs. Most of the contingencies fell into the 15%-20% range that is typically assigned to estimates of this class. Lower percentages were used to estimate contingencies for:

- Care and Maintenance (2%) because a signed contract was in place; and
- Tailings and sludge ponds (10%) because the estimates were based on what were believed to be conservatively high estimates of geotextile, rock and soil quantities.

Higher percentages were used to estimate contingencies for:

- Baker Creek (25%) because of the high uncertainty in the design;
- Building, hazardous waste and debris disposal (50%) because of the wide variability in the building demolition estimates that had been gathered;
- Contaminated soils (30%) based on experience at other sites where actual volumes of contaminated soil have exceeded estimates; and
- Freeze system (24%) due to uncertainties in the design at the time the estimates were prepared.

Response 3

The cost estimates presented in Tables 6.13.4 and 6.13.5 are based on over 3,000 lines of spreadsheet calculations. They involve several hundred quantity, unit rate and productivity inputs. Engineering best



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practices were used throughout and inputs were selected and reviewed by professional engineers with extensive experience in northern mine closure. In some cases vendors provided proprietary information.





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #16

May 31, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: Alternatives North #16

Date Received:

February 28, 2011

Linkage to Other IRs:

Date of this Response:

May 31, 2011

Request

Preamble:

The DAR describes the existing environment at the Giant Mine Site including ambient air quality. High-volume air samplers have been installed and operated at the site since 2004. Air quality predictions for several contaminants of potential interest were also modeled during the construction phase.

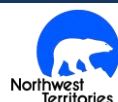
Question:

1. Figure 7.3.6 shows the location of the hi-vol samplers at the Giant Mine site. None of these appears to be downwind when compared to the windrose from the Yellowknife airport shown in Figure 7.3.1. Please explain the rationale for the sampler locations and whether the monitoring results are a good indication of ambient air quality at the site.
2. Please correlate the air quality exceedances shown in Table 7.3.3 with the recorded wind data (speed and direction) from the Yellowknife airport on those dates and the length of time from the last application of soil cement on the tailings at the site. This may provide some insights into the cause of these exceedances and possible mitigation to avoid similar occurrences.
3. Figures 8.6.1 to 8.6.4 show predictions for air contaminants (arsenic, particulates, NOx, and SOx). The predicted areas above various guidelines extend outside the surface lease area and sometimes encompass a stretch of the Ingraham Trail highway. This public road is open to the public, including pedestrians and cyclists. Please explain how INAC has concluded that there will be no adverse effects from changes to air quality caused by the Development. What triggers and thresholds will be used to guide mitigative actions up to and including shutting down site construction activities?

Reference to DAR (relevant DAR Sections):

S. 7.3.3 Ambient Air Quality

S.8.6.2 Air Quality





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #16

May 31, 2011

Reference to the EA Terms of Reference

S.3.2.3 (11) Description of Existing Environment

S.3.4.2 Human Health and Safety

Response 1 Summary

The locations for ambient air quality monitors were selected based on a variety of factors, only one of which was the prevailing wind direction. Of equal or greater importance was the location of potential receptors relative to sources of air quality contaminants. Overall, the monitored sites are considered to be representative of ambient air quality conditions.

Response 1

For clarity, “mini-vol” samplers are operated at all locations except the former Giant townsite where a “high-vol” sampler is situated.

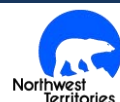
As indicated in the windrose (Figure 7.3.1 – reproduced below), wind sources are relatively evenly distributed, the only notable exception being calms from the southwest. In this regard, the direction of prevailing winds was only one factor to consider during selection of the sampling stations. A second, and more critical factor, was the relative location of potential human receptors. For example, the townsite high-vol and south tailings mini-vol were situated to address potential concerns associated with receptors in N’dilo. Similarly, the mini-vols established at the roaster complex and immediately adjacent to the northwest tailings pond are used to identify any potential concerns of on-site exposures where human use could occur on a regular basis (e.g., on Highway 4). Priority was not placed on establishing sampling stations at locations where human activity is anticipated to be minimal (e.g., the northeast corner of the northwest tailings pond).

An added factor in determining the location of the high-vol sampler was the availability of an AC power supply at the townsite. Mini-vol samplers were used at the remaining sites due to the absence of an AC power supply (i.e., mini-vol samplers are powered by batteries).

Taking into consideration the objectives of monitoring that has been conducted to date the selected locations are considered to be good indicators of ambient air quality at the site.

Response 2 Summary

Potential correlations between air quality monitoring data and site activities/conditions are evaluated and presented in annual Air Quality Monitoring Reports. Visual observations of suspended particulates also play an important role in determining the timing and nature of any efforts to mitigate suspended particulates (e.g., when to apply soil cement, application of water on site roads, etc.). The Giant Mine Remediation Project (Remediation Project) has been designed to reduce potential sources of air quality contaminants.





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #16

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Response 2

As part of annual air quality monitoring conducted at the site, any elevated results that are observed in the monitoring data are correlated to environmental conditions (e.g., wind speed and dry conditions) and site activities that occurred during the sampling period (e.g., earth moving). To illustrate, the following observations were presented in Section 4 of the document titled “Air Quality Monitoring at Giant Mine Site, Yellowknife: A Baseline Study (Volume 4 – 2007)”, as presented in Appendix C of the DAR:

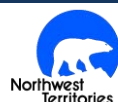
Activities that may have contributed to elevated concentrations of TSP and PM₁₀ in 2007 include the re-vegetation of the Baker Creek realignment as well as construction on the Ingraham Trail (Highway 4). The re-vegetation of Baker Creek realignment took place August 4th to September 1st, and may have influenced the particulate concentrations at the B3 Pit location and Mill locations. Construction on the Ingraham Trail started early July and continued throughout the summer, this could have contributed to the elevated particulate matter at the B3 Pit location, Mill location and Northwest Pond location. The month of June was very dry. Application of calcium chloride and soil cement on tailings ponds started the week of July 6th and was on-going until August 4th. Site road grading took place the weeks of August 4th, 24th, and September 8th which may also have contributed to increased particulate matter.

In addition to correlating monitoring results with site activities, Giant Mine Project Team (Project Team) relies heavily on visual observations of suspended particulates during wind events to determine the timing and nature of any efforts to mitigate suspended particulates (e.g., when to apply soil cement, application of water on site roads, etc.).

Without diminishing the importance of the question in terms of the current management of the site, the issue will be addressed through the implementation of the Remediation Project. Specifically, several of the project activities (e.g., capping and re-vegetation of tailings) will limit the need for on-going application of soil cement and other forms of mitigation to address suspended particulates.

Response 3 Summary

Based on the air quality monitoring presented in the Developer’s Assessment Report (DAR), concentrations of relevant air quality parameters are predicted to remain below applicable criteria at the selected off-site receptor locations. Although TSP concentrations may exceed the air quality criteria in the near vicinity of the site and/or along the Ingraham Trail, it is considered very unlikely that such situations would result in elevated exposures to people. Taking into consideration the fundamental conservatism of the air quality assessment and mitigation measures that will be put in place, adverse effects to people are not anticipated. Last, but importantly, any minor residual effects that might occur will be required to achieve the net-positive objectives of the Remediation Project.





Giant Mine Environmental Assessment

IR Response

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May 31, 2011

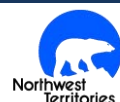
Response 3

As described in Section 8.6 of the DAR, five potentially sensitive receptors were selected to assist in determining if the Remediation Project could result in adverse air quality effects. The potentially sensitive receptors were selected based on the assumption that individuals can reasonably be expected to be present for the applicable exposure duration (i.e., one and/or 24 hours) to the potential contaminants of concern. There were no situations where applicable criteria were exceeded at the potentially sensitive receptors.

However, as noted in the information request, there are situations in which guidelines have been exceeded in areas adjacent to the surface lease and/or along the Ingraham Trail. For perspective, the Project Team draws attention to the following assumptions and conclusions associated with the air quality assessment:

- The exceedances would occur only during periods where the highest emissions coincide with the worst meteorological conditions. This is a very conservative assumption.
- Due to the limited land use at locations outside of the surface lease where exceedances might occur, there is a low probability that individuals will be present when concentrations are elevated.
- With regard to individuals driving through the site on the Ingraham Trail, exposure periods are anticipated to be relatively brief. Although there may be recreational users on the Ingraham Trail, it is improbable that they would remain in areas with elevated concentrations for extended periods. In particular, the likelihood of individuals being exposed to elevated concentrations of arsenic (the primary contaminant of concern) for the relevant exposure period (i.e., 24 hours) is extremely low.
- Notwithstanding the conservative assumptions noted above, all appropriate measures will be put in place to mitigate situations in which exceedances of applicable air quality criteria might occur. These measures are described in Section 8.6.2.4
- Last, but importantly, any minor residual effects that might occur will be short term in duration and cannot be entirely avoided to achieve the net-positive objectives of the Remediation Project.

Although the air quality monitoring program will be an effective tool for verifying past performance and modifying overall site practices, other short-term mitigation measures such as shutting down site construction activities will be selected based on meteorological conditions/forecasts (e.g., for wind) and visual evidence of potential concerns including: blowing dust and the presence of individuals along the Ingraham Trail in the vicinity of the site for extended periods. Furthermore, whenever possible, construction activities with the potential to cause air quality effects will be scheduled only for periods when there are favourable meteorological conditions.





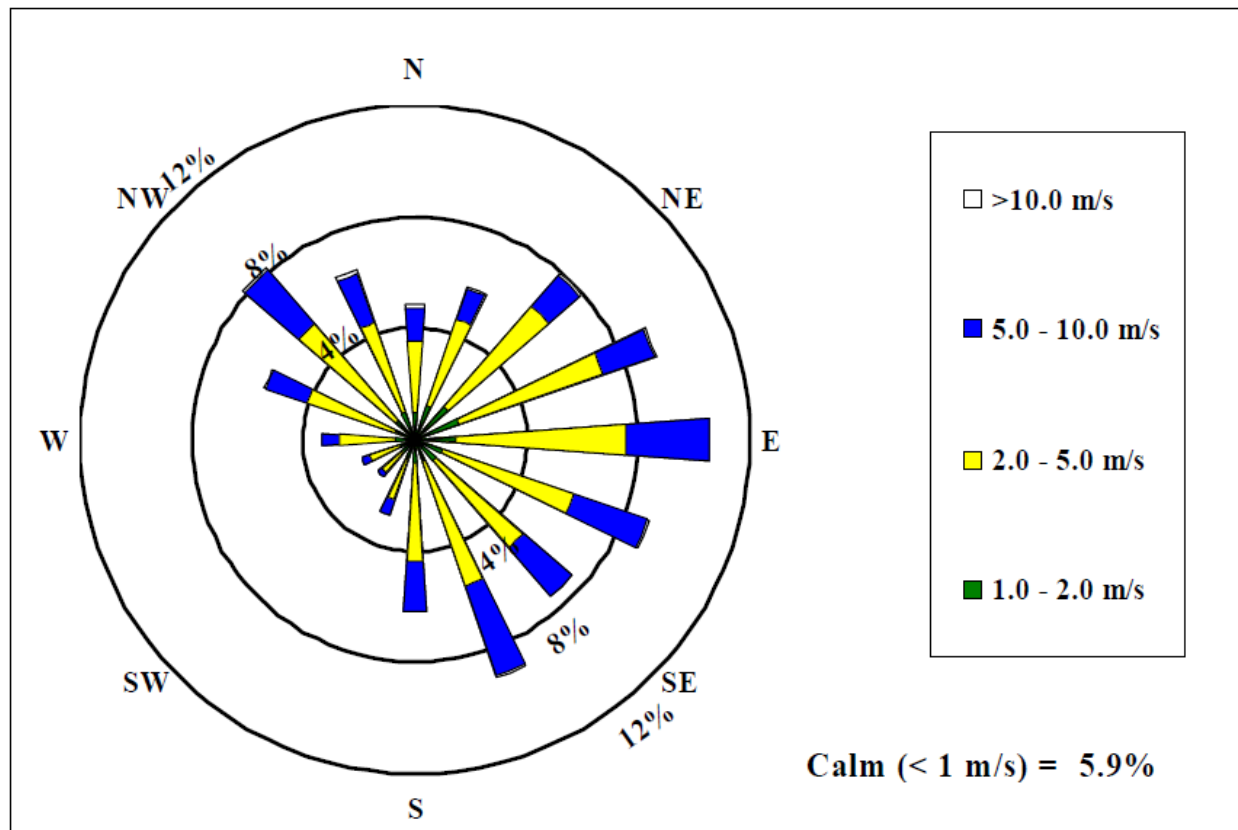
Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #16

May 31, 2011

Figure 7.3.1 Windrose for Yellowknife Airport



Note: Arrows denote the direction wind blows from.



Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #17

May 31, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: AltNrth #17

Date Received

February 28, 2011

Linkage to Other IRs

Review Board IR #12

Date of this Response:

May 31, 2011

Request

Preamble:

The only assessment of the possible effects of wildfire on the Development appears on pg. 10-11:

“Should the buildings, equipment or thermosyphons be damaged by accident, vandals or wildfire, the Project Team will require that they are replaced prior to the outer limit of the dust actually beginning to thaw, which is expected to take several years. No further assessment required.”

Question:

1. Please describe the history and patterns of forest and grass fires associated with the Giant Mine site.
2. Given this history, what are chances of a forest fire developing nearby and resulting in an unintentional release from the Giant Mine site?

Reference to DAR (relevant DAR Sections):

S. 10 Assessments of Accidents and Malfunctions.

Reference to the EA Terms of Reference

S.3.2.5 Accidents and Malfunctions
S.3.2.5 Biophysical Environment





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #17

May 31, 2011

Response

Both the Yellowknife Fire Department and GNWT Forestry were contacted and they have no record of any forest fires or grass fires in the vicinity of the Giant Mine site.

The issue of forest fires and grass fires near the Giant Mine site was considered as part of the failure modes analysis being carried out on the Giant Mine Remediation Project. The results from the Failure Modes Analysis Report for the Information Request Review Board #12 will be submitted in June, 2011.





Giant Mine Environmental Assessment IR Response Template

Round One: Information Request – Alternatives North #18

June 17, 2011

INFORMATION REQUEST

EA No: 0809-001

Information Request No: Alternatives North #18

Date Received

February 28, 2011

Linkage to Other IRs

Review Board IR #27
Alternatives North IR #01, 3, 19
YKDFN IR #25, 26, 27

Date of this Response

June 17, 2011

Request

Preamble:

The Review Board IR #1 deals with the lessons learned to date from the Freeze Optimization Study from an engineering and design perspective. The Study was carried out without a land use permit and there were at least three publicly reported spills at the Giant Mine site as follows:

June 11, 2009 Spill of Drill Mud into Baker Creek;
August 12, 2009 Spill of Drill Mud; and
October 22, 2009 Spill of Arsenic that covered a worker at site

The DAR also states at page 10-9 "Since the Project Team assumed the responsibility for Giant Mine in 1999, workplace safety has consistently been good and improvements to health and safety practices are continuously occurring."

Question:

Please describe any lessons learned regarding spill reporting, spill management, monitoring, inspection and enforcement resulting from the spills that took place at the Giant Mine site during the Freeze Optimization Study.

Reference to DAR (relevant DAR Sections)

DAR, s.10 Assessments of Accidents and Malfunctions





Giant Mine Environmental Assessment

IR Response Template

Round One: Information Request – Alternatives North #18

June 17, 2011

The DAR also states at page 10-9 “Since the Project Team assumed the responsibility for Giant Mine in 1999, workplace safety has consistently been good and improvements to health and safety practices are continuously occurring.”

Reference to the EA Terms of Reference

TOR s.3.2.5 Accidents and Malfunctions

Summary

The Spill Response Plan for the Giant Mine site was reviewed and updated in November 2009 to address any issues that arose during drilling on site.

The plans continue to be reviewed annually to ensure that all the information is up to date and that the plans reflect current site activities.

After every spill, the Spill Response Plan for the Giant Mine is reviewed and issues are addressed to ensure continual improvement to dealing with spills on site.

Response

After any spill occurs at Giant Mine, there is a review of spill reporting, spill management and monitoring and any lessons learned are used to update the site-wide Spill Response Plan.

The Spill Response Plan underwent an internal review during November, 2009 and was updated to ensure that call out procedures and reporting to the Spill Line were current and efficient. In addition, the Standard Operating Procedures (SOPs) for working in and around arsenic trioxide were updated.

The revised Spill Response Plan was submitted to regulatory agencies for review, and comments received were incorporated into the plan.

Spill Reporting

Improvements to spill reporting have included submitting the Spill Reports by fax and following up with a phone call to make sure that the Spill Line has received the report.

Whenever there is a question about the quantity of a spilled material and if it is a reportable amount, the Spill Response Team will treat it as a reportable quantity and report the release to the Spill Line.

Spill Management

Whenever drilling beside a water body, silt curtains will be deployed and the water body will be monitored for any release of drill muds. If a release is noted, drilling will stop immediately. All drill muds used at Giant Mine will be environmentally friendly.





Giant Mine Environmental Assessment

IR Response Template

Round One: Information Request – Alternatives North #18

June 17, 2011

When drilling into arsenic chambers, no air will be applied to the cutter head and all open drill holes will be sealed with a welded cap or HEPA filter. This will prevent pressurization of the chamber and releases of arsenic to the surface.

Spill Monitoring

Collection and disposal/treatment of the spilled material is done in consultation with the Regulatory Inspector.

Confirmatory sampling with analysis completed at an accredited laboratory is conducted to confirm that all spilled material has been removed. A clean up report and laboratory results are sent to the Regulatory Inspector.

The worker that was exposed to arsenic on October 22, 2009 was wearing appropriate PPE and therefore suffered no effects from the spill. This reinforces that appropriate standards are being used on site.





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #19

June 17, 2011

INFORMATION REQUEST RESPONSE TEMPLATE

EA No: 0809-001

Information Request No: Alternatives North #19

Date Received

February 28, 2011

Linkage to Other IRs

Alternatives North IR #02, 20, 22
Review Board IR #11
YKDFN IR #05, 13, 18, 26
City Of Yellowknife IR #02
Environment Canada IR #02, 15

Date of this Response

June 17, 2011

Request

Preamble:

The DAR states at page 14-5:

“INAC will facilitate third-party access to data for research and/or analysis, subject to the applicable government legislation, policies and contractual obligations. Whenever possible, this access will be through the Giant Mine Remediation Project website. Comments received from the public on monitoring data will be considered in the development and amendment of EMPs.”

This statement does not provide much assurance that this information and data will be made readily available or what sort of rules may govern the availability of various types of data. For example, three Access to Information requests were filed with INAC in 2009 regarding various aspects of the Giant Mine. A formal response with copies of records took over a year and is still outstanding, well over the statutory requirements under federal legislation.

Question:

1. Please clarify whether access to monitoring data related to the Giant Mine Remediation Project will be made available only subject to formal requests under the Access to Information Act.
2. Please indicate what types of information will routinely be made available through an informal request.





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #19

June 17, 2011

Reference to DAR (relevant DAR Sections)

s. 14.1.4 Access to Monitoring Data

Reference to the EA Terms of Reference

s. 3.2.5 Accidents and Malfunctions

Response

The Government of Canada recognizes the right of access by the public to information in records under the control of government institutions as an essential element of our system of democracy. The Giant Mine Remediation Project Team (Project Team) is committed to openness and transparency by respecting the spirit and requirements of the *Access to Information Act (ATIP)*, its Regulations and its related policy instruments.

The Project Team further acknowledges the importance of facilitating access to records in its care by making every reasonable effort to assist the public and ensure a high standard of care for records under its control.

With respect to monitoring data, the Project Team anticipates that the results of the monitoring programs will be reported through the Annual and State of Environment Reports to the Mackenzie Valley Land and Water Board (MVLWB). For specific contents of the Annual and State of the Environment Report please refer to the response to Alternatives North Information Request #02.

Subject to limitations set out in ATIP, the Project Team is committed to providing all final research and data regarding monitoring, environmental management plans, spills and any information required by legislation, regulation, policy and guidelines.

The Project Team will provide information for informal requests that are within the public realm, i.e. monitoring data from Surveillance Network Programs. Where possible, the Project Team will discuss the preferred method to receive this information and appropriate timeline to respond.



Giant Mine Environmental Assessment IR Response

Round One: Information Request - Alternatives North #20

May 31, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: Alt North #20

Date Received

February 28, 2011

Linkage to Other IRs

Alternatives North IR #2, 22
Review Board IR #11
YKDFN IR #5, 13, 18, 26
City of Yellowknife IR #2,
Environment Canada IR #2, 15

Date of this Response:

May 31, 2011

Request

1. Please provide a draft table of content or outline for each of the Annual and Status of the Environment (SOE) reports.
2. Please indicate whether INAC can commit at this point to providing details on the following items in these reports:
 - Monitoring and inspection (internal and external regulatory) program results;
 - Spills, non-compliance with regulatory requirements including responses and remedial actions;
 - Complaints received, if any, and responses;
 - Internal and external audit summaries and responses;
 - Summary of public consultations, issues raised and responses;
 - Predicted effects vs. actual monitoring results;
 - Changes to any monitoring and inspection programs and the rationale for same;
 - Adjustments to any conceptual or predictive models used to manage the Project;
 - Evaluation of the adaptive management systems; and
 - Long-term trends from baseline conditions.

Reference to DAR (relevant DAR Sections):

S.14.14 Access to Monitoring Data





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #20

May 31, 2011

Reference to the EA Terms of Reference

S. 3.2.5 Accidents and Malfunctions

Response

The Giant Mine Remediation Project Team (Project Team) anticipates that compliance monitoring will be reported through the Annual and State of Environment Reports to the Mackenzie Valley Land and Water Board (MVLWB).

The content of the Annual Report will ultimately be decided by the MVLWB but the Project Team anticipates that the report will outline operational and environmental data collected over the previous year and at a minimum include:

- The monthly and annual quantities in cubic metres of Water obtained from Great Slave Lake and other sources;
- The monthly and annual quantities in cubic metres of Water discharged from the effluent treatment facilities;
- The estimated monthly and annual quantities in cubic metres of sludge generated from the Water Treatment Facility;
- A summary of Modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures;
- Tabular summaries of all data generated under the "Surveillance Network Program" and a discussion of any problems with data collection, analysis or results;
- A list of unauthorized discharges and remedial responses;
- A summary of major work completed during the year and an outline of any work anticipated for the next year;
- A summary of any studies requested by the Mackenzie Valley Land and Water Board that relate to Waste disposal, Water Use, or Remediation and a brief description of any future studies planned; and
- Any revisions to approved Management Plans in the Water Licence.

The Project Team anticipates that a Status of the Environment Report (SOE) will be a condition of Water Licence MV2007L8-0031 and will be submitted every three years during the initial 15 years of Remediation to the MVLWB. The SOE is intended to verify Remediation Project impact predictions, determine the effectiveness of the mitigation measures and identify any unanticipated impacts that may arise from the Remediation Project. The SOE at a minimum will include:

- Changes to any monitoring plans;
- Adjustments to conceptual or predictive models used to manage the Project in the previous three years;
- Evaluation of the adaptive management systems; and
- Evaluation of long term trends from baseline conditions.





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #20

May 31, 2011

The SOE is intended to report on trends in the monitoring data and provide recommendations for modifications to the monitoring programs or site operations. Changes to specific monitoring plans are anticipated to be approved by the MVLWB.

Summaries of Public Consultations including issues raised and responses will be made publicly available. The Project Team commits to work with the Parties to determine what additional reporting may be required to the MVLWB.





Giant Mine Environmental Assessment IR Response Template

Round One: Information Request - Alternatives North #21

May 31, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: AltNrth #21

Date Received

February 28, 2011

Linkage to Other IRs

Date of this Response

May 31, 2011

Response

Preamble:

Minewater sampling was done from C-shaft beginning in June 2005 but was not possible in the lower parts of the mine after August 2007 due to —blockages. Alternatives North understands that C-shaft is no longer in operation.

Question:

1. Please describe and discuss the current status of C-shaft and the implications, if any, for continued and comparable minewater monitoring.
2. Please provide a copy of the related reference cited in the DAR at page R-17 and any more recent reports of a similar nature:

Reference to DAR (relevant DAR Sections):

DAR, s. 14.2 Long-Term Environmental Monitoring

Reference to the EA Terms of Reference

ToR s.3.2.6 Public Consultation

Summary

The C-Shaft mine water multi-port (M.P.) monitoring system broke down in 2007. In December, 2008, the Akaitcho pumping system came on-line allowing for composite weekly deep water mine samples. Additional sampling of the groundwater occurs throughout the mine site.

Response 1





Giant Mine Environmental Assessment

IR Response Template

Round One: Information Request - Alternatives North #21

May 31, 2011

The C-Shaft mine water multi-port (M.P) monitoring system broke down in 2007. It is believed that there was a failure underground which led to a portion of the pipe being displaced. With the pipe displaced, the equipment is no longer functional. As a result no sampling has been done at C-Shaft since 2007. As discussed in section 14.2.2.1 of the Developer Assessment Report (DAR) efforts to restore the C-Shaft mine water "M.P." monitoring system were unsuccessful. Before the recommendations to repair the line could be implemented, C-Shaft and the head-frame were ordered closed and inaccessible by the mine safety divisions of the Workers' Safety and Compensation Commission (WSCC). Currently, there is no "stratification" monitoring being done on the mine pool. However, weekly sampling of the mine water continues at the Akaitcho pumping system.

The Akaitcho pumping system came on-line in December 2008. This system pumps mine water from the mine pool and is sampled weekly. Approximately 100ml every hour is collected from an automated sampler. Once a week this composite sample is taken and analyzed at an accredited laboratory.

Although stratification samples can not be taken, the Akaitcho sampling system allows the mine to get regular, composite deep water mine samples

In addition to this mine water sample, the Project Team is monitoring the groundwater at 24 water monitoring wells throughout the mine site. These are sampled annually during the summer for total suspended solids, total dissolved solids, conductivity, hardness, cyanide and both total and dissolved metals, including arsenic.

There are annual reports for this work. *Groundwater & C-Shaft Monitoring: 2009 summary*, by SRK Consulting is the most recent report on file.

INAC is working on alternative methods for stratification sampling.

Response 2

Attached are the Ground Monitoring Reports from 2003-2009





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #22

May 31, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: AltNrth #22

Date Received:

February 28, 2011

Linkage to Other IRs:

Alternatives North IRs: #07, #10, #12, #15

YKDFN IR #02

City of Yellowknife IR #09

Review Board IR #11

Also linked to the INAC response to the Review Board fourth deficiency statement regarding funding certainty

Date of this Response:

May 31, 2011

Request:

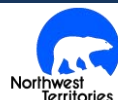
Is INAC prepared to research and investigate options other than annual or occasional parliamentary budgetary approvals to fund the perpetual care requirements associated with the Giant Mine Remediation Project? If so, please provide a timeline and preliminary budget for this work.

Reference to DAR (relevant DAR Sections):

Table 6.13.4 of the DAR presents a summary of estimated costs for the implementation phase of the Giant Mine Remediation Project, and Table 6.13.5 presents a summary of estimated annual costs over the long-term. This latter Table identifies the estimated cost for long term operations and maintenance as \$1.91 million per year. The DAR also states that INAC will seek the necessary Treasury Board approvals in order to obtain this long term funding.

Reference to the EA Terms of Reference

Section 2.3 of the Terms of Reference (Temporal Scope) – “As the contaminant will continue to exist on the site, the risk of potential contamination may exist in perpetuity. To predict impacts in the future, assumptions must be made about future events and conditions” (p. 7).





Giant Mine Environmental Assessment

IR Response

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May 31, 2011

Section 3.2.2 of the Terms of Reference requires the Developer to provide: “A description of project feasibility including financial feasibility. Include discussion of funding certainty for the development and related monitoring” (p.10).

Summary:

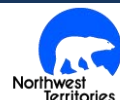
- INAC has a high level of confidence that the Giant Mine site will remain a government priority and that long-term funding will continue to be made available.
- The Government is aware of the Giant Mine and is committed to meeting its obligations.
- As a result of the high level of confidence and past success in securing funding for the Remediation Project, INAC is not currently prepared to research and investigate funding options outside of the current ongoing and well established approach (i.e., the parliamentary budget approval process).
- In INAC's view, the budgeting and approval of expenditure authority, required for all government projects, are the appropriate mechanisms to address funding of the perpetual care requirements associated with the Giant Mine Remediation Project.
- However, should conditions change; INAC would be open to considering the most effective and efficient funding mechanism that would maintain the integrity of the Remediation Project.

Response:

The funding for the Remediation Project of the Giant Mine site is provided by the Federal Contaminated Sites Action Plan (FCSAP). To date, Federal Government support and funding has been stable and consistent. Since the announcement in 2004, the Government of Canada has continually expressed its commitment to the program and has spent in the order of \$95 million on the Giant Mine site. Prior to the establishment of the FCSAP program, INAC spent \$14 million on the care and maintenance of the Giant Mine site between 1999 and 2004. This is a strong historical track record of dependable funding and support on behalf of INAC and the Federal Government. Building upon past success, INAC continues to use best practices and efforts to ensure that funding will be available for the life of the Project.

It is also important to underscore the difference between the Government of Canada and a non-government proponent. The government of Canada is a democratic constitutional entity and is not at risk of disappearing, going bankrupt, or de-listing in the same manner as a private-sector corporation or other commercial actor.

The Giant Mine site is well known throughout Canada as one of the most contaminated sites under the responsibility of the Federal Government. There are aspects of the site that pose potentially significant risks to both human health and the environment. Given this high and public risk profile, the mine site has remained a government priority since the late 1990s when the Crown became involved. Since that time INAC, as the federal department responsible for the site on behalf of the Government of Canada, has allocated resources to effectively manage risks at the site while developing a remediation plan. Based on the significant investment to date, and the consistent priority given to the management of the risks at the Giant mine site, it is expected that this Project will remain a priority. The Government is aware of the Giant Mine and is committed to meeting its obligations. This long-term commitment will





Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Alternatives North #22

May 31, 2011

be reinforced through adherence to the Developers' obligations under applicable licences, permits and regulatory law.

Further to the above, the Governments of Canada and the Northwest Territories (NWT), in selecting the preferred remediation option for the site, have recognized and accepted that the Giant Mine Remediation Project includes long-term care, maintenance and monitoring. The DAR also states clearly that several elements of the project will be required to be addressed in perpetuity. Long-term care, maintenance and monitoring are essential components of the remediation approach at the Giant Mine site that will protect human and environmental health and safety and ensure the integrity of Canada's investment.

INAC maintains a very high level of confidence that the Giant Mine site will remain a priority and that long-term funding will be made available due to the fact that:

- the site has a number of known potential risks to both human health and the environment;
- government support and funding has historically been stable and consistent;
- a significant level of investment of public funds has already been made; and
- all stakeholders, including the Governments of Canada and the Northwest Territories, are aware of the long-term nature of the project.

In INAC's view, the budgeting and approval of expenditure authority, required for all government projects, are the appropriate mechanisms to address funding of perpetual care associated with the Giant Mine Remediation Project. INAC is not prepared to research and investigate funding options outside of the ongoing and well established approach (i.e., the parliamentary budget approval process). However, should conditions change; INAC would be open to considering the most effective and efficient funding mechanism that would maintain the integrity of the Remediation Project.

