



Alternatives North

January 27, 2013

Richard Edjericon
Chairperson
Mackenzie Valley Environmental Impact Review Board
200 Scotia Centre
Box 938, 5102-50th Ave
Yellowknife NT X1A 2N7

RE: Alternatives North Submission on the Responsible Ministers' Proposed Modifications to Measures for the Giant Mine Remediation Project

We wish to thank the Review Board for the opportunity to comment on proposed changes to the Measures recommended for the Giant Mine Remediation Project. Given the complexity of this Project and what is at stake for Yellowknife, it was indeed wise to solicit the views of the Parties to the environmental assessment. We commend your staff for running an effective and efficient meeting of the Parties on January 20, 2014 that we and others found to be very valuable in formulating our views as outlined below.

We also wish to thank the Responsible Ministers for accepting the majority of the Review Board Measures on the Giant Mine Remediation Project. Most of the proposed changes to the Measures are minor and in most cases, help clarify roles and responsibilities. The Responsible Ministers have shown leadership in accepting very significant changes to the Giant Mine Remediation Project, in terms of the proposed remediation now considered an interim approach with a requirement for ongoing research and development into a more permanent solution, and a legally binding Environmental Agreement with provisions for an independent Oversight Body. We were very relieved that the Responsible Ministers took this action even in the face of contradictory advice from the Giant Mine Remediation Project staff. The Review Board itself deserves much of the credit for carefully reflecting the evidence provided by the Parties and finding a way forward.

Alternatives North supports many of the changes proposed by the Responsible Ministers. However, some of the proposed changes will present problems and issues as noted below. We have suggested some minor changes as shown below. The format of our analysis is as follows:

- green box original Review Board Measures;
- yellow box proposed changes to Measures by Responsible Ministers shown with ~~strikeout~~ and **bold** font; and
- red box proposed changes by Alternatives North (to the reworded Measures from the Responsible Ministers proposed changes) shown as **bold and underscored** font for text additions, and as **~~bold, underscored and strikeout~~** for text deletions.

Our rationale and justification for any further changes, including rejection of some of the proposed wording from the Responsible Ministers, is shown below the coloured boxes for each of the Measures identified in this Consult-to-Modify process.

We look forward to the conclusion of this environmental assessment. However, we remain concerned that a timely and effective negotiation of an Environmental Agreement is still outstanding. This is the most important matter for Alternatives North. We look forward to a recommencement of those negotiations where we can make further constructive contributions.

Sincerely,

A handwritten signature in black ink that reads "Kevin O'Reilly". The signature is written in a cursive, flowing style.

Kevin O'Reilly
Giant Mine Coordinator
Alternatives North

- cc. Honourable Bernard Valcourt, Minister of Aboriginal Affairs and Northern Development
- Honourable Gail Shea, Minister of Fisheries and Oceans Canada
- Honourable Leona Aglukkaq, Minister of the Environment
- Honourable Michael Miltenberger, Minister of Environment and Natural Resources
- Chiefs Edward Sangris and Ernest Betsina, Yellowknives Dene First Nation
- Mayor Mark Heyck, City of Yellowknife
- Bob Bromley, Weledeh MLA, NWT Legislative Assembly
- Dennis Bevington, MP Western Arctic
- Joanna Ankersmit, Contaminated Site Program, AANDC
- Ray Case, Assistant Deputy Minister, Environment and Natural Resources, GNWT

REVIEW BOARD Measure 3: To facilitate active research in emerging technologies towards finding a permanent solution for dealing with arsenic at the Giant mine site, the Developer will create a multi-stakeholder research agency with potentially affected Parties. The ongoing funding for this research agency will be negotiated and included as part of the environmental agreement specified in Measure 7. This body will, on a periodic basis:

1. produce reports on relevant emerging technologies;
2. identify research priorities
3. administer research funding
4. ensure the results of research are made public, and
5. apply results of each cycle to the next cycle of these steps.

RM Measure 3: To facilitate active research in emerging technologies towards finding a permanent solution for dealing with arsenic at the Giant mine site, the Developer will ~~create~~ **fund a multi-stakeholder research agency with potentially affected Parties activity as advised by stakeholders and potentially affected Parties through the Oversight Body.** The ongoing funding for this research ~~agency activity, and a process for its coordination~~ will be negotiated and included as part of the environmental agreement specified in Measure 7 **and will make best use of existing research institutions and programs.** ~~This body~~ **The Oversight Body will ensure through the research activity that,** on a periodic basis:

1. produce reports on relevant emerging technologies **are produced;**
2. identify research priorities **are identified;**
3. administer research funding **is administered;**
4. ensure the results of research are made public, and
5. apply results of each cycle **are applied** to the next cycle of these steps.

AN Measure 3: To facilitate active research in emerging technologies towards finding a permanent solution for dealing with arsenic at the Giant mine site, the Developer will ~~create~~ **fund a multi-stakeholder research agency with potentially affected Parties activity as advised by stakeholders and potentially affected Parties through the Oversight Body.** The ongoing funding for this research ~~agency activity, and the additional resources required to manage and a process for its coordination,~~ will be negotiated and included as part of the environmental agreement specified in Measure 7 **and will make best use of existing research institutions and programs.** ~~This body~~ **The Oversight Body will ensure through the research activity that,** on a periodic basis:

1. produce reports on relevant emerging technologies **are produced;**
2. identify research priorities **are identified;**
3. administer research funding **is administered;**
4. ensure the results of research are made public, and
5. apply results of each cycle **are applied** to the next cycle of these steps.

Alternatives North supports the proposed changes to this Measure. We support that the Oversight Body should be given the responsibility for coordinating and making public ongoing research and development into a permanent solution. We would suggest one further small change be made as shown above, to ensure that the additional responsibilities and mandate for the Oversight Body is recognized and that adequate resources are provided for this new function.

REVIEW BOARD Measure 4: The research agency will provide the results of the research to the periodic reviews of the Project described in Measure 2. If better technological options are identified in-between these periodic 20-year reviews, the research agency will report these publically to the Parties, the public and the Developer. The Developer will consider these technologies and make decisions regarding their feasibility. The Developer will make any such decisions public.

RM Measure 4: The ~~research agency~~ **Oversight Body** will provide the results of the research **funded by the Developer** to the periodic reviews of the Project described in Measure 2. If better technological options are identified **through the funded research** in-between these periodic 20-year reviews, ~~the research agency~~ **these will be reported these publically by the Oversight Body** to the Parties, ~~the public and~~ the Developer **and the Canadian public**. The Developer will consider these technologies and make decisions regarding their feasibility. The Developer will make any such decisions public.

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Alternatives North supports the proposed modifications from the Responsible Ministers.

REVIEW BOARD Measure 5: In order to mitigate significant adverse impacts that are otherwise likely, the Developer will commission an independent quantitative risk assessment to be completed before the Project receives regulatory approvals. This will include:

1. explicit acceptability thresholds, determined in consultation with potentially affected communities
2. an examination of risks from a holistic perspective, integrating the combined environmental, social, health and financial consequences.
3. possible events of a worst-case/ low frequency high consequence nature
4. additional considerations specified in Appendix D of the Report of EA

From this, the Developer will identify any appropriate Project improvements and identify management responses to avoid or reduce the severity of predicted unacceptable risks.

RM Measure 5: In order to mitigate significant adverse impacts that are otherwise likely, the Developer will commission an independent quantitative risk assessment. **A preliminary report, including the study design, will be completed prior to receiving regulatory approvals. The final report will be completed and submitted to regulators and the Oversight Body within two years after** ~~to be completed before~~ the Project receives regulatory approvals. This will include:

1. explicit acceptability thresholds, determined in consultation with potentially affected communities
2. an examination of risks from a holistic perspective, integrating the combined environmental, social, health and financial consequences.
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AN Measure 5: In order to mitigate significant adverse impacts that are otherwise likely, the Developer will commission an independent quantitative risk assessment. **A preliminary report, including the study design, will be completed to assist with final design and prior to receiving to support regulatory approvals applications. The final report will be completed and submitted to regulators and the Oversight Body within two years after** ~~to be completed before the Project receives regulatory approvals of the preliminary report.~~ This will include:

1. explicit acceptability thresholds, determined in consultation with potentially affected communities
2. an examination of risks from a holistic perspective, integrating the combined environmental, social, health and financial consequences.
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From this, the Developer will identify any appropriate Project improvements and identify management responses to avoid or reduce the severity of predicted unacceptable risks.

Alternatives North strongly supports the concept of conducting a comprehensive and collaborative risk assessment. To make the best and most effective use of this work, it should feed into the final design of the several project components that are at an early stage of development, notably the tailings cover, open pits, remediation of contaminated soils and disposal of buildings and non-hazardous materials. If the risk assessment work does not feed into design and the regulatory applications, there will likely be delays in the regulatory process caused by changing designs and the need for more complete information.

The overall risk assessment should and can be coordinated with the human health risk assessment. We see no reason why these two assessments need to be done completely separately or sequentially, if the Giant Team works collaboratively with the Parties.

REVIEW BOARD Measure 10: The Developer will commission a comprehensive quantitative human health risk assessment by an independent, qualified human health risk assessor selected in collaboration with Health Canada, the Yellowknives Dene, the City of Yellowknife, and the Developer. This human health risk assessment will be completed before the Project receives regulatory approvals. It will:

1. Include a critical review of the 2006 Tier II human health risk assessment and the previous screening reports;
2. Consider additional exposures and thresholds (as specified in Appendix F of the Report of EA);
3. Decide whether a Tier III risk assessment is appropriate;
4. Provide a plain language explanation of the results in terms that are understandable to the general public, and communicate this to potentially affected communities in a culturally appropriate manner;
5. Provide interpretation of results and related guidance; and
6. Inform the broad health effects monitoring program (described in Measure 9 above).

Based on the results of this human health risk assessment, and on the results of the health effects monitoring program (described in Measure 9 above), the Developer will, if necessary in response to this information, identify, design and implement appropriate design improvements and identify appropriate management responses to avoid or reduce the severity of any predicted unacceptable health risks.

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Alternatives North provides the same rationale as mentioned above for Measure 5.

REVIEW BOARD Measure 7: The Developer will negotiate a legally-binding environmental agreement with, at a minimum, the members of the Oversight Working Group, and other appropriate representative organizations, to create an independent oversight body for the Giant Mine Remediation Project. These negotiations will build on the existing discussion paper and draft environmental agreement of the Giant Oversight Working group. This oversight body will be in place before major Project activities begin on site, and will exist for the life of the Project. The environmental agreement will include a dispute resolution mechanism to ensure compliance with the agreement and a stable funding mechanism for the oversight body.

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Alternatives North supports the intent of the proposed changes, in emphasizing the need to move forward quickly on the negotiation of an Environmental Agreement. We have been urging the resumption of negotiations since the last meeting of the Oversight Working Group in August 2012. The Oversight Working Group should retain its role as the negotiations forum for an Environmental Agreement.

There were some recent discussions of how to “kick-start” the negotiations both at the Review Board meeting on January 20, 2014 and the Giant Mine Working Group meeting on January 23, 2014. Some of the Parties, including Alternatives North, believe that there should be a firm target for negotiations that turn to mediation and finally, binding arbitration. We tabled a “For Discussion Only” paper at the Giant Mine Working Group meeting in an effort to move things along (appended below). The Review Board may wish

to incorporate parts of this into its response to the proposed changes to Measure 7 and/or make a new suggestion that contains elements of the “For Discussion Only” paper.

Alternatives North is concerned that the Responsible Ministers have proposed dropping the reference to the Oversight Body “for the life of the Project”. We firmly believe that an Environmental Agreement and an Oversight Body are required for the duration of the Giant Mine Remediation Project until there is a permanent and lasting solution, particularly for the arsenic stored underground. Although Measure 1, now accepted, will reframe the Project as an interim approach for 100 years, it is difficult if not impossible to predict even that far into the future. Thus the need for a permanent and long-lasting Environmental Agreement that establishes oversight, public reporting and other means of ensuring accountability. Although the most recent draft of the Environmental Agreement contains provisions for the arrangement to be in place until the Parties agree otherwise, we believe direction in the form of the revised wording of this Measure would provide additional incentive and a requirement for a “life-of-project” approach.

One matter is very clear. At the Review Board January 20, 2014 meeting, none of the Parties outside of the federal or territorial governments, expressed any support for having the Oversight Working Group serve as the Oversight Body in an interim capacity. The non-GNWT/non-federal Oversight Working Group members was made up of volunteers with little or no capacity to fulfill the contemplated roles of the Oversight Body. To have the Oversight Working Group serve in the interim may also be counterproductive to a timely and successful negotiation of an Environmental Agreement.

FOR DISCUSSION ONLY

**FRAMEWORK FOR NEGOTIATIONS OF A
GIANT MINE ENVIRONMENTAL AGREEMENT**

Purpose of this Framework

- Set out roles, timelines and responsibilities in negotiating an Environmental Agreement for the Giant Mine Remediation Project.
- Ensure that the relevant binding Measures (3, 4, 5, 7, 8, 10 and 11) from the Report of Environmental Assessment on the Giant Mine Remediation Project are implemented.
- Draft 8 of a Giant Mine Environmental Agreement (dated August 28, 2012) as prepared by the Oversight Working Group shall serve as the starting point for negotiations.

Parties

- The Parties to the negotiations shall be the Government of Canada, Government of the Northwest Territories, Yellowknives Dene First Nation, City of Yellowknife and Alternatives North

Principles and Process

- The Parties will negotiate in good faith to reach an agreement acceptable to all Parties within three months of the acceptance of the Report of Environmental Assessment by the Responsible Ministers.
- The Parties agree to jointly appoint a facilitator to assist with negotiations within two weeks of the acceptance of the report of Environmental Assessment by the Responsible Ministers.
- If an agreement has not been reached within three months of negotiations, a formal mediation shall be initiated.
- If an agreement has not been reached within six months of the acceptance of the Report of Environmental Assessment by the Responsible Ministers, the Parties shall enter into a formal arbitration, on any and all outstanding issues.
- The Governments of Canada and the Northwest Territories shall cover all costs related for the facilitator and the mediation and arbitration phases of any negotiations.

Funding

- The Governments of Canada and the Northwest Territories shall provide a maximum of \$XX,000 to each of the Yellowknives Dene First Nation and Alternatives North to enable their respective participation in the negotiation of the agreement, excluding any costs related to mediation and arbitration.
- The negotiation funding can be used to cover legal and other expert fees, internal consultations, travel and related costs.

Communications

- The Parties agree to refrain from public and media comment during the negotiation of the agreement. Any reports or media releases shall be jointly prepared and approved by all Parties in a timely manner.

21 January 2014

Prepared by Alternatives North

REVIEW BOARD Measure 11: Within five years of receiving its water license, the Developer will divert Baker Creek to a north diversion route previously considered by the Developer, or another route that avoids the mine site and is determined appropriate by the Developer.

RM Measure 11: The Developer will thoroughly assess options for, and the environmental impacts of, diversion of Baker Creek. ~~Within five years of receiving its water license, the Developer will divert Baker Creek to a north diversion route previously considered by the Developer, or another route that avoids the mine site and is determined appropriate by the Developer.~~ **Within one year of the project receiving its water licence, a report outlining a comparison of options, including the current on-site re-alignment, will be provided to the appropriate regulatory authorities, the Oversight Body and the public.**

Once informed by the advice of the Oversight Body and regulatory authorities, the Developer will determine the final alignment for Baker Creek. If off-site diversion is selected, the Developer will seek required regulatory approvals to implement the diversion within 5 years of receiving its initial water licence.

AN Measure 11: The Developer, with the participation of the Parties, will thoroughly assess options for, and the environmental impacts of, diversion of Baker Creek. ~~Within five years of receiving its water license, the Developer will divert Baker Creek to a north diversion route previously considered by the Developer, or another route that avoids the mine site and is determined appropriate by the Developer.~~ **Within one year of the project receiving its water licence, a report outlining a comparison of options, including the current on-site re-alignment, will be provided to the appropriate regulatory authorities, the Oversight Body and the public.**

Once informed by the advice of the Oversight Body and regulatory authorities, the Developer and any relevant regulators will determine the final alignment for Baker Creek. If off-site diversion is selected, the Developer will seek required regulatory approvals to implement the diversion within 5 years of receiving its initial water licence.

Alternatives North is generally supportive of the proposed changes but suggests two further changes. Firstly, inserting “with the participation of the Parties” in the first sentence to ensure that the Developer meaningfully involves the Parties in developing and assessing the options for Baker Creek. This wording should also ensure that the Elders of the Yellowknives Dene First Nation have an opportunity to include their Traditional Knowledge and views on the future of Baker Creek. Secondly, we are not convinced that the Developer alone will determine the final alignment. There are regulators such as the Department of Fisheries and Oceans and the Mackenzie Valley Land and Water Board that have some jurisdiction over the future of Baker Creek, and their roles should be recognized in the Measure. Our proposed wording in the second last sentence attempts to address this issue.

REVIEW BOARD Measure 12: To prevent significant adverse impacts on Great Slave Lake from contaminated surface waters in the former channel of Baker Creek, the Developer will ensure that water quality at the outlet of Baker creek channel will meet site-specific water quality objectives based on the CCME *Guidance on the Site-Specific Application of Water Quality Guidelines in Canada*.

RM Measure 12: To prevent significant adverse impacts on Great Slave Lake from contaminated surface waters in the **existing or** former channel of Baker Creek, **should it be rerouted to avoid the mine site**, the Developer will ensure that water quality at the outlet of Baker creek channel will meet site-specific water quality objectives based on the CCME *Guidance on the Site-Specific Application of Water Quality Guidelines in Canada*.

AN Measure 12: To prevent significant adverse impacts on Great Slave Lake from contaminated surface waters in the **existing or** former channel of Baker Creek, **should it be rerouted to avoid the mine site**, the Developer will ensure that water quality at the outlet of Baker creek channel will meet site-specific water quality objectives based on the CCME *Guidance on the Site-Specific Application of Water Quality Guidelines in Canada*.

Alternatives North has no objection to the proposed changes by the Responsible Ministers.

REVIEW BOARD Measure 13: The Developer will design and, with the applicable regulators, manage the Project to ensure that, with respect to arsenic and any other contaminants of potential concern, the following water quality objectives are achieved in the vicinity of the outlet of the former Baker Creek channel, excluding Reach 0:

- a) Water quality changes due to discharge from the former channel of Baker Creek will not reduce benthic invertebrate and plankton abundance or diversity;
- b) Water quality changes due to discharge from the former channel of Baker Creek will not harm fish health, abundance or diversity;
- c) Water quality changes due to discharge from the former channel of Baker Creek will not adversely affect areas used as drinking water sources,
- d) Water quality changes due to discharge from the former channel of Baker Creek will not adversely affect any traditional or recreational users; and,
- e) There is no increase in arsenic levels in Great Slave Lake due to discharge from the former channel of Baker Creek beyond the parameters described in Measure 12.

RM Measure 13: The Developer will design and, with the applicable regulators, manage the Project to ensure that, with respect to arsenic and any other contaminants of potential concern, the following water quality objectives are achieved in the vicinity of the outlet of the **existing or** former Baker Creek channel, **should it be rerouted to avoid the mine site**, excluding Reach 0:

- a) Water quality changes due to discharge from the former channel of Baker Creek will not reduce benthic invertebrate and plankton abundance or diversity;
- b) Water quality changes due to discharge from the former channel of Baker Creek will not harm fish health, abundance or diversity;
- c) Water quality changes due to discharge from the former channel of Baker Creek will not adversely affect areas used as drinking water sources,
- d) Water quality changes due to discharge from the former channel of Baker Creek will not adversely affect any traditional or recreational users; and,
- e) There is no increase in arsenic levels in Great Slave Lake due to discharge from the former channel of Baker Creek beyond the parameters described in Measure 12.

AN Measure 13: The Developer will design and, with the applicable regulators, manage the Project to ensure that, with respect to arsenic and any other contaminants of potential concern, the following water quality objectives are achieved in the vicinity of the outlet of the **existing or** former Baker Creek channel, **should it be rerouted to avoid the mine site**, excluding Reach 0:

- a) Water quality changes due to discharge from the former channel of Baker Creek will not reduce benthic invertebrate and plankton abundance or diversity;
- b) Water quality changes due to discharge from the former channel of Baker Creek will not harm fish health, abundance or diversity;
- c) Water quality changes due to discharge from the former channel of Baker Creek will not adversely affect areas used as drinking water sources,
- d) Water quality changes due to discharge from the former channel of Baker Creek will not adversely affect any traditional or recreational users; and,
- e) There is no increase in arsenic levels in Great Slave Lake due to discharge from the former channel of Baker Creek beyond the parameters described in Measure 12.

Alternatives North has no objection to the proposed changes by the Responsible Ministers.

REVIEW BOARD Measure 15: The Developer and regulators will design and manage the Project so that, with respect to arsenic and any other contaminants of potential concern:

1. Water quality at the outfall will meet the Health Canada Guidelines for Canadian Drinking Water Quality; and,
2. The following water quality objectives in the receiving environment are met:
 - e) Water quality changes due to effluent discharge will not reduce benthic invertebrate and plankton abundance or diversity beyond 200 metres of the outfall;
 - f) Water quality changes due to effluent discharge will not harm fish health, abundance or diversity;
 - g) Water quality changes due to effluent discharge will not adversely affect areas used as drinking water sources; and,
 - h) There is no increase in arsenic levels in Yellowknife Bay water or sediments beyond 200 metres of the outfall.

RM Measure 15: The Developer and regulators will design and manage the Project so that, with respect to arsenic and any other contaminants of potential concern:

1. Water quality at the outfall will meet the Health Canada Guidelines for Canadian Drinking Water Quality; and,
2. The following water quality objectives in the receiving environment are met:
 - e) Water quality changes due to effluent discharge will not reduce benthic invertebrate and plankton abundance or diversity beyond ~~200~~**500** metres of the outfall;
 - f) Water quality changes due to effluent discharge will not harm fish health, abundance or diversity;
 - g) Water quality changes due to effluent discharge will not adversely affect areas used as drinking water sources; and,
 - h) There is no increase in arsenic levels in Yellowknife Bay water or sediments beyond ~~200~~ **500** metres of the outfall.

AN Measure 15: The Developer and regulators will design and manage the Project so that, with respect to arsenic and any other contaminants of potential concern:

1. Water quality at the outfall will meet the Health Canada Guidelines for Canadian Drinking Water Quality; and,
2. The following water quality objectives in the receiving environment are met:
 - e) Water quality changes due to effluent discharge will not reduce benthic invertebrate and plankton abundance or diversity beyond ~~200~~**500** ~~200~~ metres of the outfall;
 - f) Water quality changes due to effluent discharge will not harm fish health, abundance or diversity;
 - g) Water quality changes due to effluent discharge will not adversely affect areas used as drinking water sources; and,
 - h) There is no increase in arsenic levels in Yellowknife Bay water or sediments beyond ~~200~~ **500** ~~200~~ metres of the outfall.

For greater clarity, this Measure is not intended to limit the application or development of any Aquatic Effects Monitoring Program or a Response Framework that may be required for the Giant Mine Remediation Project.

At the Review Board's January 20, 2014 meeting, we understood that the Giant Team clearly indicated that the proposed water treatment system would be able to meet the Guidelines for Canadian Drinking Water Quality well within 200 metres of any outfall and that there would not be any resulting changes

in benthic invertebrates, plankton or arsenic levels. Given this position, we see no need to make the changes proposed by the Responsible Ministers.

We are very concerned that the Measure, with or without the proposed changes, may be interpreted in a manner that would restrict the application or development of any Aquatic Effects Monitoring Program or Response Framework that may be required in the future. For this reason, we recommend that the sentence at the end be added to ensure that proper monitoring and actions in response to potential environmental changes are taken in relation to the disposal of waste from the Giant Mine Remediation Project into the receiving environment, as part of the regular water licencing process.