

GIANT MINE Oversight Board



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Review of GMRP Status of the Environment Report from June 2015 to June 2021

The Giant Mine Oversight Board (GMOB) has completed its review of the Status of the Environment Report, provided by the Giant Mine Remediation Project (GMRP) on September 16, 2022.

The report is required pursuant to Article 6 of the Environmental Agreement and GMOB has evaluated the report as per Section 6.2 of the Agreement.

GMOB is open to meeting with the Project Team to discuss the attached comments at a mutually convenient time and to begin planning for the public meeting required pursuant to Section 6.3 of the Environmental Agreement.

If you have any questions in the meantime, please feel free to contact me through the GMOB office.

Sincerely,

David Livingstone
Chair

cc. Parties to the Environmental Agreement

GMRP Status of the Environment Report June 2015-June 2021

GMOB review comments

| Ref # | Topic | Reference | Comment |
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| 1 | General | General | <p>Overall, the report does a good job of communicating the current Status of the Environment on the site. The language is accessible to the general public, perhaps not "plain language", but understandable. The document's background and purpose is clear, and there is good use of figures and diagrams to help explain complicated information.</p> <p>The report offers the general public a reason to be confident that the project is being well managed from the perspective of environmental safety, and also reveals the sheer complexity of the project and the large number of environmental considerations that are at play.</p> |
| 2 | Links and data accessibility | General | Including the references and e-links is appreciated. |
| | Plain Language Report | General | The project was required to produce a Plain Language Report. If this is the intent of the Summary section of the current report, then it would be better as a stand-alone document. |
| 3 | Socio-Economic Considerations | General | The document should include a comment/statement that information on socio-economic considerations can be found in the socio-economic Strategy and Action Plan of the GMRP. Alternately, could socio-economic impacts be considered an effect on the "human environment" and included within this document? |
| 4 | Soil Arsenic Concentrations | Summary | The summary section mentions there are some areas on site that have higher soil arsenic levels than are outlined in the territorial industrial standard. This may understate the issue since in the main body of the report has it coded as 'red' indicating a significant issue. |
| 5 | Soil Arsenic Concentration - Undeveloped Areas | General | The Project will not be remediating undisturbed areas of the site. However, these areas are identified as being of concern because they are well above the industrial standard. This provides mixed messaging and should be clearly explained why these areas are not being remediated. |
| 6 | Climate Change | General | Climate change is addressed less than other components of the report. Climate and weather affect the site - e.g. permafrost melt, later rainfall affecting ground freezing, etc. Lessons learned in Section 10.1 could be viewed through the lens of climate change. |
| 7 | Climate Change - rate of change | Section 11.0 | This Section includes the statement "The status of the Environment is not expected to change significantly in the next three years." What is the basis for this statement in the context of climate change? There are examples on site of ongoing change associated with melting permafrost, changes in flow regimes, etc. that require adaptive management. This suggests that change is happening in real-time and should be accounted for. |

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| 8 | Climate Change - Indicator | General | Consider using climate change response actions as the indicator for climate change - track the numbers of occasions where adaptive management was required in response to unexpected weather events or changes in permafrost conditions. |
| 9 | Climate Change - Vulnerabilities Assessment | General | The project should identify vulnerabilities associated with climate change (e.g. ice build up, permafrost thaw). Evaluate required actions against these vulnerabilities and report on the outcomes. |
| 10 | Climate Change - Vulnerabilities Assessment | General | The next report should include any actions or strategies the project has in place to mitigate against potential adverse climate-related impacts. |
| 11 | Figure 23 - Arsenic Concentrations | General | This figure highlights the issue where there are high arsenic concentrations on one side of the boundary, and almost certainly similar concentrations on the other side. The report is silent on where responsibility lies for managing the elevated arsenic concentrations outside the boundary; areas of responsibility could be clarified in a statement at the beginning of the report. |
| 12 | Pg 82 and 98 - Dam 1 maintenance | General | The work surrounding Dam 1 was difficult to follow; diagrams may have helped to explain what was being done and should be used wherever possible in future reports. |
| 13 | Minewater and Sediment Monitoring | Table 1 | Minewater monitoring should be included under the "Water" heading. Sediment monitoring should be included under the "Land" heading, however an argument could be made for including sediment monitoring under "Water". |
| 14 | Lands Section - Additional Sub-headings | Pg 7 | For clarity, additional sub-headings should be included with the Lands section: soil, dams, pits and foreshore tailings as each of these sub-components has its own facts. |
| 15 | Environmental Monitoring - Fish | Pg 7 | The effects to fish are difficult to follow - consider using a bullet list to convey this information. |
| 16 | Figure 4 | Pg 18 | This is a good visual. It could be referenced in later chapters, or be redesigned/altered to provide a similar visual for the different components. |
| 17 | Missing Engagement Activities | Pg 23 | Include the NSMA meetings and GMWG in the engagement activities. |
| 18 | Identify Commenters | Table 7 | Some of the entries identify which group provided the comments. This is important information and should be done for all of the engagement activities. |
| 19 | Application of TK | Table 7 | How the TK is applied is an important detail that should be added to the Table. Right now the Table only outlines the provision of the TK to the GMRP. |
| 20 | Plain Language Explanation | Figure 14 | The wind diagram is interesting, but a plain language explanation should be provided to help the reader interpret it. |
| 21 | Clarity | Pg 32 | The discussion regarding hydrologic changes is a bit difficult to follow. It should be edited to make it more clear - it is not clear whether water levels, streamflow or general climate change is being discussed. |

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| 22 | Water Quality Data - Underground | Section 5 | There is some information provided regarding water quality in Baker Creek and Yellowknife Bay, but not for the underground. This information should be included as well. |
| 23 | Water Monitoring - Underground | Section 5 | Water monitoring does not include discussion regarding sampling in the immediate vicinity of the arsenic chambers. GMOB has previously recommended this type of sampling be conducted as a means of tracking arsenic flux. GMOB acknowledges that once the freeze is in place, there should be no water seeping from the arsenic chambers. However, tracking water quality in the vicinity of the chambers would be a useful method for communicating the improvements to the site resulting from the freeze. |
| 24 | Clarity | Photo 5 | Not a great photo - it is hard to determine what is being shown. |
| 25 | Figure Clarity | Pg 47 | Make this figure larger so it is easier to read; there is important information here that is easily overlooked. |
| 26 | Catch and Release Fishing | Pg 53 | Confirm that the fishing happening at the mouth of Baker Creek is actually "catch and release". |
| 27 | Arsenic Chambers | Section 7.3 | This section should include more information on the status of the arsenic chambers: structural integrity, conditions of water flow, and condition of the contaminant etc. |
| 28 | Wildlife Monitoring from 2015 to 2021 | Pg 85 | This paragraph should clarify that there is no formal wildlife monitoring program in place as a result no monitoring indicators are possible. |
| 29 | Cumulative Effects - Oil and Gas | Section 9.0 | The reference to Oil and Gas projects should be removed as oil and gas projects are not relevant to the Yellowknife region. |
| 30 | Table 21 - Wildlife Monitoring | Table 21 | Arsenic Contamination of Wildlife – reference is made to a Wildlife and Wildlife Habitat Management and Monitoring Plan – but this is not referenced or described in Section 8.0. |
| 31 | Health Effects Monitoring Programs | Pg 93 | There is no mention of the offsite contamination initiative hosted by GNWT and the feds with the City of Yellowknife. This should also be tracked as it has a direct relationship to the cumulative effects of Giant Mine. |
| 32 | Typo - Pg 8 | Pg 8 | Thorough should be throughout |
| 33 | Missing Footnote | Pg16 | Footnote 1 is missing. |
| 34 | Editorial | Pg 30 | strikethrough on "As most people know" |
| 35 | Editorial | Pg 46 | strikethrough on "low in suspended solids" |
| 36 | Editorial | Pg 46 | Last sentence before Baker Creek: a comma would be more clear than the brackets. |
| 37 | Editorial | Pg 51 | Table 12, second row: Missing a word or two? Not completely clear. |
| 38 | Editorial | Pg 59 | Use a more plain language word for "pelagic". |
| 39 | Editorial | Pg 60 | strikethrough on "in Dettah and Ndilo" |
| 40 | Editorial | Pg 63 | First column, last paragraph: The listing of considerations is a bit awkward. A bullet list would be more clear. |
| 41 | Typo | Pg 83 | Soil quality - remove the "in" before "within". |
| 42 | Typo | Pg 92 | Just MVEIRB, not MVEIARB. |

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| 43 | Typo | pg 93 | First bullet in second column - the paragraph has a break, when it should read straight through. |
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