

Ms. Natalie Plato
Deputy Director
Giant Mine Remediation Project
Crown-Indigenous Relations and Northern Affairs Canada

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Review of 2020-21 Annual Report Giant Mine Remediation Project

The Giant Mine Oversight Board (GMOB) has completed the review of the 2020-21 Annual Report of the Giant Mine Remediation Project (GMRP). The final report was received by GMOB on December 15, 2021. Please find attached the table of our comments.

The document was reviewed by GMOB against the requirements set out in Sections 5.1 and 5.2 of the Giant Mine Remediation Project Environmental Agreement. Additionally, we have provided comments on the content/format of the document and noted changes between the draft report, initially reviewed by GMOB, and the final document.

It is important to note that our review is focussed on the report itself and does not include an assessment of the overall progress of the Project.

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

Sincerely,



David Livingstone
Chair, Giant Mine Oversight Board

cc. Parties to the Environmental Agreement

| <u>TOPIC</u> | <u>COMMENT</u> | <u>RECOMMENDATION</u> |
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| Overall Summary Table (pg 10 - 16) - Clarity | <p>Overall this table provides a useful summary of GMRP activities. GMOB has identified several opportunities for improving the clarity of the information in this table as follows:</p> <ul style="list-style-type: none"> - Include a column on the left with numbers for tracking the activities. - The word "advanced" has several interpretations, and may not provide insight into the status of the initiative. Consider using "started", "continued", "partially completed" or other words that have a more definite interpretation. - "substantive" should be more clearly defined in the context of "substantive design". - Consider the use of colour coding such as in Table 1 on Page 20 to quickly provide information on the status of the activities. <p>Note: there are several instances where these terms are used through the remainder of the report, and these phrases should be adjusted to be made more clear.</p> | GMOB recommends the GMRP look for ways to make the language more clear, and increase the specificity of the terminology. |
| Project Overview | The Project Overview does not explicitly identify the current approach for the site - i.e. freeze the underground arsenic and manage water. As this is the a primary activity, this information should be included in the overview. | GMOB recommends the Project Overview include a description of the current management strategy for the arsenic trioxide dust. |
| Section 3.1.1 - Waste Disposal Options - Recycling | The report identifies that the GMRP is investigating options for recycling demolition materials, and has set a target of 75%. Is the 75% target a federal standard, or is it based on another source? The success of this initiative should be tracked in future reports. | GMOB recommends the success of the demolition waste recycling initiative be tracked in future reports. |
| Section 3.4, pg 24 - superscript 2. | In the superscript, borrow is defined as "material that is used to infill a pit." GMOB agrees that this is a use for borrow, but borrow more generally refers to material (e.g. granular material) removed from a location for use in construction. The definition should be updated. | GMOB recommends the definition of "borrow" be updated. |
| Section 4.1.1 - C&M | The second paragraph notes that "It was recommended that action be taken to stabilize the assembly with an engineered cap." It would be useful to identify who recommended the action - e.g. geotechnical consultant? IPRP? Other? | GMOB recommends the report clarify who made the recommendation to undertake this action. |

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| Section 4.1.2.3 - Geotechnical Inspection of Dams | The bullet list identifies that the geotechnical inspection identified several dams as requiring immediate action, and the rest as "reasonably safe". "Reasonably safe" is a bit subjective, particularly in the context of dam stability. Can this be provided with more context? E.g. "maintenance is required, but can be scheduled over a year". | GMOB recommends that the descriptor "reasonably safe" be replaced with less subjective language. |
| Section 5.1 - Figure 3 - Colours | The colours used in the bar graphs are fairly similar, particularly for 2016-17 and 2017-18. This is more of an issue for figures where data for a particular period is not present - e.g. Figure 3 in Section 5.1. It is not immediately clear which year the small bar on the far left side of the figure refers to. GMOB understands that the GMRP is trying to maintain a colour scheme within the report, but using more contrasting colours would help with interpreting the figures. | GMOB recommends the GMRP review whether more contrasting colours could be used in the figures. |
| Section 5.3.1.1 - Annual Water Monitoring | <p>The end of the first paragraph notes that more water was pumped in 2020/21 than in previous years. This is thought to be due to increased pumping from the underground workings and relatively high runoff into the Northwest Pond.</p> <p>The reason for needing to increase pumping from the underground should be indicated. This would help to highlight linkages in water management across the site.</p> | GMOB recommends the wording be updated to communicate linkages within the minewater system. |
| Section 5.3.1.1 - Annual Water Monitoring, Table 4. | <p>One of the activities identified on Pg 35 is "Further evaluate the hydraulic head increase and arsenic concentrations fluctuation at MW00-02."</p> <p>Is this discussed in more detail in another report? This question applies to GMOB's overall understanding of the site, and is not limited to this report.</p> | GMRP direct GMOB to where this issue is described in more detail. |
| Section 5.3.3 - AEMP, Bullet List | The fourth bullet includes the sentence: "Nevertheless, the treated effluent <u>might</u> have impacted algae and aquatic plant growth from Baker Creek." EEM reporting to date has identified sub-lethal toxic effects to <i>P. subcapitata</i> , <i>L. minor</i> and <i>C. dubia</i> . The wording should be revised to more accurately reflect the findings of the EEM studies. | GMOB recommends the GMRP review the wording regarding sub-lethal effects of effluent in Baker Creek. |

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| Section 6.1.2 - Monitoring of Arsenic Levels | <p>This Section describes measurement of arsenic levels in workers using urine samples. The Section does not identify whether the samples are analyzed for inorganic arsenic, organic arsenic or both. GMOB notes that inorganic arsenic should be included as a parameter in order to help differentiate dietary sources of arsenic from occupational exposures.</p> | <p>GMOB recommends the GMRP confirm whether inorganic arsenic is included within the urinalysis program. If inorganic arsenic is not currently being monitored, then it should be added to the program.</p> |
| Section 7.1 - Engagement | <p>The second paragraph starts with the statement "The Project team assesses the effectiveness of its communications and engagements through various means, such as the engagement log, gathering feedback from the public and keeping a media log to track inquiries and topics." However, while the methods listed are useful for tracking, they will not necessarily provide insight into how effective the engagement is.</p> <p>GMOB has raised this topic previously. The GMRP spends considerable time and resources on engagement, and it would be beneficial to understand how effective the engagement is.</p> | <p>GMOB recommends the GMRP develop methods for evaluating the effectiveness of engagement, in addition to tracking engagement actions.</p> |
| Section 7.2.2 - Figures | <p>Figure 7.2.2 provides graphical displays of the data using bar graphs. These are effective at comparing data within a series, but are not always effective for comparing over different series. Other presentation methods such as line graphs would make the year over year trends easier to evaluate.</p> | <p>GMOB recommends the GMRP include line graphs for data presentations where year over year changes are discussed.</p> |
| Socio-economic Data Collection, Analysis and Reporting - general comment | <p>The approach to collecting, analysing and reporting on socio-economic results for the project creates the potential for uncertainty and misrepresentation, and should be improved. GMRP retained DAS to review the Socio-Economic sections of the GMRP 2020 Annual Report. Their review contains a number of observations regarding the GMRP's approach to socio-economic data collection and reporting.</p> | <p>GMOB requests a meeting with the GMRP to review GMRP's comments and share the DAS review.</p> |

Section 7.2.2 - Employment Results

There is a lot of good information provided regarding the Project's employment record. However, the approach in reporting these data makes analyses challenging. There are two central issues:

(1) It is not immediately clear which data are subsets of other data, and
(2) It is difficult to keep track of the different variables (# of persons, hours, and person years)

It should not be left up to the reader to determine which variables go together and which are subsets of others. While all of the data are useful, establishing standardised reporting methods would be helpful. For example, "person years" and "hours worked" provide the same information, however, few people would be able to quickly convert the "total number of hours worked" into the number of full-time jobs (or at least its equivalency). It is one of the reasons why full-time equivalency is adopted as a standard approach to reporting employment in situations where jobs can be short-term, temporary, or seasonal. This would alleviate the need to switch back and forth between the different variables that can have the unintended consequence of causing confusion which leads to distrust in the data being reported.

GMOB recommends that data that are subsets of other data be more clearly indicated in the tables to improve clarity. e.g. northern employees and southern employees are distinct data sets, however Indigenous, IOC and female employees are subsets. Further, it is not clear whether the Indigenous and IOC number are drawn from the total employment numbers (northern plus southern), or from northern only. The tables could be reformatted including putting dividers between the source data and subset data, group subsets with source data, etc.

GMOB recommends the GMRP consolidate variables that report the same information, e.g. hours worked and person- years provide essentially the same information.

GMOB recommends the GMRP use full time equivalents when reporting employment numbers.

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| Section 7.2.2 - Employment Target Ranges | <p>Target ranges as percentages are ineffective. GMOB understands that this has become the standardized approach in the NWT, however, experience has shown that it does not necessarily result in constructive discussions regarding employment. For example, meeting or exceeding a percentage target in a situation where a project has created 100 jobs should not solicit the same response as meeting or exceeding the target when 1,000 jobs are created. Similarly, if a project were to go from 1,000 jobs to 100 jobs, and as a result, the percentage of resident employees goes up, we should not necessarily be regarding this as a positive if it meant substantial job losses. What is important is the absolute number of people working and the types of jobs they are working in.</p> <p>We should be moving away from arbitrary predictions and targets, and towards tangible numbers and goals from which real strategies can be developed, implemented, and reported on.</p> | <p>GMOB recommends the GMRP consider reporting employment information and goals using alternative metrics such as:</p> <ul style="list-style-type: none">• How many jobs is the Project predicted to create, in total, next year/each year?• How many jobs will be created next/each year in each skill category?• How many jobs within each category do Northern, Northern Indigenous, and female labour currently fill?• Can these numbers be improved upon?• Can we identify where the labour for these positions will come from? |
| Section 7.2.2 - Procurement Target Ranges | <p>Similar to the previous comment regarding employment results, the presentation of procurement results could be improved by clarifying what information is being provided in the tables.</p> <p>It would be helpful to present the information contained in Table 17 for the entire Project (not just for Parsons). This will help as the project matures, and will help in demonstrating the shift from planning to action and what that means for economic activity on the ground.</p> <p>In addition, it can be easy to misinterpret the total value of contracts as an indicator of GDP. While the two can be closely correlated, there are many cases in the Northern economy where the relationship is not as strong as many might assume. To help, it would be useful to provide a separate table where the value of contracts to Northern and Northern Indigenous businesses are separated between goods and services. This will be especially helpful in future years when determining the Project's effect on domestic demand and how much of the contracts are being serviced through imports (regardless of the location of the business that was awarded the contract).</p> | <p>GMOB recommends the information in Table 17 be expanded to include the entire project.</p> <p>GMOB recommends that the value of contracts to Northern and Northern Indigenous businesses be separated between goods and services.</p> |

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| Section 7.2.2 - Procurement Target Ranges, Table 16 | It is unclear what information Table 16 is providing. Does the value represent the wages paid to Northern employees? Should the reader be able to compare these figures to what was shown in the Employment Results? This table will be an important one moving forward, so it would be helpful to be more explicit with its explanation. | GMOB recommends the GMRP provide additional explanation regarding what information Table 16 is intended to convey. |
| Section 7.2.2 - Next Steps, Employment | <p>The second bullet is worth highlighting:</p> <p>"Enhance the assessment of labour demand for common services and project implementation activities"</p> <p>Predicting future labour demand should be a priority as it will be critical in the success of the remaining next steps.</p> | GMOB concurs with the GMRP that this activity is an important next step. |
| Section 7.2.2 - 2020-21 Employment Results | Northern employment is lower than the target ranges. Has the GMRP engaged in discussion with any of the larger contractors that have won contracts for their opinions regarding why the northern numbers are low? These contractors may also be able to provide insight into what are reasonable employment targets. | GMOB recommends the GMRP work with their contractors to evaluate why Northern employment numbers are lower than target levels, and to assist with establishing appropriate targets. |
| Section 7.2.2 - 2020-21 Employment Results, IOC Commitments | Has the GMRP conducted a review of IOC commitments by successful contractors against what is achieved after the contract has been completed? This would be a mechanism for evaluating the effectiveness of the IOC incentives. | GMOB recommends the GMRP provide additional discussion regarding how well the IOC program is working. |
| Section 7.2 - Procurement and Employment Data Presentation | The GMRP presents several data tables summarizing employment and procurement statistics. GMOB has provided recommendations regarding what metrics should be tracked in a previous comment. Once the metrics are finalized, it would be useful to include the target values in the data tables along with the statistics. | GMOB recommends that targets be included in the tables summarizing employment and procurement statistics. |
| Section 7.2.2 - Next Steps, Procurement | <p>One of the procurement-specific Next Steps is to "Continue to modify/enhance procurement tools to support the procurement of local, Indigenous and Northern businesses, including the use of IOC and PSAB." There is no discussion providing the context for this activity.</p> <p>It seems to be an important Next Step, so additional discussion should be provided to clarify the intent.</p> | GMOB recommends the GMRP include additional discussion providing context for modifying/enhancing procurement tools. |

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| Section 7.2.3 - Sky Lennie example | This is a good news example, but as presented it does not follow the flow of the rest of the report. Could it be presented in a Case Study highlight box or some other method that would help it fit better into the overall report? | GMOB recommends the GMRP consider how this case study could be incorporated more smoothly into the overall report. |
| Section 7.2.3 - 2020-21 Training Results | <p>Additional detail around the training results should be provided to give readers a better sense of the program. The data should be broken down by categories - standard mandatory certificates (e.g. job site orientation; first aid training; operational safety; WHMIS); skills training (e.g. forklift); and career training (e.g. heavy equipment operation; project management; site management; etc). The training stats in categories could be correlated with job retention and other measures, etc.</p> <p>Mandatory training is now included as part of the overall training statistics, but it is not clear that this type of training leads to the desired long term goals - e.g. retention, career development, etc.</p> | GMOB recommends additional information and detail be provided around the training data. |
| Section 7.2.3 - Dechita Nàowo | The Dechita Nàowo program appears to be a successful vehicle for delivering training. GMOB notes that the Training Orientation, Safety Meeting, Supervisor Training program had only 2 participants. This is a low number for what would seem to be a more career oriented training stream. Are there plans in place that would help to increase the numbers in this stream? | GMOB recommends that any plans or initiatives intended to increase participation in career oriented training should be highlighted. |
| Section 8.0 - Closing | There is no focus on socio-economic initiatives in the Closing section. This is a key element of the overall project, with an entire section devoted to it in this report. GMOB expects that there would be some discussion regarding future socio-economic initiatives in the activities for the upcoming year. | GMOB recommends that information on planned socio-economic initiatives should be included in the list of activities planned for 2021-22. |
| Appendix C - Project Risks and Mitigation | <p>There is very little specific information provided in this Appendix; there is reportedly more information available under a separate cover, but it is not clear that this is readily available to reviewers.</p> <p>There appears to be a relatively small number of risks rated as high. A brief description of these risks, and how they are being managed would provide useful context for reviewers.</p> | GMOB recommends the GMRP include a brief summary of "high" risks as well as how these risks are being managed. |

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| Appendix D, Table 24, Activity #3 - Education Resource | The education resource is identified as being "underway". Is there a timeline for developing this resource, or is there a reporting mechanism that provides more detail on the progress to date? | GMOB recommends the table include a progress update on the education resource. |
| Annex A, Dam Inspections | This section states that dams are used to "keep solids out of tailings". GMOB assumes this is intended to mean something like "retain tailings solids", or "hold back tailings solids". The sentence should be reviewed and adjusted as necessary. | GMOB recommends the GMRP review the intended meaning of the statement "keep solids out of tailings". |
| Annex A, Socio-economic - IOC Percentages | This section states that IOC employment increased compared to previous years. It would be more accurate to state that it increased from 2019-20, as data in the associated figure shows it as being lower than in 2017-18 and 2018-19 and possibly 2016-17. | GMOB recommends the GMRP review the accuracy of the wording regarding IOC employment percentages. |
| Errata | <p>3.1.1, para 2, consider: "In <u>October</u> they held pre-engagement on the Management and Monitoring Plan pertaining to waste in October with the GMRP Working...."</p> <p>3.1.2, para 1: "This scenario includes <u>implementing</u> the implementation of land use restrictions, <u>placing</u> placement of signage, <u>maintaining</u> maintenance of the current vegetative cover and continued groundwater monitoring in the pond water impacted area."</p> <p>3.4, para 1: "These open pits pose potential risks to worker and public safety as well as to the environment, given the probability that Baker Creek may flood the area, affecting the underground." Consider whether the following is more accurate: "These open pits pose potential safety risks to workers and public and risks to the environment from future flooding in Baker Creek. Floods may also compromise underground stability."</p> <p>4.1.1, bullet list: conducting ongoing <u>water and effluent</u> monitoring and sampling of water and effluent; conducting ongoing <u>dam</u> monitoring of the dams.</p> <p>Section 5.3.2 Metal and Diamond Minding <u>Mining</u>...</p> <p>Section 5.3.3 Aquatic Effects Monitoring Plan <u>Program</u></p> | |

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| Errata | <p>Section 5.4.1, bullet list: Begin <u>constructing</u> construction of the Non-hazardous Waste Landfill.</p> <p>Section 6.1.2, final para: Tracking of results that...</p> <p>Section 7.1.1, Next Steps: ...for YKDFN, <u>NSMA</u> NMSA and...</p> <p>pg 74, second last para: ...from previous years (35% in <u>2019-20</u> 219-20, 28% in 2018-19, 35%....</p> <p>Section 8, first sentence: ...the Water Licence and Land Use Permit, <u>While...</u></p> <p>Appendix B, Table 22, Design Bullet List: Review of Fish Swim Performance at Proposed Water Treatment <u>Plant</u> Plan Outfall</p> <p>Annex A, Regulatory Inspections: The main construction manager <u>and</u> their subcontractors also conduct regular.....</p> <p>Annex A, In Closing: ...resubmission of its management and monitoring <u>plans</u> place.</p> | |
| Noted changes between the draft and final GMRP 2020 Annual Report | | |
| Final Report - Figure 2, Management Board | The "Management Board" text box in the Draft Report included the GMRP Director and Deputy Director positions. | GMOB requests the GMRP clarify whether these positions been replaced or whether the roles being fulfilled by other positions. |
| Final Report - Section 4.1.1 - C&M | The bullet list of Care and Maintenance activities in the Draft report included "conducted ongoing monitoring and sampling of air quality". | These activities were conducted in 2020-2021. GMOB requests clarification as to why they would not be included in the Final Document. |
| Final Report - Section 6.1.2 - Table 6 | This table includes a footnote preceded by 3 asterisks. It is not clear what this footnote references. | The footnote reference should be indicated. |

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| Final Report - PDF Page 70 | The Draft Report included a footnote that provided information on the intent of IOCs. This has been removed from the Final version. The information in the deleted footnote provided additional insight for readers outside the federal procurement system, and this information should be retained. | GMOB recommends the informtion on the intent of IOCs be retained. |
| Final Report - Section 7.2.4 - Next Steps. | The heading at bottom of this section in the Draft report was "Next Steps: Social and Cross-cutting" in the Draft report page and has been changed to "Next Steps: Training" in the Final report. The activities identified in the bullet list are not entirely training related, so the heading in the Draft report seems more appropriate. | GMOB recommends this heading be reviewed for accuracy. |