

LEGAL FRAMEWORK

The NIRB is governed by the provisions of the Nunavut Land Claims Agreement (NLCA), which was negotiated based on and reflecting the following objectives¹:

- *to provide for certainty and clarity of rights to ownership and use of lands and resources, and of rights for Inuit to participate in decision-making concerning the use, management and conservation of land, water and resources, including the offshore;*
- *to provide Inuit with wildlife harvesting rights and rights to participate in decision-making concerning wildlife harvesting;*
- *to provide Inuit with financial compensation and means of participating in economic opportunities; and,*
- *to encourage self-reliance and the cultural and social well-being of Inuit.*

The primary objectives of the NIRB are set out in Section 12.2.5 of the NLCA as follows:

In carrying out its functions, the primary objectives of NIRB shall be at all times to protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and to protect the ecosystemic integrity of the Nunavut Settlement Area. NIRB shall take into account the well-being of the residents of Canada outside the Nunavut Settlement Area.

Part 10 of Article 12 of the NLCA states:

12.10.1 No licence or approval that would be required in order to allow a proposed project to proceed shall be issued in respect of a project that is to be screened by NIRB until the screening has been completed and, if a review pursuant to Part 5 or 6 is to be conducted, until after that review has been completed and a NIRB project certificate has been issued by NIRB pursuant to these provisions.

Exceptions

12.10.2 Notwithstanding Section 12.10.1, where a project proposal has been referred for review pursuant to Part 5 or 6, approvals or licences for exploration or development activities related to that project may be issued if:

- (a) the activity falls within Schedule 12-1; or*
- (b) the activity can, in the judgement of NIRB, proceed without such a review.*

In previous cases, involving requests for the Board to exercise its jurisdiction under this section the Minister expressly noted the Board's role with respect to the consideration and granting of an exception from review as follows:

¹ Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty The Queen in Right of Canada

The discretion to consider and subsequently grant exceptions under 12.10.2 of the Agreement rests with the Board and should only be exercised after careful consideration.²

Reflecting the Board's jurisdiction under this aspect of the NLCA, upon accepting the application under Section 12.10.2(b), the NIRB conducted a thorough review of the technical matters pertaining to the proposal, and now provides the Board's determination to the respective authorizing agencies regarding whether they can proceed to issue the required approvals independently of the conclusion of the Review of the related project. It should be noted that a determination by the NIRB to allow specific exploration and/or development activities to proceed independently of the Review of the related project under section 12.10.2(b) does not affect the requirement for the Proponent to obtain any licences, permits or approvals required to undertake any of the excepted activities.

Further, the NIRB's consideration and determination in respect of a section 12.10.2(b) exception application is in no way an indication of the likely outcome of the Review process associated with the related project to which the exception application activities are related. Neither does the NIRB's determination in relation to the section 12.10.2(b) exception application affect the Board's ultimate determination regarding whether the related project under Review should be allowed to proceed, nor the potential issuance of a NIRB Project Certificate under the NLCA, Article 12, section 12.6.17 following the final decision of the Minister of Aboriginal Affairs and Northern Development.

NIRB ASSESSMENT AND DECISION

After a thorough assessment of all material provided to the Board, and in accordance with the primary objectives as described above, it is the determination of the Board pursuant to Section 12.10.2(b) of the NLCA that the request to except the activities included in Sabina's Site Preparation Work application from the NIRB's ongoing Review of Sabina's Back River Gold Mine Project (NIRB File No. 12MN036) should be rejected. As explained more fully in the text that follows, the basis for the Board's rejection of this exception request is that, the Board, like several intervenors, did not find that the information supplied with the request established that the potential for impacts associated with the excepted activities are sufficiently understood to proceed without further assessment. Further, the Board determined that the uncertainty created by current data gaps associated with the request could not be addressed by the NIRB providing recommendations to minimize the potential for impacts, and therefore the activities should not be authorized to proceed in advance of the Board's consideration of the main project under the Part 5 Review.

² Excerpt from the September 13, 2011 correspondence of the Minister of Aboriginal Affairs and Northern Development referring the Meliadine Gold Project (NIRB File No. 11MN034) to the NIRB for public Review and noting that the Project Proposal included a request for the NIRB to consider the construction of an All-Weather Road as an exception from the requirement for Review under the NLCA 12.10.2

PROCEDURAL HISTORY: BACKGROUND

On June 14, 2012 the NIRB received the Back River project proposal directly from the Proponent, and subsequently on July 12, 2012 the NIRB received a referral from the Nunavut Water Board. The Back River project is located in the Kitikmeot Region of Nunavut, an area that does not currently have an approved land use plan in place; therefore, a conformity determination from the Nunavut Planning Commission was not required for this file. The NIRB assigned this project proposal file number 12MN036 and commenced its screening pursuant to Article 12, Part 4 of the NLCA.

On September 25, 2012 the NIRB issued its screening decision report to the Honourable John Duncan, then-Minister of Aboriginal Affairs and Northern Development, which recommended pursuant to NLCA Section 12.4.4(b) that the Back River Project required a Review under Part 5 or 6 of Article 12 of the NLCA. On December 17, 2012 the Minister referred the Project to the NIRB to conduct a Review to assess the ecosystemic and socio-economic impacts of the proposal pursuant to Article 12, Part 5 of the NLCA. In addition, pursuant to Section 12.5.1 of the NLCA, the Minister also provided specific direction to the Board regarding its consideration of potential transboundary impacts and potential cumulative effects associated with this project proposal.

Pursuant to Section 12.5.2 of the NLCA, on April 30, 2013 the NIRB issued its *Guidelines for the preparation of an Environmental Impact Statement for Sabina Gold & Silver Corp.'s Back River Project (NIRB File No. 12MN036)* (i.e. EIS Guidelines) to the Proponent.

On January 20, 2014 the NIRB acknowledged receipt of Sabina's *Draft* EIS (DEIS) submission for the Back River project and, on February 11, 2014, provided notification to Sabina that the DEIS conformed to the NIRB's EIS Guidelines. The DEIS included specific references to applications for various site preparation and other pre-development works to be considered by the NIRB as potential exceptions from the Review process pursuant to Section 12.10.2(b) of the Nunavut Land Claims Agreement (NLCA). The various applications for authorizations for these works were also included as appendices to Volume 12 of the DEIS.

On March 21 and April 7, 2014 the NIRB requested that Sabina provide clarification on the scope of the requested exceptions; Sabina responded that the various applications contained within Volume 12 of the DEIS had been intended for the Board's consideration as exceptions from Review, and were complete applications but noted that the applications that had not yet been submitted to relevant agencies (separately from the DEIS submission to the NIRB) to initiate associated licensing, permitting or other approval processes. On May 30, 2014 the NIRB received notification from Sabina of their intentions to submit an updated application package after receiving further direction from the Nunavut Water Board.

PROCEDURAL HISTORY: CURRENT APPLICATION

On October 20, 2014, the Nunavut Impact Review Board (NIRB or Board) received an updated application package from Sabina for proposed works and activities in support of the Proponent's Site Preparation Work, pursuant to NLCA Section 12.10.2(b). On October 27, 2014 the NIRB

issued correspondence to the Proponent noting that receipt of a formal request from an authorizing agency to screen the proposed works would be required for the NIRB to commence its assessment of the updated exception application package. On November 24, 2014 the NIRB received a referral from the Kitikmeot Inuit Association to screen the applications for access to Inuit Owned Lands and consequently the NIRB commenced its assessment of the updated Site Preparation Work application package pursuant to NLCA Section 12.10.2(b). On December 9, 2014 the NIRB invited comments from interested parties on Sabina's 12.10.2(b) application and requested that comments be submitted directly to the NIRB on or before January 13, 2015.

As activities excepted under NLCA Section 12.10.2(b) would be considered for approval separately from the NIRB's Review of Sabina's Back River Gold Mine project proposal, parties were asked to provide comments and advice to the Board regarding the following issues:

- A determination of whether Parties agree/disagree with the conclusions in the 12.10.2(b) application package regarding the alternatives assessment, environmental impacts, proposed mitigation, significance of impacts, and monitoring measures – and reasons to support the determination;
- A determination of whether or not conclusions in the 12.10.2(b) application package are supported by the analysis – and reasons to support the determination;
- A determination of whether appropriate methodology was utilized in the 12.10.2(b) application package to develop conclusions – and reasons to support the determination, along with any proposed alternative methodologies which may be more appropriate (if applicable);
- An assessment of the quality and presentation of the information in the 12.10.2(b) application package; and
- Any further comments regarding the expressed need for and required timing of the proposed exceptions as presented within the 12.10.2(b) application package – and reasons to support any comments made.

On or before January 13, 2015 comments regarding Sabina's 12.10.2(b) application were received from the following parties:

- Government of Nunavut;
- Aboriginal Affairs and Northern Development Canada;
- Environment Canada;
- Fisheries and Oceans Canada;
- Natural Resources Canada; and
- Transport Canada.

On January 14, 2015 and again on January 23, 2015 the NIRB received correspondence from the Kitikmeot Inuit Association (KitIA) advising that a comment regarding Sabina's 12.10.2(b) application would be forthcoming; on February 13, 2015 the NIRB received KitIA's comments and proceeded to consider the Site Preparation Work application.

On February 3, 2015 the NIRB provided Sabina with an opportunity to address the comments and concerns raised through the submissions of parties; on March 26, 2015 the NIRB received Sabina's response to parties' comment submissions.

PROPOSED ACTIVITIES AND SCOPE OF ASSESSMENT

Sabina's Site Preparation Work application package included one new Type B water licence application with the Nunavut Water Board, two applications with the Kitikmeot Inuit Association for access to Inuit Owned Lands, and one Request for Review Application³ with Fisheries and Oceans Canada.

The scope of Sabina's Site Preparation Work application package includes components related to the support of advanced exploration, environmental baseline activities in the proposed project area and measures intended to improve safety and environmental protection. In addition, Sabina has proposed activities related to site development, specifically the extension of the current Goose airstrip, quarry and road development, as well as the transportation and storage of equipment, fuel, and materials intended to allow for timely progress of the construction phase of the proposed Back River Gold Mine, if allowed to proceed.

Sabina is requesting approval for site preparation work at both the Goose Property and at the proposed Marine Laydown Area at Bathurst Inlet, with proposed commencement of activities in 2015 for an approximate 6 month construction period.

The proposed activities include:

- At the Goose Property:
 - An all-weather airstrip extension;
 - Realignment of Rascal Lake outflow stream;
 - New quarry within the future Umwelt open pit footprint;
 - Develop a 5 kilometre (km) all-weather road and 6 km ice road to gain access to the new quarry; and,
- At Bathurst Inlet: establishment of a temporary laydown area for the staging of fuel and supplies arriving by barge.

SUMMARY OF COMMENTS RECEIVED

The following provides a *summary* of the comments and concerns received during the public commenting period for this file. Please refer to Appendix A of this determination to review the comment submissions in its entirety.

³ Request for Review Application to determine if the proposed works would result in a *serious harm* to fish as defined by Section 35 of the *Fisheries Act*.

Kitikmeot Inuit Association (KitIA)

The Kitikmeot Inuit Association submitted comments, concerns and/or information requests regarding the proposed culverts, baseline information and Sabina's No Net Loss plan.

- Requested clarification on detailed design of culverts, rational for proposed two side-by-side culverts;
- Requested clarification on monitoring and mitigation plans;
- Requested information on monitoring methods for Rascal Stream East;
- Noted and supported the importance of comprehensive adaptive monitoring plans during and following construction;
- Noted the need for better accordance of the fisheries assessment of Rascal Stream alignment with the updated Fisheries Act (November 2013);
- Requested further information on the mitigation and management measures proposed to achieve No Net Loss of fisheries productivity;
- Recommended geotechnical characterization for limited acid rock drainage conclusions be confirmed and documented with supporting geochemical analyses for all berm materials prior to any construction;
- Recommended the frequency of contact water quality monitoring and review be established;
- Recommended including mitigation and management information for all crossings; and
- Recommended clarification on whether or not monitoring for potential fish stranding is being proposed, or justify otherwise by providing an assessment of potential risk that incorporates similar examples elsewhere.

Government of Nunavut (GN)

- The Government of Nunavut (GN) noted that in general it agreed with Sabina's conclusion that most of the adverse effects from the proposed activities were likely to be mitigated;
- The GN further noted that where Valued Ecosystem Components were considered in the application, Sabina provided only a discussion of baseline conditions and a list of potential impacts, without discussion of the significance of these potential impacts;
- The GN requested that Sabina provide greater detail and clarification regarding certain aspects of its 12.10.2(b) application to allow parties to fully assess the potential impacts of the activities proposed:
 - potential impacts on terrestrial wildlife;
 - submission of the actual wildlife monitoring plans updated to include the proposed activities and commitments in the project description; and
 - airstrip expansion, updated air quality and noise models, the type of aircraft and frequency of trips associated with the project, and an effects assessment to include the potential effects of a larger class of aircraft on wildlife.

Aboriginal Affairs and Northern Development Canada (AANDC)

- Aboriginal Affairs and Northern Development Canada (AANDC) noted a lack of coherent analysis of the various alternatives and rationale utilized by Sabina for selecting a given option based on the stated criteria;
- AANDC also noted that there appeared to be no consideration for alternatives for some of the site preparation works such as the all-weather road, and the proposed Rascal Lake stream outflow realignment;
- AANDC detailed that most of the provisions of Section 6, Subsections 2b and c, of the NIRB's Guide 9⁴ had not been met in the 12.10.2(b) application: the analysis and conclusions contained in the application do not include detail about the actual alternatives considered, thus making it difficult to assess whether sufficient consideration was given to environmental and socio-economic concerns in Sabina's analysis of options for the proposed works;
- AANDC further noted that Sabina had previously made commitments at the NIRB's Pre-Hearing Conference⁵ that it would provide additional information on various project activities, especially alternatives, in its Final Environmental Impact Statement; this included the project activities in the 12.10.2(b) application such as the all-weather road, all-weather airstrip extension, Rascal Lake outflow stream realignment, and operation of a temporary laydown area;
- AANDC requested additional detail related to the existing environment, methods of the impact prediction and significance determination, evidence of public engagement, additional details on proposed monitoring and justification, and additional detail on the permanence or reversibility of components; and
- AANDC acknowledged the difficulty involved in collecting detailed information at this stage of the assessment, however also indicating that AANDC believes that improvements can be made to the 12.10.2(b) application by incorporating AANDC's suggestions and implementing adaptive management and monitoring approaches.

Environment Canada (EC)

- Environment Canada (EC) provided comments and specialist advice for the NIRB's consideration pursuant to the *Canadian Environmental Protection Act*, 1999, the pollution prevention provisions of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*; and
- As a result EC's review of the 12.10.2(b) application, additional information was requested related to water quality monitoring with updates also required in various proposed management plans, as well as additional geotechnical information required, and a need for discussion of additional mitigation practices that should be considered by Sabina to reduce impacts to wildlife and species at risk.

4 Nunavut Impact Review Board Guide 9: DRAFT Guide to Exceptions from the Review Process, Section 6: the Application, dated April 2012.

5 Nunavut Impact Review Board Technical Meeting and Pre-Hearing Conference held in Cambridge Bay November 13-19, 2014.

Fisheries and Oceans Canada (DFO)

Fisheries and Oceans Canada (DFO) focused its review and comments on the required installation of culverts along the all-weather access road and the required realignment of Rascal Stream associated with the proposed expansion of the airstrip.

- DFO noted that, as the works outlined in the 12.10.2(b) application were included in Sabina's Draft Environmental Impact Statement for the Back River project, the deficiencies which DFO noted in its October 6, 2014 technical review comments were applicable and had resulted in several commitments from Sabina to provide additional information in its Final Environmental Impact Statement; this additional information has not yet been received;
- DFO agreed with the conclusions presented by Sabina regarding the potential environmental impacts, proposed mitigation, significance of impacts and monitoring measures; however it noted culvert design discrepancies between what was presented at the NIRB's technical meetings and what is currently proposed in the 12.10.2(b) application;
- It was further noted that the rationale for the change in the design criteria for the culverts was not provided, nor were the requested engineering drawings; therefore DFO would be unable to assess the extent of the impact on fish and fish habitat resulting from the culvert installations and associated infilling. As a result, DFO requested additional information on these specific items; and
- DFO was satisfied with the quality and presentation of the information in the 12.10.2 application as it relates to the proposed watercourse crossings and the realignment of Rascal Stream, with the exception of the outstanding information requirements outlined in its submission.

Natural Resources Canada (NRCan)

Natural Resources Canada's (NRCan) comments were related to explosives storage, quarry rock characterization, and permafrost and terrain stability, and requested clarification on the scope of activities in the application, noting that additional information and clarification on these topics was required.

- NRCan noted that the Proponent indicated its intention to avoid geochemically unsuitable material, without establishing whether this would always be possible and without described how geochemically unsuitable material would be managed; and
- NRCan noted that it had referred to various issues requiring further study or analysis during the technical review of the Draft Environmental Impact Statement that, if not already conducted, would be useful to support the design and final siting or routing of infrastructure proposed in the 12.10.2(b) application.

Transport Canada (TC)

- Transport Canada (TC) indicated that the Proponent's Oil Pollution Emergency Plan (OPEP) must be updated to comply with sections of the *Canada Shipping Act* and applicable regulations;

- TC noted its requirement under the Marine Transportation Security Regulations to review the proposed security procedures prior to any Part 2 vessels interfacing with the Project site, to identify any gaps of vulnerabilities that may be outstanding;
- TC also included several requests for information within its comment submission;
- In general, TC agreed with the information presented within the 12.10.2(b) application, provided that the Proponent conforms to the regulatory requirements outlined in TC's comments; and
- TC noted that an OPEP must be submitted to TC for review prior to the commencement of the proposed activities, with the requirements Marine Transportation Security Regulations needing to be met prior to any vessel actually interfacing with the project site.

ASSESSMENT OF THE APPLICATION

After a thorough assessment of all materials provided to the NIRB for this project proposal, it is the opinion of the Board that due to the gaps in the supporting information provided, the Proponent has not established that the proposed activities in Sabina's "Site Preparation Work" proposal will not cause significant adverse impacts or public concern if allowed to proceed without being subject to the Review. In the Board's view, the proposed activities included under the Site Preparation Work proposal require additional assessment so that the Board is confident that the potential for impacts associated with the activities is more thoroughly and adequately understood before the activities are permitted to proceed. As a result, these activities will continue to be assessed through the Part 5 Review of the related project.

Activities related to the ongoing exploration and research of the "Beechy Lake Area" (NIRB File No.: 08EA084) as well as exploration supplies staging and movement via the "Winter Roads – Hackett, George and Goose Camps" project (NIRB File No.: 09RN066) may still be permitted to proceed.

The NIRB's assessment included consideration of the following general items:

1. Rationale, objective, implications of the proposed activities on the feasibility of the related project undergoing Review

The Proponent provided its rationale and justification for its current application for site preparation work to enable timely and efficient construction and operation of the Back River Gold Project if approved. These activities would be supported by the existing camp and infrastructure and would involve activities in relation to the following additional infrastructure improvements: extending the existing all-weather airstrip; constructing an all-weather road corridor from the existing Goose camp to the rock quarry west of camp onto the proposed Umwelt quarry; temporary marine laydown; and ice-road.

Aboriginal Affairs and Northern Development Canada (AANDC) noted that all of the highlighted projects/activities were more appropriately considered exemptions from screening pursuant to section 12.4.3 of the Nunavut Land Claims Agreement and not as exceptions from Review pursuant to NLCA section 12.10.2(b). Sabina also highlighted that a large number of the

activities included in “Site Preparation Work” application are activities that have already been screened by NIRB. However, rather than suggest that these activities should be exempt from further assessment under section 12.4.3 of the NLCA, Sabina cited the prior screenings to demonstrate that these activities have already been determined to have low impacts in support of exempting the activities in the Site Preparation Work application from further assessment during the Review of the related project.

The Kitikmeot Inuit Association (KitIA) and Environment Canada (EC) noted gaps in the information provided in support of the monitoring and mitigation plans for the proposed Rascal Stream Realignment. The Government of Nunavut (GN) indicated that in its view the application package contained insufficient information to fully assess the potential impacts on terrestrial wildlife from the proposed activities.

Given the fairly advanced stage of the Review of the related project (awaiting the receipt of the Final Environmental Impact Statement from the Proponent in the next few months), the Board questions whether Sabina has established the need for the exception activities to support timely and efficient construction and operation of the Back River Gold Project, if approved. Further, the Board shares the concerns expressed by several Intervenor that insufficient information in the application package meant that the parties, and ultimately, the NIRB, could not adequately assess, without further and better information, the potential for impacts posed by these activities. The Board was particularly concerned by the insufficient information regarding potential for effects on terrestrial wildlife.

Consequently, the Board did not have sufficient information to conclude that the activities included in the Site Preparation Work application could truly be said to represent low potential for impacts. In the result, the Board did not approve the exception activities proceeding to licensing without any further assessment by the NIRB of the potential for impacts, and instead requires the exception activities (other than those that may already have been screened by the NIRB and could be exempt from further assessment under Article 12, Section 12.4.3) to be included in the Board’s continuing review of the related project under Part 5 of Article 12 of the NLCA.

2. The permanence of proposed structures

In its 12.10.2(b) application to the NIRB, Sabina indicated that the Rascal Lake outflow stream realignment would be permanent. The quarry, all-weather airstrip, and all-weather road would also be permanent and used throughout the Project lifecycle. The ice road would be temporary until the all-weather road is commissioned. However, the temporary laydown area would be temporary and decommissioned at the end of the exploration phase of the Project.

Sabina explained in its Closure and Reclamation plan that should the site close, culverts would be removed from any access road and natural drainage restored. The access road would otherwise remain intact. The airstrip at the Goose Property would remain intact. Once the desired volume of rock has been removed from the Goose quarry, it would be permitted to passively flood, and subsequently once the Umwelt quarry is closed, it would be abandoned to its design and management plan specifications.

The Temporary Laydown Area at Bathurst Inlet is planned as a temporary structure within the footprint of the proposed future Marine Laydown Area to minimize area disturbance; however, AANDC noted that due to the amount of development proposed at the site, that it should be considered a permanent structure, not temporary.

Transport Canada also noted that, as identified during TC's review of the Draft Environmental Impact Statement, there were various issues requiring further study or analysis that would be very useful to support the design and final siting or routing of infrastructure proposed in the 12.10.2(b) application.

Given the permanence of much of the infrastructure proposed to be developed under the scope of the excepted activities, coupled with information gaps, as noted by TC that could affect final siting, staging and routing of infrastructure, the Board has concerns that allowing these activities to proceed without further assessment could result in permanent infrastructure being located and developed without the benefit of a full and integrated understanding of the site conditions and required mitigations. If these activities were allowed to proceed in advance of the Review of the related project, there is a risk that the Board will be limited to managing impacts through mitigation measures designed after the fact rather than by including more fulsome consideration of impact mitigation requirements in advance of Sabina making final infrastructure siting and development decisions.

3. Alternative uses of proposed structures or materials if the related project under Review was not to be approved

Sabina did not indicate any alternative uses for the proposed structures associated with the 12.10.2(b) application, should the Back River Gold Mine project (NIRB File No. 12MN036) not proceed. Within the application, the Proponent reviewed its alternatives assessment, noting the selected alternatives were based on technical feasibility; cost implications; potential impacts to the environment; amenability to reclamation, and community engagement.

The KitIA noted concerns with the potential impacts of the proposed Rascal Stream Realignment alternative. AANDC recommended that Sabina provide a more detailed analysis of alternatives, clearly explaining what criteria and rationale were used to select the proposed alternatives as well as the alternatives that remained viable. In its written response filed with the NIRB, Sabina explained all activities proposed for the Site Preparation Work application were consistent with the larger project assessed in the Draft Environmental Impact Statement (DEIS) and was referenced for further review of the comprehensive assessment. Further, Sabina indicated the Site Preparation Work application identified only the project components that carried low potential for environmental impact while also providing the most benefit to the project development schedule.

As noted in the background part of this report, if Sabina were granted the ability to proceed with the activities included in the Site Preparation Work application without further assessment, the "green light" on the exception activities would not affect the Board's jurisdiction to make recommendations as to whether that the related project should or should not be allowed to

proceed at the conclusion of the Board's Review. Consequently, the question of alternative uses for the proposed structures should the related project not be recommended to proceed is an important consideration to the Board. Where, as here, the Proponent has not provided information regarding the alternative uses of the infrastructure developed as an exception from further assessment, the NIRB has to assume that no further use of the infrastructure will be made and has had to consider the potential for adverse effects when such infrastructure is abandoned and/or reclaimed.

4. Significance of potential ecosystemic and socio-economic impacts

Several potentially significant ecosystemic and socio-economic impacts were identified, as follows.

- Ecosystem, wildlife habitat and Inuit harvesting activities:
 - Potential impacts to water quality from storage and transfer of fuel as well as dust from airstrip, road, and quarrying activities. The Proponent has provided a comprehensive spill contingency plan and would require a water licence from the Nunavut Water Board.
 - Potential impacts to caribou and caribou calving (Bathurst herd; Beverly herd; and Dolphin and Union herd) from transport of personnel to project sites by helicopter.
- Socio-economic effects on northerners:
 - Potential positive impact as Proponent has committed to using wildlife monitors through the local Hunters' and Trappers' Organization, as well as sourcing accommodations for project personnel within the community.
- Technological innovations for which the effects are unknown:
 - Not a concern for this project.

As noted under the discussion of Item 1 above, the Board did not find that they had sufficient information to conclude that the activities included in the Site Preparation Work application could truly be said to represent low potential for impacts. In particular, as noted by Intervenor, information regarding potential impacts to terrestrial wildlife and wildlife habitat was lacking and this hampered the Board's confidence that the activities should be allowed to proceed without additional assessment.

5. Public concern

The Board notes no significant public concern was expressed during the public commenting period for this file.

6. Posting of security/performance bonds

The Board notes that Sabina has estimated its reclamation liability for the work proposed to be inclusive of all current liabilities at the Goose Property, at \$2,354,950.

Validity of Land Claims Agreement

Section 2.12.2

Where there is any inconsistency or conflict between any federal, territorial and local government laws, and the Agreement, the Agreement shall prevail to the extent of the inconsistency or conflict.

Dated April 30, 2015 at Churchill, MB.



Elizabeth Copland, Chairperson

Attachments: Appendix A: Public Comment Submissions

Appendix A
Public Comment Submissions



February 13, 2015

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Kristina Benoit
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Nunavut Impact Review Board
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Re: NIRB 12MN036: Comments on Sabina's 12.10.2 Exception Application pertaining to the proposed Back River project

Via email: info@nirb.ca

Dear Ms. Benoit:

The Kitikmeot Inuit Association (KitIA) is writing in response to the NIRB's request for comments on Sabina's 12.10.2(b) exception application pertaining to the proposed Back River project, originally requested by January 13th, 2015. On January 23rd, 2015 the KitIA requested an additional 3 weeks to submit our response.

The KitlA would like to thank the NIRB considering the attached comments. Please feel free to contact us if you have any questions.

Sincerely,

Original signed by

Tannis Bolt
Project Officer
Kitikmeot Inuit Association



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The KitIA retained Hutchinson Environmental Sciences Ltd. (HESL) and Palmer Environmental Consulting Group (PECG) for this review. Our review of Sabina's Site Preparation application focused on the Rascal Lake outflow realignment and the new 5km all-weather road to the proposed Umwelt quarry. The documents reviewed were as follows:

- Follow up to Application for Activities considered Allowable as Exceptions to the NIRB Review per NLCA 12.10.2,
- Appendix B - Back River Pre-development Activities Project Description,
- Appendix C - Comprehensive Spill Contingency and Emergency Response Plan,
- Appendix D - Comprehensive Waste Management Plan,
- Appendix E - Comprehensive Hazardous Materials Management Plan,
- Appendix F - Comprehensive Quarry Management Plan,
- Appendix G - Comprehensive Transportation Management Plan,
- Appendix H - Abandonment and Restoration Plan,
- Appendix I - Oil Pollution Emergency Plan, and
- Appendix K - Fisheries Assessment of Rascal Stream Realignment.



The KitIA has multiple comments, concerns and/or information requests regarding the proposed culverts, baseline information and Sabina's No Net Loss plan, and as a result we have summarized the comments, concerns and/or information requests under the following categories:

Culverts:

The KitIA is requesting either justification or further details on the following comments regarding proposed culverts:

- Please clarify the number of crossings, crossing names, and illustrate labelled location on an updated map figure for all of the all-weather road crossings;
- Please provide rationale for proposing two side-by-side culverts rather than one, and whether or not Sabina will adopt SRK's recommendation to use box culverts and thereby avoid additional excavation;
- Please include details surrounding culvert construction plans including: potential for velocity barriers for fish and whether or not culverts are sized for the 100-year flood event. If not sized for the 100-year flood event, please provide justification for this change; and,
- Please provide further detail regarding an adaptive monitoring plan in the event that culvert flow velocities impede Arctic grayling migration. The plan should include triggers and action items that are clearly defined so there is minimal lag that may further affect fisheries productivity.

Baseline:

- Please provide monitoring methods that will be directly comparable to those used in baseline monitoring in Rascal Stream East (RSE) (e.g., visual counts prior to any trapping or netting); and,
- It is recommended that a second year of data is collected prior to the proposed Rascal Stream realignment. We recognize that this will not be possible under the timing of the proposed plans, but have included here as a note and to support the importance of comprehensive adaptive monitoring plans during and following construction.

No Net Loss:

Both the project proposal and the fisheries assessment of Rascal Stream alignment could benefit from better accordance with the updated Fisheries Act (November 2013). Under the updated *Fisheries Act*, proponents are now required to illustrate how their projects will achieve No Net Loss of fisheries productivity rather than fish habitat. Thus, references to any harmful alteration, disruption or destruction of fish habitat (HADD) and DFO operational statements in the project description are not consistent with the updated version of the *Act*, and should be removed or modified using updated guidance. For example, it is recommended that Sabina outlines its plan for obtaining a *Fisheries Act* authorization, including undertaking a Self-Assessment for all of the culvert crossings and the channel realignment, identifying the applicable "Measures to Avoid Harm", and describing the steps planned to engage DFO in a project review.



The KitIA is of the opinion that water flow and sedimentation (due to increased velocity of water) could have a combined effect on water quality and fish production. Based on this opinion the KitIA requests the following additional information/clarity:

- Please outline additional specific criteria of success that can aid in strengthening the evaluation of achieving No Net Loss of fisheries productivity. Examples of how this may be completed are described in Pearson et al. (2005);
- Please provide examples of other studies where Arctic grayling have successfully adapted to a new habitat for spawning, rearing, and migration. Include details such as the distance between old and new habitats, the difference in habitat types, and any successful mitigation strategies for enhancing Arctic grayling usage. If useful, provide details of an adaptive management plan aimed at maintaining fisheries productivity. The plan should take into account the low likelihood of Arctic grayling using RSW for spawning in the first year or so, as Arctic grayling typically require clear, fast flowing streams for spawning (Stewart et al. 2007), and no spawning was observed previously in this system;
- Please provide further detail regarding the configuration and the trigger for using sediment curtains in Goose Lake;
- Please include details for monitoring sediment quantity in RSW. For example, sediment traps can be placed in the bed upstream of proposed spawning areas. It is noted that this monitoring may not need to be intensive if the previously-suggested erosion studies are completed; and,
- Please indicate whether or not the stream realignment design was approved by a qualified fluvial geomorphologist. At a minimum, we recommend a simple erosion analysis should be completed to assess how the new flow regime will compare to the existing one, in terms of erosion potential.

In addition to the categories above, the KitIA provides the following recommendations:

The realignment of Rascal Stream would be achieved by constructing berms using material sourced from the existing approved quarry or the Umwelt Pit which should not pose a concern as these sources are stated as “are classified as non-PAG or low S material with a limited potential for ARD. Additionally, based on low solid phase arsenic concentrations, metal leaching is unlikely to be an issue” (Section 4, Appendix J). We note, however, that these descriptions do not confirm the long term safety of the berm materials.

Recommendation 1: the supporting geochemical characterization describes, in general, a “limited potential” for ARD and metals leaching is said to be “unlikely”. We recommend that these conclusions be confirmed and documented with supporting geochemical analyses for all berm materials prior to any construction.



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In Section 7.1: Sabina specifies that runoff from the quarry will be required to meet MMER criteria, "Water quality results will be tracked on site, made available during inspections, and included in annual reports.". However, sampling frequency is not specified. This is concerning as Section 8: Adaptive Management relies on the fact that "regular inspections and the evaluation of... water quality monitoring will be reviewed by an environmental specialist". The plan does not provide a guarantee this will be frequent enough to catch any changes to water quality.

Recommendation 2: Sabina should indicate the frequency of contact water quality monitoring and review.

Only the Gander Pond Inflow Stream and the Echo Lake Outflow Stream are proposed to have embedded culverts, whereas the crossing type on the Rascal Stream is not specified.

Recommendation 3: Please include mitigation and management information for all crossings.

Reduced flows may continue in Rascal Stream East, with the potential for Arctic grayling stranding within the watercourse. There is no indication that monitoring is being proposed, even in the period immediately following berm construction, to mitigate any potential fish stranding. It is anticipated that some water will continue to seep and flow through the stony substrates on which the berms are proposed to be constructed. The impermeable geomembrane proposed within the berm core will not impede water flow below its lower limit.

Recommendation 4: Please indicate whether or not monitoring for potential fish stranding is being proposed, or justify otherwise by providing an assessment of potential risk that incorporates similar examples elsewhere.

If the proponent wishes for further direction or guidance on how to address these concerns please feel free to contact the Kitikmeot Inuit Association.

At this time the Goose Property Airstrip will not be designed to accommodate aircrafts as large as a Boeing 767. If larger aircraft are selected as a viable option, Sabina commits to updating the air quality and noise models and conduct an effects assessment to address the potential effects of this larger class of aircraft. This would be included in the FEIS.

With plans to extend the airstrip within this exception request, the GN would like the Proponent to update their air quality and noise models, and conduct an effects assessment to include the potential effects of a larger class of aircraft on wildlife before any of the proposed activities proceed. This updated assessment should include more information on the type of aircraft and frequency of trips contemplated by the proponent.

If you have any questions pertaining to this submission or regarding GN participation in the review process, please contact me at (867) 975-7830 or at asimonfalvy@gov.nu.ca.

Qujannamiik,

Agnes Simonfalvy
Avatiliriniq Coordinator

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Λ^{0c} C^c D^c C^c D^c Δ^b

January 13th 2015

Tara Arko
A/Director, Technical Services
Nunavut Impact Review Board
PO Box 1360
Cambridge Bay, NU
X0B 0C0

Via email: info@nirb.ca

RE: NLRB 12MN036: Request for comments on Sabina Gold and Silver Corporation's application for NLCA 12.10.2(b) Exception

Dear Ms. Arko,

Thank you for your letter dated December 9th 2014, requesting comments from federal departments on the 12.10.2(b) Exception application for Sabina Gold and Silver Corporation's Back River Project. I am responding on behalf of the federal departments including Aboriginal Affairs and Northern Development Canada, Environment Canada, Fisheries and Oceans Canada, Natural Resources Canada and Transport Canada.

The federal departments have conducted a review of the application package provided by Sabina, and understand that the comments provided will serve as an analysis on the completeness and quality of the information in the document. As requested, I am pleased to provide the NIRB with comments from the federal departments. (Attachments 1 - 5)

A contact list from federal departments for the Back River Project is also attached. (Attachment 6)

We look forward to participating in future stages of the review of this proposed project.

Sincerely,

Matthew Spence
Director General
Northern Projects Management Office

cc: James Neary, Aboriginal Affairs and Northern Development Canada
Michael Mohammed, Environment Canada
Georgina Williston, Fisheries and Oceans Canada
Kathleen Cavallaro, Natural Resources Canada
John Cowan, Transport Canada
Tineka Simmons, Northern Projects Management Office

Enclosed (7)	1	Aboriginal Affairs and Northern Development Canada	5.	Transport Canada
	2	Fisheries and Oceans Canada	6.	Federal Contact List
	3	Natural Resources Canada		
	4	Environment Canada		

Canada¹



Nunavut Regional Office
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Your file - Votre référence
12MN036
Our file - Notre référence
CIDM # : 879028

January 13th, 2015

Tara Arko
A/Director, Technical Services
Nunavut Impact Review Board
P.O. Box 1360
Cambridge Bay, NU, X0B 0C0
Via electronic mail to: info@nirb.ca

Re: **Acknowledgement of Sabina Gold & Silver Corporation's Application for NLCA 12.10.2(b) Exception and Request for Public Comment**

Dear Ms. Arko,

On December 09, 2014 the Nunavut Impact Review Board (NIRB) invited interested parties to comment on Sabina Gold & Silver Corporation's application for NCLA 12.10.2(b) exception for a suite of site preparation and exploratory activities related to its Back River Project which is currently undergoing an NCLA part 5 Review.

Activities described in Sabina's application that have already been approved and ongoing include;

- construction of Goose exploration camp,
- diesel and fuel resupply and storage,
- explosives and ammonium nitrate storage,
- exploration and study support; and,
- construction of ice-based airstrip.

The proposed site preparation works (SPWs) include;

- construction of ice road and associated water use,
- all-weather airstrip extension (from 915m -1524m),
- Rascal Lake outflow stream realignment,
- construction and use of a 6km all-weather road and associated crossings,
- quarry development and operation; and,
- staging of a temporary laydown area (TLA) at the site of the proposed marine laydown area (MLA).

Aboriginal Affairs and Northern Development Canada (AANDC) appreciates the opportunity to participate in this process and provides the following comments as per the NIRB's request:

- A. A determination of whether Parties agree/disagree with the conclusions in the 12.10.2(b) application package regarding the alternatives assessment, environmental impacts, proposed mitigation, significance of impacts, and monitoring measures – and reasons to support the determination;**

Alternatives assessment

Comment #1: The NIRB has produced guidance documents for proponents and interested parties that outline the procedures and criteria used in their review of project proposals. The NIRB's Guide 9 (currently in draft form) provides guidance with regards to exception from the review process [Section



12.10.2(b) of the Nunavut Land Claims Agreement (NLCA)]. The NIRB's requirements for alternatives assessment are outlined in section 6, sub-section 2, page 8. Based on this guidance, AANDC offers the following analysis.

Sabina's proposal contains a consideration of alternatives to the various site preparation activities (Appendix B; section 6.0, page 16-18) and, in most cases, lists the criteria that were used to evaluate alternatives. However, the Proponent did not present a coherent analysis of the various alternatives nor the rationale for selecting a given option based on the stated criteria. Apart from an insufficient alternatives analysis, there was no consideration of alternatives for some of the SPWs such as the all-weather road and Rascal Lake stream outflow realignment. As an example, for the all-weather road, the Proponent used very generic statements such as; *its layout reflects best practices for avoiding sensitive areas, such as archaeology sites, rare plants and lichens, special landscape features, and wildlife habitat features such as nesting sites and dens* (Appendix A, section 6.1 page 16) to support the proposed trajectory of the all-weather road, without mentioning other alternative trajectories against which proposed layout was compared in order to arrive at their decision. AANDC will also like to mention that Sabina's commitment to Pre-Hearing Conference commitment # 1 (PHC1) [AANDC Technical Review Comment #1(TRC1)]; *to show within the FEIS how alternatives were analyzed and to explain when options are dropped off, identify rationale for the selection, and clarify which alternative options remains a possibility* was not fulfilled as there is no improvement to the alternatives assessment in the current 12.10.2(b) exception application. Furthermore, most of the provisions of section 6 of the NIRB Guide 9 (sub-sections 2b and c, page 9) have not been met, thus making it difficult to assess whether sufficient consideration was given to environmental and socio-economic concerns in Sabina's analysis of options for carrying out the proposed SPWs.

AANDC recommends that Sabina provides a more detailed analysis of alternatives (all-weather road, all-weather airstrip extension, Rascal Lake outflow stream realignment, and operation of a temporary laydown area), clearly explaining what criteria and rationale were used to select the proposed alternatives as well as those alternatives that remain viable.

Environmental impacts, proposed mitigation, significance of impacts, and monitoring measures

The NIRB's requirements for impacts assessment are outlined in section 6, sub-section 4, page 9 of the Draft Guide 9. According to this section of the guide, an application for a 12.10.2 (b) exception should include: *a detailed account of any impacts to the environment which may result from the exploration and/or development activities and whether such damage can be effectively prevented, mitigated or reversed*. In addition, it should also include detailed management and monitoring plans updated to reflect realities of the proposed SPWs as well as *remediation plans that reflect the timing and life cycle of proposed activities*. Based on this guidance, AANDC offers the analysis outlined in Comments #2 through #6.

Comment #2: Water and sediment quality

a) In reviewing the proposal, AANDC observed that presentation of baseline concentration data for potentially problematic metals (Al, As, Cr, Cd, Cu, etc) in freshwater bodies and/or sediments was fragmentary. The baseline summary section contained numerous generic statements such as: *Metal concentrations in lakes are generally low, and tend to be lower in the summer than in winter; baseline water quality data are available from southern Bathurst Inlet from 2007, 2008, and 2012 to 2013; baseline sediment quality data are available from the area from 2007 to 2013, amongst others* (Appendix B, section 8.5.2.1, page 52). Although Sabina cross references portions of the DEIS as sources of further information in some cases (e.g. Rescan 2012a), it does not specify where in the DEIS documents and appendices this information is found, making it difficult to access information necessary to assess the impacts of proposed project activities on water and sediment quality.

In order to facilitate the assessment of impacts of SPWs on water and sediment quality, it is recommended that the Proponent clearly presents baseline metal concentrations, projected levels, and benchmark (CCME or equivalent regulations/guidelines) used for determining impact significance.



Presenting such data in tables (where possible) will greatly assist the reader to understand Sabina's analyses.

b) The Proponent has not provided sufficient detail on sewage management during SPWs. The absence of such information makes it difficult to assess the potential water quality impacts that may result from the use and discharge of water during the various site preparation activities. AANDC will like to note that although *Sabina has committed to providing more details in the FEIS on the waste water management strategy including sewage effluent...* [PHC 18 (AANDC TC 15)], we believe that the potential impacts of sewage effluent and/or grey water generated during proposed SPWs on water quality still needs to be analyzed in order to allow for development of appropriate mitigation measures. AANDC recommends that the Proponent provides an analysis of the impacts of sewage effluents/grey water on water quality and propose appropriate mitigation measures as well as monitoring plans.

c) In analysing the potential effects of construction and site preparation infrastructure use on water quality, the Proponent identifies runoff and dust deposition as potential effects pathways and goes further to state that: *some in-water or near-water activities required during site preparation also carry the potential for effects on water quality* (Appendix B, section 8.5.2.2, page 53) without further elaborating on these activities. AANDC recommends that the Proponent identifies the "in-water or near-water activities that could potentially impact water quality and propose specific mitigation measures.

d) The design of quarry A as *free-draining*; allowing water from the quarry to drain into low-lying areas and eventually into the stream that connects Gander Pond, is problematic as there are no water management structures in place. Although the Proponent plans to sample runoff from the quarry in order to compare this runoff to water quality criteria, there are no contingencies in place to deal with any potential exceedances of quarry runoff discharge criteria. AANDC suggests that the Proponent commits to managing quarry A pit water (e.g. by constructing ditches to divert runoff to a containment area such as a sump or a settling pond) in order to minimize potential impacts to downstream water bodies due to the release of potentially contaminated quarry pit water (TSS, dissolved metals, low pH) .

Comment #3: Quarry rock characterization and ARD/ML Potential

a) The Proponent has presented some data on geochemical characterization of rock from the proposed Goose and Umwelt quarries and concluded that material from the chosen locations is suitable for use in construction because of its limited potential for ARD (Appendix B, section 8.5.2.2, page 53). AANDC notes that only 16 of the 73 samples (i.e. ~22%) subjected to static testing were representative of material within the potential Umwelt quarry area. Sabina's analyses showed that 3 of the 16 representative samples have an uncertain ARD potential while one is PAG. Without conducting further kinetic testing to ascertain ARD potential it would be prudent for the Proponent to assume that 25% of greywacke samples (3 with uncertain ARD potential and 1 PAG) could potentially be acid generating. AANDC suggests that the Proponent commits to continued testing of quarry rock during excavation to confirm ARD/ML potential in order to ensure that acid-generating rock is not used in the construction of the all-weather air strip, road or related site preparation infrastructure.

b) In the Quarry Management Plan the Proponents states that *the greywacke would be suitable to use as construction material in conjunction with the gabbro as incidental ARD generated by the greywacke could be neutralized by the gabbro* (Appendix F, section 6.1.1, page 10) without stating a rationale for the use gabbro as an acid neutralizing agent. AANDC recommends that the neutralization potential of the envisaged gabbro material as well as the greywacke/gabbro ratio that would be used be presented in order to facilitate assessment of its utility as a neutralizing agent.

Comment #4: Vegetation

a) Sabina stated in the current proposal that *terrestrial ecosystem mapping (TEM) and rare plant surveys were conducted in 2012 within the vicinity of Goose Camp and the MLA* (Appendix B, section 8.4.2.1, page 27) and goes further to describe the plant species identified during the field surveys, without mentioning which specific vegetation field survey methodologies/techniques were used to collect these



data. It is generally known that the choice of field survey methodology can potentially affect the accuracy of predictions of a project's impacts on vegetation, thus non-mention of survey methods makes it difficult to evaluate Sabina's assessment of impacts of the project activities on vegetation. AANDC requests that Sabina provides details of the vegetation survey method(s) used in order to facilitate evaluation of the accuracy of the vegetation effects assessment presented.

b) In assessing the impacts of dust on vegetation, Sabina reports observing *Siphula ceratites* (a rare lichen) once within the area potentially impacted by the all-weather road and twice within the 500m buffer around quarries but then goes further to infer that these species might not be impacted by dust from SPWs because it does not occur *within the footprint of the proposed activities*. AANDC believes that this species might be impacted by dust as it has been found to occur within the alteration zone. AANDC recommends that the Proponent commits to re-evaluating the impacts of dust on this species and continued monitoring for any adverse effects.

c) There appears to be some inconsistency in the S-ranking for *Siphula ceratites* in Table 8.4-3 (S1S2) and the text on page 29 (S2S3). Sabina needs to rectify this apparent inconsistency.

Comment #5: Impact assessment methodology

a) In reviewing Sabina's proposed 12.10.2(b) exception application, AANDC observed that Sabina did not present sufficient detail on the methods/techniques used for impact prediction and significance determination. Although the Proponent identified potential effects of various project components on VECs/VSECs (Appendix B, Table 8.1-1 page 20), there is no mention of the magnitude of impacts or the level of significance of the identified effects, making it difficult to evaluate if the proposed mitigation measures are sufficient. Furthermore, only direct project impacts on VECs seem to have been assessed, with no consideration of potential indirect/secondary and cumulative impacts. Although some of the proposed site preparation activities might generate non-significant impacts on VECs (e.g. Caribou habitat) when examined individually, there is the possibility that these impacts, when combined with those from the larger Back River project and /or foreseeable future projects in the LSA could potentially generate significant effects. AANDC recommends that Sabina elaborates on the methods (qualitative or quantitative) used to assess the impacts of various activities on identified VECs/VSECs, the magnitude and direction of effects, mitigation measures and the significance of residual impacts.

b) Little information has been provided on Sabina's public consultation approach and assessment of the socio-economic impacts for the activities proposed in the current 12.10.2(b) exception application. Socio-economic impacts of the proposed activities are only presented in Table 8.1-1 (Appendix B, page 20) of the current submission thus making it difficult to assess how socio-economic impacts factored into the analysis. AANDC recommends that the Proponent provide more information on how potential socio-economic impacts are factored into the analysis (*i.e.*, public preferences, project sequencing, employment, potential socio-economic benefits, etc.)

Furthermore, although section 11.0 (Appendix B, page 68-70) discusses Sabina's approach to public consultation and engagement for the larger Back River project, it is silent on the public concerns raised about the current exception application. This goes contrary to the provisions of section 6, sub-section 6 of NIRB Guide 9. AANDC recommends that the Proponent provide more information on the issues identified from public consultations for the 12.10.2 (b) application and how such concerns have been addressed. AANDC would like the NIRB to note that the Department submitted technical comments (AANDC TC# 28 and 29) regarding Sabina's public consultation and engagement during review of the DEIS of the larger Back River project to which Sabina committed *to providing access to all primary documents used during public consultation in the FEIS (PHC #37)*. As noted above, Sabina did not provide any evidence of public engagement related activities to the 12.10.2(b) application.

Comment #6: monitoring measures

a) The proposed monitoring measures for wildlife and water quality are generally adequate. However, in its quarry management plan, Sabina acknowledges that during periods of high runoff, *water flowing from*



quarry areas may contain suspended solids due to erosion of ground surfaces, oils and grease from heavy equipment, ammonia from blasting residues, and metals but then goes further to state that runoff from the quarries will meet the quarry runoff discharge criteria (Appendix F, section 7.1, page 13) without mentioning how this determination was made, nor the contingencies to deal with discharge criteria exceedances. Furthermore, Sabina's *Abandonment and Reclamation Plan* states that *there are no water management ponds associated with the site preparation works* (Appendix H, section 3.8, page 14), so it is difficult to envisage how proposed monthly monitoring of water quality will prevent potential contamination of surface water bodies during high runoff periods if there are no water management ponds. AANDC suggests that the Proponent considers incorporation of water management ponds to serve as temporal water storage areas in cases where runoff water quality exceeds discharge criteria.

b) Sabina has proposed only two years of post-closure monitoring in the scenario where the larger Back River project is not authorized to proceed (*No-go alternative*), without giving a rationale and justification for this time frame. Compared to the 25 years post-closure monitoring for mine sites and contaminated sites in Nunavut, the proposed two years may be too short to reliably determine the stability of waste rock piles, landfills, and associated structures that could potentially be left behind at closure of the SPWs. AANDC had earlier commented that the five year post-closure monitoring time frame for the larger Back River project was too short and recommended that *the Proponent commits to re-evaluating and justifying the duration of post closure monitoring that will realistically be required* (AANDC TC # 25). Sabina concurred to this request and committed to *re-evaluating and providing additional justification on the duration of post-closure monitoring that will be required based on the new Mine Closure Reclamation Plan submitted as part of the FEIS (PHC #301)*. AANDC requests that the Proponent provides further rationale and justification for their determination that a two-year post-closure monitoring program is adequate. (See NIRB Direction in Guide 9, section 6, sub-section 4, bullet #3 page 9).

B. A determination of whether or not conclusions in the 12.10.2(b) application package are supported by the analysis – and reasons to support the determination:

Comment # 7: The issues identified in comments 1-5 make it difficult to affirm or refute conclusions in the 12.10.2(b) application. AANDC, however, acknowledges the difficulty involved in collecting detailed information at this stage of the assessment and believes that the Proponent can improve upon the current assessment and conclusions regarding assessment of impacts of proposed site preparation works (SPWs) on identified VECs (e.g., water and sediment quality, vegetation, caribou, etc) by incorporating the aforementioned suggestions and implementing adaptive management and monitoring approaches.

C. A determination of whether appropriate methodology was utilized in the 12.10.2(b) application package to develop conclusions – and reasons to support the determination, along with any proposed alternative methodologies which may be more appropriate (if applicable):

Comment #8: AANDC is unable to make a determination regarding the appropriateness of methodology utilized in the 12.10.2(b) application given that there was scant information on the methodologies and/or techniques used for impact prediction and significance determination, baseline vegetation surveys, amongst others. Although a summary of the interactions between VECs/VSECs and various site preparation activities is present on page 20 (Appendix B), it is difficult to understand how the Proponent arrived at the determination of negative but mitigable or non-mitigable as well as the significance of residual impacts. Furthermore, the prediction of potential effects of various SPW activities on VECs/VSECs appears to have been done qualitatively, which suggests that pathway assessment might have been done in a subjective manner. AANDC suggests that the Proponent provides more discussion regarding their impact assessment approach highlighting methods/techniques used to predict impact direction and magnitude, mitigation measures, significance of residual impacts as well as impact reversibility.



D. An assessment of the quality and presentation of the information in the 12.10.2(b) application package:

Comment #9: a) The maps provided in the project description do not give much detail, making it difficult to distinguish between infrastructures already in place and those for the proposed SPWs. Figure 5.0-2 (Appendix B, page 6) for example, is of insufficient topographic detail to allow for assessment of the proposed placement of culverts along proposed access roads and the ability of the planned locations and culvert numbers to adequately minimize water back-up during peak flows. AANDC recommends that the Proponent improves upon the quality and level of detail presented on maps. For maps depicting proposed access roads and air strip extension, it is suggested that the Proponent produces topographic maps. (See NIRB Direction in Guide 9, section 6, sub-section 1, Bullet #5, page 8).

b) The 12.10.2(b) application contains limited baseline data and although such information might well be present in cross-referenced DEIS documents, the lack of details on specific location makes it difficult to find referenced information. For example, the Proponent referenced Rescan 2012a, 2012b, 2012c, 2013a, 2013b, and 2014a as sources of further information but does not specify where in the DEIS documents and appendices this information could be found. Furthermore, the absence of summary tables for baseline datasets as well as projected changes makes it hard to visualize project induced changes and effects. In order to minimize excessive cross-referencing, it is recommended that the proponent endeavors to include tabulated summaries for baseline data, projected changes, and benchmarks (if available) used in determining impact significance. The specific locations of referenced material should be provided in situations where cross-referencing of DEIS is unavoidable. (See NIRB Direction in Guide 9, section 6, sub-section 4, bullet #2, page 9)

E. Any further comments regarding the expressed need for and required timing of the proposed exceptions as presented within the 12.10.2(b) application package – and reasons to support any comments made.

Comment #10: Project Rationale

Section 2.0 of the SPW proposal entitled *Rationale for application for exceptions* (Appendix B, page 2) does not provide a clear rationale to support the push for commencement of proposed activities prior to the larger Back River project review. Rather, this section discusses the NIRB's Guide 9 directives which address circumstances under which the NIRB may grant exceptions to proceed with exploration and/or development activities for a related project which is undergoing review. Although it might be inferred from some components of the proposal the SPWs are needed in order to ensure that project meets its time lines, the Proponent has not provided strong arguments to support this position. Furthermore, Sabina has stated in many of the supporting documents that the *SPW will consist of the positioning of equipment, consumables and fuel at the Project sites, the quarrying of aggregate for construction, and the establishment of basic infrastructure such as a section of all-weather road and an extended airstrip at the Goose Property*. None of the proposed activities pertain to exploration or continued baseline data collection. Without a strong rationale as to why these activities cannot wait until the larger Back River project review is completed, it is difficult to assess the need for this exception application at this time of the review. AANDC recommends that Sabina revises section 2.0 of the current submission to clearly state reasons why the proposed SPWs should be allowed to proceed now and not after the larger Back River proceed has been reviewed and a project certificate granted.

Comment #11: Distinction between exemption and exception

Although NIRB Guide 9 clearly distinguishes between exception and exemptions, Sabina appears to be mixing up these terminologies in many instances within the 12.10.2(b) application. For example, in Appendix H(page 6), Sabina states that; *the SPW is expected to undergo an environmental screening by NIRB, seeking an exemption or exception from review* while in Appendix B (page 1) they state that; *Sabina is seeking either exemption or "exception from review" be granted for activities required during two years of site preparation*. Furthermore, in its letter to the NIRB (*Re: Follow up to Application for*



Activities considered Allowable as Exceptions to the NIRB Review per NLCA 12.10.2) dated October 20, 2014 to show that precedent exists for activities to be exempted from review, Sabina compiled a list of activities (Table 2) that have been granted *exemption or exception* by the NIRB. However, all the highlighted projects/activities are 12.4.3 exemptions from screening and not 12.10.2 exceptions. All these suggest that the Proponent might be mistaking 12.4.3 exemptions for 12.10.2 exceptions. AANDC requests that the Proponent addresses the mix-up in terminology (exemption vs exception) clearly stating that they are applying for an exception and not an exemption from screening, given that the SPWs have already undergone a part 4 screening and referred for part 5 review under NLCA

F. The permanence of proposed infrastructure

Comment #12: In section 7.0 (Appendix B, Table 7.0-1), Sabina considers four activities (quarry construction and operation, all-weather airstrip extension, Rascal Lake outflow stream realignment and construction and operation of an all-weather road) to be permanent and the remaining two (ice road and water use & construction and operation of a TLA) as temporary. AANDC agrees with Sabina's classification for all proposed SPWs, except for TLA whose classification as a temporary structure *to be decommissioned at the end of the exploration phase of the Project* seems to go contrary to the reasoning and Sabina's explanation that the TLA would be established on the footprint of the MLA and used for storage of fuel, material and equipment for future activities (i.e. construction and operation of the larger Back River project). It is thus not clear whether Sabina intends to decommission the TLA and then re-construct the MLA on the same area or simply transition from TLA to MLA- a more logical approach. If the second option is true, then the TLA will be temporary only if the larger Back River project is not authorized. In the case where the project is approved, the TLA will transition into the MLA and should be considered permanent. AANDC suggests that Sabina clarifies its classification of the TLA as temporary infrastructure.

G. The reversibility of potential impacts

Comment #13: After AANDC's review of Sabina's 12.10.2(b) application documents, it is evident that most vegetation loss due to proposed SPW would be irreversible even after implementation of Sabina's A&R plan considering that the Proponent has stated that: *active revegetation of the site as part of closure is not planned given the cold climate setting of the Project as well as the precedent established for closure in Nunavut*. It should be noted that AANDC recommended during the review of DEIS for the larger Back River project that Sabina commits to reconsidering active revegetation in its A & R plan and Sabina committed to include *the potential for re-vegetation research in the Preliminary MCRP in the FEIS* (PHC #302).

Furthermore, Sabina has provided no analysis of the reversibility of impacts of the SPW in the 12.10.2 (b); thus making it difficult to assess of the reversibility of impacts of SPWs on the identified atmospheric, terrestrial, freshwater and marine environment VECs as well as human environment VSECs. AANDC suggests that Sabina assesses the reversibility of impacts of the SPWs on various VECs/VSECs, highlighting expected time frames for VECs/VSECs recovery.

H. The need for proposed security bonding

It is typical for this type of work to have a form of security associated with it. The Proponent has submitted such a cost estimate with its water licence application (8BC-BRP----) for the site preparation works, which has been distributed to interested parties for review by the Nunavut Water Board. This cost estimate is currently being reviewed by Aboriginal Affairs and will be commented on in a review memorandum to be provided to the Nunavut Water Board (NWB) on January 19th, 2015. A security amount will be set by the NWB taking into account the applicants cost estimate as well as any comments from interested parties. This security amount is then ultimately approved and accepted by the Minister of Aboriginal Affairs.

I. Whether an approval of the proposed activities would have the effect or appearance of fettering any further or final decision by the Board relating to the larger Back River mining and milling development proposal currently under review



AANDC takes no position on the issue of whether approval of the proposed activities would have the effect or appearance of fettering any further or final decision by the Board relating to the larger Back River mining and milling development proposal currently under review, and submits that this issue is one that must be determined by the Board.

Comment #14: Alteration of baseline conditions: AANDC believes that authorization of the proposed site preparation activities (construction of the TLA, extension of the airstrip and RSE realignment, quarrying activities, all-weather roads) to proceed concurrently with the part 5 review could potentially alter baseline conditions and interfere with accurate assessment of the environmental and socio-economic impacts of the larger Back project currently under review. Furthermore, failure to collect sufficient background before commencement of proposed SPWs could make it difficult to use post-EA monitoring data to evaluate accuracy/efficiency of mitigation measures. AANDC recommends that the Proponent commits to collecting all baseline data needed for assessing the environmental impacts of the larger Back River project currently undergoing a part 5 review prior to commencement of site preparation works, if approved

AANDC looks forward to collaborating with NIRB, Sabina and other interested parties during subsequent project review phases. Should you have any questions, please do not hesitate to contact Felexce Ngwa via telephone (867-975-4552) or e-mail (felexce.ngwa@aandc-aadnc.gc.ca).

Sincerely,

[Original signed by]

James Neary
Manager, Impact Assessment
Nunavut Regional Office, Aboriginal Affairs and Northern Development Canada



Environment
Canada

Environnement
Canada

Environmental Protection Operations Directorate (EPOD)
Prairie and Northern Region (PNR)
Qimugjuk Building
P. O. Box 1870
Iqaluit, NU X0A 0H0

January 13, 2015

EC file: 6100 000 115 /001
NIRB File No.: 12MN036

Kristina Benoit
Technical Advisor
Nunavut Impact Review Board
P.O. Box 119
Cambridge Bay, NU X0B 0C0

via: info@nirb.ca

RE: Sabina Gold & Silver Corporation's 12.10.2(b) Exception Application.

Environment Canada (EC) has reviewed the information submitted to the Nunavut Impact Review Board (NIRB) regarding the above-mentioned project proposal and is submitting comments on mitigation measures as well as other matters of importance to the project proposal as requested by the NIRB. EC's specialist advice is provided pursuant to the *Canadian Environmental Protection Act 1999*, the pollution prevention provisions of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

This proposed exception application involves work and activities associated with its Back River Gold Mine project proposal, which is currently undergoing a Part 5 Review by the NIRB.

For further clarification on any aspect of the submission, please contact me at (867) 975-4982 or john.price@ec.gc.ca.

Sincerely,

John Price
Environmental Assessment Officer

Attachment(s) – Environment Canada's Comments

cc: Dave Fox, A/Head, Environmental Assessment North (NT & NU), EPOD-PNR, EC
Michael Mohammed, Senior Environmental Assessment Coordinator, EPOD-PNR, EC
Jean-Francois Dufour, Habitat Biologist, CWS-Eastern Arctic, EC



Water Quality

1. Under Appendix K – Fisheries Assessment Stream Alignment detailed monitoring methods are provided for a number of parameters to ensure that the realignment is functioning effectively over time. These parameters include stream flow and water and sediment quality, among others. EC notes that monitoring for erosion at the western outlet of Rascal Stream has not been included in the monitoring. As this stream network will be experiencing increased flows due to the realignment there is potential for erosion at the outlet. Monitoring for erosion at the western outlet of Rascal Stream be included in the monitoring plan.
2. Under Appendix G – Transportation Management Plan, Section 2.3 - Site Preparation and Construction Activities indicates that Sabina intends to complete the majority of the construction activities pre-thaw, however, construction of the all-weather secondary road can be completed post-thaw and the ephemeral stream crossings will be built as the road reaches each crossing location. Although the streams crossed on the secondary all-season road are ephemeral, they do lead into fish bearing waters at Goose Lake, therefore, erosion, sedimentation and TSS are issues that should be mitigated during their construction. Wherever possible, any road construction involving culverts and stream crossings is completed pre-thaw to avoid sedimentation, erosion, and total suspended solids. Any construction done post-thaw should include additional mitigation measures to prevent erosion and stability issues.
3. Under Appendix F - Quarry Management Plan, Section 3.1.4 – Water Management indicates that Quarry A will be free draining and the runoff from the quarry will drain to a lower lying area and eventually to a stream. Runoff, if present, will be sampled and compared to the quarry runoff criteria. This water management strategy differs from that of the proposed Umwelt quarry. Although the report indicates that runoff from the quarry will be sampled it is unclear as to how the runoff will be collected if the quarry is to be free draining into the receiving environment. It is unclear why this water management strategy differs from the proposed water management, involving a sump method of collection, at Umwelt quarry. Any runoff be collected, sampled, and compared to criteria prior to discharge to the environment.

Geotechnical

4. Under Appendix J,

*Relevant static testing data from the Umwelt quarry area are summarized in Appendix 1. Figure 3 is a plot of the neutralization potential (NP) versus acid potential (AP) for the upper greywacke showing results for all of the samples from **the Umwelt and Llama deposit areas, with circles depicting the samples that are specifically representative of the potential quarry areas located on either side of the Umwelt mineralization trend.***

The generally low AP suggests that this material is not likely to be an appreciable source of acidity. NPs were also very low indicating limited pH buffering capacity. Based on these results, approximately 67% of samples are classified as non-PAG or as having a low sulphur content ($AP < 5$), 27% are classified as having an uncertain potential for ARD ($NP/AP = 1$ to 3), and 5% are classified as potentially acid generating (PAG; $NP/AP < 1$).

As stated previously, 16 of the upper greywacke samples are considered to be representative of the potential quarry area. The majority of these are classified as non-PAG or low sulphur material, and three samples are classified as having an uncertain potential for ARD. Only one of these samples has an AP greater than 10 kg CaCO₃ eq/t, again, indicating that this material is unlikely to be an appreciable source of acidity.



A look at Figure 3, and the samples (depicted with circles) representing the potential quarry area, indicates that there are several samples that fall within uncertain area though in the low sulphur (low S) area. It is always prudent to treat the samples in the uncertain region with caution and in some cases the mitigation applied to them is similar to PAG samples. It should also be noted that even with low sulphur content; the rocks may generate acid with time if there is little or no acid neutralization material. Any samples that fall in the uncertain region area with low sulphur be treated similarly as samples in the PAG region.

5. The Marine Laydown Area (MLA) in southern Bathurst Inlet will be used for annual resupply during the life of the mine and mobilize equipment for construction and demobilize during closure. Sabina will also build winter access roads to connect all the Properties.

Under Appendix B, Figure 5.0-1 “Overview of Area subject to Site Preparation Activities” appears to indicate that the Marine Laydown Area (MLA) is located about 120km off site NW of Goose property. Please be aware that when the mine become subject to *MMER* that the MLA will be subject to the s.36(3) of the *Fisheries Act* and not *MMER*. This is because MLA located at the south end of Bathurst Inlet is not part of the mine site and, for that reason, the requirements of the *MMER*, which apply only to the mine site are not germane to the operations at the MLA. While the *MMER* does not apply to discharges from the MLA environment around the MLA is protected by the general prohibition of s.36(3) of the *Fisheries Act*, which prohibits the discharge of deleterious substances into waters frequented by fish.

Wildlife and Species at Risk

6. Sabina identifies direct habitat loss and disturbance for migratory birds as potential effects of the site preparations activities. As a mitigation measure, Sabina proposes to conduct ground clearing outside sensitive periods where possible.

Sabina provides few details and does not commit to conducting land-clearing outside the migratory bird nesting period. As commented in Sabina’s DEIS, EC would like to remind the Proponent that land clearing activities conducted during summer have a high potential of incidental take of migratory birds.

EC is responsible for implementing the Migratory Birds Convention Act and the Migratory Birds Regulations. Paragraph 6(a) of the Migratory Bird Regulations states that no one shall disturb or destroy the nests or eggs of migratory birds. The inadvertent harming, killing, disturbance or destruction of migratory birds, nests and eggs is known as incidental take. Incidental take, in addition to harming individual birds, nests or eggs, can have long-term consequences for migratory bird populations in Canada, especially through the cumulative effects of many different incidents.

Currently the regulations do not provide for authorizations or permits for the incidental take of migratory birds or their nests or eggs in the course of industrial or other activities. As such, to minimize the possibility of contravening the law, taking reasonable care, and avoidance are the best approaches to take when contemplating any activity or decision that has the potential to impact migratory birds, nests or eggs. Project proponents are responsible for taking appropriate measures to ensure that they comply with the legislation and regulations.

To prevent detrimental effects on migratory birds, nests and eggs and help maintain sustainable populations of migratory birds, Environment Canada recommends that proponents know their legal obligations; avoid engaging in potential destructive or disruptive activities in key sensitive periods and locations; and develop and implement appropriate preventative and mitigation measures to minimize the risk of incidental take.



In the proposed project area, migratory birds may be found nesting from mid-May until mid-August; it is important to note that breeding periods may vary from year to year due to climatic conditions and some species may nest outside the dates provided if conditions are favourable.

If avoidance is not possible, EC recommends that scientifically sound approaches be used to determine the likelihood that migratory birds, their nests or eggs are present in a particular location and where further investigation is required to determine the presence of breeding birds, an area search for evidence of nesting be undertaken using non-intrusive search methods to prevent disturbance.

If there is indication of nesting or nests containing eggs or young of migratory birds are located or discovered, all disruptive activities in the nesting area should be halted until nesting is completed. Any nest found should be protected with a buffer zone appropriate for the species and the surrounding habitat until the young have naturally left the vicinity of the nest (see Table 1). Moreover, if there are migratory bird nests where work is proposed, options like avoiding, adapting, rescheduling or relocating activities that could disturb or destroy the nests should be considered.

EC encourages Sabina to use the setback distances in the following table to establish buffer zones to protect any nests found or indicated nests. EC also recommends the success of these mitigation measures be provided in annual wildlife monitoring reports.

Migratory Bird Species Group	Setback Distance for Pedestrians / ATVs (m)	Setback Distance for Roads / Construction / Industrial Activities (m)
Songbirds	30	100
Shorebirds	50 ^a	100 ^a
Terns/Gulls	200	300 ^b
Ducks	100	150
Geese	300	500
Swans/Loons/Cranes	500	750

^a If project activities are within the breeding ranges of American Golden Plover or Ruddy Turnstone, these setbacks should be increased to 150 m for Pedestrians/ATVs and 300 m for Roads/Construction/Industrial Activities respectively. If project activities are within the breeding ranges of Black-bellied Plover, Whimbrel or Red Knot (listed on Schedule 1 of the *Species at Risk Act*), these setbacks should be increased to 300m for Pedestrians/ATVs and 500m for Roads/Construction/Industrial Activities. If field crew are trained in the identification of these species then these higher setbacks need only apply to these more sensitive species, and lower setbacks can be used for the remaining shorebird species. In areas where several species are nesting in proximity, setbacks for the most sensitive species should be used.

EC encourages Sabina to consult Environment Canada's Incidental Take web page and the fact sheet "**Planning Ahead to Reduce the Risk of Detrimental Effects to Migratory Birds, and their Nests and Eggs**" at: www.ec.gc.ca/paom-itmb/ to obtain further information on how to protect migratory birds and their nests and eggs when planning or carrying out project activities.



5204-50th Avenue Suite 301
Yellowknife, NT
X1A 1E2

January 13, 2015

Your file *Votre référence*
12MN036

Our file *Notre référence*
12-HCAA-CA7-0007

Nunavut Impact Review Board
Attention: Tara Arko
A/Director, Technical Services
P.O. Box 1360
Cambridge Bay, NU X0B 0C0

Dear Ms. Arko:

Subject: Sabina Gold and Silver Corporation's Application for NLCA 12.10.2 (b) Exception

Fisheries and Oceans Canada's – Fisheries Protection Program (DFO) would like to thank the Nunavut Impact Review Board (NIRB) for the opportunity to provide comments on Sabina Gold and Silver Corporation's Application for NLCA 12.10.2 (b) Exception.

Fisheries and Oceans Canada is providing the following comments as requested by the NIRB as they relate to DFO's mandate. Specifically, DFO has focused our review and comments on the installation of culverts along the all-weather access road and the realignment of Rascal Stream associated with the expansion of the air strip.

- 1) A determination of whether parties agree/disagree with the conclusions in the 12.10.2(b) application package regarding the alternatives assessment, environmental impacts, proposed mitigation, significance of impacts and monitoring measures and reason to support the determination.

Fisheries and Oceans Canada notes that the works proposed in this application were also submitted for review in the Draft Environmental Impact Statement (DEIS) for the Back River Project. In DFO's Technical Review Submission for the Back River Project dated October 6, 2014 technical review comment 3.1.1 Freshwater Fish Community- Rascal Goose Lake Diversion and 3.1.3 Watercourse Crossings are also relevant to this application.



In response to DFO technical review comment 3.1.1 Sabina provided DFO with Appendix K- Back River Project- Fisheries Assessment of Rascal Stream Realignment. At the technical meeting for the Back River Project held on November 13-15 2014, Sabina made additional commitments (# 22-24) based on technical comments which arose from DFO's review of Appendix K. Sabina committed to providing this information in the NLCA 12.10.2 (b) Exception Application however this information has not yet been received.

In response to DFO's technical review comment 3.1.3, Sabina had committed to providing a response and incorporating DFO recommendations into the design of watercourse crossings. However, DFO notes that in the review the DEIS Sabina had indicated that they would be designing their culverts to handle a 1 in 50 year storm event and would be providing engineering drawings prior to the technical meetings. DFO notes that in the 12.10.2 (b) Application Sabina has stated that all major culverts will be designed to a 1 in 20 year return period and only 1 general engineering design drawing was provided in the 12.10.2 (b) application. The rationale for the change in the design criteria for the culverts has not been provided nor have the requested engineering drawings in order to DFO to be able to assess the extent of the impact on fish and fish habitat resulting from the culvert installations and associated infilling.

Also related to the installation of culverts along the proposed all-weather access road, the location of culverts was provided in the Appendix B -2015 Site Preparation Activities Project Description/ Environmental Screening Report- Figure 5.0-2. This figure does not provide the names of the watercourses and it is not clear which culverts are associated with the fish bearing watercourses identified in the text. Additionally, a culvert is proposed to be installed on the access road crossing over the Gander Pond inflow stream. This road is identified as a winter road in Figure 5.0-2, and the Proposed Access Road is identified as both a Winter Road and Access Road in Figure 5.0-2. DFO requests clarification on the extent of the proposed All-weather Access Road versus the proposed Winter Road, as well as clarification on culvert locations and associated watercourses.

Overall, based on our review of the proposed culvert installations and the realignment of Rascal Stream, DFO agrees with the conclusions presented on the environmental impacts, proposed mitigation, significance of impacts and monitoring measures. The additional information requested by DFO would provide additional clarification on the impacts and proposed mitigation measures but would not change the overall conclusions.

- 2) A determination of whether or not conclusions in the 12.10.2 (b) application package are supported by the analysis and reasons to support the determination.

Overall based on our review of the proposed culvert installation and the realignment of Rascal Stream, DFO is of the opinion that the conclusions in the 12.10.2 (b) application are supported by the analysis. The additional information requested by DFO would provide additional clarification on the impacts and proposed mitigation measures but would not change the overall conclusions.



- 3) A determination of whether appropriate methodology was utilized in the 12.10.2 (b) application package to develop conclusions and reasons to support the determination, along with any proposed alternative methodologies which may be more appropriate (if applicable).

It is DFO's opinion that appropriate methodology was utilized in the 12.10.2 (b) application package to develop conclusions for the realignment of Rascal Stream(Appendix K) and the installation of culverts along the access road.

- 4) An assessment of the quality and presentation of the information in the 12.10.2 (b) application package

It is DFO's opinion that the quality and presentation of the information in the 12.10.2 application was adequate as it relates to the proposed watercourse crossings and the realignment of Rascal Stream with the exception of the outstanding technical comments noted in the response to question 1. However, it is understood that at this stage of the project proposal, detailed engineering drawings and associated hydrology baseline data is often not available for all proposed crossing locations.

- 5) Any further comments regarding the expressed need for and required timing of the proposed exceptions as presented within the 12.10.2 (b) application package and reasons to support comments made.

Based on DFO's review of Appendix B (2015 Site Preparation Activities Project Description/Environmental Screening Report) Sections 1 and 2 DFO notes that limited information was provided on the rationale for the expressed need or required timing of the proposed exceptions. Only a general comment is made in Section 1.0 stating that "the transportation and storage of equipment, fuel and material during site preparation is essential to the development of the Back River Project as it will allow Sabina to progress into timely construction of the project". No further discussion or justification is presented in Section 2 – Rationale for Application Exceptions or elsewhere in the application.

The Nunavut Impact Review Board also requested that DFO provided comments on:

- A) The permanence of the proposed infrastructure

DFO's review of the project focused on the Rascal Stream realignment which is required for the airstrip extension and the culvert installations on fish bearing watercourses associated with the construction of the all-weather access road.

Based on the information provided in Appendix B Table 7.0-1 – Lifecycle of Proposed Site Preparation Activities - the proponent has indicated that the all-weather airstrip extension, the Rascal Lake outflow stream realignment and the construction and



operation of the all-weather road are permanent. It is also noted that while the all-weather road is considered to be permanent the culverts will be removed upon closure. This assessment of permanence is also supported in section 3.6 of the Appendix H Abandonment and Reclamation Plan for Site Preparation Work. DFO therefore concludes that the proposed infrastructure is permanent.

B) The reversibility of the potential impacts

Based on the information provided in the 12.10.2 (b) application it is DFO's conclusion that the potential impacts associated with the realignment of Rascal Stream are not reversible since the air strip is considered permanent. The impacts on the water courses associated with the culverts along the all-weather access road are considered reversible since based on the information provided above they will be removed upon closure, however the remainder of the all-weather road will remain intact.

C) The need for proposed security bonding

Fisheries and Oceans Canada has no comments on the proposed security bonding presented in the 12.10.2 (b) application. However, DFO would like to note that if during the regulatory review process it is determined that a Fisheries Act Authorization will be required for impacts to fish and fish habitat either due to the installation of the culverts along the all-weather road or the realignment of Rascal Stream, then DFO will require the submission of an irrevocable Letter of Credit. The purpose of this letter of credit is to ensure that the "Offsetting Plan" is implemented and monitoring is carried if the proponent fails to do so.

D) Whether an approval of the proposed activities would have the effect or appearance of fettering any further or final decision by the Board relating to the larger Back River mining and milling development proposal currently under review.

DFO takes no position on the issue of whether approval of the proposed activities would have the effect or appearance of fettering any further or final decision by the Board relating to the larger Back River mining and milling development proposal currently under review, and submits that this issue is one that must be determined by the Board.



Fisheries and Oceans
Canada

Pêches et Océans
Canada

If you have any questions concerning the above, please contact Georgina Williston at our Yellowknife Office by telephone at (867) 669-4927 or by email at Georgina.Williston@dfo-mpo.gc.ca.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Julie Dahl', written over a light blue horizontal line.

Julie Dahl
Regional Manager, Regulatory Reviews
Fisheries Protection Program

cc. Georgina Williston - DFO



Your file - Votre référence
12MN036
Our file - Notre référence:
NU-074

January 13, 2015

Tara Arko
A/Director, Technical Services
Nunavut Impact Review Board
P.O. Box 1360
Cambridge Bay, NU, X0B 0C0
Via electronic mail to: info@nirb.ca

**Re: Acknowledgement of Sabina Gold & Silver Corporation's Application for NLCA
12.10.2(b) Exception and Request for Public Comment**

On December 9, 2014 the Nunavut Impact Review Board (NIRB) invited interested parties to comment on Sabina Gold & Silver Corporation's application for an exception under s. 12.10.2(b) of the Nunavut Land Claim Agreement for a suite of site preparation and exploratory activities related to its Back River Project which is currently undergoing a Part 5 Review. The following site preparation and exploration activities have been included in Sabina's request for exception: construction of ice road and associated water use; all-weather airstrip extension (from 915m -1524m); Rascal Lake outflow stream realignment; construction and use of a 6km all-weather road and associated crossings; quarry development and operation; and, staging of a temporary laydown area (TLA) at the site of the proposed marine laydown area (MLA).

Natural Resources Canada (NRCan) appreciates the opportunity to participate in this process and has the following comments in relation to the NIRB's specific questions:

- 1. A determination of whether Parties agree/disagree with the conclusions in the 12.10.2(b) application package regarding the alternatives assessment, environmental impacts, proposed mitigation, significance of impacts, and monitoring measures – and reasons to support the determination;***
- 2. A determination of whether or not conclusions in the 12.10.2(b) application package are supported by the analysis – and reasons to support the determination;***
- 3. A determination of whether appropriate methodology was utilized in the 12.10.2(b) application package to develop conclusions – and reasons to support the determination, along with any proposed alternative methodologies which may be more appropriate (if applicable);***
- 4. An assessment of the quality and presentation of the information in the 12.10.2(b) application package; and***
- 5. Any further comments regarding the expressed need for and required timing of the proposed exceptions as presented within the 12.10.2(b) application package – and reasons to support any comments made.***



NRCan has the following comments with respect to the above questions:

Comment #1: Explosives storage

Based on the information provided by Sabina, the following proposed activities would involve blasting and include the storage of prepackaged explosives in magazines: Umwelt quarry development and operation, the all-weather airstrip construction and the all-weather road construction. Sabina has indicated that pre-packaged explosives will be stored in accordance with legislative requirements and best management practices. It is anticipated that the handling and storage of explosives would be licensed by the territorial Occupational Health and Safety Commission and not NRCan. However, NRCan offers the following comments:

- Sabina should clarify the information on the storage of explosives and confirm how explosives storage will be licensed, given that this regulatory authorization has not been identified in the exception application.
- While it is unlikely that this would change the overall conclusions of the application for exception, the valued ecosystem component – project component interaction matrix (Table 8.1-1, Project Description) requires clarification. Specifically, it is not clear whether the matrix and subsequent effects analysis is referring to the use of explosives or the storage of explosives. If the matrix addresses the storage of explosives only, Sabina should clarify its position that the storage of explosives at the Goose Exploration Camp will have a positive impact on paleontological and non-traditional land and resource use. Based on NRCan's experience, the construction or placement and operation of explosive and ammonium nitrate storage facilities may interact with the surficial geology, vegetation, freshwater quality and human health and safety. However, all of these impacts would be minimal with the implementation of mitigation measures, best management practices, and by following the quantity safe distance principles set out in *NRCan's Quantity Distance Principles User's Manual* (1995).
- Sabina should confirm that the proposed exception activities do not include explosives manufacturing facilities. While it is likely Sabina has included broader mitigation measures that would apply to the mine development proposal, Page 54 of Appendix B- Project Description Pt. 2, refers to manufacturing of explosives and manufacturing facilities for explosives.

Comment #2: Quarry rock characterization and ARD/ML Potential

In Appendix B of the 12.10.2(b) exception application, the proponent has concluded, based on data on geochemical characterization of rock from the proposed Goose and Umwelt quarries, that material from the chosen locations is suitable for use in construction because of its limited potential for acid rock drainage (Appendix B, section 8.5.2.2 pg 53). However, Appendix J indicates that 32% of the samples tested at the Umwelt Site are classified as having an uncertain potential or as potentially acid generating (Note: Figure 3 of Appendix J



shows that up to 50% of the samples may be classified as having an uncertain ARD potential).

Table 6.1 of the Quarry Management Plan indicates that the site design and development of the quarry would include the identification of suitable rock with low acid rock drainage and metal leaching (ARD/ML) potential however NRCan was unable to locate the specific criteria (e.g. only material with an NPR > 3) and on-site procedure that that would be followed to determine whether material would be geochemically suitable for construction purposes. While the proponent has indicated that it intends to avoid geochemically unsuitable material, it is not clear whether this will always be possible. If it is not possible, the proponent has not described how geochemically unsuitable material will be managed. As such, NRCan suggests the proponent:

- consider operational testing of the quarry rock (during excavation) to confirm the ARD/ML potential in order to ensure that acid generating rock is not used in the construction of the all-weather air strip, road or related site preparation infrastructure construction;
- establish the specific criteria that will be used to determine geochemically suitable material; and,
- describe how geochemically (and physically) unsuitable material will be managed and monitored in order to minimize impacts to the environment.

Comment #3: Permafrost and Terrain Stability

NRCan identified, during its technical review of the DEIS, that site-specific geotechnical and geophysical investigations would be useful to support final borrow site selection to ensure that ice-rich terrain is avoided. If not already conducted, these would also be useful to support the design and final siting or routing of infrastructure such as: borrow sites, the marine lay down area, the all-weather airstrip extension and the all-weather road, which are included as proposed exception activities.

6. *Comments regarding the following: the permanence of proposed infrastructure, the reversibility of potential impacts, the need for proposed security bonding, and whether an approval of the proposed activities would have the effect or appearance of fettering any further or final decision by the Board relating to the larger Back River mining and milling development proposal currently under review.*

With respect to the NIRB's invitation, while NRCan appreciates the opportunity, we have no comments on any of the items in question. NRCan takes no position on the issue of whether approval of the proposed activities would have the effect or appearance of fettering any further or final decision by the Board relating to the larger Back River mining and milling development proposal currently under review.



Natural Resources
Canada

Ressources naturelles
Canada

We would like to thank the NIRB for the opportunity to provide comments. If you require additional information please contact Kathleen Cavallaro via phone at (613) 996-0055 or via email at Kathleen.Cavallaro@nrcan.gc.ca.

Sincerely,

Original Signed by

John Clarke
Director, Environmental Assessment Division
External Relations
Science and Policy Integration
Natural Resources Canada

cc: Rob Johnstone, NRCan (Minerals and Metals Sector)
Matthew Spence, Director General, Northern Projects Management Office



Transport Canada Transports Canada

Prairie and Northern Region
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P.O. Box 8550
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Your file Votre référence
12MN036

Our file Notre référence
7075-70-1-115

January 13, 2015

Tara Arko
Acting Director of Technical Services
Nunavut Impact Review Board (NIRB)
P.O. Box 1360
Cambridge Bay, NU, X0B 0C0

**Re: Acknowledgement of Sabina Gold & Silver Corporation's Application for NLCA
12.10.2(b) Exception and Request for Public Comment**

Dear Ms. Arko,

Transport Canada (TC) received the Nunavut Impact Review Board (NIRB) letter dated December 9th 2014, requesting parties to review Sabina Gold and Silver Corporation's (Sabina) "Site Preparation Work" application package pursuant to the Nunavut Land Claims Agreement (NLCA) Section 12.10.2(b) and provide comments to the NIRB for consideration. Transport Canada has reviewed the application with an interest in the proposed activities and offers the following comments:

Project Description:

- Sabina has made no mention of over-wintering of barges and is advised that if overwintering is to take place, TC must be provided with the operations plan and risk assessment for over-wintering of a vessel to determine if required regulatory requirements are met.
- Sabina is to confirm that there is adequate water depth for safe navigation of barges into the proposed Marine Laydown Area (MLA) in southern Bathurst Inlet.

Oil Pollution Emergency Plan (OPEP):

- In their response to Transport Canada's technical comment number one, Sabina committed to amending the legislative requirement section of the OPEP to comply with section 168(1) (b) (iii) of the Canada Shipping Act, 2001. This requirement is not reflected in the updated OPEP.
- Appendix I – OPEP; Sabina will be required to confirm and state in the OPEP that the lighting used at the bulk fuel storage facility meets the requirements of the Vessel Pollution and Dangerous Chemical Regulations.

Canada 

- Annex 5, page 36; Bulk Cargo Transfer Procedures states that “bulk fuel transfer procedures are proprietary to the barge operator and the selection of fuel supplier is a commercial element of the project which shall be determined at a future date prior to commencement of operations”. Transfer Procedures are a requirement under the Vessel Pollution and Dangerous Chemical Regulations, and should be reflected in the updated OPEP, which is to be submitted to Transport Canada prior to the commencement of the project.
- Canadian Coast Guard (CCG) resources should not be utilized as a means to respond to spills. Sabina is required to demonstrate procedures for responding to a spill larger than the level 1 minimum spill size.
- Sabina is requested to provide a revised and updated OPEP which demonstrates that the requirements of the CSA 2001 Part 8, the relevant regulations and standards outlined below can be met prior to commencing this Project and throughout the Project life:
 - Response Organization and Oil Handling Facility Regulations
 - Vessel Pollution and Dangerous Chemicals Regulations
 - Environmental Response Arrangement Regulations
 - Oil Handling Facilities Standards (TP 12402)
 - Release and Environmental Emergency Notification Regulations

Appendix B

- Sabina is required to comply with the Marine Transportation Security Regulations (MTSR's) as soon as a vessel, captured in the MTSR PART 2, conducts an interface with their site, by having security procedures completed to address security requirements, as stipulated in MTSR, section 315, and 355 - 358, for their site. Transport Canada will review the security procedures, prior to any Part 2 vessels interfacing with their site, for any gaps or vulnerabilities that may be outstanding. After incorporation of requirements, TC will provide a Letter of Compliance to operator, which will be valid for a five year period. Transport Canada may conduct an Intermediate Inspection in the 3rd year of the letter's applicability and additionally, as required. The Canadian Safety of Life at Sea (SOLAS) and non-SOLAS vessels that interface with the site, require a security assessment and a security plan approved by TC if conducting international voyages.
- If Sabina intends to offer for transport or import dangerous goods that require an Emergency Response Assistance Plan (ERAP) under Section 7 of the *Transportation of Dangerous Goods Act, 1992* (e.g. certain explosives, propane in 3000 L or greater size tanks), Sabina would have to submit a plan to TC for review. Also, the air transportation of dangerous goods must comply with Part 12 of the TDG Regulations.
- The Canada Flight Supplement (CFS) lists the Sabina Gold and Silver Corp - Goose Lake NU aerodrome with two ice runways (open January – April) and a 2999 ft gravel strip indicated as Runway 14R/32L, which is already a permanent runway. As Sabina proposes to undertake the runway extension to Transport Canada TP 312 standards, this runway will remain permanent and Sabina will be required to provide TC with a notice that includes the new runway threshold co-ordinates and an aerial picture for update in the CFS.

Transport Canada has an interest in the proposed application activities and generally agrees with the information listed in the 12.10.2 (b) application package, provided that Sabina conforms to the regulatory requirements which are contained in the Department's comments. Specific timing of the proposed works/activities would require that an OPEP must be submitted to TC for

review prior to the commencement of such activities and that the MTSR requirements be met prior to any vessel interfacing with their site.

Transport Canada takes no position on the issue of whether approval of the proposed activities would have the effect or appearance of fettering any further or final decision by the Board relating to the larger Back River mining and milling development proposal currently under review.

Transport Canada appreciates the opportunity to provide comments on the proposed Sabina Site Preparation Work application and will continue to work with the NIRB on the review of this project. Should you have any questions regarding Transport Canada's comments, please contact John Cowan via email at john.cowan@tc.gc.ca or by telephone at (204) 983-1139.

Regards,



Dale Kirkland
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Transport Canada