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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No: 2AM-BRP1831

To: Back River Distribution List

Date: April 19, 2021

Subject: Pre-Hearing Conference Decision Regarding an Application for Amendment to the Type “A” Water Licence No: 2AM-BRP1831

This Pre-Hearing Conference Decision Report is in relation to an application filed by Sabina Gold & Silver Corp. (Sabina or Applicant) for an amendment to the existing Type “A” Water Licence No: 2AM-BRP1831 for the Back River Project (the Application). On April 15, 2021, the Members of the Back River Panel (the Panel or P19), duly appointed by the Nunavut Water Board (NWB or Board) as the decision-makers for the file met by teleconference to consider the next steps in the NWB’s processing of the Application. By Motion #2021-01-P19-05, the Panel approved the release of this Pre-Hearing Conference Decision Report. In addition, by Motion #2021-01-P19-06, the Panel authorized the issuance of the procedural direction in this Report that will be associated with the Board holding an in-person Public Hearing in Cambridge Bay to support the Panel in their decision-making for the file. Please note, that as requested by the parties during the discussions about the format, timing and location of the potential Public Hearing for the file during the Pre-Hearing Conference, the Board is currently planning to ensure that audio and video links to the in-person Public Hearing will be provided to parties unable to travel to Cambridge Bay and members of the public unable to attend the venue for the Public Hearing due to limits on public gatherings, travel restrictions, or other public health measures that may be in place at the time of the Public Hearing.

The NWB has tentatively set the date for the Public Hearing to take place sometime in the week of July 12 – 16, 2021. Please note that the dates and format of the Public Hearing are subject to final confirmation that will be issued in the NWB’s Notice of Public Hearing which the Board expects to publish on April 23, 2021. However, parties and the public should also be aware that even after the Notice of Public Hearing has been issued, the Board may have to modify the schedule and format of the Public Hearing on short notice if circumstances warrant, including:

- If there are changes to travel or other Public Hearing logistics;
- If parties fail to supply the documentation required to be supplied in advance of the Public Hearing in accordance with the timelines set out in this Report; or



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- If there are changes to public health guidance required to prevent the spread of COVID-19, such as the imposition of more stringent limits on indoor public gatherings or limits on non-essential travel within Nunavut.

By way of background, the Application was submitted by Sabina to the NWB on October 13, 2020. On October 15, 2020, the NWB acknowledged receipt of the Application and began the NWB’s formal processing of the Application. Following a completeness check or initial technical review and public comment period in respect of the Application, on December 17, 2020, the NWB issued formal Notice of the Application and provided correspondence confirming that the Application could proceed to the Technical Meeting (TM) and Pre-Hearing Conference (PHC) stage and advising that the TM and PHC had been tentatively scheduled for March 2 and 3, 2021 and would be conducted remotely via video and audio conference. On February 2, 2021, the Board changed the dates for the TM/PHC to March 23 and 24, 2021 in order to allow parties to have time to review Hydrodynamic and Water Quality modelling results to be provided by Sabina in mid-February. On March 11, 2021, in response to a request from the Kitikmeot Inuit Association, the Board moved the TM/PHC to March 26 (with the meetings to continue into the morning of March 27, 2021, if additional time is required to complete the agenda). Unfortunately, due the hall in Cambridge Bay being booked for the revised dates for the TM/PHC, the community information session could not be held on the evening of March 26. Consequently, to ensure that members of the public are informed about the Application and the upcoming Public Hearing, the Board will use other mechanisms such as radio and social media outreach to provide information.

In accordance with Rule 14 of the NWB’s *Rules of Practice and Procedure* (the *Rules*), and the previous direction and delegation from the Panel to the staff of the NWB, the NWB’s staff held a Technical Meeting (TM) via video and audio conference to discuss technical issues on March 26, 2021.

As set out in Rule 14.1 of the *Rules* and discussed in detail in this Report in [5.0 Pre-Hearing Conference \(PHC\)](#), the PHC, which was conducted on the same day, March 26, 2021, dealt with the following matters relevant to the Application:

- Timetable for the pre-Hearing exchange of information;
- Identification of interested parties;
- Submissions of interested parties;
- List of issues to be dealt with at the Public Hearing;
- Desirability of amending the Application for the purpose of clarification;
- Procedures for the Public Hearing; and



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- Identification of any other matters that may assist in the simplification and disposition of the Application or conduct of the Public Hearing.

The list of the parties who confirmed their attendance at the TM/PHC are provided in this Report in [APPENDIX B: Summary Listing of Participants in Technical Meeting and Pre-Hearing Conference](#). The final agendas for each of these meetings are attached as [APPENDIX A: Technical Meeting and Pre-Hearing Conference Agendas](#).

Having considered the Application and supporting materials submitted by the Applicant as summarized in [APPENDIX C: List of Application Submissions](#), the technical review comments in respect of the Application received to date by the NWB, the discussions during the Technical Meeting, the questions, issues and comments identified by participants during the Pre-Hearing Conference, and the commitments of the Applicant as outlined in [APPENDIX D: List of Commitments](#), the Panel has concluded that the Application is ready to proceed to the Public Hearing stage of the Board’s consideration of the Application. As noted above, the Panel directed that the Public Hearing to consider the Application is tentatively scheduled for the week of July 12-16, 2021 to be conducted in-person in the closest community, Cambridge Bay, in accordance with the timelines and other procedural details provided in the text that follows.

Introduction and Registration

The following participants registered and attended the Board’s Technical Meeting (TM) and the Pre-Hearing Conference (PHC) conducted via video and audio conference on March 26, 2021:

Sabina Gold & Silver Corp. representatives:

- Mathew Pickard – Vice President, Environment and Sustainability;
- Merle Keefe – Manager, Environmental Permitting;
- Catherine Paul – Environmental Consultant;
- Dionne Filiatrault – Project Manager, Golder;
- Shadi Dayyani – Water Quality Modeller, Golder;
- John Kurylo – Senior Geotechnical Engineer, SRK;
- Samantha Barnes – Hydrotechnical Engineer, SRK.

Kitikmeot Inuit Association (KIA) representatives:

- John Roesch – Senior Project Officer;
- Richard Nesbitt – Senior Aquatic Scientist, Hutchinson Environmental Sciences Ltd.



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Crown-Indigenous Relations and Northern Affairs (CIRNA) representatives:

- Sarah Forté – Water Management Specialist;
- Bridget Campbell – A/ Manager of Water Resources;
- Richard Hoos – Arctic Environmental Expert, Tetra Tech.

Environment and Climate Change Canada (ECCC) representatives:

- Orlagh O’Sullivan – A/ Senior Environmental Assessment Officer;
- Meagan Tobin – Water Quality Project Officer;
- Reg Ejeckam – Senior Mining Project Officer.

Nunavut Water Board (NWB) representatives:

- Karén Kharatyan – Director of Technical Services;
- Sergey Kuflevskiy – Technical Advisor for the file; and
- Teresa Meadows – Legal Counsel, Meadows Law.

The full list of the TM/PHC participants is attached to this Report as [APPENDIX B: Summary Listing of Participants in Technical Meeting and Pre-Hearing Conference](#).

1.0 The Application Before the Board

The Application before the Board was filed by Sabina on October 13, 2020 and requested amendments to the existing Type “A” Water Licence No: 2AM-BRP1831 to reflect changes to the existing operations and project infrastructure associated with the construction and operation at Sabina’s Back River gold mine (the Application). The Application seeks the NWB’s authorization of specific changes (described below) to the existing use of water and deposit of waste associated with a Mining undertaking,¹ which is located approximately 400 kilometres (km) southwest of Cambridge Bay and 95 km southeast of the southern end of Bathurst Inlet. The Application package was initially provided to the Board on October 13, 2020 and later supplemented by additional information and responses to the Information Requests from the interveners. The documents filed by the Applicant in support of the Application are listed in detail in [APPENDIX C: List of Application Submissions](#).

¹ The *Nunavut Waters Regulations*, SOR/2013-69, Schedule 1, Item 2, Column 2, describes a “Mining undertaking” as: Exploration or prospecting — including bulk sampling — for minerals other than petroleum or gas, the operation of a mine, the processing of minerals other than petroleum or gas, the restoration of the site of a mine and any other mining activity other than an industrial activity described in item 1, column 2 [of Schedule 1].



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All of the Applicant’s submissions are available from the NWB’s public registry at the following link:

<ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-BRP1831%20Sabina/1%20APPLICATION/2020%20Amendment/>

All documentation associated with the Application and received from the Applicant, the Board, intervening parties and the public is available from the NWB’s public registry at the following link:

<ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-BRP1831%20Sabina/>

Scope of the Application

In the Application, Sabina is proposing changes to the approved project activities under Type “A” Water Licence No: 2AM-BRP1831 to support ongoing construction and operations at the Back River Project.² Specifically, Sabina is seeking approval for the following proposed changes under the Application:³

- Extending Umwelt underground workings from 650 m depth to 900 m;
- Increasing the size of the Goose airstrip from 1,500 m by 47 m (5,000 by 150 feet) to 1,800 by 61 m (6,000 by 200 feet);
- Increasing the size of the Marine Laydown Area (MLA) airstrip from 915 m by 47 m (3,000 by 150 feet) to 1,500 m by 61 m (5,000 by 200 feet);
- Adding 500,000 litres (L) of fuel storage on a new pad at the Marine Laydown Area;
- Placing aggregate over approximately 15 kilometers (km) of rough terrain along the Winter Ice Road between the MLA and Goose site;
- Increasing water use at the Goose site from 468,000 m³ to 822,450 m³ annually;
- Increasing water use for ice road construction and maintenance from 675 m³ per km to 2,025 m³ per km;
- Increasing the volume of waste rock in the Waste Rock Storage Facility (WRSF) from 59 to 86.6 Mt located with no change to the total footprint of the WRSF;
- Adding the use of mined-out open pits for tailings storage;
- Replacing three (3) temporary emergency shelters along the Winter Ice Road with

² Mathew Pickard (Sabina) to Richard Dwyer (NWB), RE: Amendment Type A Water Licence Application for Sabina Gold & Silver Corp. Back River Project (NWB File No. 2AM-BRP1831), dated October 13, 2020.

³ Sabina Gold & Silver Corp., The Back River Project, Modification Package, *Version 2*, dated October 2020.



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- permanent emergency camps;
- Adding two (2) years to the Operations Phase of Project;
- Reducing process plant throughput from 7,000 tonnes per day to between 3,000 - 4,000 tonnes per day;
- Using small diameter flexible pipe for MLA desalination plant intake and discharge instead of approved permanent pipes; and
- Extending the MLA shoreline pad approximately to 41 m long, 9.5 m wide and 2 m in depth.

2.0 Regulatory and Procedural History of the Application

Licence History

The original Type “A” Water Licence No: 2AM-BRP1831 (Licence) was issued to Sabina on September 21, 2018 to allow for the use of water and deposit of waste during construction and operation activities at the Back River Project. The Licence was subsequently approved by the Minister of Crown-Indigenous Relations on November 6, 2018.

Pre-Licensing Requirements

The Nunavut Planning Commission (NPC)

On June 9, 2020, the NPC issued its land use planning conformity determination for the Application,⁴ which stated that:

- the Application is for a Project that remains outside the area of an applicable regional land use plan;
- the activities associated with the Application (Project Proposal) were previously screened by the Nunavut Impact Review Board (NIRB) (NIRB File No: 12MN036);
- the Project Proposal is a significant modification to the previously approved activities, *“because it is for a component or activity that was not part of the original proposal and its inclusion is a significant modification of the Project”*. On this basis, and because the modification does not belong to a class of works or activities that are exempt from screening by the NIRB, as set out in Schedule 12-1 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right*

⁴ Peter Scholz (NPC) to Richard Dwyer (NWB) and others, RE: “NPC file # 149378 [Back River 2020 Modification Package], dated June 9, 2020.



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- of Canada (*Nunavut Agreement*), the NPC determined that a screening level assessment of the Project Proposal by the NIRB was required; and
- on this basis, the NPC forwarded the Application to the NIRB for further assessment under Article 12 of the *Nunavut Agreement* and Part 3 of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*).

The Nunavut Impact Review Board (NIRB)

Following the NIRB’s receipt of the referral of the Application from the NPC, the NIRB reviewed the modification of activities proposed in the Application. On August 11, 2020, the NIRB issued the NIRB’s direction regarding the Application, which stated that a further assessment of the project proposal is not required under Article 12 of the *Nunavut Agreement* and s. 92(1)(a) of the *NuPPAA*. Specifically, the NIRB noted that:

the Back River Project 2020 Modification Package would not constitute a significant modification that requires further assessment by the NIRB if Sabina implements the updates to management and monitoring plans and enhancements to the existing reporting program to reflect the activities in the Back River Project 2020 Modification Package.

the potential for ecosystemic effects associated with the changes to the Back River Project as proposed in the Back River Project 2020 Modification Package can be addressed via the implementation of updated management and mitigation plans, and enhanced monitoring and reporting.⁵

On this basis, the NWB concluded that the applicable pre-licensing conformity and impact assessment requirements for the Application under Articles 11 and 12 of the *Nunavut Agreement*, Part 3 of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*) and ss. 38 and 39 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, S.C. 2002, c. 10 (*NWNSRTA*) have been met, and the Application can now be processed by the NWB.

⁵ Kaviq Kaluraq (NIRB) to Matthew Pickard (Sabina), RE: Nunavut Impact Review Board Direction Regarding the “Back River Project 2020 Modification Package” submitted by Sabina Gold & Silver Corp. in relation to the Back River Project, dated August 11, 2020.



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Procedural History

The following section includes a brief overview of the procedural history associated with the NWB’s processing of the Application. The following listing captures only the major procedural steps associated with the Application. All documentation and the complete record of the NWB’s processing of the file are available from the NWB’s ftp site at the links provided in Section 1.0 of this Report.

October 13, 2020

NWB received an Application from Sabina to amend existing type “A” Water Licence No: 2AM-BRP1831 that governs the Back River Project.

October 15, 2020

NWB distributed the Application for an initial four week preliminary technical assessment and completeness check with the deadline for submission of comments set for November 13, 2020.

November 12, 2020

NWB received submissions from ECCC regarding their preliminary technical assessment and completeness check of the Application.

November 13, 2020

NWB received submissions from the KIA and CIRNA regarding their preliminary technical assessment and completeness check of the Application.

November 16, 2020

NWB requested Sabina to address the comments received from the Interveners during the preliminary technical assessment and completeness check of the Application with a deadline set for November 30, 2020.

November 30, 2020

Applicant provided responses to the comments submitted by the Interveners, and NWB forwarded Sabina’s responses to the parties, asking Interveners to indicate whether the responses satisfied the Intervener’s request.

December 4, 2020

ECCC confirmed their satisfaction with Sabina’s responses and deemed the Application sufficient to move forward to the full technical review stage of the process.

December 4, 2020

KIA and CIRNA confirmed their satisfaction with Sabina’s responses and deemed the Application sufficient to move forward to the full technical review stage of the process. However, both KIA and CIRNA indicated that they expected Sabina to “*provide an updated Hydrodynamic model*”, as well as information on



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groundwater inflow parameters, for review and comment by Interveners during the technical review of the Application.

December 17, 2020

NWB deemed the Application to be complete, provided Notice of the Application and distributed the Application for a thirty (30) day full public review of the Application. The deadline for submission of comments from the public and interveners was January 29, 2021. At that time, the NWB indicated that the tentative dates for the Technical Meeting (TM) and Pre-Hearing Conference (PHC) for the file would be March 2 and 3, 2021.

January 18 2021

CIRNA inquired when Sabina would be providing the Hydrodynamic Model to the NWB for review by the parties.

January 19 2021

Sabina committed to provide the Hydrodynamic Model requested by Interveners by February 15, 2021.

January 28-29, 2021

NWB received technical review comments for the Application from CIRNA and ECCC.

February 2, 2021

NWB received technical review comments for the Application from the KIA.

In their technical review comments, the KIA and CIRNA indicated that they could not complete their full technical review comments because the Hydrodynamic Model had not been provided. In response, Sabina committed to provide the outstanding Hydrodynamic Model by February 12, 2021.

February 2, 2021

NWB distributed the technical review comments received from ECCC, CIRNA and the KIA, and provided correspondence updating the timeline for the technical review of the Application to give parties sufficient time to review the Hydrodynamic Model and responses to technical comments provided by Sabina. The revised dates for the Technical Meeting/Pre-Hearing Conference (TM/PHC) were tentatively set as March 23 and 24, 2021.

February 12, 2021

NWB received and distributed Sabina’s Responses to the Interveners’ comments, including the Hydrodynamic and Water Quality Model and other supporting documentation.

March 1-2, 2021

NWB received and distributed the Interveners’ comments on the Hydrodynamic and Water Quality Model.



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March 11, 2021

In response to a request by the KIA to move the Technical Meeting and Pre-Hearing Conference (TM/PHC) for the file to later in the week of March 22-26, the NWB provided notice to the parties that the TM/PHC was moved to March 26 -27, 2021.

March 12, 2021

NWB distributed Sabina’s Responses to the Interveners’ comments on the Hydrodynamic and Water Quality Model.

March 12, 2021

NWB distributed correspondence including the draft agendas for the TM/PHC.

March 15-17, 2021

NWB received confirmation of participation at the TM/PHC and presentation materials from Sabina, KIA, CIRNA and ECCC, and the NWB distributed these submissions.

March 19, 2021

NWB distributed the final Agenda for the TM/PHC.

March 26, 2021

NWB conducted the TM/PHC via video and audio conference.

Complete information related to the procedural history of the Application and the information filed with the NWB associated with the Application can be accessed from the NWB’s FTP site and Public Registry using the following link:

[ftp://ftp.nwb-oen.ca/registry/2_MINING_MILLING/2A/2AM - Mining/2AM-BRP1831 Sabina/1 APPLICATION/2020 Amendment/](ftp://ftp.nwb-oen.ca/registry/2_MINING_MILLING/2A/2AM_-_Mining/2AM-BRP1831_Sabina/1_APPLICATION/2020_Amendment/)

3.0 Technical Review Comments Received by the Board

Prior to the Technical Meeting (TM) and Pre-hearing Conference (PHC) two opportunities to comment on the Application were provided to the Interveners and members of the public. The Board’s first request for comments asked parties to consider whether the Application was complete and to identify any outstanding issues that should prevent the Board from continuing to process the Application, including any additional information requests. This comment period closed on November 13, 2020. The second comment period requested parties to file substantive technical review comments about the Application on or before January 29, 2021. The sections that follow outline the comments provided during these review periods, and also reflect comments provided to the Board during the Technical Meeting/Pre-hearing Conference.



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Sabina Gold & Silver Corp. (Sabina or Applicant)

In addition to the original Application and supplemental information submitted by Sabina on October 13, 2020, the Applicant provided additional information in response to technical comments submitted by the Board and the Interveners, the Kitikmeot Inuit Association (KIA), Crown-Indigenous Relations and Northern Affairs (CIRNA) and Environment and Climate Change Canada (ECCC). The submission also included saline water quality data, historic water quality results and water quality predictions, Hydrodynamic and Water Quality Model (Hydrodynamic Model), as well as various revised management plans including the Tailings Management Plan, Waste Rock Management Plan, and Borrow Pits and Quarry Management Plan.

In their closing statement at the Technical Meeting (TM), Sabina reaffirmed their commitments to provide the information summarized in [APPENDIX D: List of Commitments](#).

Kitikmeot Inuit Association (KIA)

The KIA is the representative of the Inuit beneficiaries of the Kitikmeot Region at both the territorial and regional levels and supports sustainable economic development opportunities for Inuit beneficiaries. KIA’s participation in the review of the Application was focused on ensuring that adequate protection of the environment occurs by requiring the Applicant to implement best practices in their mitigation and monitoring programs.

The KIA technical review raised a number of issues, with a focus on the following topics:

- Winter Ice Road (WIR) subbase upgrade;
- Upgraded WIR summer water and dust management;
- WIR Service/Emergency camps;
- Barriers to fish passage after mine decommissioning;
- Shoreline Pad extension at the Marine Laydown Area (MLA);
- Goose Property and MLA airstrip extension;
- Umwelt Underground extension;
- Total water use increase at the Goose Property;
- Temperature and precipitation predictions in the Hydrodynamic Model;
- Updates to the deleterious substance list under the *Metal and Diamond Mining Effluent Regulations*⁶ (MDMER);
- Defined closure period;
- Additional meromictic lake storage as part of saline water management;

⁶ SOR/2002-222



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- Man-made surface containment ponds as part of saline water management;
- Transport and disposal to Bathurst Inlet as part of saline water management;
- Background water quality inputs to Water and Load Balance model;
- Divergence from Final Environmental Impact Statement (FEIS) predicted impacts to Goose Lake;
- Change in discharge period to include two years of the Operational Phase;
- Water quality predictions and defining the mixing zone;
- Water quality inputs into the Hydrodynamic Model;
- Hydrodynamic Model calibration;
- Warm-up period⁷ for the Hydrodynamic Model; and
- Updated reclamation security estimate.

Specifically, the KIA provided the Board with the following requests resulting in the commitments outlined in [APPENDIX D: List of Commitments](#):

- Sabina to provide additional Hydrodynamic Model results for years 1 through 10, to assess water quality in Goose Lake including at discharge and other reference stations (e.g. at approximately 100 m, 200m from each inflow into Goose Lake).
- Sabina to provide proposed effluent quality criteria for parameters of concern identified in the Hydrodynamic Model update, with associated rationale.
- Sabina to convene a teleconference with KIA, ECCC, CIRNA and other interested stakeholders to provide an overview of the planned updates to the Hydrodynamic Model.
- Sabina to include into the updated Hydrodynamic Model the mixing zone design for all discharges into Goose Lake, taking into account additional field data.
- Sabina to provide an explanation of how the groundwater inflow estimates have been reduced, information on the effectiveness of grouting and an evaluation of the available saline groundwater storage, including a discussion regarding estimated time to reach capacity.
- Sabina to update all applicable management plans following the completion of the updated Hydrodynamic Model, specifically:
 - The Water Management Plan;
 - The Tailings Management Plan; and
 - The Waste Rock Management Plan.

⁷ As indicated in Sabina’s responses to Technical Comments on the Hydrodynamic Model, dated March 12, 2021, “a warm-up period was included to provide sufficient time for the Model to reach dynamic equilibrium before simulation results were used for comparison against measured data or for future predictions.”



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Crown-Indigenous Relations and Northern Affairs (CIRNA)

CIRNA administers Crown land and resources and enforces regulatory permits affecting land and water resources in Nunavut, including enforcing the provisions of water licences issued by the NWB and specifically of the Applicant’s existing Licence No: 2AM-BRP1831 under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, S.C. 2002, c. 10 (NWNSRTA) and *Nunavut Waters Regulations*, SOR/2013-69. Reflecting CIRNA’s responsibilities and jurisdiction, the following key issues were highlighted in CIRNA’s initial comment submissions on the completeness of the Application, in their technical review comment submissions and in their submissions at the Technical Meeting (TM).

CIRNA provided the Board with comments and recommendations, focusing on the following topics:

- Groundwater inflow parameters;
- Methodology for extrapolated water quantity and quality predictions;
- Unanticipated groundwater quantities;
- Treated sewage attenuation;
- Active layer groundwater monitoring;
- Design criteria for event ponds;
- Design criteria for diversion berms and culverts;
- Water and Load Balance Model 2020 Update;
- Water and Load Balance Model limitations and climate change adjustments;
- Hydrodynamic Model;
- Saline Water Pond balance;
- Saline Water Pond permafrost;
- Lake mixing model;
- Goose Property waste and water management;
- Goose Property waste rock management;
- Mass balance assessment;
- Reclamation Plan and Cost Estimate;
- Arsenic concentration in tailings beach sediments;
- Criteria for segregating potentially acid generating (PAG) and non-PAG rocks;
- Use of containment ponds as tailings facilities;
- Temporary PAG rock stockpiles;
- Quarry site development plans; and
- Additional approved infrastructure in the Tailings Management Plan.



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Specifically, CIRNA provided the Board with the following requests resulting in the commitments outlined in [APPENDIX D: List of Commitments](#):

- Sabina to provide an updated Hydrodynamic Model;
- Sabina to include annual comparison of measured and modelled groundwater inflow rates in annual reports;
- Sabina to ensure that only ponds designed to contain tailings are used as tailings facilities, and that any additional facilities will be captured in updated reclamation plans and updates to reclamation costs and security;
- Sabina to include the approved infrastructure section into the Tailings Management Plan;
- Sabina to update the Interim Closure Reclamation Plan and Security Estimate; and
- Sabina to update the Draft Water Licence Security Framework.

Environment and Climate Change Canada (ECCC)

The focus of the ECCC’s involvement in respect of the Application is based on their jurisdiction under the *Canadian Environmental Protection Act, 1999*,⁸ the *Species at Risk Act*⁹ and ECCC’s jurisdiction under the pollution prevention provisions of the *Fisheries Act*.¹⁰

The following key issues or topics were highlighted in the ECCC’s initial comment submissions on the completeness of the Application, in their technical review comment submissions and in their submissions at the Technical Meeting (TM):

- Saline water management;
- Groundwater inflows into the underground mines;
- Establishment of meromixis within Umwelt mined-out pit or Umwelt reservoir;
- Updated Water and Load Balance (inconsistencies);
- Updated modelling predictions and comparison to Water Quality Guidelines;
- Hydraulic conductivity of fractured zone near the Tailings Storage Facility Dam;
- Tailings production and storage;
- Waste Rock Storage Area design;
- Hydrodynamic Modelling and Water Quality in Goose Lake; and
- Air quality.

⁸ S.C. 1999, c. 33.

⁹ S.C. 2002, c. 29.

¹⁰ R.S.C. 1985, c. F-14.



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Specifically, the ECCC provided the following recommendations to be considered by Sabina to resolve technical issues and to be included as commitments:

- Sabina to provide a comparison of changes in outputs from the Water and Load Balance as a result of the changes to the Hydrodynamic Model assumptions;
- Sabina to provide a discussion of how the changes to the initial conditions and reduced annual freshwater inputs may impact the development of meromixis in Umwelt Pit, as compared to Llama Pit;
- Sabina to provide information on the final ratio of freshwater to saline water in Umwelt Pit, as compared to Llama Pit.
- Sabina to review the outputs of the Water and Load Balance in the Hydrodynamic Model to eliminate inconsistencies in the data presented;
- Sabina to model nodes intended to meet specific criteria (Canadian Council of Ministers of the Environment (CCME), Site-specific Water Quality Objectives (SSWQO), the *Metal and Diamond Mining Effluent Regulations*, SOR/2002-222 (MDMER), etc.) and provide a comparison of modelled water quality to guidelines and criteria;
- Sabina to discuss sources of exceedances of *CCME Water Quality Guidelines for the Protection of Aquatic Life* and whether assumptions used in the Hydrodynamic Model have resulted in accurate predictions for water quality;
- Sabina to discuss modelled exceedances of *CCME Water Quality Guidelines for the Protection of Aquatic Life* at PN03 and other relevant nodes, and potential impacts to aquatic life if these concentrations are realized;
- Sabina to provide a discussion of the potential impacts to aquatic life within Goose Lake given the modelling predictions and predicted exceedances;
- Sabina to provide a discussion on the extent of the mixing zones from PN04 and PN05 and provide modelled concentrations at the edge of the proposed mixing zones;
- Sabina to provide a discussion of the minimal data used to calibrate the Hydrodynamic and Water Quality Model and how outcomes of the Model have been impacted, and may be impacted in future iterations;
- Sabina to include additional sensitivity scenarios into the Hydrodynamic and Water Quality Model updates to reduce Model uncertainty;
- Sabina to provide a comparison of modelled water quality in Goose Lake to natural background concentrations in order to detect changes to water quality conditions in Goose Lake; and
- Sabina to provide further clarification on the potential for exceedances of chromium water quality benchmarks at PN03 as per Hydrodynamic and Water Quality Model.



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While some of the above recommendations were addressed at the Technical Meeting, the outstanding concerns were included as commitments, outlined in [APPENDIX D: List of Commitments](#).

4.0 Technical Meeting (TM)

The TM for the Application was held via Zoom video and audio conference from 8:30 a.m. to 1:00 p.m. MT on March 26, 2021. As is the Board’s practice, the TM was an informal meeting and was chaired by Karén Kharatyan, the Board’s Director of Technical Services. The meeting was attended by:

- the NWB’s staff and legal counsel;
- the Applicant, which included representatives of Sabina, as well as the Applicant’s consultants; and
- the Interveners, KIA, CIRNA and the ECCC.

In keeping with the Board’s normal practice, the three-member Panel of the Board (Panel P19 or Back River Panel), who are the decision-makers for the Application, were not present at the TM or the subsequent Pre-hearing Conference (PHC), having delegated the conduct of these meetings to the Board’s staff. The TM included the following:

- Discussion of the technical issues identified by interveners and the NWB staff during their technical review of the Application;
- Examination of technical data, comment submissions and other materials submitted as part of the Application;
- Discussion, and where possible, resolution of technical matters or issues raised by interveners and the Applicant, particularly those matters that could affect the Board’s determination on any PHC issues, prior to holding the PHC;
- Providing an opportunity for Sabina and participants to identify and confirm for the Board the issues and concerns that have been resolved and to discuss any unresolved or ongoing issues related to the Application;
- Identification of opportunities for streamlining the issues and process so as to eliminate existing or potential duplication or delay in the NWB’s processing of the Application going forward; and
- Documenting any commitments made by the various parties during the TM, with the aim of carrying over the commitments to the PHC and Public Hearing stages of the NWB’s consideration of the Application.



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The TM participants were advised that, upon completion of the TM, the Board expected any outstanding issues in respect of the Application to be resolved, or if not resolved, that some form of agreement, including commitments by the parties, would be provided to the Board. The focus of the resolution of issues and identification of commitments was to ensure that the Application can proceed to the next step of the licensing process, the Public Hearing, notwithstanding any unresolved issues.

At the TM, the following general topics were discussed:

- The scope of the Amendment Application;
- Outstanding requests for additional information by the NWB and the parties; and
- The status of various updates and additions to management and monitoring plans.

In addition to comments provided during the technical review of the Application, the following additional questions were raised during the Technical Meeting:

No.	Questions/ Comments
<i>Kitikmeot Inuit Association (KIA)</i>	
1.	<p>How will the updated Feasibility Study, and particularly the changes to the sizes of the pits and to the waste management strategy, impact the water quality and the Hydrodynamic Model?</p> <p><u>Sabina’s response:</u> Sabina clarified that they are not intending to discharge during the majority of the operational mine life, not until year 11, and that the data currently available is limited. However, Sabina anticipates that additional Water and Load balances will be incorporated into the updated Hydrodynamic Model and future modifications to the Water Management Plan and Waste Management Plan.</p>
2.	<p>Considering that the Hydrodynamic Model in its current iteration indicates that there are fairly significant impacts to Goose Lake, which might trigger a long-term need for treatment and a long-term liability to the KIA, and that the further updates to the Hydrodynamic Model will be required once more data is available, what is the appropriate timeline for updating the Model? Is 90 days following the Licence issuance appropriate? Is it possible to modify the Mine Plan substantively enough to address these issues?</p> <p><u>Sabina’s response:</u> Sabina clarified that simply rerunning the Hydrodynamic Model in its current state will not resolve the issues, because the Model inputs need to be updated based on the additional data and potential modifications to the Mine Plan need to be made in order to manage the exceedances, which is a time-consuming process. Sabina also emphasized that their commitment to meet specific CCME, SSWQO, and MDMER criteria as per the FEIS still stands, and that the Wild-Life Compensation will apply if these thresholds are exceeded.</p>



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3.	<p>KIA does not have a good understanding of where the outputs are currently being evaluated and how this will be matched with the CCME requirements once the Model and the Mine Plan are refined. KIA is concerned that while the exceedances at station PN03 are minor, there might be significantly greater exceedances in other locations much closer to the inflow into Goose Lake (e.g. “neck” area).</p> <p><u>Sabina’s response:</u> Sabina agreed that they needed to assess the water quality effects at nodes closer to the mine related discharge point (e.g. PN04) and define the mixing zone, where the CCME and SSWQO criteria would be evaluated. Sabina also clarified that the 2 year contingency within the closure cost allocation can be increased to a longer period, if they are not able to meet the required thresholds within the first 2 years.</p>
<i>Crown-Indigenous Relations and Northern Affairs (CIRNA)</i>	
4.	<p>Will the ICRP be incorporated into the current water licensing process and what is the timing for the next steps?</p> <p><u>Sabina’s response:</u> Sabina confirmed that the ICRP would be updated as part of this licensing process and committed to complete their discussions with the parties 30 days prior to the Public Hearing.</p>
5.	<p>Will Sabina be able to collect more water column, water quality, physical and chemical data from Goose Lake during the 2021 season to improve the validation of the updated Hydrodynamic Model?</p> <p><u>Sabina’s response:</u> Sabina committed to conduct the April under-ice water quality program to capture additional data and incorporate it into the next run of the Model.</p>
<i>Environment and Climate Change Canada (ECCC)</i>	
6.	<p>Will the 90days following the Licence issuance timeline provide Sabina with sufficient time to incorporate the Mine Plan changes and comments from the reviewers into the Model?</p> <p><u>Sabina’s response:</u> Sabina reassured that setting this deadline to January 2022 would allow them accurately and effectively update the Model to incorporate all technical review issues.</p>
<i>Nunavut Water Board (NWB)</i>	
7.	<p>What are the risks of having excess saline groundwater inflows into the underground mine and are there any contingency measures in place? What are the total volumes of water that Sabina can accommodate in the ponds vs. total predicted inflows for the entire life of mine?</p> <p><u>Sabina’s response:</u> Sabina emphasized that they had a very good understanding of the geological conditions in the area, including the depth of permafrost ranging from 490 to 570m below ground and the tight bedrock, both providing confidence of low inflows, with the exception of</p>



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	fractures, which were extensively reviewed in the geotechnical study and for which grouting could be done in order to control seepage. Sabina further explained that the salinity of the groundwater was predicted to be between 15,000 and 30,000 ppm and that the water management infrastructure they have in place would be able to manage the higher end of the predicted inflows. Sabina also noted that they currently operated a desalination plant, which regularly treats saline water to about 5,000ppm.
8.	<p>Were there any thermal studies done to examine the potential for development of taliks underneath the mined out pits, and will there be any connection between these taliks and the taliks underneath Goose Lake (considering recharge and discharge conditions with respect to Goose Lake)?</p> <p><u>Sabina’s response:</u> Sabina confirmed that thermal modelling was done as part of the geotechnical study, which determined that open taliks would develop underneath the open pits at a timeline of 85 to 200 years and would eventually connect with the regional groundwater system. This modelling also showed that the predicted travel time between the flooded open pits and Goose Lake through the regional groundwater system under the base of permafrost, or through open taliks, was over 1,000 years. Sabina also clarified that the active layer within the Goose Main Pit, which is 130m away from Goose Lake, was modelled to reach 10 to 15 m. Sabina emphasized that they currently had 4 thermistors installed between the Goose Main Pit and Goose Lake, and that these thermistors were fully frozen forming a permafrost wall. However, Sabina agreed to install additional thermistors if required.</p>
9.	<p>What will happen to the water in the Tailings Storage Facility (TSF) once the tailings are diverted to the mined-out pits? How will the TSF be able to accommodate the waste rock?</p> <p><u>Sabina’s response:</u> Sabina clarified that they would be depositing tailings into the TSF from year 1 to 5 and then would transfer the tailings deposition to Llama Tailings Facility. The water will be drawn off the TSF, and the waste rock will be placed into the areas that had potentially been dewatered by years 3 to 6. Sabina also indicated that they had a planned 2 year pause in waste rock deposition to drain the rest of the water from the pond to allow the waste rock placement.</p>
10.	<p>The NWB advised that it would be premature to include criteria for the final discharge point into the Licence, considering that the KIA and ECCC indicated that they would not be able to provide a list of additional parameters of concern without reviewing the updated Hydrodynamic Model.</p> <p><u>Sabina’s response:</u> Sabina clarified that they want the final discharge criteria to be included into the Licence in order to have more flexibility with respect to water management.</p> <p><u>KIA’s recommendation:</u> KIA suggested refining the model in the shorter term, rather than having a full model rerun, to give the parties an idea what parameters can potentially cause some chronic effects in the Lake and may need additional onsite management prior to year 11.</p>



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Following these discussions, in the afternoon of March 26, 2021, the NWB circulated to all TM participants, an electronic copy of the draft list of issues in respect of the Application that the NWB expected to be discussed at the Public Hearing for the file, as well as a draft of the list of all commitments made by the parties during the TM.

5.0 Pre-Hearing Conference (PHC)

As the parties confirmed at the conclusion of the Technical Meeting (TM) that there were no outstanding issues that would prevent the Application from proceeding to a Public Hearing, the Pre-Hearing Conference (PHC) portion of the Agenda immediately followed the conclusion of the TM on the afternoon of March 26, 2020. The PHC was conducted via Zoom video and audio conference.

The PHC was also chaired by Karén Kharatyan, the Board’s Director of Technical Services, with the same parties in attendance as those who participated in the TM. The purpose of the PHC was to discuss the various matters as set out in Rule 14 of the Nunavut Water Board’s *Rules* in preparation for a Public Hearing.

The PHC commenced with the review and refinement of both the list of issues and the list of commitments to reflect the clarifications and subsequent agreement of the parties. The wording in [APPENDIX D: List of Commitments](#) of this Report reflects these discussions. For the convenience of the parties, where commitments made by the Applicant will result in the submission of additional or updated documentation, the Board has included a description of the timelines for submission of this information and the form of submission expected by the parties.

Similarly, the list of issues (discussed in more detail under the subheading [List of Issues](#) below) was also reviewed and revised at the beginning of the PHC to reflect the discussions of participants during the TM.

Timetable for Pre-Hearing Exchange of Information

It was noted at the beginning of this discussion that, as required by s. 55(2) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, S.C. 2002, c. 10 (NWNSRTA), the NWB must give the public and parties a minimum of sixty (60) days’ notice in advance of a Public Hearing.

The Applicant and Interveners in attendance were polled regarding any outstanding information requirements that must be supplied in advance of the Public Hearing and indicated that, provided that the additional information described in [APPENDIX D: List of Commitments](#) is provided in



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accordance with the timelines specified in the list, the preparation and submission of additional information should not delay the potential Public Hearing for the Application.

As the PHC participants did not identify any issues that would prevent the Board from proceeding to a Public Hearing for the Application, the Board’s legal counsel outlined the following proposed timetable for the pre-Hearing exchange of information set out below. The Applicant and all participants were reminded, however, that the Board reserves the right to revisit the timing proposed if:

- parties are unable to meet the deadlines in their commitments;
- if the Board receives subsequent, reasonable requests from the parties for adjournments in response to additional information received;
- if public health authorities issue directions or orders to respond to the COVID-19 pandemic; or
- as may subsequently be considered necessary by the Board.

In establishing the following schedule, the Board considered the views of the parties and the Board’s current commitments to identify that the most feasible timing for a Public Hearing is likely the middle of July 2021. Unless modified as outlined above, the Board requires the participants to observe the following timetable:

- **On or before Friday, April 23, 2021** the NWB provides Notice of the Public Hearing;
- **On or before Friday, May 21, 2021** any party requesting French translation of the Executive Summary materials, presentation materials and/or requesting the Board to provide simultaneous French translation at the Public Hearing should make such requests to the Board in writing;
- **On or before Tuesday, June 15, 2021**, the Interveners must file their final written submissions for the Public Hearing;
- **On or before Friday, June 25, 2021**, the Applicant must file any further responses to the information filed in advance of the Public Hearing and final written submissions with the Board;
- **On or before Tuesday, July 6, 2021**, all parties intending to present to the Board during the Public Hearing must file any presentation materials (e.g. PowerPoint Presentations, etc.) upon which they intend to rely at the Public Hearing; and
- **In the week of July 12-16 (tentatively Tuesday, July 13, 2021, and Wednesday, July 14, 2021)**, the NWB conducts the Public Hearing in-person in Cambridge Bay, closes the Public Hearing Record for the Amendment Application, and remits the matter to the NWB’s decision-making Panel for their decision.



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NOTE: When the Interveners and/or the Applicant file additional written submissions, final responses and presentation materials as outlined above, they are also required to provide **an Executive Summary of their written submissions in English, French, Inuktitut and Inuinnaqtun and fully translated copies of their presentation materials in English, Inuktitut and Inuinnaqtun at the same time** as they file the full submission. All submissions will be posted on the NWB’s ftp-site (<ftp://ftp.nwb-oen.ca/>) and in the public registry upon receipt. A copy of the public registry as it relates to the Application will be available for review at the Public Hearing.

Identification of Interested Parties

During the PHC, the following parties confirmed their participation and attendance at the Public Hearing:

- The Applicant, Sabina Gold & Silver Corp. (Sabina)
- Kitikmeot Inuit Association (KIA)
- Crown-Indigenous Relations and Northern Affairs (CIRNA)
- Environment and Climate Change Canada (ECCC)

When asked at the PHC, parties indicated that with the exception of interested community members, there are no additional interested parties that should be invited to participate in the Public Hearing.

Provision of Final Written Submissions from Interested Parties

Any additional information that the Applicant, Interveners or other interested parties may wish the Board to consider during their review of the Application must be filed with the Board in advance of the Public Hearing and in accordance with the timelines outlined above under the heading “Timetable for Pre-hearing Exchange of Information”.

List of Issues

As noted above, the parties in attendance at the TM and PHC confirmed that none of the issues for discussion associated with the Application and related information requirements should prevent the Board from proceeding with the Public Hearing.

At the beginning of the PHC, the parties reviewed and commented on the following list of issues that are expected to be discussed at the upcoming Public Hearing. All parties agreed that, subject



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to adding issues following the review of information that may be exchanged in advance of the Public Hearing, the following issues will be addressed at the Public Hearing:

1. Scope of Amendments to the Existing Licence under the 2020 Modification Package
 - Goose Site
 - Airstrip Extension
 - Umwelt Underground Extension
 - Total Water Use Increase
 - Waste and Water Management Infrastructure
 - Marine Laydown Area
 - Addition of Fuel Transfer Area
 - Airstrip Extension
 - Shoreline Pad Extension
 - Winter Ice Road
 - Subbase Upgrade
 - Service/Emergency Camps
 - Total Water Use Increase
2. Water Management
 - Increased water use at the Goose Site and associated with the Winter Ice Road
 - Changes in water management strategies required to meet Canadian Council of the Ministers of the Environment Water Quality Objectives (CCME WQOs) or Site-Specific Water Quality Objectives (SSWQOs), as appropriate, at the edge of the mixing zone, (the “mixing zone” remains to be determined)
3. Water Quality
 - Predictions of elevated parameters of concern at the outlet to Goose Lake
 - Inclusion of a complete list of parameters and discharge criteria for potential effluent discharges to Goose Lake
4. Modelling, Management Plans, Manuals and Reports
 - Timing of updates to the original Hydrodynamic Model and predictions, as well as the content
 - Updates and additions to existing management plans and reports to reflect new infrastructure and closure of existing infrastructure, including:
 - Water Management Plan
 - Tailings Management Plan
 - Waste Rock Management Plan
 - Borrow Pits and Quarry Management Plan
 - Closure and Reclamation Plan
5. For-construction Drawings and Reports



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- Providing the assessment of hydraulic conductivity of bedrock associated with the Tailings Storage Facility (TSF) Dam
- 6. Monitoring Program
 - Regulated monitoring (Final Discharge Point) for potential Effluent discharge to Goose Lake and other potential amendments to existing monitoring requirements.
- 7. Annual Reporting Requirements under Schedule B
 - Inclusion of comparison of measured groundwater inflow rates to model predictions into Annual Reports
- 8. Closure and Reclamation Planning
 - Updated Interim Closure and Reclamation Plan
 - Amendments to Part C Security and associated definitions in Schedule C
- 9. Discussion on Amended Water Licence Framework

Changes to the Application for the Purposes of Clarification

No parties identified that changes to the current Application were necessary for the purposes of clarification, and the Public Hearing will consider the changes as requested in the Application provided by Sabina in October 2020.

Procedures for the Public Hearing

Parties were asked for their views with respect to the form of the Public Hearing (written, teleconference or in-person). The KIA and CIRNA noted that there might be public interest in this Application and therefore favored that the Public Hearing be conducted in-person in the community of Cambridge Bay with the Board making arrangements to allow for remote participation via audio or video conference of those who cannot travel into Nunavut. CIRNA also noted that, because the Board was unable to host a community information session for the Application to date, CIRNA recommended that the Board incorporate at least one in-person community session during the Board’s decision-making process for this Application. The Board agrees that ensuring that the residents of the community closest to the mine are informed about the Application and have an opportunity to ask questions and share their comments and concerns with the Board is an important part of the Board’s process, and will be exploring options to engage with the community as the Application progresses to the Public Hearing.

The KIA and CIRNA also indicated that they would expect the NWB’s procedures for the conduct of an in-person Public Hearing will be modified as necessary to meet the guidance of applicable



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public health authorities in place at the time the Public Hearing is being conducted. ECCC also noted that there are restrictions on travel into Nunavut and limits on public gatherings in place in Nunavut and, as a result, ECCC would be unable to travel to Cambridge Bay for an in-person Public Hearing. Consequently, ECCC favored a Public Hearing conducted via video/audio conference format. ECCC indicated that if the Board chooses to conduct an in-person Public Hearing, arrangements should be made to allow for participants unable to travel into Nunavut to participate via video and/or audio links.

While acknowledging that their preference was for an in-person Public Hearing, Sabina also noted that the restrictions on non-essential travel into Nunavut may limit the ability of Sabina’s representatives and consultants to travel to Cambridge Bay. Sabina noted that if the current restrictions remain in place at the time of the Public Hearing, and Board chooses to conduct the Public Hearing remotely via video or audio conference, the Applicant would take steps to ensure that community representatives who wish to participate in the Public Hearing could do so by attending at a central location provided in the community.

Although the NWB understands the views of the parties that a Public Hearing held by video or audio conference may be more convenient or perceived to be more expedient, the NWB must also give due weight and consideration to the requirements of the *Nunavut Agreement*, including respect for the importance of the oral tradition. Given the potential public interest in the Application, the NWB’s duly appointed decision-making Panel for the Application, Panel P19, has determined that it is most appropriate for the Board to hold a combination in-person Public Hearing (if necessary in two linked “hubs”) in Cambridge Bay, with video and audio conference access for parties unable to travel to Nunavut.

With respect to the location of the in-person component of the Public Hearing, Cambridge Bay as the closest and most directly affected community is the appropriate location. On this basis, the Panel has decided, by Motion #2021-01-P19-06, that the in-person component of the Public Hearing should be held in Cambridge Bay.

All parties should be advised, however, that this procedural direction, including the proposed timing and format of the Public Hearing may be modified by the Board in the future, even on short notice, if required to reflect changed circumstances such as:



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- The failure of any participants to meet the timelines for the pre-Hearing exchange of documentation;
- Updates to applicable guidance from public health authorities and changes to public health measures put in place to prevent the spread of COVID-19; and
- Technological limits and/or innovations.

At present, based on the time commitments outlined in the discussion of the exchange of documents set out above and the discussions with the parties at the PHC, the Public Hearing is tentatively scheduled for the week **of July 12-16, 2021**.

The parties have confirmed that they do not anticipate that, other than modifications to the Board’s Public Hearing practices necessary to comply with the directions of public health authorities to prevent the spread of COVID-19, they will not require the Board to deviate from the Board’s normal *Rules of Practice and Procedure* (May 2005) (*Rules*) during the conduct of the Public Hearing. As such, the Board directs all parties that other than as specifically required to protect the health and safety of the public and all participants during the Public Hearing, the Public Hearing will be conducted in accordance with Parts III and IV of the Board’s *Rules*.

Measures to Simplify the Disposition of the Application

No specific measures to simplify the disposition of the Application were identified at the PHC. However, as always, the Board encourages participants to make available visual representations such as maps, diagrams, pictures, video clips and models of facilities and infrastructure to support their discussions with the community during the Public Hearing.

Steps following the Public Hearing

Following the closure of the Public Hearing Record (usually at the end of the Public Hearing), the Application will be remitted to the Panel for decision-making, and within thirty (30) to forty-five (45) days of the close of the Public Hearing Record, the Board will issue its Record of Proceedings and Reasons for Decision to the Minister of Northern Affairs. If the Panel recommends that the existing Type “A” Licence should be amended as requested in the Application, the Board will attach a draft of the Type “A” Water Licence to the Decision for the Minister’s consideration.



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If you require additional information regarding this Application, the Board's specific direction or the Board's processes in general, please do not hesitate to contact myself, or the NWB's Director of Technical Services, Karén Kharatyan, karen.kharatyan@nwb-oen.ca. For any administrative matters related to the Public Hearing, please contact the NWB's Manager of Licensing, Richard Dwyer, at licensing@nwb-oen.ca.

Regards,

NUNAVUT WATER BOARD

Stephanie Autut
Executive Director

SA\SK

Attachments:

- Appendix A: Technical Meeting and Pre-Hearing Conference Agendas
- Appendix B: Summary Listing of Attendees in Technical Meeting and Pre-Hearing Conference
- Appendix C: List of Application Submissions
- Appendix D: List of Commitments generated during the Technical Meeting held on March 26, 2021 for an Amendment Application for Licence 2AM-BRP1831



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APPENDIX A: Technical Meeting and Pre-Hearing Conference Agendas

FINAL AGENDA

TECHNICAL MEETING

**BACK RIVER PROJECT –
SABINA GOLD & SILVER CORP**

WATER LICENCE (TYPE “A” LICENCE No: 2AM-BRP1831)

Date: March 26, 2021

Time: 8:30 AM – 3:00 PM (MT)

Teleconference Call-In Information: Phone: +1 587 328 1099; Meeting ID: 956 9728 5642

Zoom link: <https://zoom.us/j/95697285642>

1. Introduction
2. Opening remarks/Application to the Board (15 Minutes)
 - a. Overview of scope and procedural history of the Application
3. Purpose of the Technical Meeting and Pre-Hearing Conference
4. Technical Review of the Application
 - a. Introduction of Participants
 - b. Presentation by Applicant (Sabina) (up to 45 minutes, excluding time for questions and answers)
 - i. Questions from Parties, other conference call participants and the NWB regarding the Applicant’s Presentation
 - c. Identification of interested parties
 - d. Presentations by interested parties (up to 30 minutes, excluding time for questions and answers)
 - e. Formulation of outstanding issues
 - f. Identification of the parties’ commitments to resolve relevant technical issues, service of documents to parties (deadline, public registry, form)
5. Closing of Technical Meeting



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FINAL AGENDA

PRE-HEARING CONFERENCE

**BACK RIVER PROJECT –
SABINA GOLD & SILVER CORP**

WATER LICENCE (TYPE “A” LICENCE No: 2AM-BRP1831)

Date: March 26, 2021

Time: 3:00 PM – 5:30 PM (MT)

Teleconference Call-In Information: Phone: +1 587 328 1099; Meeting ID: 956 9728 5642

Zoom link: <https://zoom.us/j/95697285642>

1. Pre-Hearing Conference

- a. Identify issues that may prevent the Application from proceeding to a Public Hearing
- b. Discuss form, timing, and location of a potential Public Hearing for the Application
- c. Establish timetable for the pre-hearing exchange of information including:
 - i. preparation and filing of additional documents by the parties (deadlines, form, public registry)
 - ii. document-translation requirements
 - iii. documentation to be included in the Public Hearing Record
- d. Finalize list of issues to be addressed at the Public Hearing
- e. Identify interested parties in the Public Hearing
- f. Identify any changes required to the Application for the purposes of clarification
- g. Final procedures to be followed at the Public Hearing including:
 - i. requested modifications to the applicable NWB Rules of Practice and Procedure for Public Hearings (May 2005)
 - ii. language requirements at the Hearing
- h. Consideration of any other matters that may aid in the simplification and disposition of the Application at the Public Hearing

2. Other issues

3. Closing of the meetings.



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APPENDIX B: Summary Listing of Participants in Technical Meeting and Pre-Hearing Conference

AMENDMENT TO WATER LICENCE 2AM-BRP1831, BACK RIVER PROJECT, SABINA GOLD & SILVER CORP.					
TECHNICAL MEETING (via Videoconference)					
March 26, 2021					
Registration Form					
No.	First Name	Last Name	Organization	Phone number	e-mail
1	Dionne	Filiatrault	Golder for Sabina	780-237-3681	dionne_filiatrault@golder.com
2	Teresa	Meadows	Meadows Law NWB Counsel	780-784-6325	tmeadows@meadowslaw.ca
3	Sergey	Kuflevskiy	NWB	867-360-6338	sergey.kuflevskiy@nwb-oen.ca
4	Orlagh	O'Sullivan	ECCC	431-276-4506	orlagh.osullivan@canada.ca
5	Shadi	Dayyani	Golder for Sabina	403-891-4593	shadi_dayyani@golder.com
6	Richard	Hoos	Tetra Tech for CIRNAC	604-608-8914	rick.hoos@tetrattech.com
7	Matthew	Pickard	Sabina	416-605-7881	mpickard@sabinagoldsilver.com
8	Merle	Keefe	Sabina	604-240-6619	mkeefe@sabinagoldsilver.com
9	John	Roesch	KIA	867-982-3310	srproject@kiatia.ca
10	Richard	Nesbitt	HECL for KIA	519-576-1711	richard.nesbitt@environmentalsciences.ca
11	Reg	Ejeckam	ECCC	431-275-1711	reg.ejeckam@canada.ca
12	Meagan	Tobin	ECCC	587-340-1873	meagan.tobin@canada.ca
13	John	Kurylo	SRK for Sabina	604 681 4196	jkurylo@srk.com
14	Karen	Kharatyan	NWB	867-360-6338	karen.kharatyan@nwb-oen.ca
15	Samantha	Barnes	SRK for Sabina	778-785-8467	sbarnes@srk.com
16	Sarah	Forte	CIRNA	(867) 975-4282	sarah.forte@canada.ca
17	Bridget	Campbell	CIRNA	(867) 975-4282	bridget.campbell@canada.ca
18	Catherine	Paul	Sabina	604-908-8609	cpaul@sabinagoldsilver.com



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AMENDMENT TO WATER LICENCE 2AM-BRP1831, BACK RIVER PROJECT, SABINA GOLD & SILVER CORP.					
PRE-HEARING CONFERENCE (via Videoconference)					
March 26, 2021					
Registration Form					
No.	First Name	Last Name	Organization	Phone number	e-mail
1	Teresa	Meadows	Meadows Law NWB Counsel	780-784-6325	tmeadows@meadowslaw.ca
2	Sergey	Kuflevskiy	NWB	867-360-6338	sergey.kuflevskiy@nwb-oen.ca
3	Dionne	Filiatrault	Golder for Sabina	780-237-3681	dionne_filiatrault@golder.com
4	Orlagh	O'Sullivan	ECCC	431-276-4506	orlagh.osullivan@canada.ca
5	Shadi	Dayyani	Golder for Sabina	403-891-4593	shadi_dayyani@golder.com
6	Richard	Hoos	Tetra Tech for CIRNAC	604-608-8914	rick.hoos@tetrattech.com
7	Matthew	Pickard	Sabina	416-605-7881	mpickard@sabinagoldsilver.com
8	Merle	Keefe	Sabina	604-240-6619	mkeefe@sabinagoldsilver.com
9	John	Roesch	KIA	867-982-3310	srproject@kiatia.ca
10	Richard	Nesbitt	HECL for KIA	519-576-1711	richard.nesbitt@environmentalsciences.ca
11	Reg	Ejeckam	ECCC	431-275-1711	reg.ejeckam@canada.ca
12	Meagan	Tobin	ECCC	587-340-1873	meagan.tobin@canada.ca
13	Karen	Kharatyan	NWB	867-360-6338	karen.kharatyan@nwb-oen.ca
14	Sarah	Forte	CIRNA	(867) 975-4282	sarah.forte@canada.ca
15	Bridget	Campbell	CIRNA	(867) 975-4282	bridget.campbell@canada.ca
16	Catherine	Paul	Sabina	604-908-8609	cpaul@sabinagoldsilver.com



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APPENDIX C: List of Application Submissions

The following documents were included with the Application:

- 1. June 10, 2020:**
 - Modification Package Intro
 - Modification Package Cover Letter
 - Appendix A 2020 Modification Package Figures
 - Appendix B Water Management Plan
 - Appendix C. Goose Property Water Availability Memo
 - Appendix D. MLA Shoreline Pad Extension Memo
 - Appendix E. WIR Water Increase Memo
 - Appendix F. Type A Water Licence Amendment Application
- 2. September 18, 2020**
 - Cove E-mail Sabina Clarification June Package to be Amended October 2020
- 3. October 13, 2020**
 - Amendment Cover Letter
 - Attachment 1 - Amendment Application
 - Attachment 1.1 - Compliance Assessment Box 23
 - Attachment 2 – Modification Package Version 2
 - Attachment 2-Appendix B-Water Management Plan
- 4. October 15, 2020**
 - Cover E-mail: Sabina's Project Modification Submission to NWB
- 5. November 13, 2020**
 - Cover E-mail: Back River Project Sabina Gold & Silver Corp. Amendment Application Completeness check for 2AM-BRP1831 water licence
- 6. November 30, 2020**
 - BACK RIVER PROJECT Responses to Information Requests for Water Licence (2AM-BRP1831) Amendment
- 7. January 19, 2021**
 - Cover E-mail: Technical Review Sabina Response to CIRNA question on updated Hydrodynamic Model
- 8. February 12, 2021**
 - BACK RIVER PROJECT Responses to Technical Comments for Water Licence (2AM-BRP1831) Amendment



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- 9. March 03, 2021**
 - Cover E-mail: Hydrodynamic Model Extension Request for Sabina Response to Comments
- 10. March 12, 2021**
 - BACK RIVER PROJECT Responses to Technical Comments on the Hydrodynamic Model for Water Licence (2AM-BRP1831) Amendment
- 11. March 16, 2021**
 - Back River Project Type A Water Licence Amendment Technical Meeting –March 26, 2021 (English Presentation)
 - DRAFT WATER LICENCE FRAMEWORK “ADDENDUM” TO SUPPORT WATER LICENCE AMENDMENT
- 12. March 25, 2021**
 - Back River Project Type A Water Licence Amendment Technical Meeting –March 26, 2021 (Inuktitut Presentation)
 - Back River Project Type A Water Licence Amendment Technical Meeting –March 26, 2021 (Inuinnaqtun Presentation)



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APPENDIX D: List of Commitments generated during the Technical Meeting held on March 26, 2021 for an Amendment Application for Licence 2AM-BRP1831

No.	Party(s) Responsible for Commitment	Party(s) who raised (Item#)	Issue - TM Commitment	Timeline for Submission	Form of Submission
1.	Sabina	KIA, CIRNA	Updated Draft Water Licence Security Framework (Part C, Items 1 & 2 pending in DWLF), staging and splitting of Security.	Sabina’s final submission prior to the Final Hearing	Potentially Joint Submission (KIA, CIRNA, Sabina) to the NWB
2.	Sabina	KIA, CIRNA	Updated Interim Closure Reclamation Plan and Security Estimate.	Sabina’s final submission 30 days prior to the Final Hearing	Updated Reclamation Security Estimate and ICRP
3.	Sabina	KIA, ECCC, CIRNA	Sabina to provide additional Hydrodynamic Model results for years 1 through 10, to assess water quality in Goose Lake including at discharge and other reference stations (e.g at approximately 100 m, 200m from each inflow into Goose Lake). Model results with consideration of the commitments made with respect to submissions on the Hydrodynamic Model received throughout the technical review of the Application, where applicable (e.g. sensitivity analysis, wet and dry year scenarios).	May 17, 2021	Technical Memo



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No.	Party(s) Responsible for Commitment	Party(s) who raised (Item#)	Issue - TM Commitment	Timeline for Submission	Form of Submission
			Sabina to provide proposed effluent quality criteria for parameters of concern identified in the Model update, with associated rationale.		
4.	Sabina	KIA, ECCC, CIRNA	Sabina to convene a teleconference with KIA, ECCC, CIRNA and other interested stakeholders to provide an overview of the planned Hydrodynamic Model updates pursuant to commitment #3. Attendees to provide verbal input on forthcoming Model updates.	Prior to April 21, 2021	Teleconference
5.	KIA, ECCC	Sabina, NWB	KIA and ECCC to provide technical comment on the updated Hydrodynamic Model and preliminary EQCs for parameters of concern submitted by Sabina pursuant to commitment #3.	May 31, 2021	Technical Memo
6.	Sabina	KIA, ECCC, CIRNA	An updated Hydrodynamic Model including mixing zone design for each inflow into Goose Lake taking into account additional field data. The updates are to take into account commitments made with respect to the submissions received during the technical review of the Application, as well as final	90 days following approval of the Licence	Updated Hydrodynamic Model and Report



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No.	Party(s) Responsible for Commitment	Party(s) who raised (Item#)	Issue - TM Commitment	Timeline for Submission	Form of Submission
			submission and issues raised during the Public Hearing process, where applicable. The updated Model report will expressly outline inputs and scenarios varied from the previous iteration in a summary table.		
7.	Sabina	NWB	Sabina to provide updated Draft Water Licence Framework (DWLF), identifying suggested amendments to the existing Licence.	Sabina's final submission prior to the Final Hearing	DWLF
8.	Sabina	NWB	Sabina to work cooperatively with the NWB to determine regulatory requirements associated with WIR emergency camps.	30 April, 2021	Teleconference/ Email
9.	Sabina	NWB	If determined in Item 8 that a type "B" water licence can be applied, Sabina may submit DWLF for a type "B" water licence or incorporate into DWLF for the existing type "A" water licence.	Sabina's final submission prior to the Final Hearing	DWLF (as per Item 7)
10.	Sabina	KIA, ECCC, CIRNA	All applicable management plans will be updated, i.e.: <ul style="list-style-type: none"> • Water Management Plan • Tailings Management Plan • Waste Rock Management Plan 	90 days prior to initiation of proposed activity or within 2021 Annual Report,	DWLF (as per Item 7)



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No.	Party(s) Responsible for Commitment	Party(s) who raised (Item#)	Issue - TM Commitment	Timeline for Submission	Form of Submission
			The updates are to take into account commitments made with respect to the submissions received during the technical review of the Application, as well as final submission and issues raised during the Public Hearing process, where applicable.	whichever comes first	