



The **BACK RIVER**  
PROJECT

**FINAL ENVIRONMENTAL IMPACT STATEMENT  
ADDENDUM**



February 2017

**Submitted to:**  
Nunavut Impact Review Board  
PO Box 1360  
Cambridge Bay, NU X0B 0C0

# BACK RIVER PROJECT

## FEIS ADDENDUM

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- 6. Oil Pollution Emergency Plan (Revised)
- 19. Aquatic Effects Management Plan (Significantly Revised)
- 20. Wildlife Mitigation and Monitoring Program Plan (Significantly Revised)
- 21. Conceptual Fish Offsetting Plan (Revised)
- 30. Vegetation Monitoring Plan (New)
- 31. Conceptual Fish-out Plan (New)

## 2. Volume 2 Addenda: Project Description and Alternatives

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### VOLUME ADDENDA SUMMARY

#### INTRODUCTION

This FEIS Addendum is being provided to the NIRB, in response to the direction received on January 23, 2017, to provide new and updated information on the topic of Project Description and Alternatives, as identified within the NIRB Hearing Decision Report (June 15, 2016) and the Ministers' Referral Letter (January 12, 2017).

For convenient reference, this FEIS Addendum follows the original FEIS heading and numbering scheme. In the interest of brevity, the volume and chapter numbers of the FEIS Addenda headers in the Table of Contents have been combined. For example, Section 6.4 in the FEIS Addendum Table of Contents corresponds to Volume 6, Chapter 4 Freshwater Water Quality in the FEIS. Where there is no new or updated information provided in the FEIS Addendum, the corresponding section number is omitted. For example, Section 6.2 and 6.3 are omitted from the FEIS Addendum Table of Contents for this reason. Wherever the original FEIS information is referenced, FEIS is used at the start of the reference (FEIS Volume 10 Chapter 19). Wherever the FEIS Addendum information supersedes the FEIS information, FEIS Addendum is used at the start of the reference (FEIS Addendum Volume 10, Chapter 21).

The Back River Project (the Project) is a proposed gold project owned by Sabina Gold & Silver Corp. (Sabina) within the West Kitikmeot region of southwestern Nunavut. It is situated approximately 400 km southwest of Cambridge Bay, 95 km southeast of the southern end of Bathurst Inlet, and 520 km northeast of Yellowknife, Northwest Territories. The Project is comprised of two main areas: the Goose Property and the Marine Laydown Area (MLA) situated along the western shore of southern Bathurst Inlet. The majority of annual resupply will be completed using the MLA, located in Bathurst Inlet, and an approximately 160 km in long winter ice road will interconnect these sites.

The Feasibility Study for the Project, completed in June 2015, positively identified the economic viability and potential of the Back River Project. The mine plan reflects an estimated 10 year operating mine life based on currently identified ore reserves, with a total ore feed of 19.8 million tonnes to a single process plant at the Goose Property. The life of the Back River Project, from mobilization and construction to operations and closure, reclamation, and post closure, is 27 years.

The Project includes several mineral deposits: Umwelt, Llama, Echo, and Goose Main at the Goose Property. Ore will be mined using conventional open pit and underground methods and trucked to the process plant. Waste rock will be stored in several designated waste rock storage areas (WRSAs) on the surface or backfilled in mined out workings. Tailings from the process plant will first be stored in a Tailings Storage Facility (TSF) located near the process plant and then backfilled in mined out open pits.

Alternatives within the Project have been evaluated according to the following criteria: technical feasibility; economic validity; potential impacts to the environment; and amenability to reclamation. Input received during community and government engagement and consultation has been considered in the alternatives assessments. As the Project planning advances, alternatives assessment criteria will also include community acceptability or preference as well as the potential for enhancing socio-economic effects.

The Project will create significant socioeconomic benefits. The total GDP impact is estimated to be over \$500 million during the Construction phase and \$2.5 billion over the 10 years of production. The Project will substantially benefit Nunavut and will contribute as much as \$44 million in GDP to Nunavut during

the two years of construction and as much as \$380 million in GDP during the Operation phase. Construction is estimated to result in a total of about 4,300 person-years of direct, indirect, and induced employment across Canada and approximately 21,000 person-years over the 10-year operations.

Both Project locations will have self-sufficient operating infrastructure including: accommodations, administration, laydown areas, diesel-fired power generation, emergency and medical facilities, maintenance shops, warehousing, and water and waste management facilities.

### CONFORMITY TO EIS GUIDELINES

Sabina has reviewed the EIS Guidelines (Section 6.0) in respect of the new information provided on the topic of Project Component and Activities, and provided an updated Table of Conformity in FEIS Addendum Appendix V1-1A. This Table replaces the FEIS Table V1-1A.

### INTRODUCTION (FEIS VOLUME 2, CHAPTER 1)

No areas of concern noted within the Final Hearing Report or the Ministers' Referral Letter. No additional information is presented.

### PROJECT COMPONENTS AND ACTIVITIES (FEIS VOLUME 2, CHAPTER 2)

No areas of concern noted within the Final Hearing Report or the Ministers' Referral Letter. No additional information is presented.

### FUTURE DEVELOPMENT (FEIS VOLUME 2, CHAPTER 3)

No areas of concern noted within the Final Hearing Report or the Ministers' Referral Letter. No new or updated information or clarification is presented.

### ALTERNATIVES (FEIS VOLUME 2, CHAPTER 4)

No areas of concern noted within the Final Hearing Report or the Ministers' Referral Letter. No new or updated information or clarification is presented.

### ECONOMIC AND OPERATING ENVIRONMENT (FEIS VOLUME 2, CHAPTER 5)

No areas of concern noted within the Final Hearing Report or the Ministers' Referral Letter. Hence, no changes have been made to this chapter of the FEIS. The following is provided in this Addenda Summary only to update on the Inuit Impact and Benefit Agreement (IIBA).

In 2016, Sabina formally commenced its negotiations with the KIA on land tenure and IIBA terms for the Back River project. The parties continue to advance a detailed non-binding term sheet which will form the basis to finalize definitive agreements once completed. Sabina is committed to working with the KIA to complete the term sheet and the definitive agreements with an objective of formally outlining Sabina's social, economic and environmental commitments to the people of the Kitikmeot Region. Sabina believes that it is reasonable to expect, assuming that progress on the negotiations continues at the current pace, that these agreements will be successfully completed before the end of 2017. Further detail on this subject is available in FEIS Addendum Volume 3 Addenda Summary.

### DETAILED PROJECT DESCRIPTION - CONSTRUCTION (FEIS VOLUME 2, CHAPTER 6)

No areas of concern noted within the Final Hearing Report or the Ministers' Referral Letter. No new or updated information or clarification is presented.

**DETAILED PROJECT DESCRIPTION - OPERATIONS (FEIS VOLUME 2, CHAPTER 7)**

No areas of concern noted within the Final Hearing Report or the Ministers' Referral Letter. No new or updated information or clarification is presented.

**DETAILED PROJECT DESCRIPTION - RECLAMATION AND CLOSURE (FEIS VOLUME 2, CHAPTER 8)**

No areas of concern noted within the NIRB Final Hearing Report or the Ministers' Referral Letter. No new or updated information or clarification is presented.

**DETAILED PROJECT DESCRIPTION - ENVIRONMENTAL MANAGEMENT (FEIS VOLUME 2, CHAPTER 9)**

No areas of concern noted within the NIRB Hearing Report or the Ministers' Referral Letter. However, Sabina has prepared new or updated information for management plans to address concerns directed at other sections of the FEIS. Four management plans were revised, two were revised significantly, and two are new as reflected in this updated table.

**FEIS Addendum Volume 2, Table 9.2-1. Monitoring and/or Mitigation Plans for the Back River Project (Revised)**

| Chapter  | Document                                    | Construction | Operations and Ongoing Maintenance | Temporary Closure / Care and Maintenance | Final Closure | Post Closure |
|--|---|--------------|------------------------------------|--|---------------|--------------|
| 1  | Environmental Management Plan               | x            | x                                  | x  | x             | x            |
| 2  | Environmental Protection Plan               | x            | x                                  | x  | x             | x            |
| <b>Biophysical Monitoring and Mitigation Plans</b> |   |              |                                    |  |               |              |
| 3  | Risk Management and Emergency Response Plan | x            | x                                  | x  | x             |              |
| 4  | Fuel Management Plan (Revised)              | x            | x                                  | x  | x             |              |
| 5  | Spill Contingency Plan (Revised)            | x            | x                                  | x  | x             |              |
| 6  | Oil Pollution Emergency Plan (Revised)      | x            | x                                  | x  | x             |              |
| 7  | Site Water Monitoring and Management Plan   | x            | x                                  | x  | x             |              |
| 8  | Ore Storage Management Plan                 |              | x                                  | x  |               |              |
| 9  | Mine Waste Rock Management Plan             | x            | x                                  | x  | x             |              |
| 10   | Waste Management Plan                       | x            | x                                  | x  | x             |              |
| 11   | Incineration Management Plan                | x            | x                                  | x  | x             |              |
| 12   | Hazardous Materials Management Plan         | x            | x                                  | x  | x             |              |
| 13   | Explosives Management Plan                  | x            | x                                  | x  | x             |              |
| 14   | Road Management Plan                        | x            | x                                  | x  | x             |              |
| 15   | Shipping Management Plan                    | x            | x                                  | x  | x             |              |
| 16   | Borrow Pits and Quarry Management Plan      | x            | x                                  | x  | x             |              |
| 17   | Air Quality Monitoring and Management Plan  | x            | x                                  | x  | x             |              |
| 18   | Noise Abatement Plan                        | x            | x                                  | x  | x             |              |

(continued)

**FEIS Addendum Volume 2, Table 9.2-1. Monitoring and/or Mitigation Plans for the Back River Project (Revised) (completed)**

| Chapter                                | Document  | Construction | Operations and Ongoing Maintenance | Temporary Closure / Care and Maintenance | Final Closure | Post Closure |
|--|---|--------------|------------------------------------|--|---------------|--------------|
| 19                                     | Aquatic Effects Management Plan (Significantly Revised)         | x            | x                                  | x  | x             |              |
| 20                                     | Wildlife Mitigation and Monitoring Plan (Significantly Revised) | x            | x                                  | x  | x             |              |
| 21                                     | Conceptual Fish Offsetting Plan (Revised)                       | x            | x                                  |  | x             |              |
| 22                                     | Tailings Management Plan  | x            | x                                  | x  | x             | x            |
| <b>Socio-economic Management Plans</b> |   |              |                                    |  |               |              |
| 23                                     | Socio-economic Monitoring Plan                                  | x            | x                                  | x  | x             |              |
| 24                                     | Business Development Plan                                       | x            | x                                  | x  | x             |              |
| 25                                     | Occupational Health and Safety Plan                             | x            | x                                  | x  | x             |              |
| 26                                     | Community Involvement Plan                                      | x            | x                                  | x  | x             |              |
| 27                                     | Cultural and Heritage Resources Protection Plan                 | x            | x                                  | x  | x             |              |
| 28                                     | Human Resources Plan  | x            | x                                  | x  | x             |              |
| <b>Mine Closure</b>                    |   |              |                                    |  |               |              |
| 29                                     | Mine Closure and Reclamation Plan                               |              | x                                  | x  | x             | x            |
| 30                                     | Vegetation Monitoring Plan (New)                                | x            | x                                  |  |               |              |
| 31                                     | Conceptual Fish-out Plan (New)                                  | x            |                                    |  |               |              |

**APPENDICES (FEIS VOLUME 2)**

| FEIS Appendix  | Title   | Summary of Change |
|----------------|---|-------------------|
| Appendix V2-4A | Waste Management Multiple Accounts Analysis Report  | No changes        |
| Appendix V2-4B | MLA Location  | No changes        |
| Appendix V2-4C | Summary Results from Select Alternative Assessments | No changes        |
| Appendix V2-6A | Logistics and Transportation Memo                   | No changes        |
| Appendix V2-7A | Hydrogeology Characterization and Modeling Report   | No changes        |
| Appendix V2-7B | Hydrology Report                                    | No changes        |
| Appendix V2-7C | Site-Wide Geotechnical Properties Report            | No changes        |
| Appendix V2-7D | Geochemical Characterization Report                 | No changes        |
| Appendix V2-7E | WRSA Design Report                                  | No changes        |
| Appendix V2-7F | Mineral Processing Memo                             | No changes        |
| Appendix V2-7G | Tailings Management System Design Report            | No changes        |
| Appendix V2-7H | Water and Load Balance Report                       | No changes        |
| Appendix V2-7I | Site-Wide Water Management Report                   | No changes        |
| Appendix V2-7J | FEIS Design Drawings                                | No changes        |