

Summary Assessment Report for Sukunka Coal Mine Project (Sukunka)

**With respect to the application by Glencore for an
Environmental Assessment Certificate pursuant to the
Environmental Assessment Act, S.B.C. 2002, c. 43 and the
Canadian Environmental Assessment Act, 2012. S.C. 2012, c. 19
as a substituted assessment**

**Prepared by:
Environmental Assessment Office
September 15, 2022**

1 INTRODUCTION

This Summary Assessment Report (Report) provides an overview of the Environmental Assessment (EA) for the proposed Sukunka Coal Mine Project (Sukunka) conducted by the Environmental Assessment Office (EAO). This Report is an overview of the Assessment Report that meets the requirements of the *Environmental Assessment Act*, 2002 (the Act) and the *Canadian Environmental Assessment Act*, 2012 (CEAA 2012) and discusses the key findings and conclusions of the EA. This Report makes direct reference to chapters of the Assessment Report where more detailed effects assessments can be found.

In British Columbia (B.C.), the decision whether to issue an Environmental Assessment Certificate is made under the Act by two deciding ministers, one of which is always the Minister of Environment and Climate Change Strategy and Minister Responsible for TransLink, and another as set out in the regulation¹. For Sukunka, the second deciding minister is the Minister of Energy, Mines and Low Carbon Innovation. The EAO has prepared this Report and the Summary Assessment Report for consideration by these two provincial ministers. In addition, all EAs require the development of a proposed Table of Conditions and a Certified Project Description for consideration by the Ministers, which would become legally-binding if the project receives an Environmental Assessment Certificate. Together, these documents are referred to as the Decision Materials.

SUBSTITUTION OF THE FEDERAL ENVIRONMENTAL ASSESSMENT

The federal Minister of the Environment and Climate Change approved the EAO's substitution request for Sukunka on April 15, 2013, which means that the EAO is responsible for carrying out the assessment of factors set out in CEAA 2012 by the Impact Assessment Agency of Canada (the Agency) and the procedural aspects of Indigenous consultation. For the purposes of meeting the CEAA 2012 substitution requirements, the EAO considered effects that Sukunka may have on the environment as described in subsections 5(1) and 5(2) of CEAA 2012, as well as subsection 79(2) of the *Species at Risk Act* (SARA). This Report and the Assessment Report for the substituted project will inform separate provincial and federal decisions. Further detail regarding the assessment of federal requirements can be found in [Section 9](#) of this Report.

2 PROJECT DESCRIPTION

On August 4, 2015, Glencore plc (Glencore) applied for an Environmental Assessment Certificate to construct and operate an open pit coal mine to produce metallurgical coal (used in the production of steel). Sukunka would be located in the Peace River Regional District, approximately 55 kilometers (km) south of Chetwynd, B.C. and 40 km west of Tumbler Ridge, B.C., as shown in Figure 1.

Glencore is one of the world's largest global diversified natural resource companies and is an integrated

¹ <http://www.eao.gov.bc.ca/acts.html#responsible>

producer and marketer of over 90 commodities, including coal. Under the Act and Reviewable Projects Regulation, a proposed new mine facility is one that will have a production capacity of $\geq 250,000$ tonnes per year of coal during operation. Sukunka would produce approximately 1.5 to 2.5 million tonnes per year of clean coal, and therefore would require an Environmental Assessment Certificate. Sukunka is also reviewable under CEAA (2012), as Sukunka would exceed a coal production capacity of 3,000 tonnes per day for a proposed coal mine.

Construction would be expected to take one to two years and mine life would be expected to exceed 20 years. Decommissioning of project facilities and progressive reclamation would be undertaken during operations, and reclamation would continue through decommissioning and closure. Glencore expects Sukunka would be commissioned in 2026, should an Environmental Assessment Certificate be issued and subsequent regulatory approvals acquired. Sukunka would have a total disturbance area of 2,715.8 hectares (ha) as shown on Figure 1. Key components of Sukunka are listed in Table 1.

Table 1: Key Components of Sukunka

<ul style="list-style-type: none"> • Six open pits • External and in-pit waste rock stockpiles • Coal handling and preparation plant (CHPP) and associated infrastructure (process water management, run-of-mine coal stockpiles, a load out facility, a sewage treatment facility, an operations office, coal testing laboratory, maintenance shop, and a flocculent and reagents storage facility) • Water management structures, including active water treatment plant and associated components (e.g., buffer pond, water pipes, effluent holding and flow attenuation ponds) • Residuals management area • Mine infrastructure area (including a mine office and mine dry, heavy vehicle maintenance shop and warehouse, truck wash, tire shop, fire truck and mine rescue garage, fuel depot, sewage treatment facility, waste collection facility, and communication system) 	<ul style="list-style-type: none"> • Mine infrastructure haul roads along the edges of the pits • Erosion and sediment control structures, such as diversion channels for clean (non-contact) water, collection channels for mine-influenced (contact) water • Substation and electrical transmission line (two options for supplying power to the mine site); • Coal haul route along a newly constructed road and the upgraded Meikle Creek Haul Road connecting to Highway 29 and one of two load-out facilities • Explosives reload facility to manufacture and store explosives on site to use when blasting to expose coal seams is required • Approximately 250-person employee camp located along Meikle Creek Haul Road at one of two proposed locations
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Sukunka would be located within the southwestern area of Treaty 8 territory and within 100 km of three Treaty 8 First Nations communities, including West Moberly First Nation, Saulteau First Nations, and McLeod Lake Indian Band (as shown on Figure 2). Sukunka would be located within the Tumbler Ridge Zone of the Regional Coal Agreement between the Province and three Indigenous groups

(Halfway River First Nation, Saulteau First Nations, and West Moberly First Nations), signed in 2015². See the Indigenous Consultation Section (Part C) of the Assessment Report for further details.

3 NEGOTIATIONS RELATED TO CARIBOU OUTSIDE THE SUKUNKA EA

Sukunka would be located in the range of the Quintette caribou herd, part of the Central Group of Southern Mountain caribou. Southern Mountain caribou are listed under SARA as threatened since 2003. As Central Group caribou have experienced dramatic declines over recent decades, the species is red-listed³ in BC and has been considered endangered since 2014 according to the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

There were substantial changes to both the provincial and federal caribou policy during the Sukunka EA, coinciding with increasing concerns regarding the threat to the Quintette herd. On May 4, 2018, the federal Minister of Environment and Climate Change Canada determined that there was an imminent threat to the recovery of southern mountain caribou and that an emergency order may be required to provide for the protection of the species. On February 21, 2020, the federal and provincial governments signed a conservation agreement enabled by Section 11 of SARA that describes the measures that will be undertaken to support the recovery of Southern Mountain caribou in B.C. to self-sustaining populations, aligning outcomes with the 2014 Federal Recovery Strategy⁴ and with the rights of directly affected Indigenous groups.

The federal and provincial governments, West Moberly First Nations, and Saulteau First Nations also signed a partnership agreement⁵ on February 21, 2020 (the same date the conservation agreement was signed) with the objective of immediately stabilizing and expeditiously growing the population of the Central Group to levels that are self-sustaining and support traditional aboriginal harvesting activities. As a result of implementation of the partnership agreement, the provincial government put a series of regulatory measures in place that prohibit new industrial activities in specific identified zones that are centered on core caribou habitat. Other specified zones are subject to provincial decision making that considers, amongst other factors, whether any adverse effects on caribou or caribou habitat are capable of being fully mitigated, and the recommendations of a Caribou Recovery Committee (consisting of Saulteau First Nations, West Moberly First Nations, Canada, and B.C.).

² Further detail available at: <https://catalogue.data.gov.bc.ca/dataset/regional-coal-agreements-first-nations>

³ The red list includes any native species or ecological communities that have, or are candidates for, extirpated, endangered, or threatened status in British Columbia.

⁴ Available online: https://www.registrelep-sararegistry.gc.ca/document/default_e.cfm?documentID=1309

⁵ Further detail available at: [Intergovernmental partnership agreement: central group Southern Mountain Caribou \[Final\] - Canada.ca](https://www.intergovernmental-partnership-agreement-central-group-southern-mountain-caribou-final-canada.ca)

In March 2021, the federal government declined to make an emergency order having considered several factors, including the signing of the conservation and partnership agreements relating to Southern Mountain caribou in B.C.

The assessments and negotiations of the conservation agreement and the partnership agreement began during the Sukunka EA, which led to a desire from Glencore and the First Nations Independent Technical Review Committee (FNITR), consisting of Saulteau First Nations, West Moberly First Nations, Doig River First Nation, and McLeod Lake Indian Band at the time, that the external negotiations be concluded to inform the conclusions of the EA prior to referral to Ministers. This contributed to Glencore requesting a second and third suspension of the legislated EA timeline to allow additional discussion, proposed project changes, and mitigation measures (additional detail in [Section 4](#) of this Report).

Figure 1: Location of Proposed Sukunka Infrastructure

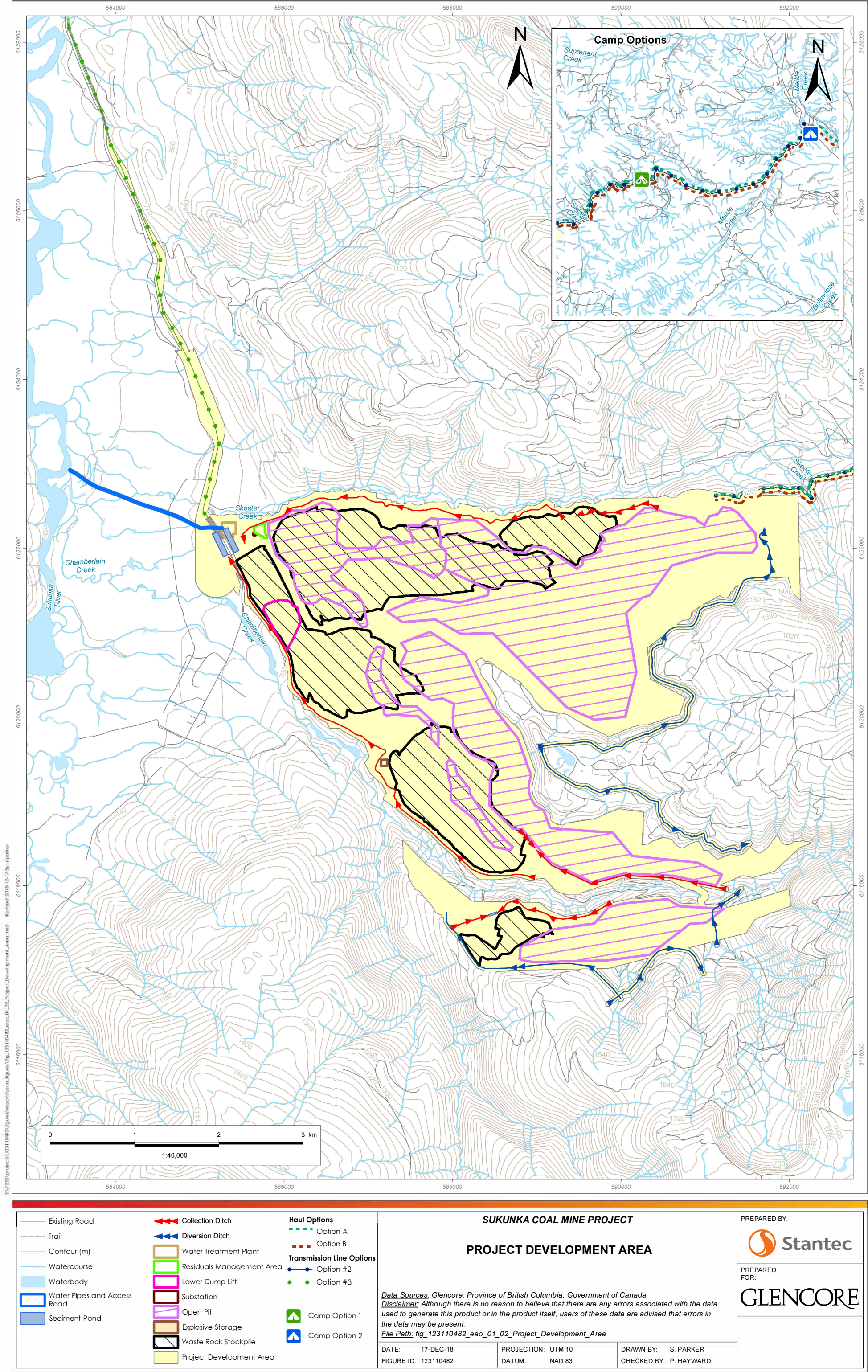
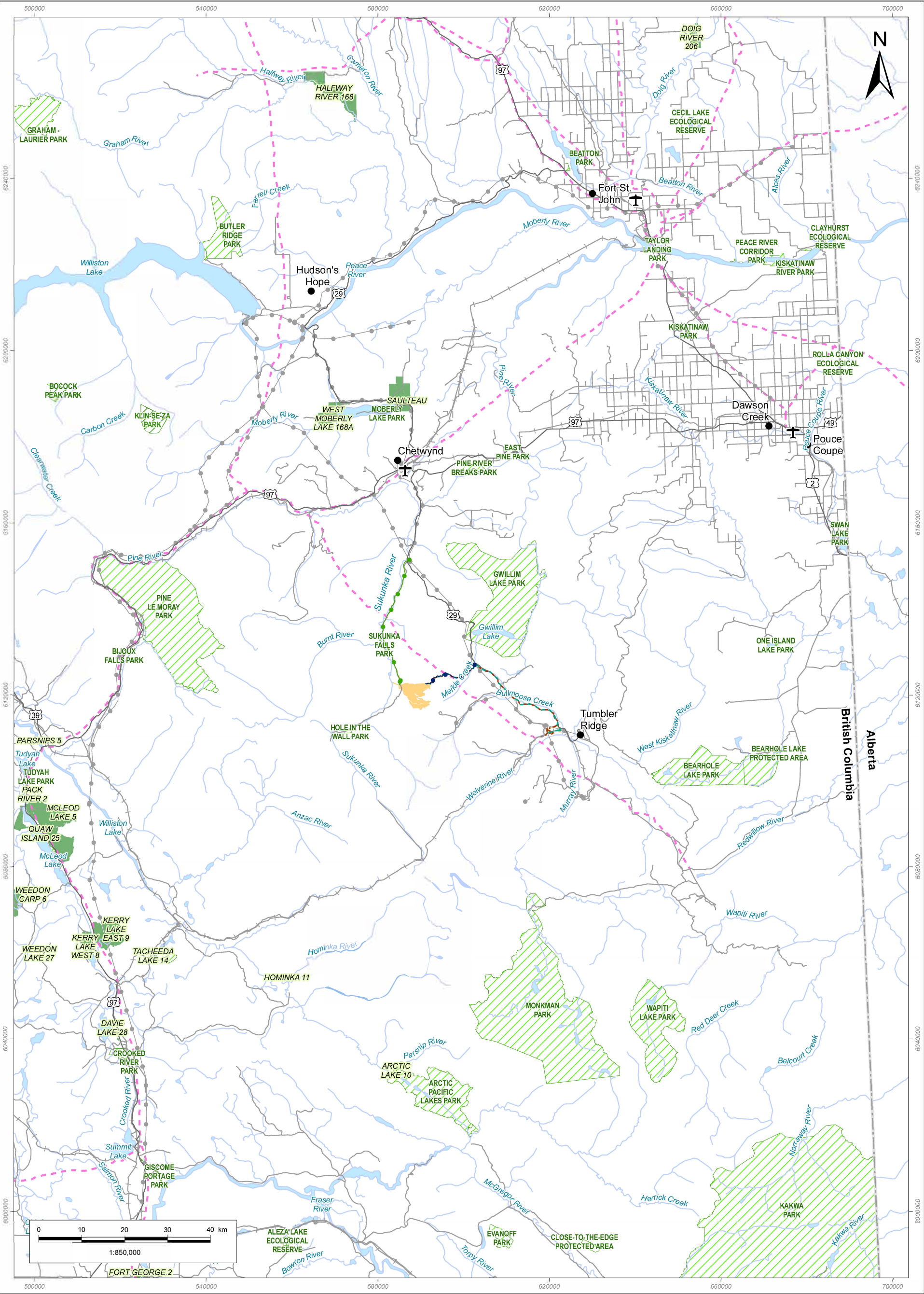


Figure 2: Communities Proximal to Sukunka



<ul style="list-style-type: none"> Airport City / Town / Village Highway Road Railway Pipeline Transmission Line Provincial Border Watercourse Waterbody First Nations Reserve Provincial Park Project Development Area Transmission Line Options <ul style="list-style-type: none"> Option 2 Option 3 Haul Options <ul style="list-style-type: none"> Option A Option B 		<p align="center">SUKUNKA COAL MINE PROJECT</p> <p align="center">COMMUNITIES PROXIMAL TO THE PROJECT</p> <p><i>Data Sources:</i> Glencore, Province of British Columbia, Government of Canada <i>Disclaimer:</i> Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present. <i>File Path:</i> fig_123110482_eao_01_01_Communities_Proximal_to_Project</p>		<p>PREPARED BY:</p> <p>PREPARED FOR:</p>
<p>DATE: 17-DEC-18 FIGURE ID: 123110482</p>		<p>PROJECTION: UTM 10 DATUM: NAD 83</p>		<p>DRAWN BY: S. PARKER CHECKED BY: P. HAYWARD</p>

4 ENVIRONMENTAL ASSESSMENT PROCESS

The EA process for Sukunka included extensive engagement over a nearly ten-year period with government agencies, Indigenous groups, and the public on the potential environmental, economic, social, heritage and health effects (including cumulative effects) of Sukunka, as required under the Act and CEAA 2012. The EAO recognizes the extensive efforts that Glencore, Indigenous nations, and technical advisors contributed to the EA and assisted the EAO in understanding the full range of potential effects of Sukunka.

The EAO and the Agency established a Working Group of technical advisors, consisting of federal, provincial, and local government representatives, as well as representatives of the potentially affected Indigenous groups. The Working Group advised on the Application Information Requirements (AIR), reviewing the Application, and reviewing the EAO's Assessment Report.

As noted in Table 2 and referenced in [Section 3](#), Glencore requested additional time during the EA to gather additional information and undertake discussions regarding water quality and caribou, which resulted in the Sukunka EA being suspended on three occasions from January 21, 2016 to July 15, 2022. Where applicable, this Summary Assessment Report and the Assessment Report were updated to reflect the changing regulatory context and concerns of Indigenous groups and the Working Group related to the time that the process was suspended.

Table 2: Major Milestones of the Substituted B.C. EA

Date	Milestone
January 25, 2013	The EAO issued an Order under Section 10 of the Act to start the Provincial EA.
April 15, 2013	The federal Minister of the Environment approved the EAO's request to have the provincial EA process substituted for the federal process in accordance with the <i>Memorandum of Understanding between the Canadian Environmental Assessment Agency and the British Columbia Environmental Assessment Office on Substitution of Environmental Assessments (2013)</i> .
May 6, 2013	The EAO issued an Order under Section 11 of the Act outlining the scope and procedures of the EA process. The scope of the assessment was required to consider the factors identified under subsection 19(1) of CEAA 2012, and any environmental effects as defined by Section 5 of the Act.
June 14 to July 15, 2013	The pre-Application phase public comment period was carried out on the draft Application Information Requirements (AIR). An open house was held on June 24, 2013, in Chetwynd, B.C.
October 23, 2013	The EAO approved the final AIR, establishing the information that must be collected, analyzed and included as part of Glencore's application for an Environmental Assessment Certificate. The AIR was developed to meet the purposes of the EA pursuant to both the Act and CEAA 2012.
January 21, 2015	Glencore submitted an application for an Environmental Assessment Certificate (Application) for Sukunka.
January 21 to February 20, 2015	The EAO evaluated the Application against the AIR. The EAO extended the evaluation period by 14 days (until March 6, 2015) to allow Glencore to respond to evaluation comments before the EAO made the determination whether the Application met the AIR.

Date	Milestone
March 6, 2015	The EAO determined that the Application did not meet the AIR and made the decision to not accept the Application for detailed review.
March 19, 2015	The EAO amended the Section 11 Order, pursuant to Section 13 of the Act to address requirements for proposed mining projects as a result of the Mt Polley tailings facility breach.
June 9, 2015	The EAO amended the Section 11 Order, pursuant to Section 13 of the Act, to reflect changes to Sukunka, including the removal of the underground mine and dedicated tailings storage facility.
August 4, 2015	The EAO accepted Glencore's Application under Section 16 of the Act.
August 10, 2015	The 180-day Application Review began.
August 19 to October 8, 2015	A public comment period was held during the Application Review phase.
January 21, 2016	On day 164 of the 180-day Application Review Period, at Glencore's request, the EAO suspended the Application review time limit for Sukunka under Section 24(2) of the Act to allow Glencore to gather additional information on caribou and water quality.
April 12, 2016	The EAO issued a Section 13 Order to add Doig River First Nation to Schedule B.
October 28, 2016	The EAO determined that the requested caribou information had been provided but the timeline remained suspended in relation to water quality information requests.
January 30, 2018	The EAO issued a Section 13 Order to add Halfway River First Nations to Schedule B.
August 23, 2018	The EAO determined that water quality information had been provided, but at the request of Glencore, the EAO suspended the timeline in order for Glencore, in consultation with Indigenous groups, to develop a report summarizing the outcomes of additional caribou regulatory discussions and implications for the Sukunka EA.
December 16, 2021	Glencore provided the report summarizing the outcomes of additional caribou regulatory discussions and implications for the Sukunka EA, beginning the EAO's review of whether the report met the criteria to begin the process for lifting the suspension.
March 4, 2022	Following further discussions between the First Nation Independent Technical Review (FNITR) committee and the EAO, Glencore requested an additional 60-day period to undertake further discussions and analysis in relation to caribou.
Mar 17, 2022	The EAO determined that the report submitted December 16, 2021 met the criteria outlined in the August 2018 suspension order, beginning a 60-day process to incorporate the information presented in the report into the EAO's referral materials. The EAO also indicated that an additional 60-day suspension would be issued once the 60-day process to incorporate the information from the suspension report had elapsed.
May 16, 2022	The EAO issued an additional suspension under Section 24 of the Act, suspending Application Review for a period of up to 60 days.
July 15, 2022	The 180-day Application Review time limit resumed.
August 2 to September 1, 2022	The EAO held a 30-day public comment period on draft provincial referral materials and draft potential federal conditions.
October 2022	This Report and the EAO's Indigenous Consultation Report (in Part C of the Assessment Report) will be provided to the responsible provincial Ministers for consideration in their decision of whether to issue an Environmental Assessment Certificate for Sukunka.

OTHER REQUIRED AUTHORIZATIONS

If an Environmental Assessment Certificate is issued, Sukunka would also require various permits from federal and provincial governments. Most provincial permits would be provided through processes run by EMLI, the Ministry of the Environment and Climate Change Strategy (ENV), and the Ministry of Forests

(FOR) and the Ministry of Land, Water, and Resource Stewardship (LWRS). Anticipated federal authorizations would include an authorization under the *Explosives Act* by Natural Resources Canada, and an authorization under the *Fisheries Act*, 2019 by the Fisheries and Oceans Canada. A complete table of permits and authorizations is provided in Part A of the Assessment Report.

5 KEY CONCLUSIONS

EAs in B.C. use Valued Components (VCs) to assess the potential effects of projects. VCs are what is important to consider about a project and the impacts it could have from a scientific, ecological, economic, social, cultural, archaeological, historical, or other importance. As part of the assessment process, the EAO works with the proponent, the public, Indigenous groups, scientists and other technical specialists, and government agencies involved in the assessment process to determine what are the VCs for a project, so that they can be properly assessed to help make the decision about whether or not a project should receive an Environmental Assessment Certificate. The selection and assessment of VCs also takes into consideration the factors relevant to Section 5(1) and 5(2) of the CEAA 2012. The VCs assessed are outlined in Table 3.

Table 3: Valued Components Assessed in the Sukunka EA and Sections in Assessment Report

Environmental Effects Fish and fish habitat (Section 5) Water quality and aquatic biota (Section 6) Wildlife (Section 7) Caribou (Section 8) Vegetation (Section 9) Soils (Section 10) Air quality (Section 11) GHGs (Section 12)	Social and Economic Effects Economic environment (Section 13) Population and demographics (Section 14) Land and resource use (Section 14) Visual quality (Section 14) Community health (Section 14) Community services and infrastructure (Section 14)
Health Effects Human health (Section 16)	Heritage Effects Archaeological and heritage resources (Section 15)

The EAO's Assessment Report assesses the impacts of Sukunka on the identified VC and identifies key mitigation measures for each VC that would be required if the project receives an Environmental Assessment Certificate. It also provides conclusions on the potential effects of the project on these VCs, both directly and (where applicable) cumulative effects. A summary table of residual effects for all VCs is contained in Appendix A of this Report.

As part of the provincial EA process, the EAO is also responsible for developing a proposed Environmental Assessment Certificate, Table of Conditions and a Certified Project Description that would become legally binding and subject to compliance and enforcement oversight should the provincial Ministers issue an Environmental Assessment Certificate. After consulting the Working Group and Indigenous groups, and in consideration of input from the public, the EAO proposed 31 conditions and a Certified Project Description

to avoid, minimize or offset the residual adverse effects of Sukunka, and to manage uncertainty to the extent possible.

The EAO concluded that there would be adverse effects to multiple VCs that were assessed in the EA. The EAO concluded that, with the implementation of mitigations and legally binding conditions if an Environmental Assessment Certificate is issued, many of the residual effects would not likely be significant. However, the EAO determined that, even with the proposed mitigations and conditions, Sukunka would likely result in: significant adverse and cumulative effects to caribou; significant adverse cumulative effects to grizzly bear; significant effects to Indigenous peoples' health and socio-economic conditions, current use of lands and resources for traditional purposes, and physical and cultural heritage under CEAA 2012; moderate to serious impacts on the Treaty right to hunt caribou; and minor to moderate impacts on the Treaty right to fish and gather plants.

The remainder of this section provides a summary of the findings of significant adverse effects and key themes that, due to their complexity and level of attention given by the Working Group and Indigenous groups, became the focus of the EA: caribou, water quality, fish, grizzly bear, and human health. [Section 6](#) further discusses key issues and impacts respecting Indigenous groups. The Assessment Report provides further detail regarding the key issues raised for each VC, the status of issue resolution, and the EAO's supporting rationale for the conclusions regarding residual effects.

CARIBOU

As noted in [Section 3](#), Sukunka overlaps with the range of the Quintette caribou herd. The Quintette herd is considered part of Woodland Caribou, Southern Mountain population, which has been listed on Schedule 1 of SARA as Threatened since 2003. As part of the Central Mountain population, the Quintette herd is red listed⁶ in BC and was assessed as endangered in 2014 by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). The herd has experienced dramatic decline over the past decades, with an estimated population of 62 remaining in all habitats in 2016. From 2018 to 2022, the herd experienced some short-term growth largely attributed to predator control efforts that commenced in 2015.

The potential impacts to the Quintette herd emerged as some of the most important issues in the Sukunka EA, leading Glencore to request three suspensions during Application Review to address the issues raised by the technical Working Group, to undertake additional analysis, to revise the proposed mitigations and offsets, and to provide further discussion regarding the impact of evolving provincial and federal caribou policy on the project. While the EAO devoted substantial efforts to the issue resolution process regarding caribou, including hiring a third-party caribou expert in 2016 and coordinating technical workshops in 2019, 2020, and 2022, the issues raised in the Sukunka EA regarding caribou largely remain unresolved.

⁶ The red list includes any native species or ecological communities that have, or are candidates for, extirpated, endangered, or threatened status in British Columbia.

Throughout Application Review, provincial and federal caribou experts and Indigenous Groups raised concerns about the direct habitat removal (125 ha in high elevation summer range and winter range) and indirect disturbance (4,186 ha based on a 4.5 km buffer) to the Quintette herd that would be caused by Sukunka. Sukunka would be located within an important habitat complex, the Bullmoose-Chamberlain Mountain area, and the existing high levels of cumulative impacts to caribou habitat further intensify the area's importance to the Quintette herd.

While Glencore made changes to mine design to minimize disturbance (e.g., reduced overlap with high elevation from 256 ha to 125 ha), this proposed direct habitat removal and indirect disturbance has the potential to cause caribou to abandon high-elevation habitat in the Bullmoose-Chamberlain Mountain area and experience increased wolf predation at lower elevations, which could jeopardize the recovery of the herd and increase its risk of extirpation. Members of the technical Working Group, including Land, Water and Resource Stewardship (LWRS), Environment and Climate Change Canada (ECCC), the Canadian Wildlife Service (CWS), and Indigenous Groups, have indicated that this risk to this herd is unacceptable.

While Glencore provided a proposed package of offsets intended to demonstrate net neutral effect, members of the Working Group indicated that the direct and indirect effects to caribou and caribou habitat cannot be mitigated or offset and cited that avoidance would be the most appropriate mitigation strategy. Concerns were also raised regarding the contribution of Sukunka to cumulative effects to caribou in the region, as the total area of disturbed low elevation or matrix habitat in the Quintette herd range already exceeds the critical habitat threshold in the federal Recovery Strategy.

Provincial and federal caribou experts, along with representatives from Indigenous Groups and their expert caribou and wildlife biologists, indicated that the effects of Sukunka are inconsistent with the goals and objectives of provincial and federal caribou policy. LWRS and Indigenous Groups indicated that Sukunka would not meet the objectives of net neutral or better effects on the viability of the herd, as required by the province's Peace Northern Caribou Plan and the Partnership Agreement. ECCC maintained that, as Sukunka exceeded the federal threshold for disturbance of critical caribou habitat, the project appears to be incompatible with the Federal Recovery Strategy. Although Sukunka would be located in an area subject to the Partnership Agreement marked for sustainable development, subsequent authorizations (should the Environmental Assessment Certificate be issued) would be required to consider, amongst other factors, any adverse effects on caribou or caribou habitat that may be incapable of being fully mitigated, and the recommendations of a Caribou Recovery Committee consisting of Sauteau First Nations, West Moberly First Nations, Canada, and BC.

Recognizing the importance of caribou, Glencore has submitted a preliminary Caribou Mitigation and Monitoring Plan (CMMP). Glencore has committed to updating the analysis of effects of Sukunka on caribou habitat during the permitting stage so that the final CMMP aligns with current provincial and federal conservation and recovery objectives. Mitigation measures proposed by Glencore to address the loss of critical caribou habitat include avoiding caribou habitat through mine design (such as removing portions of the design within caribou habitat where possible), minimizing mine features in caribou habitat (such as removing the access road adjacent to the diversion ditch in critical habitat and minimizing the width of the diversion ditch), conducting construction and maintenance activities outside of the critical

caribou timing windows, and restoring habitat in the project development area after closure. The EAO has proposed the finalization of the CMMP following LWRS' guidance as Condition 19 (should the Environmental Assessment Certificate be issued), which would require it be developed in consultation with ECCC, LWRS, FOR, EAO, and Indigenous groups. The CMMP would also be required to include a detailed plan to adaptively manage effects to caribou (should the Environmental Assessment Certificate be issued).

As they are not able to fully avoid or mitigate impacts to caribou through changes to mine design, Glencore has also proposed a financial contribution of \$3,300,000 (\$150,000 per year over an assumed 22 years of mine life) toward the predator management component of the Provincial Caribou Recovery Program and an offset package of \$1,500,000 to restore 125 km of linear features (recovering approximately 1,750 ha of currently disturbed caribou range), which the EAO has included as proposed Condition 20: Caribou Financial Agreement. Glencore has also proposed habitat securement of 1,024 ha of high elevation caribou range in the Bullmoose-Chamberlain Mountain complex. As the Working Group raised concerns regarding the effectiveness of habitat securement, citing that other tenure holders may develop overlapping tenures, Glencore made a commitment to permanently defer their rights under the *Mineral Tenure Act* in the proposed securement areas and finalize agreements with other tenure holders to permanently defer their rights as well, which the EAO has included as a requirement of the final CMMP (proposed as Condition 19).

Considering Glencore's mitigations and offsets (including financial contributions), Indigenous Groups and members of the technical Working Group members continued to express concerns regarding the potential impacts to the Quintette herd. On August 21, 2018, Chief Roland Willson (West Moberly First Nations) and Chief Ken Cameron (Saulteau First Nations) sent a joint letter to the EAO⁷ stating their opposition to Sukunka and emphasizing the potential impacts to caribou. In May 2022, the FNITR and McLeod Lake Indian Band provided a memo to the EAO that re-iterated their position that Sukunka should not proceed on the grounds of potential displacement of caribou, citing the potential for abandonment of habitats on Bullmoose-Chamberlain Mountain area and an increased risk of extirpation of the Quintette herd. Both stressed that the potential for displacement and habitat abandonment cannot be mitigated or offset (physically or financially), particularly during a period when significant efforts are being put towards caribou recovery. ECCC and LWRS reiterated that financial offsets cannot compensate for the loss of irreplaceable habitat, and that high levels of uncertainty remain about the effectiveness of the proposed offsets and mitigation measures.

Following the Application Review phase that included many years of engagement with experts and Indigenous Groups related to caribou, the EAO concludes that there would remain significant adverse residual effects and cumulative effects to caribou. The EAO recognizes that there is an outstanding risk of loss of critical habitat, displacement, potential abandonment of the important Bullmoose-Chamberlain

⁷ Available at:

<https://projects.eao.gov.bc.ca/api/public/document/62db1b82a0bd940022d224a6/download/2018%2008%2021%20Letter%20WMFN%20and%20SFN%20to%20BCEAO%20CEAA%20re%20Sukunka%20Mine%20%28signed%29.pdf>

Mountain complex, and increased risk of extirpation of the Quintette herd, and these effects would not be able to be mitigated or offset.

WATER QUALITY

Sukunka would be located in the Skeeter Creek and Chamberlain Creek watersheds, which drain into the Sukunka River. The Sukunka River in this area flows in a wide floodplain, with wetlands and riparian areas along the banks. Mining development is occurring near the Sukunka River north of Sukunka. Discharges from the Brule mine enter the Sukunka River downstream of the proposed Sukunka mine effluent discharge location. Most baseline water quality parameters in the Sukunka River, Skeeter Creek, and Chamberlain Creek at Sukunka are within B.C. Water Quality Guidelines (WQGs), with some naturally occurring guideline exceedances for metals during high flow freshet months associated with high turbidity.

Sukunka would contribute to contaminant loading in Skeeter Creek, Chamberlain Creek, and the Sukunka River as a result of construction-related activities, seepage, and surface discharges from the mine. Glencore's water quality modelling for Sukunka predicted B.C. WQG exceedances that could not be attributed to baseline variability for several metals. Except for selenium, exceedances of contaminants are predicted to be small and infrequent. Selenium predictions showed more frequent WQG exceedances. Many of the toxic effects of selenium result from bioaccumulation from primary producers, such as algae, up the food chain to egg-laying vertebrates (fish, fish-eating birds, and frogs), which are particularly sensitive to selenium toxicity.

The Working Group raised concerns about potential adverse effects to water quality, questioned the effectiveness of Glencore's proposed mitigations, and highlighted the potential for selenium bioaccumulation. During the first timeline suspension in Application Review, Glencore responded to the technical feedback and changed its primary mitigation for water quality from saturated backfills to active water treatment. Glencore provided further information on the management of potentially acid generating waste; the timing and technology to be applied to active water treatment in perpetuity; seepage collection measures to limit the amount of contact water seepage reaching the receiving environment; and supporting information regarding the potential for selenium bioaccumulation at Sukunka.

Key design mitigation measures are reflected in the proposed Certified Project Description, including seepage collection measures, active water treatment, a lined buffer pond and a lined residuals management area. In addition, the EAO proposes several conditions related to the monitoring and management of water and the aquatic environment, including:

- Condition 14: Construction Environmental Management Plan, which would include mitigations for erosion and sediment control, metal leaching and acid rock drainage management and spill response;
- Condition 21: Water Quality Management outlines requirements for Glencore to treat effluent for contaminants of potential concern influenced by Sukunka to address potential effects to downstream water quality;

- Condition 22: Selenium Management Plan, which would require Glencore to address potential selenium bioaccumulation issues; and,
- Condition 23: Aquatic Effects Monitoring Plan, which would require Glencore to monitor and use adaptive management to address potential effects on aquatic biota.

The EAO notes that there are regulatory requirements under the federal *Fisheries Act*, provincial *Environmental Management Act*, and provincial *Mines Act* for surface water quality management, monitoring and reporting that would form part of the permitting processes following the EA, should Sukunka proceed, and would reduce uncertainties regarding the effectiveness of the proposed mitigations. While the Assessment Report identifies the potential for cumulative effects on water quality in the Sukunka River from the combination of Sukunka and the Brule mine, predicted that water quality would remain within guidelines with the application of mitigation measures and the EAO's proposed conditions.

Considering the analysis summarized above and discussed in Section 6 (Water Quality and Aquatic Biota) of the EAO's Assessment Report, and having regard to the proposed conditions and Certified Project Description and associated mitigation measures, the EAO is satisfied that Sukunka's impacts on water quality would not cause significant adverse residual effects to aquatic biota.

While the EAO did not find significant adverse effects to aquatic biota, it is recognized that members of Indigenous Groups may avoid using the area for drinking and fishing due to the perception of contamination from mercury and selenium. The EAO thus concluded that there would be a significant impact to the health and socio-economic conditions of Indigenous peoples related to the perception of increased human health risk under CEAA 2012.

FISH AND FISH HABITAT

Near the proposed mine site, the Sukunka River supports several regionally important sport fish species. The EA focused on bull trout, a provincially blue-listed species, which was found in the Sukunka River as well as in Skeeter and Chamberlain Creeks.

Sukunka would affect fish and fish habitat through:

- Direct destruction of a fish-bearing tributary on the mine site;
- Destruction of wetland fish habitat for the construction of the effluent pipeline and associated road;
- Impacts to instream and riparian habitat for the construction of haul road and transmission line access road stream crossings;
- Changes to surface flows that may alter availability and suitability of fish habitat both on and off the mine site;
- Direct mortality of fish on the mine site due to the destruction of a fish-bearing tributary on site; and,
- Changes to water quality with potentially chronic effects to fish in Chamberlain Creek, Skeeter Creek, and the Sukunka River.

To mitigate these effects, Glencore proposed to develop a Fish Habitat Offset Plan that would create a new bull trout spawning and rearing channel near the Sukunka River. Working group members, including DFO and the FNITR, raised concerns that the offsetting plan did not account for all potential sources of habitat loss, including impacts to the wetland, impacts due to stream crossings, and impacts due to altered flows in the creeks and wetland. Working group members also highlighted uncertainties in baseline data regarding fish use of the creeks, whether the bull trout populations were resident or fluvial (migrant) populations, and potential project effects on fish. During Application Review, Glencore provided additional survey data describing fish habitat, and updated its conceptual offsetting plan to account for impacts to the wetland and stream crossings, increasing the amount of habitat offsetting proposed. Working group members raised concerns that updated surface flow changes had not been characterized and that additional offsetting may be required.

While the Application Review was suspended (January 2016 to July 2022), a modernized *Fisheries Act* (2019) came into force, with expanded criteria for fish and fish habitat protection and pollution prevention. Formerly, the *Fisheries Act* prohibited ‘serious harm’ to fish that are part of, or support, commercial, recreational and Aboriginal fisheries, while the modernized *Fisheries Act* (2019) prohibits the death of fish by means other than fishing and the harmful alteration, disruption or destruction of fish habitat. While most of the EA process was completed in the context of the serious harm provisions under the former *Fisheries Act* (2012), the provisions under the *Fisheries Act* (2019) now apply and Sukunka would be assessed under the latter during subsequent authorization process. Related to the expanded criteria for fish and fish habitat protection, Fisheries and Oceans Canada (DFO) was concerned that the overall characterization of potential effects to fish and fish habitat (including the estimated footprints of instream and riparian habitat) may have been underestimated. The *Fisheries Act* (2019) authorization process would involve reassessing the extent of the habitat loss (including effects to instream and riparian habitat at the various watercourse crossings and effects to fish habitat from flow reduction), consideration of any additional residual impacts and Glencore would need to demonstrate how these effects could be avoided, mitigated, or offset.

To address the issues and uncertainty identified in the EA, the EAO proposes several conditions regarding the potential residual effects and effectiveness of mitigations for fish and fish habitat, including:

- Condition 14: Construction Environmental Management Plan, which would require the development and implementation of erosion and sediment control measures; and
- Condition 23: Aquatic Effects Monitoring And Management Plan, which would require pre-construction surveys to characterize impacts on fish habitat, capture additional mitigations for fish and fish habitat (such as reduced risk work windows) and Glencore’s commitments regarding fish stream crossings (including use of clear span bridges), as well as address uncertainties in baseline information and require follow-up monitoring and adaptive management.

Considering the analysis summarized above and discussed in Section 6 (Water Quality and Aquatic Biota) and Section 5 (Fish and Fish Habitat) of the EAO’s Assessment Report, input from the technical reviewers, and having regard to the proposed conditions, associated mitigation measures, and subsequent authorizations required under the federal *Fisheries Act*, the EAO is satisfied that Sukunka would not have

significant adverse residual effects on fish or fish habitat.

While the EAO did not find significant adverse effects to aquatic biota, it is recognized that members of Indigenous Groups may avoid using the area for drinking and fishing due to the perception of contamination from mercury and selenium. The EAO thus concluded that there would be a significant impact to the health and socio-economic conditions of Indigenous peoples related to the perception of increased human health risk under CEAA 2012.

GRIZZLY BEAR

The construction of roads, transmission lines, pipelines, water diversion ditches, and water collection channels increase a measurement factor called 'linear feature density' on the landscape, which can result in increased mortality risk for mammals due to increased human and predator access. Grizzly bears require large tracts of land not impacted by linear feature developments. The Hart Grizzly Bear Population Unit (GBPU) which covers the region near Sukunka has been highly impacted from habitat loss and development of linear features (i.e., roads, seismic lines and power lines). Road density is a main factor considered in LWRS's Cumulative Effects Framework, and road density in the region is already above the maximum density managed for by the Province⁸.

Mortality risk to grizzly bears was quantified by Glencore using linear feature density specifically for grizzly bear. At baseline, the region is 21 percent below the minimum acceptable amount of areas free of linear features for grizzly bear. This means that there is currently not enough habitat for grizzly bears to maintain their current population density in the region. Sukunka would further reduce this area by 0.3 percent in the region. While direct effects to grizzly bear habitat would be expected to be partially reclaimed at the mine site due to restoration of some of Sukunka's linear features, this would be expected to occur within a very long-time horizon (250+ years). ENV and LWRS indicated that the threshold of linear feature density may be even lower than originally assessed in the Application based on more current scientific literature. Given that Sukunka was suspended from January 2016 to July 2022, it is likely that the threshold of linear feature density has lowered even further. The EAO considered both the current threshold proposed by ENV and LWRS as well as the information provided in the Application in its assessment.

Glencore responded that mitigation measures for impacts to grizzly bears would be developed in consultation with Indigenous groups and the agencies through the Wildlife Protection and Monitoring Plan (proposed by the EAO as Condition 18), Human-Wildlife Conflict Management Plan, Access Management Plan, and a Solid Waste Management Plan. However, none of these mitigation measures would be likely to reduce, offset or ameliorate potential habitat loss. Preliminary drafts of these plans were included as part of the Application and these plans would be finalized as part of permitting requirements in consultation with Indigenous groups and the relevant agencies.

⁸ See the Auditor General's report on cumulative effects, available at:
<https://www.bcauditor.com/sites/default/files/publications/reports/OAGBC%20Cumulative%20Effects%20FINAL.pdf>

Key mitigation measures proposed by Glencore included:

- Use training procedures to minimize human-wildlife interactions and protect personnel and contractors;
- Use bear-safe waste management facilities at the camp and mine site;
- Seed roadsides with seeding mixtures that minimize or eliminate the use of plant species attractive to bears and are native and endemic to the region;
- Require project personnel and contractors working in active zones to relay wildlife sightings to other workers as soon as possible (e.g., by radio); and
- Require that any direct intervention with respect to problem wildlife be done by authorized personnel in consultation with, and as approved or directed by, the British Columbia Conservation Officer Service and a wildlife biologist from LWRS.

ENV and LWRS noted that any increase in mortality risk in this part of the Hart GBPU is of great concern given the recent human-caused mortality history, high existing open road densities, and lack of habitat. Current and reasonably foreseeable future projects in the region would also contribute cumulatively to the increased mortality risk to grizzly bears.

Regional initiatives have sought to reduce cumulative effects to grizzly bear in the region, such as the Dawson Creek Land and Resource Management Plan, and activities by the Conservation Officer Service, as detailed in Section 5.2.2 of the Assessment Report. A ban on hunting throughout the province also took effect on December 18, 2017 (excluding Indigenous Group's harvest for food, social, or ceremonial purposes or treaty rights). However, this ban however may only have a small impact on the population as most harvested animals were males and the hunting level was sustainable. The EAO also notes that part of Glencore's caribou offset package (up to \$1,500,000 to restore 125 km of linear features) would also result in a substantial increase in grizzly bear range.

While Sukunka itself is not expected to cause a significant adverse effect to grizzly bears, the EAO concludes that there is an existing significant adverse cumulative effect to grizzly bear as current disturbance exceeds provincial management thresholds. Considering the effects from past and existing projects and activities on grizzly bear, and the status of the Hart GBPU, as well as reasonably foreseeable projects and activities, cumulative effects to grizzly bear are significant.

HUMAN HEALTH

Activities associated with Sukunka could lead to changes in levels of pollutants in air, soil, and water, and consequently vegetation, fish, and wildlife. Humans who are exposed to these media could be affected by these increased contaminant levels. Potential project-related effects to human health were identified through a Human Health and Ecological Risk Assessment (HHERA) which relied on data from both environmental samples and models. The HHERA showed that there could be potential risks to human health from exposure to particulate matter (PM) and sulphur dioxide (SO₂) in air. In addition, potential risks from the consumption of fish containing mercury were identified.

The FNITR, Northern Health Authority and Health Canada raised several concerns about the HHERA including: the risks identified for PM and mercury, the assessment methods in the HHERA, the potential for cumulative effects and the ability of certificate conditions to adequately address health concerns. Reviewers were concerned that monitoring may only identify health effects after they have been experienced by Indigenous groups and other users of the area. Indigenous groups also expressed interest in conducting monitoring.

In response to these concerns, Glencore provided additional analyses and emphasized the number of conservative assumptions made in the HHERA that resulted, in Glencore's view, in an overestimation of the risks associated with mercury and air contaminants.

Indigenous groups remained deeply concerned about the health impacts of mercury, its impact upon their people's ability and willingness to fish in and consume fish from the Sukunka River, and the potential for cumulative effects from Sukunka and other mines in the area. Indigenous groups raised the potential for fish in the Sukunka River to become contaminated with mercury when this river is seen as one of the last "clean" rivers in a region where the Williston Reservoir has a fish consumption advisory for mercury. The EAO considered the potential for these effects in the analysis of impacts to Aboriginal Interests.

Considering the information provided and the concerns raised, the EAO proposes the following conditions:

- Condition 28: Human Health Monitoring and Management Plan, which would require monitoring of contaminants in air, soil, water, fish tissue and vegetation with a requirement for additional mitigation and monitoring of metals in country foods if environmental media show concentrations exceed pre-determined trigger levels (trigger levels would be set to provide an early warning of the potential for health effects before they could be realized);
- Condition 27: Air Quality and Emissions Management Plan, which would include mitigation measures for dust and CAC emissions and monitor ambient air quality at receptor locations; and,
- Condition 11: Indigenous Monitoring Program, which would be developed in consultation with Indigenous groups and include capacity development and opportunities for the monitors to be involved in monitoring air, water and soil quality, fish, and country foods.

The EAO concluded that there was not a residual effect to human health due to the conservatism applied to the modelling that informed the HHERA and the proposed conditions for a Human Health Monitoring and Management Plan and an Air Quality and Emissions Management Plan, which would require Glencore to identify and mitigate potential effects to human health and address areas of uncertainty. Considering the analysis summarized above and discussed in Section 16 (Human Health) of the EAO's Assessment Report, and having regard to the proposed conditions and associated mitigation measures, the EAO is satisfied that Sukunka would not have residual effects on human health.

While the EAO did not find significant adverse effects to human health, it is recognized that members of Indigenous Groups may avoid using the Sukunka area for drinking and fishing due to the perception of contamination from mercury and selenium. The EAO thus concluded that there would be a significant impact to the health and socio-economic conditions of Indigenous peoples related to the perception of

increased human health risk under CEAA 2012.

6 INDIGENOUS CONSULTATION

The EAO examined potential impacts of Sukunka on asserted Aboriginal rights, including treaty rights, and title (Aboriginal Interests), and produced an Indigenous Consultation Report (Part C of the Assessment Report), which is included as part of the referral package to provincial and federal decision-makers. Part C includes a detailed summary of the consultation that occurred throughout the EA; the issues raised by Indigenous groups; the relevant mitigation and accommodation measures developed; and the EAO's assessment of the seriousness of the potential impacts of Sukunka on each Indigenous group's Aboriginal Interests. These assessments were informed by many information sources including:

- Indigenous knowledge;
- Information and input provided by Indigenous groups regarding the nature of their Aboriginal Interests, and how their Aboriginal Interests may be affected by Sukunka;
- Glencore's Application and supplemental materials; and,
- the EAO's assessment of effects to VCs.

Throughout the EA, the EAO consulted with the following Indigenous groups:

Table 4: Indigenous groups consulted during the Sukunka EA.

SCHEDULE B	SCHEDULE C
Treaty 8: McLeod Lake Indian Band Saulteau First Nations West Moberly First Nations Doig River First Nation Halfway River First Nation	Treaty 8: Blueberry River First Nations Fort Nelson First Nation Prophet River First Nation Horse Lake First Nation Métis Groups: Métis Nation British Columbia Kelly Lake Métis Settlement Society

The Indigenous groups listed on Schedule B were consulted at the deep end of the consultation spectrum to honour the Treaty 8 commitments. The Indigenous groups on Schedule C were consulted at a notification level. As part of the substituted EA process, the EAO also consulted all the above Indigenous groups on behalf of the federal government. The EAO distributed provincial funding to assist Indigenous groups to participate in the EA process. Additionally, EAO distributed funding provided by the Agency to support potentially-affected Indigenous groups' participation in the substituted EA.

The EAO also assigned certain consultation responsibilities to Glencore and directed Glencore to consult with Indigenous groups about the potential impact of Sukunka on Aboriginal Interests. Glencore carried

out its consultation responsibilities over the course of the EA and provided reports to the EAO regarding the key issues and status of resolution.

Indigenous groups in Schedule B were provided the following opportunities:

- Participation in the Working Group;
- Participation in meetings to identify and discuss the exercise of proven and asserted Aboriginal Interests that may be affected by Sukunka and potential measures to avoid, mitigate, address or otherwise accommodate impacts;
- Review and comment on key documents, including the draft AIR, the Application, and EAO's draft proposed conditions, Summary and Assessment Reports, including the Indigenous Consultation Report (Part C);
- Submission of a document outlining the Indigenous group's views on the Summary and Assessment Reports to be included in the package of materials sent to Ministers when Sukunka is referred for decision;
- Notification of key milestones – such as the issuance of the AIR, acceptance of the Application for review, timing of public comment periods (including open houses) – when the final Assessment Report is referred to Ministers and the resulting decision; and,
- Invitation to meet with the EAO to discuss any Aboriginal Interests in the Sukunka area.

Indigenous groups in Schedule C were provided the following opportunities:

- Notification of key milestones – such as the issuance of the AIR, acceptance of the Application for review, timing of public comment periods (including open houses) – when the final Assessment Report is referred to Ministers and the resulting decision;
- Invitation to meet with the EAO to discuss any Aboriginal Interests in the Sukunka area; and,
- Invitation to review and comment on the EAO's draft Summary and Assessment Reports, including the Indigenous Consultation Report.

Further detail regarding consultation with Indigenous groups is provided in Part C of the Assessment Report. Consultation activities and conclusions regarding the seriousness of potential impacts to Aboriginal Interests are also summarized below.

THE YAHEY DECISION

In its Indigenous Consultation Report (Part C), the EAO also considered the changed context from the *Yahey v British Columbia*⁹ decision (the 'Yahey decision'), a significant treaty rights infringement case.

⁹ Available online: <https://www.bccourts.ca/jdb-txt/sc/21/12/2021BCSC1287.htm><https://www.bccourts.ca/jdb-txt/sc/21/12/2021BCSC1287.htm>

On June 29, 2021, while the EA timeline was suspended, the British Columbia Supreme Court (BCSC) released the *Yahey* decision.

Justice Burke declared that the Province has unjustifiably infringed Blueberry River First Nations' (BRFN) Treaty 8 rights by authorizing industrial development in BRFN's traditional territory over many years. Justice Burke directed the Province to negotiate with BRFN to establish timely enforceable mechanisms to assess and manage cumulative effects while protecting BRFN's Treaty 8 rights.

The Province is continuing to work with BRFN and other Treaty 8 Nations to develop new approaches to restoration, wildlife management, land use planning, cumulative effects management, decision-making and ways to honor Treaty 8. Additional information regarding the views of Indigenous groups on the *Yahey* decision and implications for Sukunka are further discussed in [Section 5: Key Conclusions of the Environmental Assessment](#) and Part C of the Assessment Report.

FIRST NATIONS INDEPENDENT TECHNICAL REVIEW (FNITR)

On February 26, 2015, McLeod Lake Indian Band, Saulteau First Nations, and West Moberly First Nations sent a letter to the EAO, indicating that they would be conducting a First Nations Independent Technical Review (FNITR) with the objective of creating a collaborative process with Glencore to resolve issues and ensure a sustainable development program for the entire lifecycle of the project. The FNITR retained ERM Canada Consultants Ltd. in August 2015 to conduct a third-party technical review of the Application.

When Doig River First Nation and Halfway River First Nation were added to Schedule B later in Application Review, they were invited by the FNITR to join. Doig River First Nation agreed to join, and Halfway River First Nation opted to conduct an independent review of the materials. While the Sukunka EA process was suspended, McLeod Lake Indian Band informed the EAO that they would no longer form part of the FNITR; however, McLeod Lake Indian Band continued to engage with Glencore and the EAO collaboratively with the FNITR.

The objectives of the FNITR process were to review and assess the Application, conduct research, provide submissions to the EAO, and represent the interests of its member nations. This approach allowed the four Indigenous groups to share resources, consult with Glencore and the EAO, and provide, in most cases, a shared view of the potential impacts to their treaty rights. Once drafting of Part C and conditions began, the EAO worked closely with the FNITR, McLeod Lake Indian Band, and Halfway River First Nation in a collaborative manner, including co-drafting of Part C and the Table of Conditions. Glencore and the EAO's engagement with Indigenous groups is summarized in Part C of the Assessment Report.

MCLEOD LAKE INDIAN BAND

McLeod Lake Indian Band is a signatory to Treaty 8. Sukunka is located entirely within McLeod Lake Indian Band's area of traditional use. Given the nature and location of Sukunka and the EAO's assessment of the potential impacts to McLeod Lake Indian Band's Treaty 8 rights as summarized below, the EAO is of the view that the duty to consult McLeod Lake Indian Band lies at the deep end of the consultation spectrum to honour the Treaty 8 commitments.

The EAO began consulting with McLeod Lake Indian Band in 2013 when the EA was initiated. The EAO consulted deeply with McLeod Lake Indian Band, including opportunities to participate in the Working Group, review and comment on draft EA documents, and to engage in government-to-government consultation regarding Sukunka. McLeod Lake Indian Band collaborated with the FNITR (along with West Moberly First Nations, Saulteau First Nations, and Doig River First Nation), and majority of the EAO's consultation was done with McLeod Lake Indian Band through the FNITR group. Part C of the Assessment Report was drafted in collaboration with McLeod Lake Indian Band through a series of meetings and document editing periods in 2018 and 2022.

Key issues raised by McLeod Lake Indian Band included impacts to wildlife (specifically caribou, mountain goats, wolves, and grizzly bears), impacts to water quality, cumulative development pressure in the region, and impacts to access to culturally-significant areas and treaty areas. The EAO proposed conditions related to these key issues including a Wildlife Monitoring and Mitigation Plan (18), a Caribou Mitigation And Monitoring Plan (19), Water Quality Management (21), and a Road Management Plan (24) to address these concerns and require the Holder to gather and analyze additional baseline information for water and wildlife, monitor and mitigate potential effects, and mitigate Sukunka's impact on the cumulative development in the region. These issues, as well as proposed mitigation measures and conditions, are discussed in greater detail in the Assessment Report under VCs and Part C.

In the Assessment Report, the EAO completed an assessment of the potential impacts of Sukunka on McLeod Lake Indian Band's treaty rights. The EAO concluded that in consideration of the information available to the EAO, Glencore's proposed mitigation measures, proposed conditions of any Environmental Assessment Certificate issued, the EAO's analysis on potential residual and cumulative effects on VCs, and considering the views of McLeod Lake Indian Band, that there would be:

- Serious impacts on McLeod Lake Indian Band's treaty right to hunt and trap;
- Moderate impacts on McLeod Lake Indian Band's treaty right to fish and gather plants.

SAULTEAU FIRST NATIONS

Saulteau First Nations is a signatory to Treaty 8. Sukunka is located entirely within Saulteau First Nations' area of traditional use. Given the nature and location of Sukunka and the EAO's assessment of the potential impacts to Saulteau First Nations' Treaty 8 rights as summarized below, the EAO is of the view that the duty to consult Saulteau First Nations lies at the deep end of the consultation spectrum to honour the Treaty 8 commitments.

The EAO began consulting with Saulteau First Nations in 2013 when the EA was initiated. The EAO consulted deeply with Saulteau First Nations, which included opportunities to participate in the Working Group, review and comment on draft EA documents, and to engage in government-to-government consultation regarding Sukunka. Saulteau First Nations formed the FNITR (along with West Moberly First Nations, Doig River First Nation and in collaboration with McLeod Lake Indian Band) and the majority of the EAO's consultation was done with Saulteau First Nations through the FNITR. Part C of the Assessment Report was drafted in collaboration with Saulteau First Nations through a series of

meetings and document editing periods in 2018 and 2022.

Key issues raised by Saulteau First Nations include reduced access to clean and safe drinking water; change in visual character and quality of landscapes; contamination of fish, plants, and wildlife; increased cumulative development pressure; and impacts to wildlife habitat (specifically caribou, mountain goats, and grizzly bears). The EAO proposed conditions related to these key issues including a Wildlife Monitoring And Mitigation Plan (18), a Vegetation Management Plan (16), an Aquatic Effects Management And Monitoring Plan (24), a Caribou Mitigation And Monitoring Plan (19), Water Quality Management (21), and a Road Management Plan (24) to address these concerns and require the Holder to gather and analyze additional baseline information for water, monitor and mitigate potential effects on wildlife, fish, vegetation, and water quality, and mitigate Sukunka's impact on the cumulative development in the region. These issues, as well as proposed mitigation measures and conditions, are discussed in greater detail in the Assessment Report under VCs and Part C.

In the Assessment Report, the EAO completed an assessment of the potential impacts of Sukunka on Saulteau First Nations' treaty rights. The EAO concluded that in consideration of the information available to the EAO, Glencore's proposed mitigation measures, proposed conditions of any Environmental Assessment Certificate issued, the EAO's analysis on potential residual and cumulative effects on VCs, and considering the views of Saulteau First Nations, that there would be:

- Serious impacts on Saulteau First Nations' treaty right to hunt and trap;
- Moderate impacts on Saulteau First Nations' treaty right to fish and gather plants.

Saulteau First Nations has communicated that they do not agree with EAO's methodology and the conclusions of the Assessment Report regarding potential impacts to their treaty rights and will provide its conclusions in a separate submission for provincial and federal decision-makers.

WEST MOBERLY FIRST NATIONS

West Moberly First Nations is a signatory to Treaty 8. Sukunka is located entirely within West Moberly First Nations' area of traditional use. Given the nature and location of Sukunka and the EAO's assessment of the potential impacts to West Moberly First Nations' Treaty 8 rights as summarized below, the EAO is of the view that the duty to consult West Moberly First Nations lies at the deep end of the consultation spectrum to honour the Treaty 8 commitments.

The EAO began consulting with West Moberly First Nations in 2013 when the EA was initiated. The EAO consulted deeply with West Moberly First Nations, which included opportunities to participate in the Working Group, review and comment on draft EA documents, and to engage in government-to-government consultation regarding Sukunka. West Moberly First Nations formed the FNITR (with Saulteau First Nations, Doig River First Nation, and in collaboration with McLeod Lake Indian Band) and the majority of the EAO's consultation was done with West Moberly First Nations through the FNITR. Part C of the Assessment Report was drafted in collaboration with West Moberly First Nations through a series of meetings and document editing periods in 2018.

Key issues raised by West Moberly First Nations include impacts to caribou, water quality in the Sukunka River, increased cumulative development pressure, and reduced access to culturally important areas and treaty areas. The EAO proposed conditions related to these key issues including a Caribou Mitigation And Monitoring Plan (19), Water Quality Management Plan (21) and a Road Management Plan (24) to address these concerns and require the Holder to gather and analyze additional baseline information for water, monitor and mitigate potential effects on caribou and water quality, and mitigate Sukunka's impact on the cumulative development in the region. These issues, as well as proposed mitigation measures and conditions, are discussed in greater detail in the Assessment Report under VCs and Part C.

In the Assessment Report, the EAO completed an assessment of the potential impacts of Sukunka on West Moberly First Nations' treaty rights. The EAO concluded that in consideration of the information available to the EAO, Glencore's proposed mitigation measures, proposed conditions of any Environmental Assessment Certificate issued, the EAO's analysis on potential residual and cumulative effects on VCs, and considering the views of West Moberly First Nations, that there would be:

- Serious impacts on West Moberly First Nations' treaty right to hunt and trap;
- Moderate impacts on West Moberly First Nations' treaty right to fish and gather plants.

West Moberly First Nations has communicated that they do not agree with EAO's methodology and the conclusions of the Assessment Report regarding potential impacts to their treaty rights and will provide its conclusions in a separate submission for provincial and federal decision-makers.

DOIG RIVER FIRST NATION

Doig River First Nation is a signatory to Treaty 8. Sukunka is located entirely within Doig River First Nation's area of traditional use. Given the nature and location of Sukunka and the EAO's assessment of the potential impacts to Doig River First Nation's Treaty 8 rights as summarized below, the EAO is of the view that the duty to consult Doig River First Nation lies at the deep end of the consultation spectrum to honour the Treaty 8 commitments.

The EAO began consulting with Doig River First Nation in 2013 when the EA was initiated at a notification level (Schedule C) based on information available at the time that Doig River First Nation did not appear to traditionally exercise treaty rights in the proximity of Sukunka. Doig River First Nation provided additional information indicating that significant historical and present land use in the area of Sukunka, and the EAO added Doig River First Nation to Schedule B in 2016. The EAO then consulted deeply with Doig River First Nation, which included opportunities to participate in the Working Group, review and comment on draft EA documents, and to engage in government-to-government consultation regarding Sukunka. Doig River First Nation joined the FNITR in 2016 and the majority of the EAO's consultation was done with Doig River First Nation through the FNITR. Part C of the Assessment Report was drafted in collaboration with Doig River First Nation through a series of meetings and document editing periods in 2018.

Key issues raised by Doig River First Nation include impacts to caribou, water quality in the Sukunka River, increased cumulative development pressure, and reduced access to culturally-important areas and treaty

areas. The EAO proposed conditions related to these key issues including a Caribou Mitigation and Monitoring Plan (19), Water Quality Management (21), and a Road Management Plan (24) to address these concerns and require the Holder to gather and analyze additional baseline information for water, monitor and mitigate potential effects on caribou, and mitigate Sukunka's impact on the cumulative development in the region. These issues, as well as proposed mitigation measures and conditions, are discussed in greater detail in the Assessment Report under VCs and Part C.

In the Assessment Report, the EAO completed an assessment of the potential impacts of Sukunka on Doig River First Nation's treaty rights. The EAO concluded that in consideration of the information available to the EAO, Glencore's proposed mitigation measures, proposed conditions of any Environmental Assessment Certificate issued, the EAO's analysis on potential residual and cumulative effects on VCs, and considering the views of Doig River First Nation, that there would be:

- Moderate impacts on Doig River First Nation's treaty right to hunt and trap;
- Minor-to-moderate impacts on Doig River First Nation's treaty right to fish; and,
- Minor impacts on Doig River First Nation's treaty right to gather plants.

Doig River First Nation has communicated that they do not agree with the conclusions of the Assessment Report regarding potential impacts to their treaty rights and will provide its conclusions in a separate submission for provincial and federal decision-makers.

HALFWAY RIVER FIRST NATION

Halfway River First Nation is a signatory to Treaty 8. Sukunka is located entirely within Halfway River First Nation's area of traditional use. Given the nature and location of Sukunka and the EAO's assessment of the potential impacts to Halfway River First Nation's Treaty 8 rights as summarized below, the EAO is of the view that the duty to consult Halfway River First Nation lies at the deep end of the consultation spectrum to honour the Treaty 8 commitments.

The EAO began consulting with Halfway River First Nation in 2013 when the EA was initiated at a notification level (Schedule C) based on information available at the time that Halfway River First Nation did not appear to traditionally exercise treaty rights in the proximity of Sukunka. In 2016, Halfway River First Nation indicated that additional information had been provided through the negotiations of the Regional Coal Agreement in 2015 and part of their core boundary overlapped with the Sukunka PDA, and the EAO added Halfway River First Nation to Schedule B in 2018. The EAO then consulted deeply with Halfway River First Nation, which included opportunities to participate in the Working Group, review, and comment on draft EA documents, and to engage in government-to-government consultation regarding Sukunka. Opportunities to edit and comment on Part C of the Assessment Report were provided in 2018.

Key issues raised by Halfway River First Nation include impacts to caribou and to water quality. The EAO proposed conditions related to these key issues including a Caribou Mitigation and Monitoring Plan (19) and Water Quality Management (21) to address these concerns and require the Holder to gather and analyze additional baseline information for water and wildlife and monitor and mitigate potential effects

to caribou and water quality. These issues, as well as proposed mitigation measures and conditions, are discussed in greater detail in the Assessment Report under VCs and Part C.

In the Assessment Report, the EAO completed an assessment of the potential impacts of Sukunka on Halfway River First Nation's treaty rights. The EAO concluded that in consideration of the information available to the EAO, Glencore's proposed mitigation measures, proposed conditions of any Environmental Assessment Certificate issued, the EAO's analysis on potential residual and cumulative effects on VCs, and considering the views of Halfway River First Nation, that there would be:

- Moderate impacts on Halfway River First Nation's treaty right to hunt and trap;
- Minor-to-moderate impacts on Halfway River First Nation's treaty right to fish; and,
- Minor impacts on Halfway River First Nation's treaty right to gather plants.

Halfway River First Nation communicated to the EAO that they do not agree with the conclusions of the Assessment Report regarding potential impacts to their Treaty rights. Further information is provided in Section 21.5.5 of the Assessment Report.

SCHEDULE C INDIGENOUS GROUPS

Blueberry River First Nations, Fort Nelson First Nation, Prophet River First Nation, Horse Lake First Nation, Métis Nation British Columbia, and Kelly Lake Métis Settlement Society were included on Schedule C. In consideration of the information available to the EAO, Glencore's proposed mitigation measures, proposed conditions by the EAO, the EAO's analysis of residual and cumulative effects from Sukunka and the distance of Sukunka to these Indigenous Groups' known areas of traditional use, the EAO concluded that Sukunka would have negligible impacts on these Indigenous Groups' treaty rights to hunt, trap, fish, gather, and access culturally-important areas.

RESOURCES OR VALUES THAT MAY NO LONGER BE AVAILABLE FOR FUTURE GENERATIONS

Traditional subsistence activities established as treaty rights under Treaty 8 – including hunting, fishing, gathering, and trapping, and the ability to peacefully enjoy these treaty rights – may be impacted as a result of Sukunka, which could result in changes to local harvesting locations, potential abandonment of caribou habitats on the Bullmoose-Chamberlain Mountain complex, and increased public access to traditional use areas and increased cumulative pressure on environmental resources.

ADDRESSING POTENTIAL IMPACTS TO AFFECTED INDIGENOUS GROUPS

The EAO notes that the proposed EA Certificate conditions, should Sukunka proceed, would require that Glencore consult Indigenous groups on the development of all management plans that relate to potential impacts on their Aboriginal Interests (Conditions 12, 14, 15, 16, 17, 18, 19, 22, 23, 25, 27, 28), and would require that Glencore develop an Road Management Plan (Condition 24) that provides safe access to the project area (subject to mine safety and operational protocols) for Indigenous Group members to exercise traditional harvesting practices and ceremonial practices. The EAO also proposes the following conditions to address impacts to Aboriginal groups:

- Condition 10: Indigenous Cultural Awareness and Recognition, which would require Glencore to work with Indigenous groups to identify and implement opportunities for cultural awareness and recognition;
- Condition 11: Indigenous Monitoring Program, which would require Glencore to develop a plan, in consultation with Indigenous groups, to engage Indigenous groups in environmental monitoring and support the development of an independent environmental monitoring program of Sukunka run by Indigenous groups;
- Condition 30: Cultural Impact Assessment, which would require Glencore to consider the results of a cultural impact assessment undertaken by Indigenous groups in the development of post-certificate plans, programs, and documents; and,
- Condition 31: Indigenous Group Collaboration Plan, which would require Glencore to design and implement a plan for collaboration with Indigenous groups through all project phases.

Glencore had advised the EAO that it is also trying to negotiate an Impact Benefit Agreement (IBA) with the Indigenous groups listed on Schedule B.

7 PUBLIC CONSULTATION

Public consultation requirements are intended to provide multiple, meaningful opportunities for the public to provide input into the EA process. Public consultation opportunities described in this section fulfill the requirements outlined in Section 34(1)(b) of CEAA 2012. The EAO hosted three public comment periods and two open houses in total during the Pre-Application and Application Review stages of the EA:

- A 32-day public comment period from June 14, 2013, to July 15, 2013, on the draft AIR document, including an open house in Chetwynd, B.C. on June 24, 2013, with approximately 15 attendees. No written public comments were received.
- A 50-day public comment period from August 19, 2015, to October 8, 2015, on Glencore's Application. The EAO hosted an open house in Chetwynd, B.C. on September 1, 2015, which was attended by two people. The EAO received written comments from seven members of the public.
- A 30-day public comment period from August 2 to September 1, 2022, on the EAO's draft Assessment Report, draft conditions of an Environmental Assessment Certificate and draft federal conditions of a Decision Statement. The EAO received comments from 991 members of the public, overwhelmingly related to concerns over the impact of Sukunka on caribou. Other topics raised included concerns regarding water quality, the contribution of Sukunka to climate change, and impacts on Indigenous nations and their rights.

The EAO required Glencore to respond to all the public comments received and to prepare a Public Consultation Plan early in the EA that set out Glencore's consultation objectives and activities. Glencore undertook consultation activities in support of its Public Consultation Plan (as outlined in Glencore's Public Consultation Reports), including opening and operating a community project office in Chetwynd; meeting with local governments, community groups, and landowners; advertising and supporting the EAO's open houses and public comments periods; and maintaining opportunities for public engagement (email, toll-

free information line, community newsletter). Glencore also submitted multiple Public Consultation Reports to the EAO outlining their consultation activities. The Public Consultation Plan and all Public Consultation Reports are posted on EAO's EPIC website¹⁰.

The key issues raised by the public through the submitted public comments are listed in Table 5 below. These comments and Glencore's responses were considered and discussed further in the relevant sections of the Assessment Report and responded to individually in Glencore's Public Consultation Reports. Key issues raised by the public helped inform the EAO's assessment of Sukunka, including requests for technical information during the EA, the completion of the EAO's Summary and Assessment Reports, and the development of the EAO's proposed Environmental Assessment Certificate conditions.

Table 5: Key issues raised by the public during the Sukunka EA

KEY ISSUE	SECTION IN EAO'S ASSESSMENT REPORT	PROPOSED ENVIRONMENTAL ASSESSMENT CERTIFICATE CONDITION, SHOULD A CERTIFICATE BE ISSUED FOR SUKUNKA
Uncertainties regarding the effectiveness of water treatment, including management of contact water, and assumptions that went into the water quality modeling	Section 6: Water Quality and Aquatic Biota Section 5: Fish and Fish Habitat	Condition 21: Water Quality Management, which would include requirements for Glencore to treat effluent for contaminants of potential concern influenced by Sukunka to address potential effects to downstream water quality. Condition 22: A Selenium Management Plan, which would require Glencore to address potential selenium bioaccumulation issues. Condition 23: An Aquatic Effects Management and Monitoring Plan, which would require Glencore to monitor and use adaptive management to address potential effects on aquatic biota; capture additional mitigations for fish and fish habitat, Glencore's commitments regarding fish stream crossings, and address uncertainties in baseline information and require follow-up monitoring. Condition 14: The development and implementation of a Construction Environmental Management Plan that would include erosion and sediment control measures.
Impacts to the Sukunka Lousewort Bog	Section 9: Vegetation	Condition 16: Glencore would be required to conduct additional pre-construction vegetation surveys (including at the Sukunka Lousewort Bog), wetland function assessments, and species at risk and ecosystems of conservation concern surveys.

¹⁰ Available at:

<https://projects.eao.gov.bc.ca/api/public/document/58868fdfe036fb01057687b5/download/Public%20Consultation%20Report.pdf> (First Public Consultation Report)

https://projects.eao.gov.bc.ca/api/public/document/62d8964f77ae61002207cca0/download/rpt_suk_public_consult_2015_fin.pdf (Second Public Consultation Report),

and https://projects.eao.gov.bc.ca/api/public/document/5ab935f85daca30024c57129/download/Sukunka_Public_Consultation_Report_3_FINAL_Nov_2015_EPIC.pdf (Third Public Consultation Report)

Soil erosion control and soil loss during construction	Section 10: Soils	Condition 14: The development and implementation of a Construction Environmental Management Plan that would include erosion and sediment control measures. If Sukunka proceeds, <i>Mines Act</i> permit requirements related to sediment and erosion control.
Potential for flooding events and risk to surrounding water quality	Section 18: Effects of the Environment on Sukunka Section 6: Water Quality and Aquatic Biota	Condition 21: Water Quality Management, which would require Glencore to treat effluent for contaminants of potential concern influenced by Sukunka to address potential effects to downstream water quality. This concern will also be addressed during EMA permitting. Condition 23: An Aquatic Effects Monitoring Plan which would require Glencore to monitor and use adaptive management to address potential effects on aquatic biota.
Greenhouse gas emissions from equipment and removal of trees	Section 11: Greenhouse Gases	Condition 29: Glencore would be required to develop a Greenhouse Gas Reduction Plan, which would require Glencore to ensure greenhouse gas emissions remain lower than the estimates provided in the EA.
Employment opportunities calculations, social impacts to local communities, and employment loss post-closure	Section 14: Social and Section 13: Economic	Condition 25: Glencore would be required to develop a Community Effects Management Plan to address potential social and economic impacts, in particular local employment and training that address barriers to employment and communication and engagement processes.
Loss of critical caribou habitat and potential impacts to Indigenous groups based on this culturally-important species	Section 8: Caribou, and Part C Indigenous Consultation	Condition 19: Glencore would be required to finalize the Caribou Mitigation and Monitoring Plan which would provide mitigation measures to reduce potential impacts to caribou prior to construction, a detailed adaptive management plan, an offsetting plan, and a habitat securement plan. Condition 11: An Indigenous Monitoring Program would be developed in consultation with Indigenous groups and include capacity development and opportunities for the monitors to be involved in monitoring impacts to caribou.

8 LOCAL GOVERNMENT CONSULTATION

The District of Chetwynd and Peace River Regional District were invited and participated in the Working Group. The EAO considered the concerns of and potential effects to local governments during the EA and these concerns are discussed further in the relevant sections of the Assessment Report. Key issues raised by the local governments helped inform EAO's assessment of Sukunka, including requests for technical information during the EA, the completion of the EAO's Summary and Assessment Reports, and the development of the EAO's proposed EA Certificate conditions.

Key concerns identified are listed in the Table 6 below.

Table 6: Key concerns raised by local governments during the Sukunka EA

KEY ISSUE	SECTION IN EAO'S ASSESSMENT REPORT	PROPOSED ENVIRONMENTAL ASSESSMENT CERTIFICATE CONDITION
Application is based on many assumptions, predictions, and unknowns. Continued monitoring will be needed to verify predictions of environmental effects and effectiveness of mitigation measures, particularly for social and economic impacts.	Section 14: Social and Section 13: Economic	Condition 25: Glencore would be required to develop a Community Effects Management Plan in consultation with local governments, to address potential social and economic impacts, in particular local employment and training that address barriers to employment and communication and engagement processes.

9 FEDERAL GOVERNMENT PARTICIPATION

The following federal departments with specialist information or expert knowledge relevant to Sukunka participated in the evaluation and the review of the Application:

- The Impact Assessment Agency of Canada (Agency) provided guidance and information directly to the EAO regarding the substituted process and federal EA requirements under CEAA 2012, but did not participate in the Working Group;
- ECCC, including the Canadian Wildlife Service, provided comments and information related to its regulatory and statutory responsibilities within the themes of vegetation resources, wildlife resources, surface water quality, human health, cumulative effects, and Aboriginal Interests;
- DFO provided comments and information related to its regulatory and statutory responsibilities of fish and fish habitat;
- Health Canada provided advice and information related to its regulatory and statutory responsibilities in regard to human and ecological health, with a primary focus on Indigenous health;
- Natural Resources Canada provided advice and information related to its expertise in seismicity, geohazards, and sediment dispersion modelling; and,
- Transport Canada provided comments on the AIR and information related to its regulatory and statutory responsibilities within the themes of navigable waters, rail safety, transportation of dangerous goods, accidents and malfunctions and Aboriginal Interests.

Under substitution, the Assessment Report will be submitted to the Agency, consistent with Section 34(1)(d) of CEAA 2012 and in order for the federal Minister to make decisions under subsection 52(1) of CEAA 2012 within the time limits set out in CEAA 2012. If the Minister decides that the designated project is likely to cause significant adverse environmental effects referred to in subsection 5(1) or (2), the Minister must refer to the Governor in Council whether those effects are justified in the circumstances.

The Assessment Report will be made available to the public, consistent with Section 34(1)(e) of CEAA 2012. This assessment fulfills the federal requirements and/or conditions as described in (1) CEAA 2012, (2) the MOU, and/or (3) the Federal Minister of the Environment's *Notice of Commencement of an Environmental Assessment and Substitution Approval* for the Project in the following ways:

- Section 17 of the Assessment Report includes assessment of the following:
 - CEAA 2012 Section 5(1)(a): assessment of changes Sukunka may cause to several federal areas of responsibility: fish and fish habitat, aquatic species, and migratory birds;
 - CEAA 2012 Section 5(1)(b): assessment of a change that may be caused to the environment by Sukunka that may arise on federal lands, other provinces, or outside of Canada;
 - CEAA 2012 Section 5(1)(c): assessment of any change to the environment caused by Sukunka on Indigenous groups' health and socio-economic conditions, physical and cultural heritage, the current use of lands and resources for traditional purposes, or any structure, site, or thing that is of historical, archaeological, paleontological, or architectural significance;
 - CEAA 2012 Section 5(2)(a): assessment of changes to the environment that are related to the exercise of a power or performance of a duty or function by a federal authority;
 - SARA Section 79(2): the identification of adverse effects of Sukunka on the SARA-listed wildlife species and their critical habitats and associated mitigation and monitoring measures; and,
- As part of the substituted EA process, the EAO consulted the Indigenous groups listed in [Section 6](#) of this Report on behalf of the federal government, including Métis Nations, as well as the distribution of federal capacity funding to all Indigenous groups consulted (details provided in Part C of the Assessment Report).

In addition to the conditions proposed by the EAO, the federal government will be proposing conditions related to the above federal requirements, which would become legally binding if Sukunka is approved by Canada.

10 ADDITIONAL CONSIDERATIONS

Ministers may consider other matters that are relevant to the public interest in making their decision in whether to grant an Environmental Assessment Certificate to Glencore. The following potential economic benefits and contributions to community development of Sukunka were presented in the Application and considered during the Application Review.

SOCIAL AND ECONOMIC BENEFITS

Glencore estimated that total direct capital expenditures during the two-year construction period would be \$273.4 million and that Sukunka would generate an estimated Gross Domestic Production (GDP) total of \$141 million in B.C. Glencore predicted that employment during construction would total 3,015 full time

equivalents (FTEs)¹¹ in B.C. and estimated that provincial tax revenues generated during construction would total \$34.5 million.

During the 20+ years operations phase, Glencore estimated total direct capital expenditures would be \$277.3 million annually and that Sukunka would generate \$428 million in total GDP in B.C. Glencore estimated that annual employment during operations would total 543 FTEs¹² in B.C. and estimated annual provincial tax revenues to be \$36.8 million. In addition to increased spending resulting from employment wages, Glencore estimated that \$20.6 million would be spent on direct suppliers contracted locally during construction and \$104.7 million would be spent locally on capital goods during operations.

11 CONCLUSIONS

The EAO's conclusions considered:

- Information contained in Glencore's Application and supplemental information provided during Application Review;
- Glencore's and the EAO's engagement with Indigenous groups, federal, provincial, and local government agencies, and the public and its commitment to ongoing consultation;
- The EAO's efforts to seek consensus with Indigenous groups on the EAO's conclusions in the Assessment Report, including the conclusions in Part C;
- Comments on Sukunka made by Indigenous groups, federal, provincial and local government agencies as members of EAO's Working Group and Glencore's and the EAO's responses to these comments;
- Comments on Sukunka received during the public comment period, and the Glencore's response to these issues;
- Issues raised by Indigenous groups regarding the potential impacts of Sukunka and Glencore's response and effort to address these issues;
- The design of Sukunka as specified in the proposed Schedule A (Certified Project Description) of the Environmental Assessment Certificate that would be implemented during all phases of Sukunka if approved to proceed; and,
- Mitigation measures identified as proposed conditions in Schedule B (Table of Conditions) of the EA Certificate that would be required during all phases of Sukunka if approved to proceed.

Regarding the EA process, the EAO is satisfied that:

- The EA process has adequately identified and assessed potential adverse environmental, economic, social, heritage, and health effects of Sukunka, having regard to the proposed conditions set out in

¹¹ Total employment figures for construction account for direct, indirect, and induced employment generated from Sukunka

¹² Total employment figures for operations account for direct employment generated from Sukunka

the Environmental Assessment Certificate and its schedules, if issued;

- Consultation with Indigenous groups, government agencies, and the public has been adequately carried out and that efforts to consult with Indigenous groups will continue on an ongoing basis;
- Issues identified by federal, provincial, and local government were adequately considered during review of the Application;
- Regional policy initiatives are expected to support the mitigation measures and management efforts described in the Application and this Report if the project were approved to proceed; and,
- The provincial Crown has fulfilled its obligations for consultation and accommodation to Indigenous groups relating to the assessment of adverse impacts to Aboriginal Interests.

With regards to the assessment conclusions, the EAO is of the view that:

- Practical means were identified, where possible, to prevent or reduce adverse effects of Sukunka, if approved to proceed;
- Even after the application of mitigations measures and legally-binding conditions, if approved Sukunka would be predicted to result in:
 - significant adverse residual and cumulative effects to caribou;
 - significant adverse cumulative effects to grizzly bear, and
 - significant effects to Indigenous peoples' health and socio-economic conditions, current use of lands and resources for traditional purposes, and physical and cultural heritage;
- Sukunka also would be predicted to result in impacts to Treaty 8 Nations' treaty rights, in particular a moderate to serious impact to the Treaty right to hunt caribou and minor to moderate impacts on the Treaty rights to fish and gather plants.

APPENDIX A – SUMMARY CHARACTERIZATION OF RESIDUAL EFFECTS ON VALUED COMPONENTS

Valued Components	Residual Effects	Context (Resilience)	Magnitude	Geographic Extent	Duration	Frequency	Reversibility	Likelihood	Confidence	Significance (residual effects)	Significance (cumulative effects)
Accidents and Malfunctions	Failure of infrastructure	Low	Moderate to high	Local to regional	Temporary to long-term	Rare	Reversible, long-term	Low	Moderate	Not significant	N/A
	Hazardous material spill	Low	Moderate to high	Local to regional	Temporary to long-term	Rare	Reversible, long-term	Low	Moderate		
	Fire or explosion	Moderate	Low	Local to regional	Temporary to long-term	Rare	Reversible, long-term	Low	High		
	Traffic collision	Low to high	Low to high	Local	Temporary	Rare	Reversible, long-term	Low	Moderate		
Air Quality	Increase in air contaminants over objectives	Moderate to high	High	Local	Long-term	Regular	Reversible	High	High	Not significant	Not significant
	Loss of habitat (direct)	Low	Moderate to high	Beyond Regional	Long-term to permanent	Single	Irreversible	High	High	Significant	Significant
Caribou	Loss of habitat (indirect)	Low	Moderate to High	Beyond Regional	Long-term	Continuous	Reversible	High	High		
	Increased mortality risk	Low	Moderate to High	Beyond Regional	Long-term	Continuous	Reversible	High	High		
	Change in movement	Low	Moderate to High	Beyond Regional	Long-term	Continuous	Reversible	High	High		
Economic	Reduced availability of local labour and increased labour costs for businesses and service	Moderate	Low	Regional	Medium-term	Continuous	Reversible to Irreversible	High	Moderate	Not significant	Not significant

Valued Components	Residual Effects	Context (Resilience)	Magnitude	Geographic Extent	Duration	Frequency	Reversibility	Likelihood	Confidence	Significance (residual effects)	Significance (cumulative effects)
Fish & Fish Habitat	providers										
	Reduced employment and associated income during mine closure (temporary or permanent)	Moderate	Moderate	Beyond Regional	Long-term	Once to infrequent	Reversible to Irreversible	High	Moderate		
	Habitat loss or alteration	Moderate	Low	Local	Permanent	Continuous	Irreversible	High	Low to moderate	Not significant	Not significant
	Impacts to fish	Moderate	Moderate	Local	Short-term	Regular	Irreversible	High	Low to moderate	Not significant	Not significant
	Impacts to bull trout	Low to moderate	High	Local	Short-term	Regular	Irreversible	High	Low to moderate	Not significant	Not significant
	Greenhouse Gases										
	Increase in greenhouse gas emissions	Low	Low	Global	Long-term	Continuous	Irreversible	High	High	Not significant	N/A
	Heritage										
	No residual effects predicted	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Human Health										
	Consumption of fish containing mercury	Low	Moderate	Regional	Permanent	Continuous	Irreversible	Low	Low	Not significant	Not significant
	Inhalation of contaminants	Moderate	Moderate to High	Local	Long-term to Permanent	Continuous	Irreversible	Moderate	Low		
	Social										
	Housing availability and	Low to moderate	Moderate	Local	Long-term	Continuous	Reversible	High	Moderate	Not significant	Not significant

Valued Components	Residual Effects	Context (Resilience)	Magnitude	Geographic Extent	Duration	Frequency	Reversibility	Likelihood	Confidence	Significance (residual effects)	Significance (cumulative effects)
Soils	affordability										
	Increased pressure on transportation infrastructure	Moderate to High	Low	Local to Regional	Long-term	Continuous	Reversible	High	Moderate		
	Increased demands on community and emergency services and infrastructure	Low	Moderate	Local to Regional	Long-term	Continuous	Reversible	High	Moderate		
	Community health	Low to moderate	Low to moderate	Local to regional	Long-term	Continuous	Reversible to irreversible	Low	Moderate	Not significant	Not significant
	Effects on tenured land uses	Moderate	Low to moderate	Local	Long-term	Continuous	Reversible	High	High	Not significant	Not significant
	Effects on non-tenured land uses	Moderate	Moderate	Regional	Long-term	Continuous	Reversible	High	High		
	Visual quality	Low to moderate	Moderate	Local	Long-term	Continuous	Reversible to irreversible	High	Moderate	Not significant	Not significant
	Loss of soil quality	Moderate	Low	Site-specific to local	Long-term to Permanent	Regular to infrequent; continuous	Reversible to Irreversible	High	Moderate to High	Not significant	Not significant
	Loss of soil quantity	Moderate	Negligible to moderate	Site-specific	Permanent	Once to frequent; regular and continuous	Irreversible	High	Moderate to High		
	Loss of plant species	Low to High	Low to moderate	Local	Long-term to Permanent	Single	Reversible to Irreversible	High	Moderate to High	Not significant	Not significant
Vegetation and Wetlands											

Valued Components	Residual Effects	Context (Resilience)	Magnitude	Geographic Extent	Duration	Frequency	Reversibility	Likelihood	Confidence	Significance (residual effects)	Significance (cumulative effects)
Water Quality and Aquatic Biota Wildlife	Loss of ecological communities and functions	Low to moderate	Low to High	Local	Long-term to Permanent	Single and continuous	Reversible to Irreversible	High	Moderate to High		
	Loss of water quality	Unknown	Low to High	Local to Regional	Permanent	Regular to continuous	Irreversible	High	Low to moderate	Not significant	Not significant
	Loss of habitat	Low to moderate	Low to moderate	Local to Regional	Long-term	Once	Reversible to Irreversible	High	Low to moderate	Not significant	Not significant
	Increased mortality risk	Low to moderate	Low to moderate	Local	Long-term to Permanent	Continuous	Reversible to Irreversible	High	Low to moderate		
	Change in movement	Low to moderate	Low	Local	Long-term	Continuous	Reversible to Irreversible	High	Low to moderate		
	Change in health	Moderate	Low to moderate	Local	Long-term	Continuous	Reversible	High	Low to moderate		
	Change in predator-prey dynamics	Low to moderate	Low	Local	Long-term	Continuous	Reversible to Irreversible	High	Low to moderate		
	Grizzly bear (specifically)	Low	Moderate	Regional	Long-term to Permanent	Once to continuous	Reversible to Irreversible	High	Low to moderate		Significant