

EXECUTIVE SUMMARY

PROCESS OVERVIEW

Glencore plc (Glencore) is proposing the construction, operation, and decommissioning of the Sukunka Coal Mine Project (Sukunka or the Project), located within the Peace River Regional District, approximately 55 km south of Chetwynd, British Columbia (BC) and 40 km west of Tumbler Ridge. At full build-out, Sukunka would include an open pit mine, waste rock stockpiles, coal handling and preparation plant, mine infrastructure area, mine infrastructure haul road, transmission line and substation, water management structures, active water treatment plant, coal haul route and load-out facility, explosives storage and employee camp. Sukunka would be operational for over 20 years and would produce metallurgical coal for export (used in the production of steel) with an estimated three million tonnes per year of saleable coal.

Sukunka is subject to an environmental assessment (EA) under BC's *Environmental Assessment Act, 2002* (the Act) by the BC Environmental Assessment Office (the EAO) and the *Canadian Environmental Assessment Act, 2012* (CEAA 2012) by the Impact Assessment Agency of Canada (the Agency). The federal Minister of the Environment approved the substitution of the federal environmental assessment process under CEAA 2012 with the process conducted under the Act, to be carried out per the terms of the *Memorandum of Understanding between the Canadian Environmental Assessment Agency and BC's Environmental Assessment Office on the Substitution of Environmental Assessments 2013*.

In conducting this EA, the EAO examined the potential environmental, economic, social, heritage and health effects of Sukunka, including cumulative effects of other past, current, or reasonably foreseeable projects or activities. For the purposes of meeting the CEAA 2012 substitution requirements, the EAO examined environmental effects as required by Subsections 5(1) and 5(2) of CEAA 2012, as well as subsection 79(2) of the *Species at Risk Act*.

The EAO and the Agency worked together to identify which Indigenous groups could potentially be impacted by Sukunka, with consideration given to areas of traditional use where Aboriginal or Treaty rights were historically or are currently exercised. The EAO maintained consistent engagement with these Indigenous Groups and evolved its approach over the duration of this EA in consideration of the need and interests of the Indigenous Groups and the evolution in case law, including the 2021 *Yahey v. British Columbia* decision.

The EA process for Sukunka spanned nearly ten years due to the complexity of the issues involved. The EA had a number of specific attributes worth noting, including an Indigenous-led technical advisory committee, modification to the project design during the Application Review period including changes to water treatment and a reduction of the footprint within caribou habitat and, concurrent with the EA, a number of initiatives and agreements by the Province of BC, the Government of Canada and the Treaty 8 Nations to address the 2018 finding by the federal Minister of Environment and Climate Change that there is an imminent threat to recovery of the southern mountain caribou. In total, Glencore requested three

suspensions of the Application Review timeline to allow for further engagement with technical advisors and Indigenous groups on mitigation measures to reduce the impacts of the project, particularly regarding caribou. 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 related to caribou remain unresolved.

The EAO undertook public consultation activities during the EA, including inviting public comment on the application information requirements, the application, and the EAO's draft assessment report and proposed conditions that would be legally required should Sukunka be issued an EA Certificate. During the final public comment period on the draft assessment report and proposed conditions, the EAO received 991 comments, overwhelmingly relating to concerns regarding the impacts of Sukunka on caribou.

The EAO's assessments were based on all information received, including the Application and supplementary information provided by Glencore, the mitigation measures and commitments proposed to avoid or minimize the adverse effects, and the extensive consultation with, and input received from, the Working Group, Indigenous Groups, and the public.

This Assessment Report summarizes the process, engagement, issues, mitigations, and conclusions of the EA for Sukunka. The EAO prepared this Report in consultation with an advisory working group (Working Group), made up of federal, provincial, and local government representatives and representatives from potentially affected Indigenous Groups. The Agency provided advice to the EAO in relation to fulfilling the requirements of CEEA 2012.

EFFECTS TO VALUED COMPONENTS

Valued components are aspects of the natural and human environment that are considered by the public, Indigenous groups, scientists and other technical specialists, government agencies, and Glencore to have scientific, ecological, economic, social, cultural, archaeological, historical, or other importance. The EAO uses valued components as an organizing framework for the assessment of the potential effects of proposed projects.

The Sukunka EA focused on the project's potential impacts to air quality, soils, vegetation, wildlife, caribou (assessed separately from wildlife), fish, water quality and aquatic biota, greenhouse gas emissions, the economic environment, community services and infrastructure, land and resource use, community health, visual quality, population and demographics, archaeological and heritage resources, and human and ecological health ([Table 1](#)). Many of these valued components are interconnected. In such cases, the EAO has provided clear linkages to other relevant sections in the Report.

Table 1: Valued Components Assessed and Corresponding Sections in the Assessment Report

<p>Environmental Effects</p> <p>Fish and fish habitat (Section 5)</p> <p>Water quality and aquatic biota (Section 6)</p> <p>Wildlife (Section 7)</p> <p>Caribou (Section 8)</p> <p>Vegetation (Section 9)</p> <p>Soils (Section 10)</p> <p>Air quality (Section 11)</p> <p>GHGs (Section 12)</p> <p>Health Effects</p> <p>Human health (Section 16)</p>	<p>Social and Economic Effects</p> <p>Economic environment (Section 13)</p> <p>Population and demographics (Section 14)</p> <p>Land and resource use (Section 14)</p> <p>Visual quality (Section 14)</p> <p>Community health (Section 14)</p> <p>Community services and infrastructure (Section 14)</p> <p>Heritage Effects</p> <p>Archaeological and heritage resources (Section 15)</p>
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The EA examined the impacts of Sukunka on Indigenous groups and their interests, as well as how accidents and malfunctions and effects of the environment on Sukunka could affect the valued components and Indigenous Groups.

The EAO determined that there would be:

- Significant adverse effects to caribou and significant cumulative adverse effects to caribou in the region, as a result of the loss of high and low elevation caribou habitats, sensory disturbance from mine operations and construction, and the potential for the Quintette herd to abandon the important Bullmoose Mountain in their winter range critical habitat;
- Specific to the *Species at Risk Act* (SARA) subsection 79(2), significant adverse effects to woodland caribou as a SARA-listed wildlife species;
- Significant cumulative adverse effects to grizzly bear due to the exceedance of the grizzly bear linear feature density threshold (the amount of habitat undisturbed by linear features [i.e., roads, transmission lines] required for continued grizzly bear use) and minimum acceptable amount of core security habitat;
- Serious impact to the Treaty right to hunt caribou for West Moberly First Nations, Sauteau First Nations, and McLeod Lake Indian Band;
- Significant effect on Indigenous peoples' health and socio-economic conditions related to the perceived increased human health risk from elevated mercury and selenium concentrations under CEAA 2012 subparagraph 5(1)(c)(i);
- Significant effect on Indigenous peoples' physical and cultural heritage related to impacts on hunting caribou under CEAA 2012 subparagraph 5(1)(c)(ii); and
- Significant effect on Indigenous peoples' resource harvesting and current use of lands and resources for traditional purposes related to impacts on hunting caribou under CEAA 2012 subparagraph 5(1)(c)(iii).

In addition to the significant adverse effects, the EAO's analysis also determined that Sukunka would result in the following residual adverse effects:

- Predicted concentrations for Criteria Air Contaminants that would exceed BC Air Quality Objectives along the coal haul roads outside of the tenure area boundaries (particulate matter [PM]_{2.5}, PM₁₀ and dustfall) and in a small area just outside the northwest corner of the tenure boundary (sulphur dioxide [SO₂]) along the Forest Service Road;
- Changes to surface water quality and nutrient levels in the creeks in the project area, particularly associated with increased levels of selenium;
- Loss or alteration of fish habitat, increased mortality risk to fish, and risk of selenium bioaccumulation in fish, including high magnitude effects on provincially blue-listed bull trout;
- Increased risk to human health associated with consumption of fish containing mercury and inhalation of three potential contaminants of concern (PM_{2.5}, PM₁₀, and SO₂);
- Loss of wildlife habitat from direct and sensory disturbance, increase in mortality risk to wildlife, and reduction in wildlife health due to increased selenium concentrations for fish-eating species;
- Loss of blue-listed vegetation and ecosystems of conservation concern, including part of the Sukunka Lousewort Bog;
- Loss of wetlands and wetland functions;
- An increase in annual provincial greenhouse gas emissions during construction and operations; and
- Adverse social effects on housing, increased traffic and pressure on transportation infrastructure, and increased demands for community and emergency services and infrastructure.

IMPACTS TO INDIGENOUS INTERESTS

Potential direct effects from Sukunka and potential effects along the haul route and load-out facility and the transmission line corridor would occur within the southwest area of the Treaty 8 Territory. The EAO deeply consulted with West Moberly First Nations, Saulteau First Nations, and McLeod Lake Indian Band, throughout the EA, and with Doig River First Nation and Halfway River First Nation after they were added to the Schedule B of the Section 11 Order on April 12, 2016 and January 30, 2018, respectively. The EAO assessed the potential adverse impacts of Sukunka on their Aboriginal Interests (Aboriginal rights, including Treaty rights and title).

The EAO provided notifications to Blueberry River First Nations, Doig River First Nation (until added to Schedule B on April 12, 2016), Fort Nelson First Nation, Halfway River First Nation (until added to Schedule B on January 30, 2018), Prophet River First Nation, Horse Lake First Nation, Métis Nation British Columbia and Kelly Lake Métis Settlement Society of key milestones throughout the EA and opportunities to review the Assessment Report, draft provincial conditions, draft potential federal conditions, and the Indigenous Consultation Report.

Sukunka has the potential for moderate to serious impacts to Treaty rights related to fishing, hunting, trapping, and Aboriginal Interests related to gathering, trails, archaeological and heritage resources, and culturally-important sites. The EAO concludes that the key mitigation measures and proposed conditions

would avoid, reduce, or accommodate some, but not all, of the assessed potential effects to Aboriginal Interests. Additional detail can be found in Part C of the Report.

The EAO acknowledges that the Treaty 8 Nations have a different methodology for the assessment of impacts to their Aboriginal and Treaty Rights and do not agree with the EAO's conclusions. The First Nations Independent Technical Review committee's member nations (West Moberly First Nations, Saulteau First Nations, and Doig River First Nation) and McLeod Lake Indian Band intend to provide a formal submission that will be included in the referral package for provincial and federal decision-makers.

MITIGATIONS AND PROVINCIAL CONDITIONS

The EA resulted in 31 proposed conditions that include specific, rigorous, and achievable measures to avoid or reduce the potential impacts of Sukunka on valued components and Aboriginal Interests. If provincial Ministers decide to issue an Environmental Assessment Certificate (EAC) for Sukunka, the EAO proposes these conditions be attached to the EAC.

Should an EAC be issued, the following are some of key requirements of the Holder that are included in the proposed conditions:

- An Indigenous monitoring program, requiring Glencore to fund positions to be held by members of Indigenous Groups to conduct monitoring of environmental factors they deem important such as water quality and caribou;
- A Wetland Management Plan, requiring additional pre-construction surveys, setbacks from wetland features, and compensation for the removal of wetland functions;
- A Wildlife Monitoring and Mitigation Plan, requiring additional pre-construction surveys for bats, migratory birds, and amphibians as well as protection of wildlife habitat through mitigation measures and setbacks;
- A Caribou Mitigation and Monitoring Plan, requiring limits on disturbance in high elevation caribou habitat and offsets and restoration of any disturbance in high elevation caribou habitat;
- A Caribou Financial Agreement, requiring Glencore to enter into an agreement with the Province to make the financial contributions committed during the EA (up to \$3,300,000 towards regional predator management initiatives, representing up to \$150,000 per year of mine operation) and \$1,500,000 towards restoration of 125 km of linear features);
- Water Quality Management, requiring Glencore to actively treat effluent for contaminants of potential concern influenced by Sukunka to ensure downstream water quality does not exceed specific water quality thresholds;
- An Aquatic Effects Monitoring Plan, requiring monitoring and adaptive management to address potential effects on aquatic biota as well as additional pre-construction surveys for fish and fish habitat;
- A Road Management Plan to address effects related to Project and public use of the haul road, such as limiting speeds and reducing the density of roads in the region;
- An Air Quality and Emissions Management Plan, requiring Glencore to monitor air quality and

- dustfall and apply mitigation measures to be protective of human health; and
- A Human Health Monitoring and Management Plan, requiring Glencore to conduct air, soil, vegetation, fish, and water sampling to monitor contaminant levels, and apply mitigation measures and adaptive management to be protective of human health.

Should Sukunka receive an EAC and advance to the permitting process, Glencore would also be required to obtain several authorizations issued by federal and provincial agencies prior to construction. The authorization processes for these permits would involve the requirements for additional mitigation measures.

FEDERAL KEY MITIGATION MEASURES

In keeping with the memorandum of understanding on substitution, this Report provides a list of the key mitigation measures that the federal Minister of the Environment and Climate Change will take into account when making his EA decision. Key mitigation measures are presented in the CEAA 2012 chapter as measures that are essential to ensure that a project will not result in significant adverse environmental effects. In specific circumstances, if significant adverse environmental effects that are likely cannot be avoided despite the mitigation measures, key mitigation measures are those that reduce or control these significant adverse environmental effects to the extent possible.

The following are some of the key mitigation measures the EAO is recommending to inform the development of federal conditions, which are further discussed in Section 17: CEAA 2012 of the Assessment Report:

- Maintain buffers around riparian areas and wetlands;
- Use of clear span bridges at all crossings of fish bearing streams;
- Implement measures to protect fish and fish habitat when undertaking activities in or near water, taking into account Fisheries and Oceans Canada's Measures to Avoid Causing Harm to Fish and Fish Habitat;
- Carry out all phases of the Project in a manner that protects and avoids harming, killing and disturbing migratory birds and destroying and disturbing their nests and eggs;
- Offset for residual effects to fish and harmful disruption or destruction of fish habitat, following the conceptual Fish Habitat Offsetting Plan;
- Construct water outlet pipe with a diffuser for releasing treated contact water into the Sukunka River;
- Use of seepage collection measures designed with sufficient capture efficiency;
- Use of active water treatment, through post-closure, to treat potential contaminants of concern in effluent;
- Install and use erosion and sediment control measures (e.g., lined sedimentation ponds, silt fencing);
- Install, use and maintain a lined contact water buffer pond to provide primary storage for contact water that will be directed to the water treatment plant;

- Install, use, and maintain lined water treatment residuals management area for containment of water treatment residuals;
- Manage potentially acid generating waste rock by confining it to in-pit waste rock storage areas and implementing measures to ensure in-pit storage areas are net-acid consuming;
- Prior to disturbance of high elevation critical caribou habitat, secure habitat (from all tenure holders) to offset all high elevation critical caribou habitat that would be altered or destroyed by the Project;
- All construction activities including blasting and clearing will not occur within at least 500 m of high elevation habitat designated for caribou during the critical and cautionary periods for caribou;
- Provide safe crossing opportunities for grizzly bears and ungulates along linear features;
- Install fencing adjacent to all identified breeding ponds to direct western toad dispersal movements towards crossing features (e.g., tunnels, overpasses) and away from project infrastructure;
- Remove and reclaim linear features when they are no longer required for mine operation, including existing legacy roads and trails; and
- Compensate for loss of bat maternal roosting and hibernacula sites.

CONCLUSIONS

Despite substantial efforts by all parties, some issues raised in the Sukunka EA remain unresolved, particularly those related to caribou. The EAO has concluded that, after the application of Glencore's mitigations and the additional proposed key mitigations and conditions that would be imposed as part of an EAC, the Sukunka Coal Mine would result in residual adverse effects, including several significant adverse effects. The Sukunka Coal Mine would also result in moderate to serious impacts to Aboriginal Interests and Treaty 8 rights.

Significant Adverse Effects

- Significant adverse effects to caribou and significant cumulative adverse effects to caribou in the region, after the application of mitigation measures, offsets, and the EAO's proposed conditions, due to the risk of extirpation to the Quintette herd;
- Specific to the federal EA requirements, significant adverse effects to woodland caribou as a SARA-listed wildlife species under SARA subsection 79(2);
- Significant cumulative adverse effects to grizzly bear due to the exceedance of the grizzly bear linear feature density critical threshold and minimum acceptable amount of core security habitat;
- Serious impact to the Treaty right to hunt caribou for West Moberly First Nations, Sauleau First Nations, and McLeod Lake Indian Band;
- Significant effect on Indigenous peoples' health and socio-economic conditions related to the perceived increased human health risk from elevated mercury and selenium concentrations under CEAA 2012 subparagraph 5(1)(c)(i);
- Significant effect on Indigenous peoples' physical and cultural heritage related to impacts on hunting caribou under CEAA 2012 subparagraph 5(1)(c)(ii); and

- Significant effect on Indigenous peoples' resource harvesting and current use of lands and resources for traditional purposes related to impacts on hunting caribou under CEAA 2012 subparagraph 5(1)(c)(iii).

Impacts on Indigenous Groups

The EAO determined that Sukunka would result in a serious impact to the Treaty right to hunt caribou for McLeod Lake Indian Band, Sauteau First Nations, and West Moberly First Nations, and a moderate impact to both Doig River First Nation and Halfway River First Nation.

There would also be a moderate impact on the Treaty right to fish for McLeod Lake Indian Band, Sauteau First Nations, and West Moberly First Nations. With respect to the Treaty right to gathering, McLeod Lake Indian Band, Sauteau First Nations and West Moberly First Nations would experience a moderate impact.

Referral to Ministerial Decision Makers

The EAO has prepared a draft EAC that includes a draft Certified Project Description (CPD) and draft Table of Conditions that would become legally-binding if Sukunka is issued an EAC. These documents are part of the referral package that will be provided to decision-makers for their consideration.

The EAO's Assessment Report provides more detailed information regarding the process, engagement, issues, mitigations, and conclusions of the environmental assessment for Sukunka.