Analysis Report

WHETHER TO DESIGNATE THE **SUMMIT MINE 14 PROJECT** IN ALBERTA PURSUANT TO THE *IMPACT ASSESSMENT ACT*

November 2022





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Purpose

The Impact Assessment Agency of Canada (the Agency) prepared this report for consideration by the Minister of Environment and Climate Change (the Minister) in responding to a request to designate the Summit Mine 14 Project (the physical activities referred to as the Project) pursuant to section 9 of the *Impact Assessment Act* (the IAA).

Context of Request

On August 15, 2022, the Minister received a request to designate the Project from JFK Law LLP on behalf of Aseniwuche Winewak Nation (AWN). Four additional requests were received on September 13, 2022, supporting the AWN request from Ermineskin Cree Nation, Cadotte Lake Métis Nation, Duncan's First Nation and Whitefish Lake First Nation #128. The requesters raised concerns regarding the potential effects of the Project on the environment including impacts to fish and fish habitat, species at risk, migratory birds, federal lands and the rights of Indigenous peoples. The Agency focused its assessment on the potential effects within federal jurisdiction as outlined in subsection 9(1) with consideration of 9(2) of the IAA for the purposes of the designation request and followed the Agency's <u>Operational Guide: Designating a Project under the Impact Assessment Act</u>¹.

The Agency sought input from Summit Coal Inc. (the Proponent), federal authorities, the Alberta Energy Regulator, and 14 potentially affected Indigenous groups: East Prairie Métis Settlement, Ermineskin Cree Nation, Horse Lake First Nation, Louis Bull Tribe, Montana First Nation, Samson Cree Nation, Whitefish Lake First Nation #128, Mountain Métis, Métis Nation of Alberta Region 4, Métis Nation of British Columbia, Kelly Lake Cree Nation Society, Kelly Lake First Nation Society, Kelly Lake First Nation Society, Kelly Lake Pirst Nation Society, Kelly Lake Métis Settlement Society and the Métis Community Society of Kelly Lake. Public comments that were submitted to the Agency and the Minister of Environment and Climate Change were also considered.

The Alberta Energy Regulator (AER) notified the Proponent on September 6, 2022 that the Project is not a mandatory activity for the purposes of environmental assessment and that an Environmental Impact Assessment (EIA) is not required pursuant to section 44 of the *Environmental Protection and Enhancement Act* (EPEA). The AER stated that it is not within its jurisdiction to provide input to the Agency on the designation of the Project.

The Proponent responded to the Agency on September 8, 2022, with information about the Project, a response to the requesters' concerns, and its view that the Project should not be designated. The Proponent submitted responses to Agency follow up questions on September 18, 2022 and October 25, 2022. The

¹ https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/designating-project-impact-assessment-act.html

Proponent has indicated that it will be submitting or renewing applications to the province under EPEA, *Pubic Lands Act* and *Water Act.*

Advice on potential effects of the Project, and applicable legislative frameworks, was received from Fisheries and Oceans Canada (DFO), Environment and Climate Change Canada (ECCC), Natural Resources Canada (NRCan), Health Canada (HC), Transport Canada (TC), Indigenous Services Canada (ISC), Parks Canada, Women and Gender Equality Canada (WAGE), and the AER.

Project Context

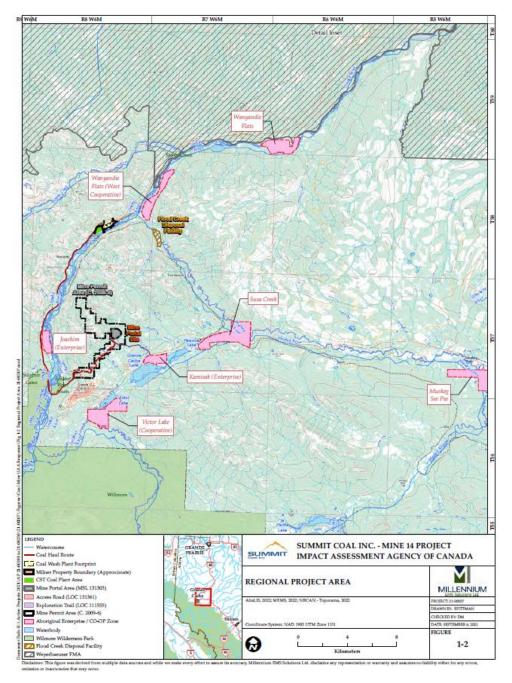
Project overview

The Proponent is proposing the construction, operation, decommissioning and abandonment of an underground metallurgical coal mine located four kilometres northeast of Grande Cache, Alberta (Figure 1). As proposed, the Project would have a coal production capacity of approximately 3,562 tonnes per day. The Project would have a surface footprint of approximately 54 hectares and a subsurface area of approximately 512 hectares. Project operations are expected to begin in early 2023 and continue until 2032, followed by two to three years of restoration.

Coal from the Project would be transported to a provincially approved, but yet to be constructed, coal processing plant (CPP) at the HR Milner Generating Station site via the access road (6.5 kilometres) and Highway 40 (20 kilometres). The CPP was not included in the designation request and was not considered in the Agency's analysis.

The Project is located within Treaty 8 territory and within the Métis Nation of Alberta Region 4.

Figure 1: Location of the Project



Source: Summit Coal Inc., Alberta Energy Regulator Response Appendix 2, May 2022

Alternative Text: The Summit Mine 14 Project is located four kilometres northeast of Grande Cache and northwest of Grande Cache Lake. The mine portal site is located near the centre of the subsurface mine permit area that extends northwest and southwest from the mine portal.

Project components and activities

The Project would have one main portal bench to access the underground mine. Underground coal extraction would be performed by miners loading shuttle cars for transportation onto a central conveyor belt. Once the coal reaches the surface by conveyor belt, it would be processed in a rotary breaker and the waste rock would be placed into a stockpile on the surface. The waste rock is proposed to be transported back into the mined-out workings underground for permanent disposal, usually within the same day. Coal would be transported from the mine portal site to the CPP via the access road and Highway 40, stored in an outdoor raw coal stockpile and fed into the CPP using a loader. Processed coal would be placed in an outdoor stockpile at the CPP before being loaded onto trains for transportation to customers.

Main Project components include:

- surface portal structures and facilities (i.e. mine fans, mine utilities, portal conveyor, administrative offices, maintenance shop);
- an underground mine (i.e. room and pillar method);
- coal handling facilities (i.e. conveyors, screening station, loadout/storage silo);
- an access road; and
- water management and drainage control features (i.e. ditches, sedimentation pond, mine water pond, treated wastewater pond).

Analysis of Designation Request

Authority to designate the Project

The *Physical Activities Regulations* (the Regulations) of the IAA identify the physical activities that constitute designated projects.

The most applicable item to the Project in the Regulations are:

- 18. The construction, operation, decommissioning and abandonment of one of the following:
 - (a) a new coal mine with a coal production capacity of 5 000 t/day or more

The Project, as described by the Proponent, is the construction, operation, decommissioning and abandonment of a coal mine with a raw coal production of 3,562 tonnes per day, and is therefore not included in the Regulations.

Under subsection 9(1) of the IAA the Minister may, by order, designate a physical activity that is not prescribed in the Regulations. The Minister may designate if, in the Minister's opinion, the physical activity

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may cause adverse effects within federal jurisdiction or adverse direct or incidental effects, or public concerns related to those effects warrant designation.

The Minister cannot designate a physical activity if the carrying out of the physical activity has substantially begun, or a federal authority has exercised a power or performed a duty or function in relation to the physical activity (subsection 9(7) of the IAA). The Agency is of the view that carrying out of the Project has not substantially begun and no federal authority has exercised a power or performed a duty or function that would permit the Project to be carried out, in whole or in part.

In the Proponent's submission on September 8, 2022, in response to the Agency's information request, it noted that it is its understanding that the Project has substantially begun because most required regulatory approvals have been attained and permanent physical undertakings have been carried out, including drilling of wells, construction of access routes, and construction of entrances to the underground mine. The Proponent also stated that following the receipt of regulatory approvals still required for the Project, it will be able to commence Project construction, then operations. The Agency determined, in accordance with the Agency's <u>Guidance for interpreting "substantially begun" under subsection 9(7) and "substantially begin" under subsections 70(1) and 70(3) of the *Impact Assessment Act2*, that the Project has not substantially begun as the physical undertakings to date appear to be related to preliminary investigation or exploration activities and are not physical activities that constitute the potentially "designated project" that could be subject to the IAA (i.e., construction, operation, decommissioning and abandonment). It is the Agency's opinion that available information does not support the Proponent's position that the Project has substantially begun.</u>

DFO issued a Letter of Advice to the Proponent in 2009. A Letter of Advice is a non-regulatory tool used to provide advice to a proponent in instances where prohibited impacts to fish and fish habitat are unlikely with appropriate avoidance and mitigation measures. DFO does not consider this to represent the exercise of a power, duty, or function.

Given this understanding, the Agency is of the view that the Minister may consider designating the Project pursuant to subsection 9(1) of the IAA.

Legislative context

Federal Legislative Mechanisms

Fisheries Act

The Fish and Fish Habitat Protection Program of DFO reviews projects for their impacts to fish and fish habitat by ensuring compliance with the *Fisheries Act* and *Species at Risk Act* (SARA). Through this program,

² https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/guidance-interpretingsubstantially-begun-subsection-9-7-and-substantially-begin-subsections-70-1-70-3.html

DFO may provide information to the Proponent in order to avoid and mitigate the negative impacts of the Project.

The Authorizations Concerning Fish and Fish Habitat Protection Regulations dictate the requirements that a proponent must meet if it chooses to request an exception to the above cited prohibitions of the Fisheries Act. These regulations also lay out factors that DFO must consider, and dictate timelines by which DFO must review an application for authorization. A Fisheries Act Authorization may be required if the Project is likely to cause the harmful alteration, disruption, or destruction to fish habitat and/or is likely to result in the death of fish. The Fisheries Act also prohibits the deposit of deleterious substances into waters frequented by fish, unless authorized by regulations or other federal legislation. Consideration of the issuance of a Fisheries Act Authorization would include legally-binding conditions for avoidance, mitigation, and offsetting requirements commensurate with project impacts. Monitoring to validate impacts and verify efficacy of mitigation measures and offsetting are also part of Authorization conditions.

In 2009, DFO reviewed the Project and issued a Letter of Advice. The Letter of Advice issued for the Project included mitigations to reduce potential impacts to fish and fish habitat downstream of the Project area (e.g. erosion sediment control measures). Letters of Advice issued prior to entry into force of the *Fish and Fish Habitat Protection Provisions* may not adequately protect fish and fish habitat in accordance with the current Act³. On October 20, 2022, DFO notified the Proponent that the Letter of Advice issued on May 5, 2009 is now obsolete and an updated review is required.

Coal Mining Effluent Regulations (pending)

The Coal Mining Effluent Regulations (proposed under the *Fisheries Act*) are currently being developed by ECCC and would apply to coal mining in Canada. These regulations will implement national effluent quality standards for selenium, nitrate and suspended solids as well as requirements related to pH and toxicity. They will also set requirements for monitoring, reporting and record keeping, including environmental effects monitoring. These proposed regulations are expected to be published in the *Canada Gazette, Part I* in late 2022. Final regulations are expected one year later, in 2023. These regulations would prescribe selenium as a deleterious substance, and include maximum thresholds.

Species at Risk Act

For non-aquatic species listed in Schedule 1 of SARA as Extirpated, Endangered, or Threatened, a permit under section 73 of SARA would be required from ECCC for activities that affect a listed terrestrial wildlife species, any part of its critical habitat, or the residences of its individuals, where those prohibitions are in place. Such permits may only be issued if: all reasonable alternatives to the activity that would reduce the impact on the species have been considered and the best solution has been adopted; all feasible measures will be taken to minimize the impact of the activity on the species or its critical habitat or the residences of its individuals; and if the activity will not jeopardize the survival or recovery of the species.

³ Guidance and transitional provisions of Bill C-68 (dfo-mpo.gc.ca); *https://www.dfo-mpo.gc.ca/pnw-ppe/guidance-ligne-directrice-eng.html*



ECCC stated that since the Project is not located on federal lands and there are no SARA orders in place, only the SARA prohibitions pertaining to migratory birds would apply. These SARA prohibitions would not apply to critical habitat unless an order is put in place.

Canadian Environmental Protection Act, 1999

The Project may be required to submit greenhouse gas (GHG) emissions reporting to ECCC if it emits the equivalent of ten kilotonnes or more of GHGs (in carbon dioxide equivalent units) per year.

Migratory Birds Convention Act, 1994

The *Migratory Birds Convention Act, 1994* protects migratory birds and their eggs and nests, wherever they occur, regardless of land tenure. A permit would be required if construction and clearing activities are scheduled within the migratory bird nesting season.

A Damage or Danger permit could be issued by Canadian Wildlife Service under the *Migratory Bird Regulations, 2022* which authorizes permit holders to scare migratory birds, destroy eggs or nests, relocate birds or their nests, or kill birds in instances where the birds, nests, or eggs are causing damage to property or threaten public health and safety.

Provincial Legislative Mechanisms

Environmental Protection and Enhancement Act

EPEA supports and promotes the protection, enhancement and wise use of the environment. The AER reviews applications under EPEA to assess the potential environmental impacts of a proposed project.

Pursuant to section 44 of the EPEA, the AER has determined that the Project is not a mandatory activity and therefore an environmental impact assessment is not required.

An approval issued under EPEA identifies the applicant's obligations and responsibilities for design, construction, operation, and reclamation of a coal mine or coal processing plant relative to air, water, land, and biodiversity. A reclamation certificate issued under EPEA asserts that all reclamation requirements have been met. Only companies with a reclamation certificate can close their projects and end their surface leases. Partial reclamation certificates can be issued for portions of a coal mine or coal processing plant to support progressive, timely reclamation⁴.

The Proponent needs to resubmit its EPEA approval but have a Draft EPEA Approval No.234735-00-00.

⁴ Coal Mining Authorizations | Alberta Energy Regulator (aer.ca); *https://www.aer.ca/regulating-development/project-application/application-process/coal-mining-authorizations*

Coal Conservation Act

The *Coal Conservation Act* establishes a regulatory regime administered by the AER for the development of coal and related facilities in Alberta. It applies to mines, coal processing plants, coal schemes in Alberta, and *in-situ* coal produced and transported in Alberta.

The Proponent currently holds mine permit C2009-6 (2009), Mine License C2011-9 (2011) Mine 14 Coal Leases (1312050624; 1312050625) and Mine 14 Coal Leases (1319090196; 1319090197; 1319090198).

Water Act

The *Water Act* supports and promotes the conservation and management of water, through the use and allocation of water in Alberta. It requires the establishment of a water management framework and sets out requirements for the preparation of water management plans. Approvals and licenses require an assessment of potential adverse effects on the aquatic environment, and approvals will contain conditions which are expected to address various potential environmental effects and require ongoing monitoring and reporting.

Under the Water Act, the AER ensures that companies use and manage water safely by:

- reviewing energy resource applications that relate to the Water Act,
- issuing water approvals for energy resource activities that occur in or near water bodies, including wetlands;
- issuing water licences and temporary diversion licences for energy resource operations that require water;
- requiring companies to have a licence before using surface water and groundwater; and
- allocating the amount of water companies can use.

The Proponent will need to apply for *Water Act* authorizations and Codes of Practice for Watercourse Crossings will be required. Currently the Proponent is working on submitting Draft *Water Act* Approval No. 241239-00-00 and Draft *Water Act* License No. 24507-00-00

Public Lands Act

The *Public Lands Act* regulates public land allocations, the sale or transfer of public land to other levels of government or private entities, and the uses (including recreational use, commercial use and industrial use) of public land. Proponents may be delegated procedural aspects of Indigenous consultation (proponent-led consultation) as part of their approval.

The Proponent has re-applied for a Mineral Surface Lease and License of Occupation for mine infrastructure (e.g. access roads) under the *Public Lands Act*.

The Proponent currently holds LOC 11155 (Carconte Creek Exploration) and has to reapply for MSL 131303 and LOC 131361 (Main Access Road) as they are expired as of 2020.

Historical Resources Act

The *Historical Resources Act* provides for the use, designation and protection of moveable and immoveable historic resources. Clearance is required prior to any site preparation or construction activities. A heritage clearance permit for the Project is required by Alberta Culture and Status of Women.

In the case of incidental historical finds, all activities that may impact the resource are to cease while it is being evaluated.

The Proponent currently holds *Historical Resource Act* Clearance 2007-212 associated to Permit 2007-212 (access road, plant site, mine portal) and *Historical Resource Act* Clearance associated to Permit BOHACH 2006-17A (Carconte Creek Exploration).

Potential adverse effects within federal jurisdiction

The Agency's analysis identified the potential for adverse effects within federal jurisdiction and adverse impacts on the rights of the Indigenous peoples, as defined in 9(1) and 9(2) of the IAA, from carrying out the Project. The Agency is of the view that the potential adverse effects within federal jurisdiction would be managed through existing legislative frameworks.

Federal and provincial legislative mechanisms relevant to the Project described above were considered in the Agency's analysis of potential adverse effects or public concerns within federal jurisdiction in relation to subsection 9(1) and 9(2) of the IAA.

Fish and fish habitat

The Agency considered information provided by the requesters and Indigenous groups, the Proponent, NRCan, DFO, and ECCC, and is of the view that there is potential for a change to fish and fish habitat, as defined in subsection 2(1) of the *Fisheries Act*, through the potential release of deleterious substances (e.g. selenium). NRCan and ECCC indicated that there is currently insufficient information available to determine the scope and extent of potential adverse effects to fish and fish habitat. The Agency agrees with NRCan and ECCC that there is uncertainty related to selenium liberation. However, the Agency is of the opinion that existing legislation provides a framework to address these potential effects.

Concerns expressed by the requesters and Indigenous groups include:

- changes to water quality due to mining discharges (e.g. release of selenium);
 - selenium impacts to fish and fish health (i.e. reproductive capabilities and structural deformities);
- impacts to species at risk (e.g. bull trout); and
- impacts to benthic invertebrate communities.

The Proponent indicated that there is no fish or fish habitat within the Project footprint (i.e. the access road and mine portal site). The access road would cross several drainages, most of which are ephemeral, that flow to Two Cabin Creek, Allen Creek, Carconte Creek and a small tributary to the Smoky River. In 2007, baseline

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hydrology, aquatic, groundwater and wildlife assessments were completed for previous provincial applications for the mine permit and licenses. During the assessment, fish were not observed in the named waterbodies, including Smoky River. All water crossings will be designed and constructed in accordance with the *Watercourse Code of Practice* under Alberta's provincial *Water Act*.

The Proponent stated that the Project's impact on groundwater is expected to be negligible and that the Project is expected to have little interaction with groundwater because low water volumes from the bedrock aquifer were encountered during drilling programs in 2006. Water pumped from the mine during dewatering will be stored in a mine water pond which is designed to contain a 1:10 year storm event. Stored water would be re-used within the mine portal site. Release of water into natural drainage courses may be required after rainfall events depending on the water levels in the containment ponds. Controlled release will occur only when meeting water quality requirements as specified by Project EPEA and *Water Act* approvals.

The Proponent stated the Project has no potential to result in selenium contamination and that issues of selenium contamination arise primarily in respect to open-pit coal mining, not underground mining like the Project. The Proponent noted that external rock dumps are not planned for the Project and all waste rock material (0.5 percent to three percent of mined material or 18 to 107 tonnes per day) from the underground workings will be initially stockpiled at surface, then transported back into the mined-out workings underground for permanent disposal, usually within the same day. The Proponent also stated that waste rock can be placed at lower levels of the underground mine where groundwater will saturate it to inhibit oxidation of selenium-bearing minerals. It states there will be no opportunity for waste rock to weather and leach selenium into the environment and that it is surface processes that usually result in the liberation of selenium. The Proponent noted that typically, the weathering process and selenium generation takes months or years to occur.

The Proponent does not expect an authorization under the *Fisheries Act* will be required as DFO previously assessed the potential adverse effects to fish and fish habitat in 2009 and that at the time, an authorization was not required and DFO issued a Letter of Advice. The Proponent confirmed that effects to fish and fish habitat will be mitigated through the provincial EPEA approval that will contain conditions outlining protection of the aquatic environment and hydrology and includes a Water Management Plan, Waste Management Plan and Surface Water Monitoring Program. The required *Water Act* licence also involves an assessment of potential adverse effects on the aquatic environment, and the Proponent noted that EPEA and *Water Act* approvals will contain conditions that are expected to address potential environmental effects and require ongoing monitoring and reporting. The Proponent also specified that by using best management practices and construction techniques, impacts to waterbodies would be minimized.

The Proponent committed to monitoring for elevated selenium at the Project and nearby waterways, and to mitigate if elevated selenium levels are found to be from the Project. Should there be an increasing trend in selenium concentrations in waste water the Proponent will use adaptive management to mitigate. The Proponent expects that the monitoring of selenium will be a condition of the EPEA and *Water Act* approvals.

NRCan indicated that the Project could potentially result in adverse effects to aquatic ecosystems via exposure to selenium. NRCan stated that open pit mining produces higher volumes of waste rock in comparison to underground mining and thus the potential sources of selenium from waste rock piles may be lower for underground mining. However, this statement that selenium risk is lower with underground mining

versus open pit mining is too broad of a generalization, and would depend on a variety of factors including, but not limited to:

- lithology of the mined area;
- relative distribution of selenium containing minerals;
- reactivity of rock surface areas;
- water availability at the Project site (and the associated dilution potential);
- presence/absence of sulfate in mining effluent to reduce selenium bioaccumulation;
- assimilative capacity of the receiving environment; and
- dimensions and characteristics of the waste rock storage areas.

DFO stated that the Project has the potential to cause adverse effects within areas of federal jurisdiction. DFO also stated that assuming the description of the Project that DFO previously reviewed in 2009 is still accurate, impacts to fish habitat are likely limited to potential changes in flow caused by land surface alterations and/or groundwater drawdown. Effects could be managed through the *Authorizations Concerning Fish and Fish Habitat Protection Regulations*. DFO noted that without updated Project information, it cannot comment on the likelihood that an authorization will be required. It is DFO's opinion that the Project requires another review under the new provisions and prohibitions of the *Fisheries Act*, which came into force in 2019. Letters of Advice issued prior to entry into force of the Fish and Fish Habitat Protection Provisions may not adequately protect fish and fish habitat in accordance with the current Act. The Project also needs to be reviewed with respect to the up-listing of bull trout (western arctic populations) to 'Special Concern' within Schedule 1 of the SARA in 2019. Bull trout (western arctic populations) are found in the receiving watersheds impacted by the Project (i.e., Upper Smoky and Muskeg HUC 8). On October 20, 2022, DFO notified the Proponent that the Letter of Advice issued on May 5, 2009 is now obsolete and an updated review is required.

ECCC noted that the deposition of contaminants out of the air into the surrounding environment may result in adverse impacts to aquatic ecosystems and elevated concentration of contaminants in water and fauna. ECCC also noted that the activities linked to mining projects can adversely affect the quality of groundwater and surface water, as well as the hydrological regimes of watercourses and water bodies. Contact water (e.g. wastewater, effluents, runoff, seepage, discharges, spills) contains contaminants that could potentially affect water quality at all stages of a project including post-closure. ECCC indicated that there is not enough information to substantiate the claim that selenium is not of concern, notably with regard to groundwater interaction. ECCC noted the lack of hydrology and water balance data and that the Proponent included conclusions in its submission based on information put forward from reports that ECCC was not able to analyze.

ECCC noted that mining operations can expose rock that contains soluble minerals that can be released to the aquatic receiving environment via precipitation and/or weathering processes. Surface water quality may also be degraded by interactions between groundwater and surface waters in the Project area. Mining projects may also result in adverse effects to surface water quality by reducing the volume of inflows into nearby lakes and rivers. ECCC indicated that surface flows can be altered through site re-contouring, surface water management, or other means. The drawdown of the water table can result from the construction and dewatering of underground mines and/or the withdrawal of water from constructed wells for water-intensive operational processes. ECCC noted that the Project's mine water contact pond is sized for a 10-year precipitation event, with any flows above that to be released; typically, mine contact water is retained in ponds



sized for 100-year events. Additionally, ECCC stated that other mining-related activities can result in adverse effects on water quality, including but not limited to, the construction of roadways, construction of watercourse crossings, disturbance of soil and rock, drilling and blasting, and wastewater discharge.

Potential effects of the Project to fish and fish habitat and species at risk are typically addressed under the federal *Fisheries Act* and SARA and the provincial EPEA and *Water Act* approval processes. Additionally, the proposed Coal Mining Effluent Regulations under the *Fisheries Act* that are currently being developed by ECCC would provide effluent quality standards for coal mining in Canada and are expected to be released in 2023. Once in place, they will apply to some of the existing coal mines in Canada (some exemptions are anticipated) and to all future coal mine expansions and new coal mine projects⁵. The Agency acknowledges that the Proponent anticipates no risk of selenium liberation due to the Project and that NRCan and ECCC identified that inadequate information has been provided to substantiate the claim that selenium is not of concern. The Proponent, however, has committed to monitoring for elevated selenium at the Project and nearby waterways, and to mitigate if elevated selenium levels are found to be from the Project, and expects that the monitoring of selenium will be a condition of the EPEA and *Water Act* approvals.

Aquatic species

The Project will not result in a change to aquatic species, as defined in subsection 2(1) of the SARA as it will not affect the marine environment or marine plants.

See the section "Fish and fish habitat" for fish species at risk.

Migratory birds and species at risk

The Agency considered information provided by the requesters and Indigenous groups, the Proponent, and ECCC, and is of the view that existing legislation provides a framework to address changes to migratory birds, as defined in subsection 2(1) of the *Migratory Birds Convention Act, 1994* and effects on federally listed species at risk under SARA.

Concerns expressed by the requesters and Indigenous groups regarding impacts to migratory birds and wildlife, including species at risk, include:

- effects to:
 - o yellow-bellied flycatcher;
 - o common yellowthroat;
 - o black-throated green warbler;
 - harlequin duck;
 - Cassin's vireo;
 - o barred owl;
 - western toad;
 - bighorn sheep;

⁵ Proposed Coal Mining Effluent Regulations: overview; *https://www.canada.ca/en/environment-climate-change/services/managing-pollution/sources-industry/proposed-coal-mining-effluent-regulations.html*

- o grizzly bear; and
- \circ wolverine.
- risk to migratory birds due to the increased concentrations of selenium in drinkable water sources which can impair bird reproduction; and
- that the Project footprint is located between two woodland caribou, southern mountain population, ranges (threatened under SARA) and effects to the À La Pêche caribou herd that is currently struggling with increased traffic-related mortality along Highway 40, and concerns that additional surface disturbance and environmental pollutants will cause further habitat destruction.

The Proponent stated that a baseline wildlife assessment for the Project and an environmental assessment that considered wildlife was undertaken in 2007 to support the previous applications for the provincial mine permit and licenses. During the baseline assessment, 10 SARA listed species were identified within or adjacent to the Project area, including:

- western toad (special concern);
- bank swallow (threatened);
- barn swallow (special concern);
- common nighthawk (special concern);
- evening grosbeak (special concern);
- olive-sided flycatcher (threatened);
- grizzly bear (special concern);
- little brown myotis (endangered);
- northern myotis (endangered);
- wolverine (special concern); and
- woodland caribou (threatened).

With the implementation of recommended mitigation measures, the Wildlife Mitigation and Monitoring Plan, and environmental management plans, residual effects to wildlife and wildlife habitat were predicted to not be significant by the Proponent. The Proponent has proposed mitigation measures to reduce impacts on migratory birds and species at risk, which include:

- minimizing overall disturbance to the Project footprint by avoiding important breeding habitats, nesting and denning sites, and movement corridors to the extent possible;
- scheduling vegetation clearing outside the active breeding period of March 1 to August 31 to minimize sensory disturbances and mortality risks during sensitive nesting periods and vegetation clearing will be limited to the Project footprint;
- pre-disturbance wildlife sweeps will be conducted by qualified biologists if vegetation clearing must occur within the restricted activity period;
- reducing speed on the access roads, and construction personnel will follow posted speed limits to avoid vehicle and wildlife collisions;
- food will always be kept inside vehicles or on person, and garbage/litter will be disposed of outside of the work area to avoid attracting wildlife species;
- use of all-terrain vehicles and off-highway vehicles by mine personnel will be prohibited;
- access to areas around the Project footprint will be restricted for non-mine personnel to the extent possible;

- existing hydrological flows will be maintained to the extent possible;
- the length and width of access roads will be minimized;
- implementing a bear safety program; and
- reclaiming areas after mining is complete.

ECCC noted that activities linked to the construction, operation and decommissioning of a mine and associated infrastructure could have negative effects on terrestrial wildlife, including migratory birds and species at risk. The nature of effects to wildlife and habitat can vary based on a number of factors, including but not limited to project location, scale, existing cumulative effects, and sensitivity of species found in the project area. Large-scale land clearing activities can lead to the destruction, disturbance and fragmentation of habitat, habitat avoidance, sensory disturbance, and the inadvertent disturbance and destruction of individuals, nests and eggs of migratory birds and species at risk. ECCC also noted that the deposition of contaminants out of the air into the surrounding environment may result in adverse impacts to terrestrial ecosystems and elevated concentration of contaminants in water, soil, flora, and fauna.

ECCC specified that mining projects may impact wildlife directly and indirectly through impacts to habitat via changes in geomorphological processes. Additionally, birds that land on and/or frequent wastewater have the potential to come into contact with toxic substances. ECCC also noted that mining projects have the potential for harmful substances to enter or be spilled into the receiving environment that may negatively affect wildlife. Depending on the nature of the release, effects to wildlife could be acute, chronic, or both. Additionally, noise, vibrations and light from Project activities may result in habitat disturbance which can lead to avoidance of use or collisions with lit structures. ECCC indicated that mining activities could have negative effects on wetlands and their ecological functions that are important to migratory birds, and it is likely that Project activities could alter existing hydrological regimes essential for maintaining wetlands and thus affect the quality or availability of habitat for migratory birds and other wildlife.

ECCC does not expect to exercise a power or perform a duty or function to enable the Project to proceed. Since the Project is not located on federal lands and there are no SARA orders in place, only the SARA prohibitions pertaining to migratory birds would apply. ECCC indicated that no species at risk critical habitat has been observed within or adjacent to the Project area. Adverse effects to migratory birds and their nests are typically managed through appropriate scheduling of activities outside of the breeding season, however collisions with vehicles and associated infrastructure can result in direct mortality of wildlife (effects will be most acute during the operation phase as this is when the most pronounced and sustained increase in vehicle volume is expected).

However, ECCC noted a number of SARA listed species that may be in the Project area (e.g. whitebark pine, olive-sided flycatcher, rusty blackbird, northern and little brown myotis, western toad, common nighthawk and southern mountain caribou). ECCC stated that it is uncertain whether the Project could increase the risk of caribou highway mortality given the proximity of the À La Pêche caribou range to the south and the Red Rock/Prairie Creek caribou range to the north. However, where a mining project requires new road infrastructure or an increase in capacity in existing road networks, the increase in road traffic volumes are likely to result in an increase in wildlife injury, mortality, and the introduction of invasive species and hunters/poachers.

Potential effects of the Project to migratory birds and species at risk are addressed under the federal *Migratory Birds Convention Act, 1994* and SARA and the provincial EPEA and *Water Act* approval processes.

Indigenous peoples

In addition to the views received from AWN in their designation request, the Agency sought views from 14 other potentially impacted Indigenous groups and received input from seven⁶. The Agency considered the information provided by the requesters (AWN, Duncan's First Nation, Cadotte Lake Métis Nation, Erminskin Cree Nation and Whitefish Lake Nation #128), other Indigenous groups that submitted input to the Agency (Louis Bull Tribe, Montana First Nation and Lac Ste. Anne Métis Community Association), the Proponent, ISC, HC, ECCC, WAGE, and the AER.

The Agency is of the view that existing legislation will provide a framework to address the potential that the Project has to cause a change on the health, social, or economic conditions of the Indigenous peoples or an impact occurring in Canada and resulting from any change to the environment on physical and cultural heritage, the current use of lands and resources for traditional purposes, or on any structure, site, or thing that is of historical, archaeological, paleontological or architectural significance to the Indigenous peoples.

All responding Indigenous groups indicated support for the federal designation of the Project. Additionally Indigenous groups have expressed concerns with the provincial consultation process. The requesters and Indigenous groups expressed concerns regarding potential Project impacts to:

- Indigenous peoples' traditional ways of life and practice of section 35 rights from cumulative impacts;
- AWN's Co-operative Lands from cumulative adverse impacts of regional coal mines, including deposition of coal dust, soil erosion, discharge of pollutants into the Smoky River and watershed, and contamination of air, land and waterways;
 - AWN indicated that their Co-operative Lands are not reserve lands under the *Indian Act* and are in some ways akin to reserve lands. The Co-operative Lands are fee simple lands held collectively for the use and benefit of AWN family groups – primarily Indigenous peoples protected under section 35 of the *Constitution Act*, 1982.
- Indigenous peoples traditional lands, including trapping, fishing, hunting, camping, and guiding/outfitting;
- the practice of gathering traditional medicinal plants and species of cultural importance (e.g. willows, wild rose, gooseberry, wild raspberry);
- the ability to pass down traditional knowledge;
- the health of Indigenous peoples from selenium contamination of drinking water, and coal dust in the air;
- loss of Crown lands and impacts to traditional ways of life;
- wildlife populations including loss of wildlife, which could affect food security;

⁶ Three of the seven responses that the Agency received were from Indigenous groups that were not initially contacted by the Agency (Lac Ste. Anne Métis Community Association, Cadotte Lake Métis Nation and Duncan's First Nation).

- reduced water quality and quantity, increased contaminant mobilization (e.g. bioaccumulation of selenium, impacts to fish and other aquatic species) and impacts to culturally important species (e.g. bighorn sheep);
- species at risk, specifically Woodland caribou;
- Métis Aboriginal rights to harvest and practice rights within and around the Project area;
- sites of cultural and spiritual importance (e.g. village sites, old cabin remains);
- protected parks and wildlife areas (e.g. Jasper National Park);
- British Columbia's environment; and
- the environment, given the use of outdated studies from 2007 and 2008 by the Proponent as the baseline conditions in the region have changed over the last 14 years and therefore require an updated assessment.

The Proponent indicated that it engaged with all potentially impacted Indigenous groups identified by the province and will continue to do so through the EPEA and *Public Lands Act* approval processes. The Indigenous groups that the Proponent identified and engaged with are the Métis Nation of Alberta Local #1994, AWN, Community of Victor Lake/Mtn Louis, Upper Athabasca Métis Elders Council and Mountain Louie, Horse Lake First Nation, and East Prairie Métis Settlement. Concerns regarding the Project that were raised to the Proponent by Indigenous groups include:

- environmental impacts such as noise, dust, water and air contamination;
- location issues (i.e. traffic);
- land access and loss of use of areas surrounding the Project;
- impacts to wildlife (e.g. increased hunting due to increased access); and
- AWN expressed particular concerns about selenium contamination and its impact on the local environment.

The Proponent indicated that it generally intends to address concerns raised by AWN in their designation request. The Proponent also noted that negative impacts to Indigenous groups will be avoided or mitigated through strategies developed in consultation during all phases of the Project and pursuant to the terms of the Proponent's existing relationships with nearby Indigenous groups. The Proponent also plans to prepare individual responses to each of the Indigenous groups that submitted designation requests to the Minister (i.e. AWN, Duncan's First Nation, Cadotte Lake Métis Nation, Erminskin Cree Nation and Whitefish Lake Nation #128) and is open to meetings with each Indigenous group should they wish to discuss the Project further.

Heritage clearance permits under the *Historical Resources Act* were granted by the Government of Alberta on August 31, 2007 and October 7, 2010. The Proponent indicated that it is unknown if they have an expiry date. The Proponent also indicated that the Project would have a positive effect on the local economy with benefits generated through the purchasing of goods and services, taxes and royalties.

ISC indicated that effects to traditional and current land use/access, access to traditional foods, and the ability for Indigenous peoples to practise their culture should be considered during the Project assessment. ISC also noted the Project may cause changes:

- in the physical environment (e.g. soil, surface and groundwater quality, fish habitat);
- to health and socio-economic conditions;
- to community well-being due to reduced access to traditional lands (activities);

- to sites of spiritual importance; and
- a displacement of culturally important wildlife.

HC indicated that there is a potential for adverse impacts to human health through the degradation of ambient air quality through increased exhaust emissions from machinery, fugitive dust, and fuel combustion byproducts during construction and operation phases of the Project. These emissions may include fine and ultra fine particulate matter, nitrogen oxides, sulphur dioxide, diesel particulate matter, volatile organic compounds. HC cannot provide additional advice on the potential for the Project to cause adverse impact to human health without detailed emission data, the location of potential human receptors, and an assessment of the potential effects on the ambient air quality by the Proponent.

HC noted that surface water may be impacted by spills of harmful substances (e.g., oils, fuel, waste products, flame retardants) used for the Project during construction and operations and the release of selenium and other contaminants related to coal mining during the operation phase of the Project. This has the potential to impact recreational and drinking water quality and may impact human health through dermal contact or ingestion. Local changes to groundwater may also affect the quality of local potable water sources. HC cannot provide advice on the potential adverse impact of exposure to surface water or groundwater on human health without the location of potential human receptors and the identification or water sources used by the community and land users.

HC also indicated that the Project may impact the quality of country foods through the same mechanisms that may impact human health (changes to water quality and air quality). Project emissions of contaminants to the environment may lead to increased contaminant concentrations in country foods that are then harvested and consumed. Without the identification of receptors, contaminants that are emitted to the environment and what country foods are harvested in the Project area, HC cannot provide advice on the potential for adverse human health impacts associated with the consumption of local country foods.

ECCC noted that projects that involve an increase in capacity for rail and vehicle traffic have the potential to adversely affect air quality via the combustion of fossil fuels to power the rail and vehicle engines and potential fugitive coal dust emissions during transportation, especially during hot and dry weather (even with the application of water or wetting agents). ECCC is engaging on the development of the Coal Mining Effluent Regulations with Indigenous communities in Alberta and British Columbia that could be impacted by the Project, including communities under Treaty 8 as well as AWN.

WAGE indicated that a Gender-based Analysis Plus analysis can be applied to anticipate adverse impacts on Indigenous populations in order to mitigate any barriers and identity how the Project could be tailored to meet diverse needs of the Indigenous people.

AER noted that the Proponent has a responsibility to contact the Aboriginal Consultation Office and that the Government of Alberta's Indigenous consultation policies and guidelines may apply to the Project. AER also indicated that the Proponent has a responsibility to contact Alberta Culture and Status of Women to discuss the requirements under the *Historical Resources Act*. The Province of Alberta's management and development of provincial Crown lands and natural resources is subject to its legal and constitutional duty to consult First Nations and, where appropriate, accommodate their interests when Crown decisions may adversely impact their continued exercise of constitutionally protected Treaty rights and traditional uses. The

Province of Alberta also consults with Métis Settlements on potential adverse impacts of Crown decisions on Métis Settlement members' harvesting and traditional use activities ⁷.

The Agency understands that Project activities could adversely affect sites of importance and land use by Indigenous peoples. The potential for changes to air quality, noise levels, and surface and groundwater quality could affect Indigenous health and are typically addressed during the provincial EPEA, *Water Act* and *Public Lands Act* approval processes. If a *Fisheries Act* Authorization is required for the Project, DFO would consult with Indigenous groups.

Although existing legislation will provide a framework to address potential effects of the Project, the Agency is unsure of the scope of consultation relevant to the provincial legislative mechanisms that will apply to the Project. The Agency is aware Indigenous groups have expressed concerns with the provincial consultation process. The Agency acknowledges that that the province is subject to its legal and constitutional duty to consult First Nations and Métis Settlements. In addition, the Agency understands that the Proponent plans to prepare individual responses to each of the Indigenous groups that submitted designation requests to the Minister.

Federal lands

The Agency considered information provided by the requesters, Parks Canada and the Proponent and is of the view that there will be no change to the environment that would occur on federal lands.

The requesters expressed concern regarding the potential for downstream impacts to federal lands, including Jasper National Park which is located 50 kilometres south of the Project. Adverse impacts to wildlife within the national park could impact conservation initiatives. Parks Canada did not express concerns about the Project's potential impacts to federal lands or national parks.

Transboundary effects

The Project has the potential to have transboundary effects as the Project would generate GHGs and is located approximately 50 kilometres from British Columbia. The Agency considered information from the requesters and Indigenous groups, the Proponent, and ECCC, and is of the view that existing legislation will provide a framework to address the potential that the Project has to cause a change to the environment that would occur in a province other than the one in which the Project is being carried out or outside Canada.

The requesters and Indigenous groups expressed concerns related to coal dust and the Project's potential adverse impact on air quality and the health of AWN members. The requesters also noted that the Project is located within Alberta and its proximity to the British Columbia border has the potential to cause environmental changes in British Columbia.

⁷ Indigenous consultation in Alberta; *https://www.alberta.ca/indigenous-consultations-in-alberta.aspx#:~:text=Alberta%27s%20management%20and%20development%20of,of%20constitutionally%20protected%20Treaty%20rights*



The Proponent indicated that the primary effect on air would be particulate matter emissions from the operations phase of the Project. The Proponent stated that an Air Quality and Dust Management Plan has been developed for the Project and paving the access road area will be a mitigation of air quality impacts. The Proponent also noted that the future EPEA approval will contain conditions related to environmental parameters and the required monitoring and reporting.

ECCC noted that the construction, operation, and decommissioning of mines can result in adverse effects on air quality, including the emission of contaminants such as sulfur oxides, nitrogen oxides, volatile organic compounds, and particulate matter. These emissions can result in local or regional degradation of ambient air quality with potential impacts on human health and sensitive ecosystem receptors. Deposition of these contaminants in the surrounding environment may result in adverse impacts to terrestrial and aquatic ecosystems. Additionally, the construction, operation and decommissioning of the Project may result in GHG emissions or impacts to carbon sinks.

HC indicated the potential for changes to air quality, but did not comment on the potential extent of such effects.

Potential effects of the Project to air quality are typically assessed as part of the provincial EPEA approval process and the Proponent will develop an Air Quality and Dust Management Plan required as part of the provincial EPEA approval process. The Project will also be subject to federal GHG emissions reporting requirements, pursuant to the *Canadian Environmental Protection Act, 1999,* if ten kilotonnes or more of GHGs are emitted in carbon dioxide equivalent units per year. At this time the Proponent has not provided an estimate of GHG emissions associated with the Project.

Other considerations

Cumulative effects

The Agency considered information provided by the requesters and Indigenous groups, the Proponent, ECCC and DFO in relation to effects set out in subsection 9(1) of the IAA, and is of the view that existing legislation provides a framework to address cumulative effects.

The requesters and Indigenous groups expressed concerns regarding:

- the Project's contribution to cumulative development in the area and resultant adverse impacts to the area's ecological integrity;
- wildlife that is already under immense pressure from industrial development (e.g. selenium contamination of several herds of bighorn sheep);
- effects of existing coal mining (e.g. Grande Cache Mine, the Vista Coal Underground Mine Phase I Project) and the Trans Mountain pipeline in the vicinity of the Project; and
- the ability of AWN member to exercise their Aboriginal rights.

The requesters indicated that a federal assessment is required to adequately assess the Project's cumulative effects.

The Proponent indicated that the Project is not expected to result in cumulative effects and that EPEA and *Water Act* approvals will contain monitoring requirements to measure potential cumulative effects. Additionally, other projects in the area would have similar approval conditions that require cumulative effects monitoring. The Proponent noted that the Project is not anticipated to result in permanent changes, as the land will be returned to an equivalent capability compared to its pre-development state, in accordance with provincial regulatory requirements.

ECCC noted that emissions of air contaminants as a result of the Project may add cumulatively to the emissions from other activities, contributing to degradation of air quality in the region. ECCC also indicated that changes to water quality or streams and lakes can be associated with contaminant loadings from various sources and activities. For example, loadings of various metal parameters (e.g. selenium) from developments in the region can affect aquatic ecosystems. ECCC noted that the Project may add to the existing cumulative effects of habitat loss in the immediate Project area and the broader region due to the existing Highway 40 surrounding the Project on three sides, oil and gas development, mining, forestry, and the City of Grande Cache nearby to the south.

DFO noted the potential for adverse cumulative effects on fish and fish habitat as a result of changes to flow.

Cumulative effects are typically considered under the provincial EPEA and *Water Act*. DFO noted that the *Fisheries Act* provides a framework of considerations to guide ministerial decision-making, including consideration of cumulative effects, should the *Fisheries Act* be applicable to the Project.

Potential adverse direct or incidental effects

Direct or incidental effects refer to effects that are directly linked or necessarily incidental to a federal authority's exercise of a power or performance of a duty or function that would permit the carrying out, in whole or in part, of a physical activity, or to a federal authority's provision of financial assistance for the purpose of enabling that physical activity to be carried out, in whole or in part. If DFO exercises a power or performs a duty or function under the *Fisheries Act*, the carrying out of the Project has the potential to cause adverse direct or incidental effects. However, the Agency is of the view that existing legislation provides a framework to address potential effects.

It is DFO's opinion that the Project requires another review under the new provisions and prohibitions of the *Fisheries Act* that came into force in 2019. The Project may require a *Fisheries Act* Authorization if the Project could cause harmful alteration, disruption, or destruction of fish habitat or death of fish.

The Proponent stated that the Project will not result in any direct or incidental effects as defined in the IAA.

Public comments

The Agency received individual letters of support for the Project from Westshore Terminals Ltd., the Mining Association of Canada, and the Municipal District of Greenview. These letters expressed support for the economic benefits that the Project would potentially bring, confidence in Alberta's provincial regulatory

process and authorities, and the assertion that the Project does not require a federal impact assessment and should not be designated. Public comments that were submitted to the Agency and the Minister were considered.

Potential adverse impacts on the section 35 rights of Indigenous peoples

The Project is located within Treaty 8 territory and within the Métis Nation of Alberta Region 4. The Agency sought views from 14 other potentially impacted Indigenous groups and received input from seven⁸. The Agency considered the information provided by the requesters (AWN, Duncan's First Nation, Cadotte Lake Métis Nation, Erminskin Cree Nation and Whitefish Lake Nation #128), other Indigenous groups that submitted input to the Agency (Louis Bull Tribe, Montana First Nation and Lac Ste. Anne Métis Community Association), and federal and provincial authorities. In relation to subsection 9(2) of the IAA, the Agency is of the view that while there is the potential for the Project to cause adverse impacts on rights that are recognized and affirmed by section 35 of the *Constitution Act, 1982* (section 35 rights), existing legislative mechanisms applicable to the Project may trigger the duty to consult thereby providing a framework to address potential impacts and would include consultation with potentially affected Indigenous groups.

Potential adverse impacts on the section 35 rights of Indigenous peoples are typically considered in the provincial EPEA, *Water Act, Public Lands Act* and *Historical Resources Act* approval processes; however, the Agency is unsure of the scope of consultation relevant to the provincial legislative mechanisms.

The Agency acknowledges that that the province is subject to its legal and constitutional duty to consult First Nations and Métis Settlements. The Agency understands that the Proponent plans to prepare individual responses to each of the Indigenous groups that submitted designation requests to the Minister (AWN, Duncan's First Nation, Cadotte Lake Métis Nation, Erminskin Cree Nation and Whitefish Lake Nation #128), and is open to meetings with each Indigenous group should they wish to discuss the Project further.

Regional and strategic assessments

There are no regional or strategic assessments pursuant to sections 92, 93, or 95 of the IAA that are relevant to the Project.

⁸ Three of the seven responses that the Agency received were from Indigenous groups that were not initially contacted by the Agency (Lac Ste. Anne Métis Community Association, Cadotte Lake Métis Nation and Duncan's First Nation).

Conclusion

The Agency took into account the information it received as part of the designation request process for the Project to inform its analysis. The Agency is of the view that existing legislation provides a framework to address the potential for adverse effects as described in subsection 9(1) and 9(2) of the IAA.

The Agency understands that the Project, as proposed, is an underground mine with a limited surface disturbance area, no permanent waste rock storage, and extracted coal will be stored and processed at the existing brownfield site of the HR Milner Generating Station. As a result, the Agency is of the view that the potential effects within federal jurisdiction caused by the Project may be limited. The Agency agrees with NRCan and ECCC that there is uncertainty related to the risk of selenium liberation. However, the Agency is of the view that existing legislation provides a framework to address the risk of selenium liberation to receiving environments, and the Proponent has committed to monitoring for elevated selenium, and mitigating if elevated selenium levels attributed to the Project are detected. In addition, the Coal Mining Effluent Regulations under the *Fisheries Act* currently being developed would provide effluent quality standards for coal mines in Canada.

The Agency is also aware that the Project may result in adverse impacts to Indigenous peoples' health and social conditions, and associated changes to the environment may impact Indigenous peoples' physical and cultural heritage, current use of lands and resources for traditional purposes, and structures, sites, or things of significance. The Agency acknowledges that consultation is a requirement of several legislative mechanisms applicable to the Project (e.g. *Fisheries Act*, EPEA and *Public Lands Act*); and is unsure of the scope of consultation relevant to each provincial legislative mechanism. The Agency acknowledges that the Province of Alberta is subject to its legal and constitutional duty to consult First Nations and Métis Settlements. The Agency also notes that the Proponent plans to prepare individual responses to each of the Indigenous groups that submitted designation requests to the Minister (AWN, Duncan's First Nation, Cadotte Lake Métis Nation, Erminskin Cree Nation and Whitefish Lake Nation #128) and continue engagement with them.