Analysis Report

WHETHER TO DESIGNATE THE COALSPUR MINE LTD. VISTA COAL MINE PHASE II PROJECT IN ALBERTA

December 2019

TABLE OF CONTENTS

Purpose	2
Project	2
CONTEXT OF REQUEST	2
Project Context	3
Project overview	3
Project components and activities	
Analysis of Designation Request	6
Authority to designate the Project	6
Potential adverse effects within federal jurisdiction	
Other Considerations	7
Potential adverse direct or incidental effects	9
Public concerns	9
Potential adverse impacts on section 35 rights of Indigenous peoples	10
Regional and strategic assessments	10
Conclusion	10
ANNEX I: ANALYSIS SUMMARY TABLE	13
POTENTIAL FEDERAL AND PROVINCIAL AUTHORIZATIONS RELEVANT TO THE PROJECT	28
LIST OF FIGURES	
FIGURE 1: PROJECT LOCATION	4
EIGLIDE 2: DDO IECT SITE	Б

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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 deciding whether to designate the Vista Coal Mine Phase II Project (the Project) pursuant to section 9 of the *Impact Assessment Act* (IAA).

Project

The Project, proposed by Coalspur Mine (Operations) Ltd. (the proponent), is the expansion of the existing open pit coal mine Vista Coal Mine Phase I Project (Phase I).

Context of Request

In May and July 2019, the Minister received requests to designate the Project under section 14(2) of the *Canadian Environmental Assessment Act*, 2012 (CEAA 2012) from: Ecojustice on behalf of the citizen groups Keepers of the Water and the West Athabasca Bioregional Society; the Alberta Wilderness Association; a member of the public; and Keepers of the Athabasca (a community chapter of Keepers of the Water).

The Agency is aware that the Minister continues to receive requests to designate the Project, including from an Ecojustice-led campaign.¹

The requests expressed concerns about: project-related effects to the local environment and areas of federal jurisdiction (including to endangered and threatened fish species), wetlands, wildlife, cumulative effects, impacts on Indigenous people and established Aboriginal and Treaty rights, the lack of federal assessment for the Project and Phase I, the scale of the Project in relation to the thresholds in the *Physical Activities Regulations* (the Regulations), the provincial process, and the export of thermal coal and subsequent impacts on human health and climate.

On May 22, 2019, the Agency informed the proponent of the designation requests and requested information. The proponent responded to Agency information requests, specifically concerning areas of federal jurisdiction, on August 9, 2019, and September 10, 2019, with information about the Project, its potential adverse effects, proposed design and mitigation measures, and its view that the Project should not be designated. The Agency sought advice and views from federal authorities, the provincial regulator, the requesters and potentially affected Indigenous groups.

Advice on applicable federal legislative mechanisms and potential effects due to the Project were received from Environment and Climate Change Canada, Fisheries and Oceans Canada, Natural Resources Canada, Health Canada, and Transport Canada. The Alberta Energy Regular provided information on provincial authorizations for the Project.

The Agency received responses from Louis Bull Tribe, Gunn Métis Local 55, Paul First Nation and Descendants of Michel First Nation Association, Ecojustice on behalf of behalf of Keepers of the Water, Keepers of the Athabasca and West Athabasca Bioregional Society, the member of the public requester, and a Professor from the Faculty of Law, University of Calgary.

¹ Ecojustice indicated that more than 1750 letters have been sent to the Minister.



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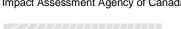
On August 28, 2019, IAA came into force and CEAA 2012 was repealed. As a determination by the Minister on whether to designate the Project had not yet occurred, the Agency issued notifications indicating that the designation request under CEAA 2012 was terminated and was now being considered under IAA, in accordance with subsection 9(1).

Project Context

Project overview

The Project is the westward expansion of the existing Phase I Project. The combined operation will be an open-pit surface coal mine for the extraction and export of thermal coal to international markets. The Project is located 280 kilometres west of Edmonton, Alberta, and its western boundary would be approximately 3.5 kilometres east of the Town of Hinton. It is situated on forested provincial crown land in the foothills, with small streams and creeks. The Project will expand the Phase I mine pits, recover coal via highwall mining in the seams, extend a coal reject dump area, and include drainage control structures. The Project will use existing Phase I mine infrastructure, such as coal processing facilities, raw and clean coal conveyors, primary access corridor, equipment parking and maintenance areas, and a coal load-out facility. The Project will have the potential to increase maximum production of clean coal by six million tonnes per year (16 949 tonnes per day) with a predicted ten year project life. The expansion of the mine pits and coal rejects dump area for the Project are approximately 586.2 hectares and 66 hectares, respectively. In 2019, Rainbow Trout (Athabasca River populations) and Bull Trout (Saskatchewan—Nelson Rivers populations) were listed as endangered and threatened under Schedule 1 of the *Species at Risk Act*, respectively, and are known to occur in proximity to Phase I and the Project.

The Phase I Project was proposed in 2011, subject to a provincial environmental assessment, and received provincial approvals in 2014. Phase I was not subject to a federal environmental assessment under the former *Canadian Environmental Assessment Act* (the former Act) as no federal authority identified the need to exercise a power, duty or function to allow the project to proceed, which was a criteria for determining whether a federal assessment was required under the former Act. The Agency understands that at that time, Rainbow Trout (Athabasca River populations) and Bull Trout (Saskatchewan– Nelson Rivers populations) were not listed under the *Species at Risk* Act. Upon review of proposed Phase I watercourse crossings and surface water management, Fisheries and Oceans Canada noted the potential for surface-groundwater interactions to impact fish habitat, and the need for the mitigation and ongoing monitoring. The proponent was not required to seek approvals under the *Fisheries Act*. The Agency understands that Phase I as proposed in 2011 did not involve the construction of new rail infrastructure or explosives facilities, and the watercourse crossings were covered by Minor Works and Waters (*Navigable Water Protection Act*) Order. Therefore no responsibility was identified by the Canadian Transportation Agency, Natural Resources Canada, or Transport Canada in relation to the *Canadian Transportation Act*, the *Explosives Act*, or the *Navigable Water Protection Act*, respectively.



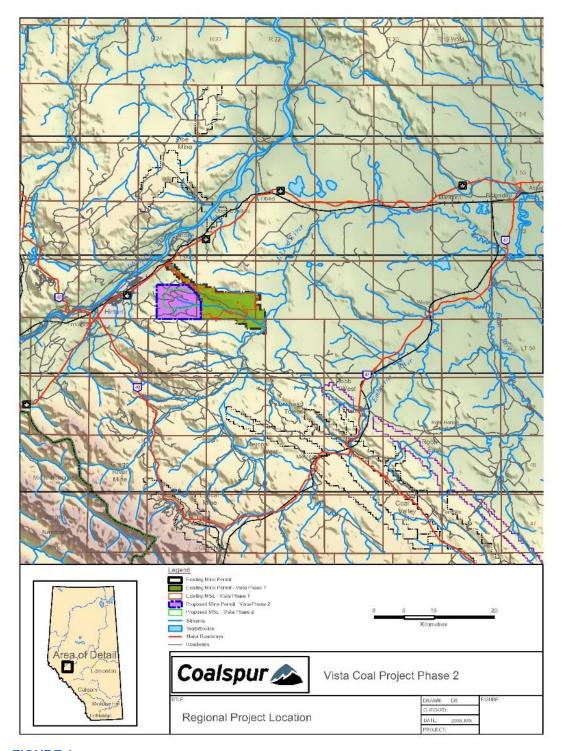


FIGURE 1: PROJECT LOCATION

Project components and activities

The activities to be performed in relation to the Project include:

- Site preparation the harvest of merchantable timber within the disturbance boundary; topsoil removal and stockpiling; and removal and in-pit and ex-pit disposal of the rock overlying the targeted coal;
- Mining trucking to Phase I; belt conveying of coal for processing on the Phase I site; and in the final cut of each pit, a continuous miner would mine the seam exposed in the highwall; and,
- Processing removal of impurities in the raw coal, transfer of impurities to the coal reject disposal areas; conveying of clean coal to a loadout area for transport by train car to ports in British Columbia, Canada.

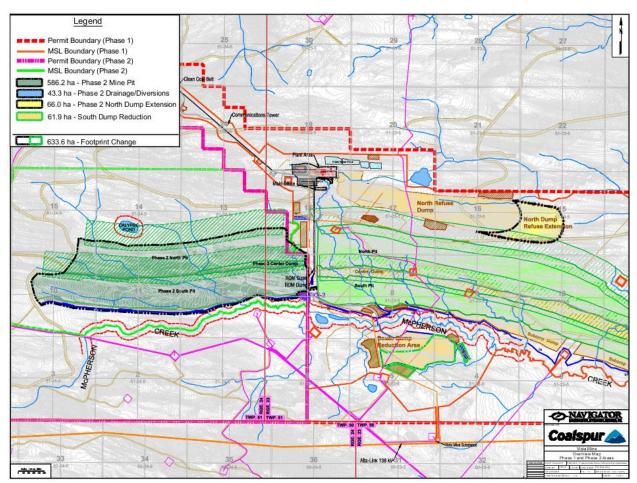


FIGURE 2: PROJECT SITE

Analysis of Designation Request

Authority to designate the Project

The Regulations identify types of projects that are designated activities. The Regulations include coal mine expansions that would result in an increase in the area of mining operations of 50 percent or more and a total coal production capacity of 5 000 tonnes per day or more after the expansion. Using proponent information, the Agency calculated that the Project would result in an increase in the area of mining operations between 42.7 to 49.4 percent, depending on how future anticipated changes to the Phase I footprint are considered in calculations, and a total clean coal production capacity of 36 723 tonnes per day after the expansion; therefore, the Project does not meet the thresholds in the Regulations.

Under subsection 9(1) of IAA the Minister may, by order, designate a physical activity that is not prescribed in the Regulations. The Minister may do this, where, in the Minister's opinion, the physical activity may cause adverse effects within federal jurisdiction or adverse direct or incidental effects, or public concerns related to those effects warrant the designation.

The 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.²

Potential adverse effects within federal jurisdiction

Based on information available, the Agency is of the view that the Project may result in adverse effects to areas of federal jurisdiction as defined in section 2 of IAA, including to effects to fish and fish habitat, migratory birds, and the Indigenous peoples of Canada.

Fish and Fish Habitat

The Agency considered information provided by the proponent, Fisheries and Oceans Canada, Natural Resources Canada, Environment Climate Change Canada, Indigenous groups, and the public, and is of the view the Project as proposed is likely to result in adverse effects to fish and fish habitat including aquatic species at risk and part of their critical habitat or the residences of their individuals. Even with measures to offset harm to fish and fish habitat, there is high uncertainty as to whether the Project could be carried out in a way that will not jeopardize the survival and recovery of aquatic species at risk. This could affect the ability of Fisheries and Oceans Canada to authorize Project activities under the *Fisheries Act*, *Species at Risk Act*, and respective regulations.

Rainbow Trout (Athabasca River populations) and Bull Trout (Saskatchewan– Nelson Rivers populations) are listed as endangered and threatened under the *Species at Risk Act*, respectively, and are known to occur in fish habitat downstream of the mine pit (including McPherson Creek, which runs approximately 100 metres from Phase I and the Project). Rainbow Trout (Athabasca River populations) presence was confirmed in one tributary that will be directly impacted by the mine pit. Critical habitat for the two species has yet to be

² The Minister must not make the designation 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 project (subsection 9(7) of IAA).



designated but is likely to be identified in the Project area. Adverse effects are anticipated from the direct loss of tributaries as a result of the mine pit, and potential loss and alteration to downstream fish habitat from changes in flow, temperature regime, and water quantity and quality.

Migratory Birds

The Agency considered information provided by the proponent, Environment and Climate Change Canada, Indigenous groups, and the public, and is of the view that the Project may result in adverse effects to migratory birds, including nine species of migratory birds listed under *Species at Risk Act* (three - threatened, six - special concern). These adverse effects relate to: changes to key habitat; changes to movement via sensory disturbance or physical blockage; bird mortality and effects to health through exposure to deleterious substances, including via water and air pathways or secondary receptors (e.g., vegetation); and direct effects such as collisions and interactions with mine waste.

Indigenous Peoples of Canada

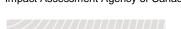
The Agency considered information provided by the proponent, Fisheries and Oceans Canada, Natural Resources Canada, Environment Climate Change Canada, Health Canada, Indigenous groups, and the public, and is of the view that the Project may result in adverse effects to Indigenous peoples of Canada. The Project is situated on provincial crown land and traditional activities could occur in the Project area. Additionally, pre-contact archaeological sites have been found in the Project area. Potential effects to fish and migratory birds, as noted above, or other wildlife species of importance could adversely effect the current use of lands and resources for traditional purposes by Indigenous peoples. Potential effects to the health of Indigenous peoples could occur through increases in air emissions, release of coal dust, Project related noise, changes in water quality, and contamination of country foods. Further information would be needed to fully understand the potential for such Project-related health effects, and other effects to Indigenous peoples such as to social or economic conditions or impacts on physical and cultural heritage, or impacts on any structure, site or thing that is of historical, archaeological, paleontological or architectural significance.

Annex I and II provides a summary table of the potential adverse effects within federal jurisdiction, mitigation measures proposed by the proponent, and anticipated legislative mechanisms if the Project proceeds.

Other Considerations

The Agency understands that there are six additional wildlife species listed under the *Species at Risk Act* whose ranges overlap with the Project area (Endangered – Gypsy Cuckoo Bumble Bee, Little Brown Myotis, Northern Myotis; Special concern – Grizzly Bear, Western Toad, Wolverine).

The Agency considered that the Project is near, but below, a threshold for coal mine expansions set in the Regulations. The Project exceeds one (total coal production capacity) of two threshold parameters set for coal mine expansions. The proposed total coal production capacity is 36 723 tonnes per day after the expansion compared to the threshold of 5 000 tonnes per day. The Project is near the second threshold parameter (50 or more percent increase in area of mine operations). Using proponent information, the Agency calculated that the increase in area of mine operations for the Project is between 42.7 and 49.4 percent.



The Agency also considered the extent to which the effects of the Project hinder or contribute to the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change, including in the context of Canada's 2030 emissions targets and forecasts. The Agency estimated the total equivalent carbon dioxide emissions from the Project operations to be roughly 222.6 kilotonnes per year³. Direct greenhouse gas emissions from the Project would be approximately 0.08 percent of Alberta emissions and 0.03 percent of national emissions⁴. The Agency understands sources of greenhouse gases from the construction and operation of coal mines are typically associated with fugitive emissions, excavation and transportation activities. Greenhouse gases are also anticipated from the burning of coal from the Project for electricity generation, which would occur outside of Canada. As part of Canada's commitments, Canada is an active member of the Powering Past Coal Alliance, which involves bringing together all levels of government, businesses, and organizations, to advance the transition away from traditional coal power electrical generation. In December 2018, Canada announced regulations to phase-out traditional coal-fired electricity in Canada by 2030. In addition to these regulations, Canada is working to assist coal workers and communities in Canada affected by the transition to cleaner electricity. Canada has committed up to \$275 million to the World Bank to create the Energy Transition and Coal Phase-Out Program which will assist developing countries to phase-out their dependence on traditional coal-fired electricity generation.

The Agency considered that all Project activities must be carried out in compliance with applicable federal legislation including the *Fisheries Act*, *Migratory Birds Convention Act* and *Species at Risk Act*.

The Agency considered that proponents will request an authorization under the *Fisheries Act* when it is not possible to avoid or mitigate impacts of projects that are likely to cause serious harm to fish, and if authorized, abide by the conditions of any such authorization. It is anticipated that the proponent will request a *Fisheries Act* authorization in relation to Project activities. The Agency understands that Fisheries and Oceans Canada would review the Application for Authorization including fish and fish habitat assessments, detailed information on impacts, and the proposed plans to offset losses; conduct consultation with potentially affected Indigenous groups in relation to the Application; and issue an authorization if deemed appropriate. Fisheries and Oceans Canada must be satisfied that the activities will not jeopardize the survival or recovery of aquatic species at risk prior to issuing a *Species at Risk Act* permit and *Fisheries Act* authorization, among other required considerations.

The Agency also considered that the Project is subject to a provincial environmental assessment and regulatory processes. The Agency understands that the Alberta Energy Regulator is willing to discuss opportunities for Fisheries and Oceans Canada to participate in aspects of the provincial process should a federal impact assessment not be required. From the Terms of Reference of the Environmental Impact Assessment of the Project issued by the Alberta Energy Regulatory to the proponent, the Agency

⁴ When compared to 2017 data, which is the most recent annual dataset available from Environment Climate Change Canada at https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/sources-sinks-executive-summary-2019.html.



³ Using estimates of total direct annual greenhouse gas emissions (for Year 2029) for Phase I in the Phase I Environmental Impact Assessment report, and taking into account known Phase I project modifications and relative production capacities of Phase I and the Project.

understands that fish and fish habitat, wildlife (including birds), species listed in Schedule 1 of the *Species at Risk Act*, and Indigenous peoples will be considered in the provincial environmental assessment.

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 project, or to a federal authority's provision of financial assistance to a person for the purpose of enabling that project to be carried out, in whole or in part.

The Project as described would likely require the exercise of federal powers, duties, or functions to proceed, such as a *Species at Risk Act* permit and a *Fisheries Act* authorization. Therefore, direct or incidental effects are possible; additional information would be required to understand the potential effects.

Public concerns

Many of the public concerns known to the Agency relate to adverse effects within federal jurisdiction.

A summary of the concerns expressed regarding the Project by the public, including the requesters, Indigenous groups engaged by the Agency, and other parties include:

- Effects to biophysical environment (e.g., release of contaminants; changes to air quality, surface and groundwater quality and quantity; noise effects on wildlife and nearby communities; effects to vegetation, wetlands and wildlife) and cumulative effects may result in adverse effects to areas of federal jurisdiction including fish and fish habitat, migratory birds, species at risk, and with respect to the Indigenous peoples of Canada;
- Impacts to established Aboriginal and Treaty rights such as fishing, hunting and gathering rights;
- Threats to populations of endangered Rainbow Trout (Athabasca River populations) and threatened Bull Trout (Saskatchewan Nelson Rivers populations), and their habitat, in the Project area;
- Adverse effects to the function of and habitats within the watershed, including wetlands;
- Contribution of impacts of coal-fired electricity on human health and climate change from the export of thermal coal;
- Concerns of downstream GHG emissions on areas of federal jurisdiction;
- Concerns with waste management, e.g., radiation, waste water, risk of a tailings pond breach;
- Concerns with fragmentation of woodland caribou habitat;
- Concern that neither Phase I or the proposed Project were subject to federal environmental assessments despite the large scales of these projects;
- Concern that the Project avoided federal impact assessment due to the revision of the mine plan to be under the thresholds in the Regulations;
- Provincial processes may not address effects in areas of federal jurisdiction, provide opportunities for public input, or provide regulatory oversight for safety (e.g., catastrophic failing of an earthen dam at Obed Coal Mine):
- The need for the Alberta Environmental Impact Statement Terms of Reference for the Project to include requirements to properly assess potential impacts to traditional land use, such as more detailed requirements for baseline and impact assessment information;



- There has been a lack of engagement by the proponent; and
- There is a lack of provincial consultation with Indigenous peoples.

Annex II provides a summary of the concerns expressed related to potential adverse effects within federal jurisdiction or adverse direct or incidental effects, the associated mitigation measures, if any, proposed by the proponent, and the related anticipated legislative mechanisms, as appropriate.

Potential adverse impacts on section 35 rights of Indigenous peoples

The Agency is of the view that the Project may cause adverse impacts on the rights of the Indigenous peoples of Canada that are recognized and affirmed by section 35 of the *Constitution Act, 1982* (section 35 rights) including the potential for adverse effects to areas of federal jurisdiction that could impact those rights. The Project is located on provincial crown land within Treaty 6 and Metis Nation of Alberta–Region 4. The Agency received comments from four Indigenous groups indicating that the Project would adversely impact the ability to exercise rights. Concerns were related to the taking up of lands, lack of engagement by the proponent, lack of provincial consultation, and concerns such as contamination of air, soil and water, with resulting effects to wildlife, plants, and fish, and the ability to exercise hunting, gathering and fishing rights. Several groups noted that the Project is located within their traditional territory.

Comments to the Agency from Keepers of the Water and Keepers of the Athabasca, who indicate that their memberships includes First Nations, Metis and Inuit peoples, state that there are a number of potential impacts of the Project to Aboriginal peoples and established Aboriginal and Treaty rights, and refer to information and concerns identified during the Phase I provincial environmental assessment to illustrate potential impacts. The concerns and information identified from Phase I related to: the presence of numerous plants (including fungi) and animal species important to Aboriginal groups; water quality and preservation; health of wild game; displacement of wildlife; moose licks/salt licks/springs; bear populations; the need to avoid sites of cultural importance; impact to medicinal and food plants; air pollution; reclamation process and timing; and social and economic interests.

The Agency understands that Alberta delegates consultation to the proponent in the provincial environmental assessment and regulatory processes and instructed the proponent to consult with five First Nations. The proponent indicates that they have working agreements with four of the five First Nations, and are working with additional Indigenous groups. Alberta will determine the adequacy of consultation including whether the proponent indicated how they intend to mitigate potential adverse impacts to the exercise of Treaty rights and traditional uses or Metis harvesting and traditional uses. The Agency sought views from 31 Indigenous groups who may be affected by the Project. Fisheries and Oceans Canada would conduct consultation with potentially affected Indigenous groups in relation to any Application for Authorization under the *Fisheries Act*.

Regional and strategic assessments

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

Conclusion



The Agency is of the view that the Project does not warrant designation pursuant to subsection 9(1) of IAA. The Agency recognizes that the Project may cause adverse effects within federal jurisdiction or have adverse direct or incidental effects, as described in subsection 9(1) of IAA and that there is uncertainty regarding whether certain potential adverse effects could be limited through project design and the application of standard mitigation measures. The Agency also notes that while the increase in area of mine operations is close to the thresholds in the Regulations it is below the threshold that would trigger a federal assessment. The Agency further notes that concerns have been expressed by the requesters and by the public related to those potential adverse effects, and that the Project may cause adverse impacts on the rights of the Indigenous peoples of Canada. Despite the potential for adverse effects in areas of federal jurisdiction, the Agency is aware that there are comprehensive existing federal and provincial legislative and regulatory requirements that will apply to the Project. These processes also provide a mechanism to consult with Indigenous Peoples and to address potential impacts on rights and related concerns. The Alberta Energy Regulator is carrying out an environmental assessment process. Adverse effects within federal jurisdiction and related concerns can be appropriately managed through this process and other existing mechanisms such as the review of any Application for Authorization under the Fisheries Act by Fisheries and Oceans Canada and other regulatory processes.

To inform its analysis, the Agency sought and received input from the proponent, federal authorities, the provincial regulator, Indigenous groups, and the requesters. In addition, the Agency considered the concerns in the letters sent to the Minister and comments within the public domain. The Agency considered the potential for the Project to cause adverse impacts on section 35 rights.

ANNEX I



Annex I: Analysis Summary Table

Impact Assessment Act,	Effects and Mitigation Proposed by the Proponent, Advice from Federal and Provincial Experts, and Public and Indigenous Concerns Known to the Agency	Relevant Legislative Mechanisms
Subsection 9(1)		
A change to	Proponent	Impacts to fish and fish
defined in subsection 2(1) of the Fisheries Act McPherson Creek are located within the min bearing tributary. The presence of pure strait populations) and Bull Trout (Saskatchewandocumented in McPherson Creek. A 100-metre buffer from mining activities will McPherson Creek as in Phase I. The proport Fisheries and Ocean Canada (DFO) and promeasures for Rainbow Trout (Athabasca Rivemitigation measures include implementation adequate water volume in fish bearing streat adaptive management based on continuous Selenium is not anticipated in the runoff from completed as part of the provincial environment and fish habitat, surface water quality, evaluation groundwater modelling of the combined operation.	McPherson Creek and its tributaries drain the Project area. Several tributaries to McPherson Creek are located within the mine pit footprint, including one known fish-bearing tributary. The presence of pure strain Rainbow Trout (Athabasca River populations) and Bull Trout (Saskatchewan– Nelson Rivers populations) were documented in McPherson Creek.	habitat and aquatic species at risk are prohibited unless authorized under the Fisheries Act and Species at Risk Act subsequent regulations. The Fisheries Act prohibits the deposit of deleterious substances into waters frequented by fish, unless authorized by regulations or other federal legislation. Alberta Energy Regulator environmental assessment and regulatory process apply (Alberta Environmental Protection and Enhancement Act, Water Act, Coal
	A 100-metre buffer from mining activities will be implemented from the mainstem of McPherson Creek as in Phase I. The proponent indicated they are working with Fisheries and Ocean Canada (DFO) and provincial regulators regarding mitigation measures for Rainbow Trout (Athabasca River populations). Additional expected mitigation measures include implementation of streamflow augmentation to maintain adequate water volume in fish bearing streams, a surface water management plan, and adaptive management based on continuous monitoring within receiving stream. Selenium is not anticipated in the runoff from the Project. Detailed assessments will be completed as part of the provincial environmental assessment process including for fish and fish habitat, surface water quality, evaluation of hydrology, and numerical groundwater modelling of the combined operations of Phase I and the Project.	
	The proponent commenced the Fisheries Act authorization process.	
	Federal Authorities	
	DFO indicated that without mitigation and offsetting, the Project may result in adverse environmental effects. DFO advised that as proposed:	Conservation Act, and the Public Lands Act).
	the Project is likely to result in:	Provincial-federal
	- the death of fish and/or the harmful alteration, disruption or destruction of fish	assessment coordination would be possible should a

Impact
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9(1)

Effects and Mitigation Proposed by the Proponent, Advice from Federal and Provincial Experts, and Public and Indigenous Concerns Known to the Agency

Relevant Legislative Mechanisms

habitat; and

 effects to listed aquatic species at risk (endangered Rainbow Trout (Athabasca River populations) and threatened Bull Trout (Saskatchewan

Nelson Rivers populations), part of their critical habitat or the residences of their individuals in a manner which is prohibited under the Species at Risk Act.⁵ federal assessment be required for the Project.

• there is significant uncertainty regarding effects to aquatic species at risk, their habitat, and their survival and recovery.

Natural Resources Canada indicated the Project may cause effects within federal jurisdiction, specifically, that there may be effects to fish habitat given that the Project includes bedrock extraction below the water table, dewatering activities, and discharging wastewater.

Environment and Climate Change Canada (ECCC) advised that the Project may result in adverse environmental effects on water quality (related to increased migration of contaminants, total suspended solids and turbidity, and nitrogen levels), changes in flow of surface and/or groundwater discharge, and effects of extreme weather events on seepage and runoff, and corresponding management of waste and wastewater.

Indigenous concerns

Indigenous concerns include elevated contaminants, waste management, and potential for spills, and related impacts to water, fish and fish habitat; permanent alteration or destruction of fish habitat including destruction of a fish-bearing tributary, and alterations to McPherson Creek; and threats to aquatic species at risk from changes in stream flow,

Impact	Effects and Mitigation	Relevant Legislative
Assessment Act, Subsection 9(1)	Proposed by the Proponent, Advice from Federal and Provincial Experts, and Public and Indigenous Concerns Known to the Agency	Mechanisms
	habitat, and water quality. That the proponent is requesting a <i>Fisheries Act</i> authorization illustrates the potential for adverse effects on fish and fish habitat.	
	Public concerns	
	Public concerns include likely impacts to endangered and threatened fish species, concerns regarding destruction of a fish-bearing tributary, and threats to fish in McPherson Creek from water quality changes (e.g., selenium), habitat degradation and fragmentation, changes in groundwater levels and hydrology, loss of tributaries to McPherson Creek, and cumulative effects to McPherson Creek from loss of tributaries from the construction of Phase I.	
A change to	See fish and fish habitat section.	See fish and fish habitat
quatic pecies, as efined in ubsection (1) of the pecies at isk Act	No adverse effects to marine plants are anticipated, as there is no interaction between the Project and the marine environment.	section.
change to		Alberta Energy Regulator environmental assessment
nigratory oirds, as	Proponent	and regulatory process
defined in subsection 2(1) of the	As many as 184 bird species have the potential to live in the Project area. Two bird species listed under the <i>Species at Risk Act</i> were detected within the Project area, Barn Swallow and Canada Warbler.	apply (Alberta Environmental Protection and Enhancement Act,
Migratory Birds Convention Act, 1994	The proponent noted there has been public concern regarding Project impacts on migratory bird species. The proponent indicated that habitat loss will be the greatest effect to migratory birds from the Project. Mitigation proposed includes a progressive	Water Act, Coal Conservation Act, and the Public Lands Act).

Analysis Report Impact Assessment Agency of Canada

effect to migratory birds from the Project. Mitigation proposed includes a progressive

Impact
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9(1)

Effects and Mitigation Proposed by the Proponent, Advice from Federal and Provincial Experts, and Public and Indigenous Concerns Known to the Agency

Relevant Legislative Mechanisms

reclamation plan intended to minimize the project footprint, expedite revegetation, and promote the development of habitats required by migratory birds. Other key mitigation measures specific to migratory birds include vegetation clearing outside of breeding bird periods and to conduct pre-disturbance nest searches. The proponent identified that reclamation activities provide an opportunity to work with local communities and Indigenous groups to improve end land use.

The Migratory Birds
Convention Act will apply.

Federal Authorities

ECCC indicated that there is insufficient information to fully understand the potential effects of the Project on migratory birds. ECCC has identified potential adverse environmental effects to migratory birds, including species at risk whose ranges overlap with the Project area (three species listed as threatened and six species listed as special concern). Effects from the Project on migratory birds may result from effects to: key habitat, including breeding (nesting) habitat; health or mortality through exposure to deleterious substances, air emissions, or collisions; changes in movement through sensory disturbance of physical blockage; local and regional populations through combined effects of the Project on habitat, mortality, movement and health; traditional use of wildlife species by Indigenous peoples.

Indigenous Concerns

Indigenous concerns included changes to wildlife habitat and behaviour; increases in toxicity to air, soil and water; and resulting effects to wildlife.

Public Concerns

Public concerns regarding migratory birds related to effects to birds identified in other coal mine environmental assessments including for Phase I, and that these might also be at issue with the Project, such as: loss of wetland habitat and water quality effects, noise, the presence of possibly almost two hundred bird species (including birds listed

Impact Assessment Act, Subsection 9(1)	Effects and Mitigation Proposed by the Proponent, Advice from Federal and Provincial Experts, and Public and Indigenous Concerns Known to the Agency	Relevant Legislative Mechanisms
	under the Species at Risk Act), and inadequacy of provincial processes to consider impacts of the Project on this area of federal jurisdiction.	
A change to the	The proponent did not provide information on potential effects of the Project that would occur on federal lands.	Alberta Energy Regulator environmental assessment
environment that would	Proponent	and regulatory process apply (Alberta
occur on federal lands	The nearest federal land, Jasper National Park, is approximately 35 kilometres from the Project and the nearest reserve lands are Alexis Nakota Sioux Nation Alexis Cardinal River #234, located approximately 73 kilometres southwest of the Project and Alexis Elk River Reserve #233, and located approximately 76 kilometresm south of the Project.	Environmental Protection and Enhancement Act, Water Act, Coal Conservation Act, and the
	Federal Authorities	Public Lands Act).
	Parks Canada responded with no comments in relation to the Project.	
	Indigenous Groups	
	An Indigenous group indicated that a federal impact assessment should be carried out, as there are often effects to federal lands from Projects, which are not considered by the province. As an example, concern was expressed that contaminants from coal mines can be transported by air to areas distant from the Project site.	
	Public	
	Concern was expressed that the Project would have significant impacts on the surrounding Rocky Mountain ecosystem near Jasper National Park.	
A change to the environment that would occur in a	The Project is approximately 85 kilometres from the British Columbia border.	Alberta Energy Regulator environmental assessment and regulatory process apply (Alberta Environmental Protection
	The proponent did not provide estimates of greenhouse gas emissions (GHG's) for the Project. It is unknown if the potential GHG emissions associated with the Project may	

Impact
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Subsection
9(1)

Effects and Mitigation Proposed by the Proponent, Advice from Federal and Provincial Experts, and Public and Indigenous Concerns Known to the Agency

Relevant Legislative Mechanisms

province other than the one in which the project is being carried out or outside Canada

hinder the Government of Canada's ability to meet its commitments in respect of climate change, including in the context of Canada's 2030 emissions targets and forecasts.

Proponent

The proponent indicated they opted into the Alberta carbon price based Carbon Competitiveness Incentive Regulation, which requires reporting of carbon dioxideequivalent emissions. The proponent indicated the carbon footprint of the coal mined might be the lowest in Alberta.

The proponent indicated the coal from the Project will represent a material reduction of sulfur dioxide emissions at its end use, as the coal from the Project will have 0.5 percent less sulphur content than is allowable in their market (Newcastle Market).

Federal Authorities

ECCC indicated that the increase in production from the expansion would increase excavation and transportation activities, subsequently approximately doubling the Phase I emissions of air contaminants such as nitrogen dioxide, fine particulate matter, dust, and other Criteria Air Contaminants. There may also be an increase in GHG emissions.

Indigenous Concerns

Indigenous groups identified that cumulative effects in the area are undermanaged and that contaminants may be transported by air and then settle to more distant areas.

Public Concerns

Concerns were raised regarding climate change impacts and the effect of downstream GHG emissions associated with the combustion of coal produced from the Project. It was also identified that GHG emissions could cause changes to each component of the environment.

and Enhancement Act, Water Act, Coal Conservation Act, and the Public Lands Act).

Federal greenhouse gas emissions reporting, pursuant to the *Canadian Environmental Protection Act, 1999*, if 10 kilotonnes or more of greenhouse gas emissions are emitted.

Alberta Carbon Competitiveness Incentive Regulation – carbon price based on allowable emissions.

Impact Assessment Act, Subsection 9(1)	Effects and Mitigation Proposed by the Proponent, Advice from Federal and Provincial Experts, and Public and Indigenous Concerns Known to the Agency	Relevant Legislative Mechanisms
With respect to the Indigenous peoples of Canada, an impact - occurring in Canada and resulting from any change to the environment -	See also section on: change to the environment - on any structure, site, or thing that is of historical, archaeological, paleontological or architectural significance.	The Alberta Historical Resources Act require the proponent to follow protocols to preserve and study historical resources and provides a framework for Historical Resources Impact Assessments (HRIAs) and mitigation studies.
	Information indicating Project overlap with preferred Indigenous use areas, sites of cultural importance and a potential access change within the disturbed area was not provided. The provincial Terms of Reference for the Environmental Impact Assessment require the proponent to: include an assessment of historical resources; identify impacts on Indigenous land use; describe and discuss traditional land use areas, the incorporation of Traditional Ecological Knowledge and Traditional Land Use information into the Project; and determine impacts on traditional, medicinal and cultural purposes and identify possible mitigation strategies.	
on physical	Proponent	
and cultural heritage	The proponent indicated that Traditional Land Use Knowledge is being collected and Traditional Ecological Knowledge studies are underway.	Alberta Energy Regulator environmental assessment and regulatory process
	Alberta Energy Regulator directed the proponent to consult with five First Nations for the provincial environmental assessment. The proponent indicates that they have working agreements with four of the five Nations, and are working with additional Indigenous groups.	apply (Alberta Environmental Protection and Enhancement Act, Water Act, Coal Conservation Act, and the Public Lands Act).
	The proponent indicates that communities have requested additional information and identified topics of interests, but that to date, no concerns have been registered that would contribute to the Alberta Record of Consultation. Technical questions received from Indigenous groups commonly include water, water toxicity, and release to the environment.	
	Federal Authorities	

Impact Assessment Act, Subsection 9(1)	Effects and Mitigation Proposed by the Proponent, Advice from Federal and Provincial Experts, and Public and Indigenous Concerns Known to the Agency	Relevant Legislative Mechanisms
	The Agency is of the view that changes to the environment, such as change to fish and fish habitat and to migratory bird habitat, may affect the use of the physical environment by Indigenous peoples.	
	Indigenous Concerns	
	Indigenous concerns identified include: potential impacts to Aboriginal and Treaty rights, the ability to carry out a traditional way of life on the land in this area (such as harvesting), the increased impact on the environment, and the potential adverse effects on their physical and cultural heritage and the intergenerational knowledge transfer and cultural learning will be disrupted.	
	Public Concerns	
	Public concerns identified include: that the proponent relies on speculative mitigation measures to address the numerous potential adverse effects identified including to physical and cultural heritage.	
With respect to the Indigenous peoples of Canada, an impact - occurring in Canada and resulting from any change to the environment - on current use	Information on the anticipated effects from a change to the environment on the current use of lands and resources for traditional purposes was not provided. The provincial Terms of Reference for the Environmental Impact Assessment requires the proponent to: describe constraints to development including Indigenous traditional land and water use; identify impacts on Indigenous land use; describe and discuss traditional land use areas, the incorporation of Traditional Ecological Knowledge and Traditional Land Use information into the Project; determine impacts on traditional, medicinal and cultural purposes and identify possible mitigation strategies; describe the current and potential use of the fish resources by Indigenous or recreational fisheries; identify impacts to changes to vegetation and wetland communities on Indigenous uses; and identify availability of species for traditional use.	Alberta Energy Regulator environmental assessment and regulatory process apply (Alberta Environmental Protection and Enhancement Act, Water Act, Coal Conservation Act, and the Public Lands Act).

Analysis Report Impact Assessment Agency of Canada

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Effects and Mitigation Proposed by the Proponent, Advice from Federal and Provincial Experts, and Public and Indigenous Concerns Known to the Agency

Relevant Legislative Mechanisms

resources for traditional purposes

Proponent

The proponent indicated that Traditional Land Use Knowledge is being collected and Traditional Ecological Knowledge studies are underway.

Alberta Energy Regulator directed the proponent to consult with five First Nations for the provincial environmental assessment. The proponent indicates that they have working agreements with four of the five Nations, and are working with additional Indigenous groups.

The proponent indicates that communities have requested additional information and identified topics of interests, but that to date, no concerns have been registered that would contribute to the Alberta Record of Consultation. Technical questions received from Indigenous groups commonly include water, water toxicity, and release to the environment.

Federal Authorities

ECCC stated there is insufficient information to properly understand the potential effects of the Project and that there may be adverse environmental effects to migratory birds, federally-listed species at risk whose ranges overlap with the Project area, including migratory birds, and traditional use of wildlife species by Indigenous peoples.

Health Canada indicated that there may be potential for contamination of country foods (e.g. coal dust contamination, methylmercury in fish), and that information on receptors and on what country foods may be consumed or affected by the Project would be needed to assess effects.

DFO indicated likely adverse effects to fish and fish habitat, including species at risk. The Agency is of the view these effects could result in effects on current use of lands and resources for traditional purposes.

Indigenous Concerns

Impact
Assessment
Act,
Subsection
9(1)

Effects and Mitigation
Proposed by the Proponent, Advice from Federal and Provincial Experts, and
Public and Indigenous Concerns Known to the Agency

Relevant Legislative Mechanisms

Indigenous group concerns identified include: loss of crown lands, effects to wildlife and health from contaminant release (air, soil, and water) from coal mining, waste management practices, changes to wildlife habitat and behaviour, effects to gathering, fishing, and hunting opportunities, lack of support for Metis engagement, and the Alberta Government's lack of Indigenous consultation.

Public Concerns

Public concerns identified include: the Indigenous peoples of Canada are experiencing the effects of climate change as relating to the current use of lands and resources for traditional purposes, and the proponent is relying on speculative mitigation measures to address the numerous potential adverse effects including to the current use of lands and resources for traditional purposes.

With respect to the Indigenous peoples of Canada, an impact occurring in Canada and resulting from any change to the environment on any structure, site, or thing that is of historical, archaeological,

See also section on: change to the environment - on current use of lands and resources for traditional purposes.

The provincial Terms of Reference for the Environmental Impact Assessment requires the proponent to: include an assessment of historical resources; identify impacts on Indigenous land use; describe and discuss traditional land use areas, the incorporation of Traditional Ecological Knowledge and Traditional Land Use information into the Project; and determine impacts on traditional, medicinal and cultural purposes and identify possible mitigation strategies.

Proponent

The proponent indicated that Traditional Land Use Knowledge is being collected and Traditional Ecological Knowledge studies are underway.

The proponent received an Alberta *Historical Resources Act* approval in October 2018 for the Project. The approval indicated that one of four precontact sites found in the Project area is to be avoided and that a plan for avoidance is to be submitted. The proponent intends to avoid mining this precontact site by constructing a road around the

Alberta Energy Regulator environmental assessment and regulatory process apply (Alberta Environmental Protection and Enhancement Act, Water Act, Coal Conservation Act, and the Public Lands Act).

The Alberta *Historical* Resources Act require the proponent to follow protocols to preserve and study historical resources

Impact Assessment Act, Subsection 9(1)	Effects and Mitigation Proposed by the Proponent, Advice from Federal and Provincial Experts, and Public and Indigenous Concerns Known to the Agency	Relevant Legislative Mechanisms
paleontological or architectural	site with a suitable barrier. Construction and maintenance details are to be included in the provincial assessment and regulatory documentation.	and provides a framework for Historical Resources
significance	Indigenous Concerns	Impact Assessments (HRIAs) and mitigation
	Indigenous concerns identified the Project's potential adverse effects from any change to the environment on any structure, site or thing that is of historical, archaeological, paleontological or architectural significance.	studies.
	Public Concerns	
	Public concerns identified include that the proponent relies on speculative mitigation measures to address the numerous potential adverse effects identified.	
Any change occurring in Canada to the health, social or economic conditions of the Indigenous peoples of Canada	Information indicating Project effects on any change occurring in Canada to the health, social or economic conditions of the Indigenous peoples of Canada was not included. The provincial Terms of Reference for the Environmental Impact Assessment requires the proponent to: describe benefits of the Project including to Indigenous communities and constraints to development including Indigenous traditional land and water use; and include an Indigenous receptor type in the public health assessment.	Alberta Energy Regulator environmental assessment and regulatory process apply (Alberta Environmental Protection and Enhancement Act, Water Act, Coal Conservation Act, and the Public Lands Act).
	Proponent	
	The proponent indicated that assessments of social-environmental effects and human health risks will be completed as part of the provincial assessment process, and that impacts of the Project on Indigenous communities are considered.	
	The proponent indicated they expect similarities in the Project human heath assessments as were documented in the Phase I human health assessment. The potential impacts of the Project to human health include: effects on health from increases in air emissions, potential health impacts from changes in water quality or health issues from Project-related noise.	

Impact
Assessment
Act,
Subsection
9(1)

Effects and Mitigation
Proposed by the Proponent, Advice from Federal and Provincial Experts, and
Public and Indigenous Concerns Known to the Agency

Relevant Legislative Mechanisms

Federal Authorities

ECCC indicated that the increase in production from the expansion would increase excavation and transportation activities, subsequently approximately doubling the Phase I emissions of air contaminants such as nitrogen dioxide, fine particulate matter, dust, and other Criteria Air Contaminants. ECCC indicated that the Project may result in adverse environmental effects on water quality related to increased migration of contaminants, total suspended solids and turbidity, and nitrogen levels, changes in flow of surface and/or groundwater discharge, and effects of extreme weather events on seepage and runoff, and corresponding management of waste and wastewater.

Health Canada indicated that in addition to the potential health impacts identified by the proponent, the Project has the potential for the release of coal dust, of which the health impacts include inhalation and coal dust contamination of country foods. Additionally, there may be the potential for other country foods contamination (e.g., methylmercury in fish). Health Canada indicated that information on what country foods may be consumed or affected by the Project was not provided and that potentially affected receptors were not identified. Health Canada would seek information to understand how project-related changes to air quality, drinking/recreational water quality, country foods and noise may affect Indigenous health.

Indigenous Concerns

Indigenous concerns identified include: the potential for spills and contamination into the surrounding area, including the river, from mining activities and possible resulting effects on the health of Indigenous people; the likely reduction in access and ability to obtain and use traditional or country foods from the traditional lands will have economic, social and health impacts; the disruption of intergenerational knowledge transfer and cultural learning, contributing to longer-term cultural impacts to Indigenous culture; and the

Impact Assessment Act, Subsection 9(1)	Effects and Mitigation Proposed by the Proponent, Advice from Federal and Provincial Experts, and Public and Indigenous Concerns Known to the Agency	Relevant Legislative Mechanisms
	members loss of experiencing tranquility and relationships with the land due to ever increasing industrial development.	
	Public Concerns	
	Public concerns identified include: the relationship of how GHG emissions would cause consequential impacts on the health, social or economic conditions of the Indigenous peoples of Canada, the potential for adverse environmental effects as well as the reliance on speculative mitigation measures to address the numerous potential adverse effects to the health, social or economic conditions of the Indigenous peoples of Canada.	
Adverse direct or incidental effects	DFO would likely need to issue a SAR-compliant <i>Fisheries Act</i> authorization for the Project to proceed.	Impacts to fish and fish habitat and aquatic specie
	NRCan indicated that the department is not likely to exercise a power or perform a duty or function related to the Project.	at risk are prohibited unles authorized under the Fisheries Act and Species
	Transport Canada does not anticipate exercising any power, duty, or function related to the Project.	at Risk Act and subsequer regulations.
Effects on	See also sections on: fish and fish habitat, migratory birds	Alberta Energy Regulator
endangered and threatened species and their habitats	Proponent	environmental assessmen and regulatory process
	Five SARA-listed wildlife species were observed in the Project area: Barn Swallow, Canada Warbler, Western Toad, Little Brown Myotis, and Grizzly Bear. Thirteen species that are considered provincially sensitive (not including SARA-listed species) were observed. The Project has the potential to affect wildlife by loss of habitat, increased mortality and effects of fragmentation on movement and life patterns. Expected	apply (Alberta Environmental Protection and Enhancement Act, Water Act, Coal Conservation Act, and the

Analysis Report Impact Assessment Agency of Canada Public Lands Act).

mitigation includes: reclaiming with species-specific vegetation, hunting restrictions,

avoidance during breeding and nesting periods, amphibian capture and relocation

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Subsection
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Effects and Mitigation Proposed by the Proponent, Advice from Federal and Provincial Experts, and Public and Indigenous Concerns Known to the Agency

Relevant Legislative Mechanisms

programs, avoidance of amphibian breeding ponds where possible, and 100-metre buffer along McPherson Creek.

Species At Risk Act applies.

Federal Authorities

ECCC identified the potential for adverse environmental effects to species at risk. ECCC indicated that the information is insufficient to understand the potential effects of the Project on species at risk that exist at and near the Project location. ECCC identified fifteen species at risk including migratory birds, and six species listed as endangered or threatened (Barn Swallow, Common Nighthawk, Gypsy Cuckoo Bumble Bee, Little Brown Myotis, Northern Myotis, Olive-sided Flycatcher), whose ranges overlap with the Project area.

Migratory Bird Convention Act applies.

Effects from the Project on species at risk, including SARA-listed and COSEWIC listed species, may result from effects to: key habitat and critical habitat for species at risk; health or mortality through exposure to deleterious substances, air emissions, or collisions; changes in movement through sensory disturbance of physical blockage; local and regional populations through combined effects of the Project on habitat, mortality, movement and health; traditional use of wildlife species by Indigenous people.

Indigenous Concerns

Indigenous concerns included fragmentation of woodland caribou habitat; changes to wildlife habitat and behaviour; and increases in toxicity to air, soil and water, and resulting effects to wildlife

Public Concerns

Public concerns included the possible presence of species at risk such as western toad, bats and birds, and effects to such species, and that the provincial assessment will not thoroughly assess impacts on species at risk, as evidenced by the Phase I assessment.

ANNEX II



Potential Federal and Provincial Authorizations Relevant to the Project

Authorization	Description
Species at Risk Act Fisheries Act	A proponent that is proposing to physically alter a waterbody is responsible for ensuring that the project conforms to all statutory requirements including the fish and fish habitat protection provisions of the <i>Fisheries Act</i> and the <i>Species at Risk Act</i> and abide by all prohibitions of these Acts. Proponent must apply for an authorization under the <i>Fisheries Act</i> when it is not possible to avoid or mitigate impacts of projects that are likely to cause serious harm to fish, and if authorized, abide by the conditions of any such authorization.
	Fisheries and Oceans Canada must be satisfied that the activities will not jeopardize survival or recovery of aquatic species at risk prior to issuing such authorizations.
	The Fisheries Act prohibits the deposit of deleterious substances into waters frequented by fish, unless authorized by regulations or other federal legislation.
Factory and Magazine Licences under Section 7(1) of the Explosives Act	Natural Resources Canada issued a Factory Licence under 7(1) of the <i>Explosives Act</i> on August 31, 2018 for the operation of a bulk explosives plant at the Phase I site. NRCan consulted with four Indigenous groups prior to the issuance of the Factory Licence.
	A new factory licence is not anticipated with the proposed Project (Phase II).
Migratory Birds Convention Act	To ensure the conservation of migratory bird populations by regulating potentially harmful human activities. A permit must be issued for all activities affecting migratory birds, with some exceptions detailed in the Regulations.
The Environmental Protection and Enhancement Act (EPEA)	This project type is a mandatory activity and an environmental impact assessment report is required. AER directed the proponent to prepare and submit an environmental impact assessment report. The final terms of reference were issued by AER on June 18, 2019. The AER process may include a public hearing.
Public Lands Act (Alberta)	To regulate public land allocations, the sale or transfer of public land to other levels of government or private entities, and the uses (include recreational use, commercial use and industrial use) of public land.



Authorization	Description
Coal Conservation Act (Alberta)	To regulate the exploration of coal, the site development for coal extraction, and the commercial operation of a coal extraction site.
Water Act (Alberta)	Provincial legislation that supports and promotes the conservation and management of water in Alberta.
Historical Resources Impact Assessment (Alberta)	Requires the proponent to follow protocols to preserve and study historical resources. This legislation provides a framework for Historical Resources Impact Assessments and mitigation studies.



