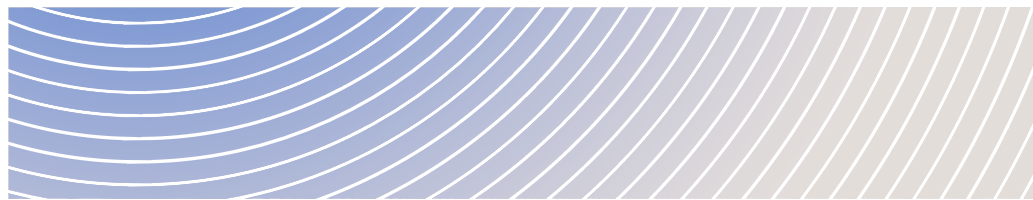




# Analysis Report



WHETHER TO DESIGNATE THE **VISTA COAL UNDERGROUND MINE AND VISTA MINE PHASE II EXPANSION PHYSICAL ACTIVITIES** IN ALBERTA PURSUANT TO THE *IMPACT ASSESSMENT ACT*

September 2021

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# Purpose

The Impact Assessment Agency of Canada (the Agency) prepared this report to assist the Minister of Environment and Climate Change Canada (the Minister) in reconsidering the requests to designate the Phase I Vista Underground Mine (the VUM) and Vista Mine Phase II Expansion (the Phase II Expansion) proposed projects (the physical activities) as ordered by the Federal Court on July 19, 2021<sup>1</sup>.

The Agency has considered and referenced the two previous analysis reports related to these physical activities prepared in 2019<sup>2</sup> and 2020<sup>3</sup> (respectively the 2019 Phase II Expansion Analysis Report and the 2020 VUM Analysis Report hereafter).

## Physical Activities

Coalspur Mine (Operations) Ltd. (the Proponent) is proposing to expand the existing Vista Coal Mine Project (Phase I), an open-pit surface coal mine for the extraction and export of thermal coal to international markets. As proposed, the VUM would be located within the Phase I mine permit area and is additional to the Phase II Expansion, which would extend surface mining westward from Phase I. The physical activities are located approximately ten kilometres east of Hinton, Alberta.

## Context for Reconsideration

In May and July 2019, the Minister received requests to designate the Phase II Expansion under section 14(2) of the *Canadian Environmental Assessment Act, 2012*. These requests were further considered under the *Impact Assessment Act (IAA)* after its coming into force on August 28, 2019. On December 20, 2019, the Minister decided not to designate the Phase II Expansion and posted the required response with reasons on the Canadian Impact Assessment Registry.

On May 1, 2020, the Minister received additional requests to designate the physical activities based on new information regarding a new proposal for the additional VUM expansion. On July 30, 2020, the Minister ordered the designation of the VUM and Phase II Expansion physical activities under subsection 9(1) of the IAA. In August 2020, the Proponent and Ermineskin Cree Nation both filed judicial review applications in Federal Court challenging the Minister's designation order. On May 6, 2021, the Agency accepted the Proponent's Initial Project Description (IPD)<sup>4</sup>, initiating the planning phase under the IAA. On June 4, 2021, the Agency issued the Summary of Issues<sup>5</sup>. On July 19, 2021, the Federal Court granted Ermineskin Cree

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<sup>1</sup> Federal Court of Canada. 2021. Ermineskin Cree Nation v. Canada (Environment and Climate Change) 2021 FC 758. <https://decisions.fct-cf.gc.ca/fc-cf/decisions/en/item/500449/index.do>

<sup>2</sup> Impact Assessment Agency of Canada. 2019. Whether to Designate the Coalspur Mine LTD. Vista Coal Mine Phase II Project in Alberta. Ottawa. <https://iaac-aeic.gc.ca/050/documents/p80341/133221E.pdf>

<sup>3</sup> Impact Assessment Agency of Canada. 2020. Whether to Designate the Coalspur Mine LTD. Vista Coal Underground Mine and Expansion Activities Project in Alberta. <https://iaac-aeic.gc.ca/050/documents/p80731/135628E.pdf>

<sup>4</sup> Initial Project Description: <https://iaac-aeic.gc.ca/050/evaluations/document/140823>

<sup>5</sup> Summary of Issues: <https://iaac-aeic.gc.ca/050/evaluations/document/140833>

Nation's judicial review application, set aside the Ministerial Order and remanded the matter for reconsideration. This resulted in the termination of the planning phase underway pursuant to the IAA, as the physical activities were no longer designated. Because the designation order has already been set aside, the Federal Court dismissed the Proponent's judicial review application as moot.

Following the Federal Court decisions, in August 2021, the Agency commenced the process for reconsideration (the Reconsideration Process). The Agency sought additional input from federal authorities and 44 Indigenous groups, including Ermineskin Cree Nation. During the Reconsideration Process, the Agency received responses and/or additional input from the following federal authorities: Fisheries and Oceans Canada (DFO); Environment and Climate Change Canada (ECCC); Transport Canada; Health Canada; and, Natural Resources Canada. The Agency also received responses and/or additional input from the following Indigenous groups: Anishnawbe Nation of the Rocky Mountains; Aseniwuche Winewak Nation; Descendants of Michel First Nation, Ermineskin Cree Nation; Louis Bull Tribe; Mountain Cree Inc.; O'Chiese First Nation; Paul First Nation; Samson Cree Nation; Swan River First Nation; and, Whitefish Lake First Nation #128. Submissions received during the IAA planning phase are available on the Canadian Impact Assessment Registry website at <https://iaac-aeic.gc.ca/050/evaluations/proj/80731>, including from Alexander First Nation, Aseniwuche Winewak Nation, Buffalo Lake Metis Settlement, Descendants of Michel First Nation, Elders of Mountain Cree Camp, Foothills Ojibway First Nation, Friends of Michel Society (Michel First Nation), Horse Lake First Nation, Louis Bull Tribe, O'Chiese First Nation, Peavine Metis Settlement, Samson Cree Nation, and Tsuut'ina Nation.

## Context for the Physical Activities

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### Physical activities overview

The physical activities - the VUM and Phase II Expansion - are the proposed expansions of the existing Vista Coal Mine Phase I (Figure 1, Figure 2).

The VUM is a proposed underground mine situated within the Phase I permit area. The Proponent indicates the VUM will be used to test various safety and production methods to determine the feasibility of underground mining the coal reserves. Updated information provided to the Alberta Energy Regulator (AER) indicates that surface components, including the mine yard and underground entries, will occupy fewer than 10 hectares and the area of underground mining will be approximately 126.9 hectares<sup>6</sup>. The underground mine will operate for three years (with the possibility of further expansion), with anticipated maximum production of 635,000 tonnes of clean (impurities removed for market) coal per year (1,740 tonnes per day). The Proponent has submitted an application<sup>7</sup> to the Alberta Energy Regulator (AER) for approval of these activities.

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<sup>6</sup> Alberta Energy Regulator. SIR-2 Response - Part A. Integrated Application Registry. [https://dds.aer.ca/iar\\_query/ApplicationAttachments.aspx?AppNumber=1927365](https://dds.aer.ca/iar_query/ApplicationAttachments.aspx?AppNumber=1927365)

<sup>7</sup> Alberta Energy Regulator. Integrated Application Registry. [https://dds.aer.ca/iar\\_query/ApplicationAttachments.aspx?AppNumber=1927365](https://dds.aer.ca/iar_query/ApplicationAttachments.aspx?AppNumber=1927365)

The Phase II Expansion is the westward expansion of surface mining from Phase I, situated on forested provincial crown land. The Phase II Expansion will expand the Phase I mine pits and recover coal via highwall mining in the seams. The Proponent's IPD identifies that the physical activity will have the potential to increase maximum production of clean coal by 5.8 million tonnes per year (16,949 tonnes per day) with a predicted ten-year lifespan. Maximum production of raw coal per day is estimated at 50,000 tonnes per day. The expansion of the mine pits is approximately 586.2 hectares. The Phase II Expansion is subject to a provincial Environmental Impact Assessment and a final Terms of Reference has been issued<sup>8</sup>.

Both physical activities would 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.

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## Physical activities and components

The scope of the physical activities includes all physical works and activities associated with the construction, operation and decommissioning of the VUM and Phase II Expansion.

Components and activities related to the VUM include construction, operation and/or decommissioning of:

- Underground entries; mine yard; water management structures; ventilation and electrical components; mining of coal via room and pillar methods, belt conveying of coal for processing and handling on the Phase I site, and reclamation.

Components and activities related to the Phase II Expansion include construction, operation and/or decommissioning of:

- Roads; site preparation; water management structures; two additional plant modules; tailings facilities; end pit lake; mine pit and dump development; mining via truck and shovel and continuous miner; hauling of coal for processing and handling; maintenance and monitoring; and reclamation.

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<sup>8</sup> <https://open.alberta.ca/dataset/ab136e20-299b-4bc0-ac76-0c6f946b0eb4/resource/8c8c777f-01e8-4929-b121-dff5957af6ba/download/ftor-coalspur-vista-project-phase-ii.pdf>

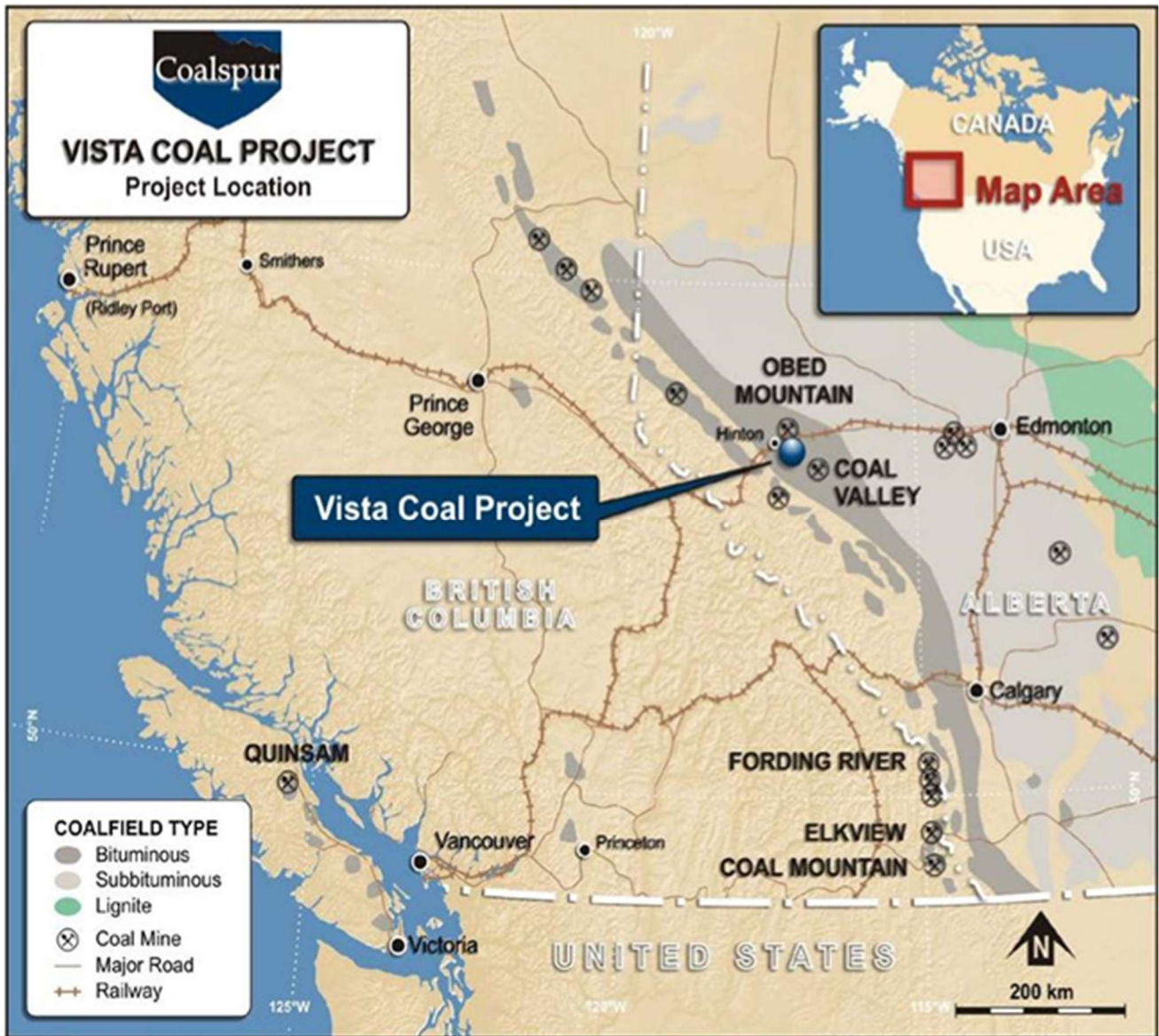


Figure 1. Project Location Map.

Source: Coalspur Mines Ltd., April 2021

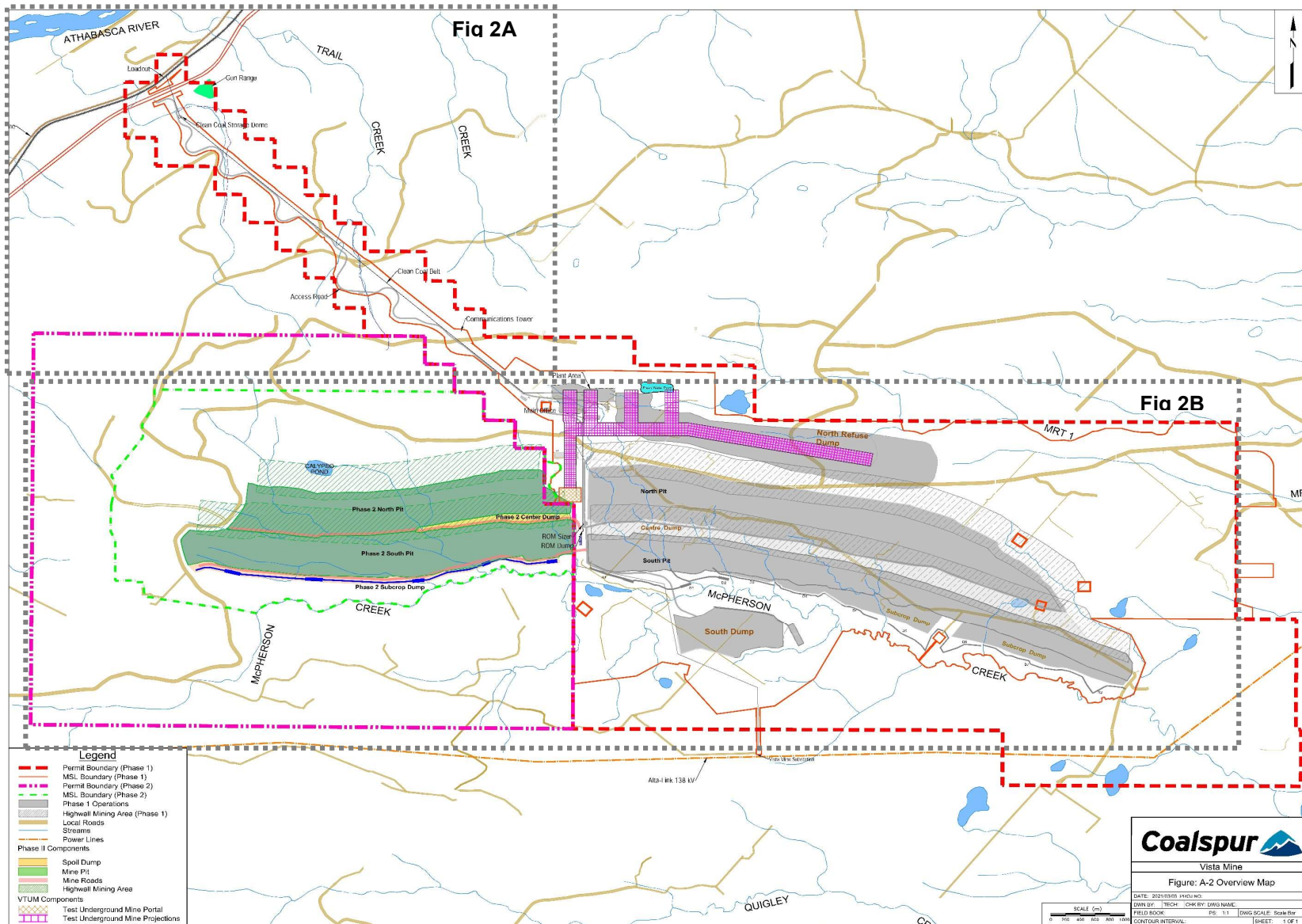


Figure 2. Project Overview Map. Coalspur Mines Ltd. Initial Project Description

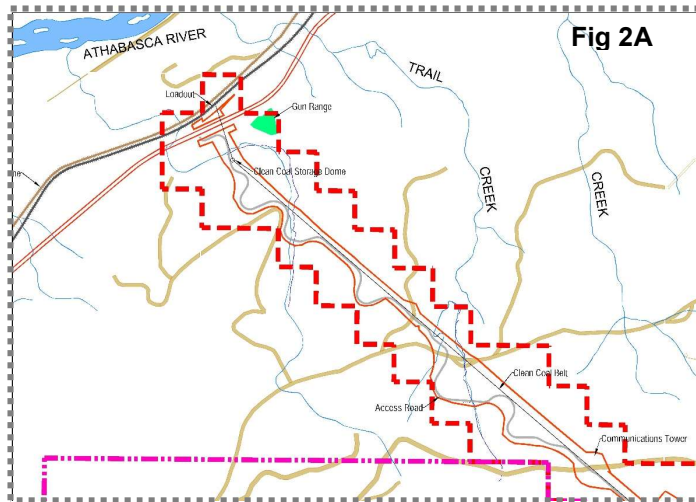


Figure 2A inset. Intersection of Phase I lease boundary and infrastructure with identified critical habitat for Athabasca Rainbow Trout in Trail Creek. Located within the Upper Athabasca and Oldman Creek Hydrologic Unit Code



Figure 2C. Excerpt from Figure A9, Recovery Strategy for the Rainbow Trout (Athabasca River Populations), 2020.

Waterways in light red identify areas within which critical habitat is found. The darker red line indicates the hydrological unit code boundary. Upper area in darker shading can be more clearly reviewed in Figure A4 of the 2020 Recovery Strategy (not shown here).

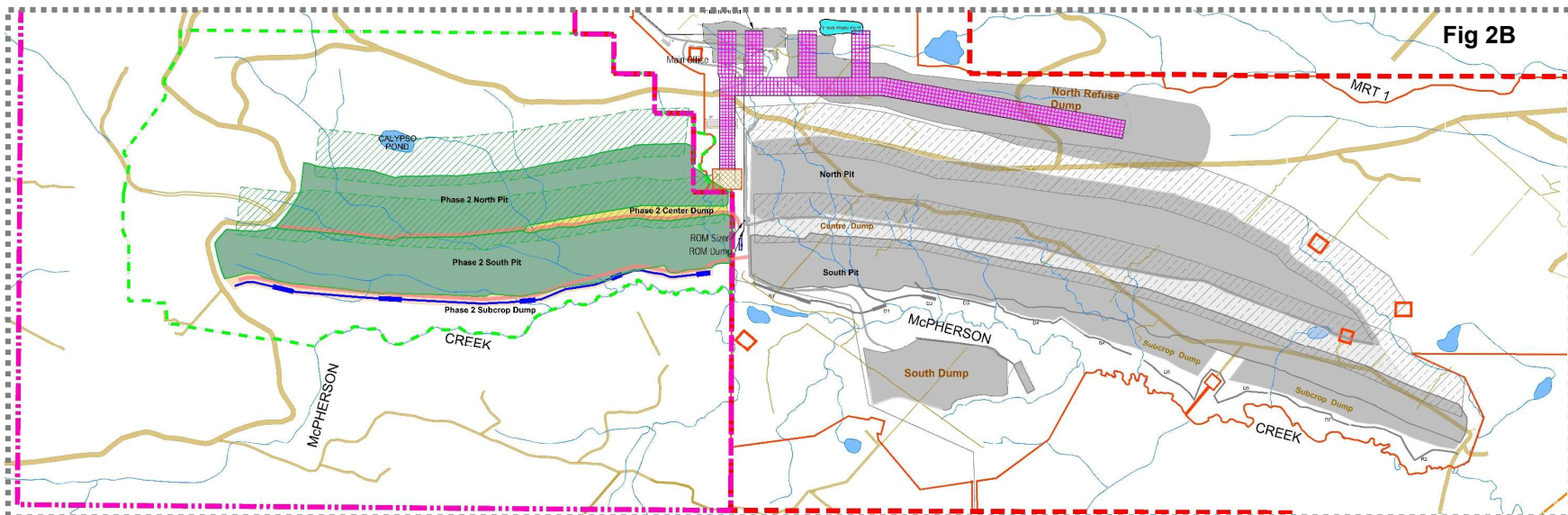


Figure 2B inset. Intersection of Phase I and Phase II activities with critical habitat identified in tributaries of McPherson Creek. Located within the Upper McLeod River Hydrologic Unit Code.



# Analysis of Designation Request

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## Authority to designate the Project

Under subsection 9(1) of the IAA the Minister may, by order, designate physical activities that are not prescribed in the *Physical Activities Regulations* (the Regulations) if in his or her opinion the physical activities 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 physical activities has not yet begun, and no federal authority has taken any action that would prevent the exercise of the Minister's authority to designate the physical activities under subsection 9(1) of the IAA<sup>9</sup>.

The Regulations identify the physical activities that constitute a designated project and 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.

In the 2019 Phase II Expansion Analysis Report, the Agency understood that the Phase II Expansion 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<sup>10</sup>, with production greater than 5,000 tonnes per day.

Based on the information provided by the Proponent, the Agency, in the 2020 VUM Analysis Report, indicated that the increase in the area of mining operations from the VUM would be approximately 2.85 hectares with production capacity below 5,000 (clean) tonnes per day.

Based on publicly available information provided to the AER in 2021, the Agency currently understands that while the proposed area of mining operations for the VUM has slightly increased since the 2020 VUM Analysis Report, other amendments, such as the removal of the north dump expansion associated with the Phase II Expansion, have reduced the combined area of mining operations of both physical activities. Thus, even combined, the resulting increase in area of mining operations (now estimated as up to a 43% increase) would still be less than the 50 percent threshold described in the Regulations. The combined coal production capacity would exceed the 5,000 tonnes per day threshold described in the Regulations.

Given this understanding of the physical activities, the Agency is still of the view that the physical activities are not prescribed in the Regulations and, therefore, the Minister may consider designating the physical activities pursuant to subsection 9(1) of the IAA.

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<sup>9</sup> 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).

<sup>10</sup> Impact Assessment Agency of Canada. 2019. Whether to Designate the Coalspur Mine Ltd. Vista Coal Mine Phase II Project in Alberta. Ottawa. 30 pp. <https://iaac-aeic.gc.ca/050/documents/p80341/133221E.pdf>

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## Potential adverse effects within federal jurisdiction

In addition to the 2019 and 2020 Analysis Reports, information to inform the Reconsideration Process and the Minister's new designation decision has been provided by Indigenous groups and federal authorities, as well as in the Proponent's IPD. Information provided through the Agency's planning process is reflected in the Agency's Summary of Issues. Information was also utilized from other publicly available sources, as referenced.

Appendix I and II provide summary tables of the potential adverse effects within federal jurisdiction, mitigation measures proposed by the Proponent, and relevant legislative mechanisms, if the physical activities proceed. Appendix III provides a summary of concerns expressed by Indigenous peoples.

### Fish and Fish Habitat

A key change that has occurred since the 2020 designation was the finalization of the *Recovery Strategy for Rainbow Trout (Oncorhynchus mykiss) in Canada (Athabasca River population)*<sup>11</sup>, in September 2020, including the identification of critical habitat, and the *Recovery Strategy for the Bull Trout (Salvelinus confluentus), Saskatchewan-Nelson River populations, in Canada*<sup>12</sup>. Rainbow Trout are listed as Endangered and Bull Trout as Threatened under the *Species at Risk Act*. Both species occur within the area of the physical activities. The physical activities are located within the Bull Trout Recovery Area and critical habitat for Rainbow Trout is found within the Phase II Expansion footprint and downstream from both physical activities.

The Agency considered information provided by the Proponent, DFO, ECCC, and Indigenous groups and is of the view that the VUM and Phase II Expansion physical activities may cause adverse effects to fish and fish habitat including fish species at risk and part of their critical habitat or the residences of their individuals. These potential adverse effects relate to alterations to fish and fish habitat from:

- changes to stream flow through physical activities related to water withdrawal and discharge, including dewatering of the underground mine;
- changes to surface water quality, such as increased contaminants or sediments from physical activities, including increased mining and associated activities and groundwater-surface water interactions during underground mining;
- the deposition of deleterious substances, such as selenium, into water frequented by fish; and

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<sup>11</sup> Fisheries and Oceans Canada. 2020. Recovery Strategy for the Rainbow Trout (*Oncorhynchus mykiss*) in Canada (Athabasca River populations). *Species at Risk Act* Recovery Strategy Series. Fisheries and Oceans Canada, Ottawa. vii + 90 pp. [https://wildlife-species.canada.ca/species-risk-registry/virtual\\_sara/files/plans/Rs-AthabascaRainbowTroutTruiteArc-en-ciel-v00-2020Sept-Eng.pdf](https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/plans/Rs-AthabascaRainbowTroutTruiteArc-en-ciel-v00-2020Sept-Eng.pdf)

<sup>12</sup> Fisheries and Oceans Canada. 2020. Recovery Strategy for the Bull Trout (*Salvelinus confluentus*), Saskatchewan-Nelson Rivers populations, in Canada. *Species at Risk Act* Recovery Strategy Series. Fisheries and Oceans Canada, Ottawa. viii + 130 pp. [https://wildlife-species.canada.ca/species-risk-registry/virtual\\_sara/files/plans/Rs-BullTroutOmblesTetePlateSaskNelson-v00-2020Sept-Eng.pdf](https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/plans/Rs-BullTroutOmblesTetePlateSaskNelson-v00-2020Sept-Eng.pdf)

- for the Phase II Expansion but potentially not for the VUM, the physical removal of fish and fish habitat, including designated critical habitat for fish species at risk (Athabasca Rainbow Trout).

The physical activities are located within the Athabasca River Basin in the Upper Athabasca and McLeod sub-watersheds. The proponent's IPD identified thirteen fish species within the area, with Rainbow Trout (Athabasca River populations) as the most prolific. DFO expressed concern about the potential for the physical activities to cause harmful alteration, disruption, or destruction of fish habitat, or death of fish. DFO also advised that there is significant uncertainty regarding effects from the physical activities to aquatic species at risk, including their habitat, survival, and recovery. It has been determined that an authorization under the *Fisheries Act* would be required for the physical activities and could include conditions to avoid, mitigate, and offset impacts to fish and fish habitat.

The physical activities interact with two areas (HUCs; Hydrologic Unit Codes) with identified critical habitat for Rainbow Trout (Athabasca River populations) – the Upper Athabasca and Oldman Creek Hydrologic Unit Code (HUC) and the Upper McLeod River HUC (Figures 2 a-c). The two sub-watersheds in which the physical activities occur have some of the larger estimated populations of Rainbow Trout (Athabasca River populations) in the region.

The Phase I permit boundary (including the clean coal belt and access road connecting the mining and processing area to the highway beside the Athabasca River) intersects with Trail Creek (Figure 2a), a tributary of the Athabasca River that contains critical habitat for Athabasca Rainbow Trout (Figure 2c). Both physical activities will use the existing infrastructure within this area. Further detail is needed to determine if the physical activities will result in additional impacts to critical habitat in the Upper Athabasca and Oldman Creek HUC, within which Trail Creek is located.

McPherson Creek, which runs within 100 meters along the south border of Phase I, drains to the McLeod River approximately 10 kilometres downstream. The McLeod River is the primary watercourse that drains the area. Activities associated with the Phase II Expansion are likely to directly affect critical habitat for Rainbow Trout (Athabasca River populations) via potential impacts to the tributaries of McPherson Creek that run through the proposed footprint (Figure 2b,c). The VUM includes mining underneath tributaries of McPherson Creek and the processing and waste management associated with the physical activity also have the potential to adversely affect critical habitat, due to the location of tributaries within and surrounding the Phase I lease area within which the VUM is located (Figure 2b,c).

Regarding the potential for deposition of deleterious substances into fish and fish habitat, ECCC indicated potential impacts from the physical activities to fish and fish habitat by calcite deposition from coal cleaning. ECCC also indicated that runoff from coal mine operations typically includes contaminants, including selenium, and the physical activities may result in deleterious substances entering McPherson Creek watershed and the McLeod River. Excessive amounts of selenium can be toxic to fish and wildlife. Concern was also raised by Indigenous groups about the potential for accumulation of selenium within bighorn sheep, a species of Indigenous importance.

The Proponent has stated that selenium is not anticipated in the runoff from the physical activities, but concerns have been raised by stakeholders and Indigenous groups. The Proponent indicates that the rocks and minerals likely to be exposed during Phase II Expansion will be similar to those in Phase I, which they

have identified as containing minimal selenium. In the Phase I provincial Environmental Impact Assessment, the potential for impacts to surface water quality and quantity and groundwater quality was low, but potential impacts to groundwater quantity was high<sup>13</sup>.

The Proponent has proposed the following monitoring, mitigation and avoidance measures:

- a 100 metre buffer from the main stream of McPherson Creek will be implemented for expansion activities, as is done for Phase I;
- streamflow augmentation to maintain adequate water volume in fish bearing streams;
- a surface water management plan, and adaptive management plan based on continuous monitoring within the receiving stream;
- development of activities in a way to avoid direct impacts to fish habitat; and
- monitoring quality and quantity parameters in multiple locations south of the mine disturbance before, during and after operations.

However, the details of the mitigation measures that will be implemented to eliminate or reduce potential effects of selenium and other contaminants are not known. There is uncertainty whether additional effects to water quality and fish and fish habitat could be limited through the physical activities design, the application of standard mitigation measures, or managed through existing legislative mechanisms.

DFO and ECCC noted that the deposition of deleterious substances may result from the physical activities and may impact fish and fish habitat and the survival and recovery of Rainbow Trout (Athabasca River populations).

It is noted by ECCC that coal mine development in the area has already increased selenium above water quality guidelines in the McLeod River. A study<sup>14</sup> performed between 1998 and 1999 indicated that baseline upstream selenium concentrations ranged from 0.5 to 1.3 µg/L total recoverable selenium. However, the greatest selenium concentrations were found in the small streams downstream from other regional mines, with concentrations of selenium in these samples as high as 36.3 µg/L total recoverable selenium. The Canadian Council of Ministers of the Environment (CCME) water quality guideline for the protection of aquatic life is 1 µg/L of recoverable selenium.

Proposed Coal Mining Effluent Regulations under the *Fisheries Act* are in development by ECCC. As proposed, these regulations would, for these physical activities, include effluent quality standards for selenium and other harmful substances that would apply at the point of discharge to water frequented by fish. However, until such time that these regulations are in place, any deposition of deleterious substances to water frequented by fish is prohibited under the *Fisheries Act*.

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<sup>13</sup> Coalspur – Vista Project Section E – Environmental Assessment. Page E-46.

<https://open.alberta.ca/dataset/2a9db6ed-4149-4b01-9fa1-676f1e78ea53/resource/6248e1da-4457-471e-b79f-85edf3662dea/download/section-e-environmental-assessment.pdf>

<sup>14</sup> Casey, Richard, and Siwik. 2000. Concentrations of Selenium in Surface Water, Sediment and Fish from the McLeod, Pembina and Smoky Rivers: Results of Surveys from Fall 1998 to Fall 1999. Alberta Environment, Edmonton, Alberta.

## Migratory Birds

Based on information provided by ECCC and the Proponent, the Agency understands that potential impacts to migratory birds include habitat alteration, increased mortality from collisions and interactions with components of the physical activities, effects to health through exposure to deleterious substances, sensory disturbance, habitat fragmentation and impacts to movement. Mitigation measures the Proponent has proposed for habitat loss include undertaking nest sweeps prior to the commencement of physical activities, working outside the restricted activity period for breeding birds when possible and undertaking progressive reclamation. It is not clear at this time the full extent of effects to migratory birds or mitigation measures that will be implemented to eliminate or reduce potential effects. However, adherence to the *Migratory Birds Convention Act, 1994*, should reduce potential adverse effects to migratory birds.

## Indigenous Peoples of Canada

The Agency considered information provided by the Proponent, Health Canada, and Indigenous groups and is of the view that the physical activities may cause adverse effects to the health, social, or economic conditions of Indigenous peoples and environmental effects that would lead to adverse impacts to physical and cultural heritage, current use of lands and resources for traditional purposes, or structures, sites, or things that are of historical, archaeological, or paleontological importance to Indigenous peoples of Canada.

The Agency analysis for the previous designation requests occurred from May to December 2019 and May to July 2020. During the 2019 Phase II Expansion analysis, the Agency received input from Louis Bull Tribe, Gunn Métis Local 55, Paul First Nation, Descendants of Michel First Nation, and Stoney Nakoda Nations (Bears paw, Chiniki, and Wesley First Nations) and also considered information from Proponent, provincial and federal authorities. This input has been summarized in Appendix 1 and further details can be found in the 2019 Phase II Expansion Analysis Report and the 2020 VUM Analysis Report.

Upon acceptance of the IPD<sup>15</sup> submitted by the Proponent on May 6, 2021, the Agency initiated the planning phase and invited comments from the public, federal and provincial authorities, and Indigenous groups on the IPD. The comments provided from all parties are captured in the summary of issues<sup>16</sup> that was issued to the Proponent on June 4, 2021.

Three Indigenous groups have written letters of support for the physical activities, Aseniwuche Winewak Nation, Descendants of Michel First Nation, and the Elders of Mountain Cree. These groups have said that the Proponent will mitigate environmental impacts, provide economic gains for their community, and collaborate with their communities during operations. Ermineskin Cree Nation has expressed that they engaged in deep dialogue with the Proponent over a number of years to ensure that their concerns related to health, social and economic conditions were addressed; their view is that the provincial process is

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<sup>15</sup> Coalspur Mines (Operations) Limited. 2021. Vista Mine Initial Project Description. <https://iaac-aeic.gc.ca/050/evaluations/document/140823>

<sup>16</sup> Government of Canada. 2021. Coalspur Mines Phase I Vista Test Underground Mine and Vista Mine Phase II Expansion Projects - Summary of Issues. <https://iaac-aeic.gc.ca/050/evaluations/document/140833>

sufficient. During the Reconsideration Process, Louis Bull Tribe and O'Chiese First Nation reiterated that they support federal designation and the undertaking of a federal impact assessment under the IAA.

The physical activities are situated on provincial crown land, in Treaty 6 territory and Métis Nation of Alberta–Region 4. The Phase II Expansion is located on forested land whereas the VUM is located primarily within the disturbed footprint of Phase I.

Some Indigenous groups noted that the absence of traditional land use studies directly related to the physical activities and potential effects, so their concerns identify their regional use and the importance of the lands that may be affected by the physical activities. ECCC has indicated there are wildlife species listed under the *Species at Risk Act* whose ranges overlap with the area of the physical activities. Some of these species are identified as species of Indigenous importance.

Indigenous groups have raised concerns regarding potential adverse effects of the physical activities to traditional and cultural use of lands and potential impacts to health, social and economic conditions as a result of the following:

- impacts to water quality and quantity of multiple rivers (McPherson and McLeod Rivers);
- impacts to wildlife, fish and migratory birds of importance including loss of habitat and access to resources;
- impacts to the ability to maintain the relationships that Indigenous peoples have with the land, including access to sites of ceremonial and spiritual significance, and the subsequent impacts on the intergenerational transfer of knowledge;
- accidents and malfunctions leading to contamination of water and terrestrial resources;
- impacts to harvested wildlife health;
- quality and availability of country foods and food security;
- impacts to Indigenous peoples' health through consumption of drinking water, country foods and medicinal plants that may be contaminated by the physical activities;
- impacts to mental and physical health of Indigenous peoples through loss of connection and solace in the land due to dramatic environmental change and fragmentation;
- uncertainty on the economic impacts of the physical activities and the need for clarity on the economic opportunities, revenue sharing and other agreements presented to Indigenous groups;
- impacts to physical and cultural heritage sites, structures and things of historical, archeological, paleontological and architecturally significant to Indigenous communities including gravesites;
- changes in air quality, noise, and water quality; and
- impacts on the ability to access sites of ceremonial and spiritual significance and subsequent impacts on the intergenerational transfer of knowledge.

In general, the Agency found that the key issues raised by Indigenous groups related to health, social, and economic conditions; cultural well-being, current use of traditional lands and resources, historical,

archaeological, paleontological and architectural resources, water, and reclamation and restoration (Appendix III).

The Agency understands that potential effects to fish and migratory birds, or other wildlife species of importance to Indigenous peoples could adversely affect the current use of lands and resources for traditional purposes by Indigenous peoples. Potential effects to the health of Indigenous peoples could occur from physical activities related changes to air quality, water quality, noise, and country foods and food security. Further information is needed to fully understand the potential for 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.

The Proponent does not anticipate the VUM physical activities will impact historical and archaeological resources that have been identified in the Phase I area. The Proponent's IPD indicated that a regional physical and cultural heritage assessment has been completed, which included the original Phase I, where the VUM is proposed and was inclusive of an additional 20 kilometres beyond the boundaries of Phase I, including Phase II. No paleontological remains were found, but 38 historical resources sites were identified within the existing Phase I, plus seven sites in the remainder of the study area. A total of four high significance historical resource sites were recorded within the regional area that lies within the existing Phase I area or directly adjacent to the currently proposed disturbance footprint for Phase II. No impacts to these sites is proposed.

As noted in the 2019 Phase II Expansion Analysis Report, the provincial Terms of Reference for the Environmental Impact Assessment for the Phase II Expansion 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.

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## 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 to a person for the purpose of enabling that project to be carried out, in whole or in part.

DFO indicated that the physical activities would require a *Fisheries Act* authorization and that the VUM and Phase II will be considered in a single review under the *Fisheries Act* and *Species at Risk Act*. Based on information provided in the IPD, Transport Canada may be required to exercise a power or perform a duty or function with respect to the *Canadian Navigable Waters Act* (CNWA). However, further detailed project information is needed to determine if a Navigation Protection Program approval would be needed. The physical activities may also potentially require the exercise of powers, duties, or functions to proceed, such as a *Species at Risk Act* permit for impacts to Athabasca Rainbow Trout or other species at risk.

Given the likelihood of federal functions, direct or incidental effects are possible. Additional information would be required to understand the potential effects.

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## Public concerns related to effects within federal jurisdiction

Appendix I provides a summary of the concerns expressed related to potential adverse effects within federal jurisdiction and adverse direct or incidental effects, the associated mitigation measures proposed by the Proponent, if any, and applicable regulatory mechanisms. The public concerns related to the physical activities are further summarized in the Annex I of each of the 2019 and 2020 Analysis Reports and in the Summary of Issues<sup>17</sup>.

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## Potential adverse impacts on the rights of Indigenous peoples

The Agency is of the view that the physical activities 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 impacts on rights from potential adverse effects to areas of federal jurisdiction and direct or incidental effects. The physical activities are located on provincial crown land within Treaty 6 and Métis Nation of Alberta–Region 4.

The concerns raised by Indigenous groups in relation to federal effects described above are linked to potential adverse impacts on the rights of Indigenous peoples, where those rights are recognized and affirmed by section 35 of the *Constitution Act, 1982*.

The physical activities may adversely impact the exercise of Aboriginal or Treaty rights of some Indigenous groups. In particular, as articulated by a number of Indigenous groups, these concerns relate to the potential for:

- changes in health, social and economic conditions related to loss of access and changes to the baseline environmental conditions;
- impacts on cultural well-being linked to loss of access to sites of cultural and ceremonial significance;
- cumulative impacts of increased industrial activity on resources and ecosystems critical for the practice of rights-related activities;
- limitations on current use of traditional lands and resources and the ability to practice rights-related activities through lack of confidence in resource safety, and direct removal, loss of access or avoidance due to sensory disturbance to areas or routes of importance;
- concerns related to limitations in access to and protection of historical and archeological sites; impacts on water quality and quantity that would impair the ability to safely use as a source of drinking water and harvest of plants and animals that rely on water in the area; and,

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<sup>17</sup> Summary of Issues for the Coalspur Vista Coal Underground Mine and Expansion Activities Project. <https://iaac-aeic.gc.ca/050/evaluations/document/140833>



- impacts related to eventual reclamation and restoration activities that would impair the ability of future generations to continue practicing rights.

For the VUM, the Alberta Aboriginal Consultation Office concluded that consultation was not required<sup>18</sup>. For the Phase II Expansion, the Proponent indicates it is engaging with seven communities (Ermineskin Cree Nation, including the community of Mountain Cree; Whitefish Lake First Nation; O'Chiese First Nation; Kehewin Cree Nation; Louis Bull Tribe; Lac Ste. Anne Metis) in alignment with the First Nation Consultation Plan approved by the Alberta Aboriginal Consultation Office, with additional engagement and relationships with other communities ongoing. The AER has a responsibility to consider potential adverse impacts of energy applications, such as coal development, on existing rights of aboriginal peoples as recognized and affirmed under Part II of the *Constitution Act*, 1982 within its statutory authority under the Alberta *Responsible Energy Development Act*<sup>19</sup>.

The Proponent stated that as part of their ongoing consultation, Indigenous communities would be informed of the proposed VUM, and short and long-term plans for Phase II. The Proponent will continue to evaluate and address the effectiveness of mitigation measures developed to address concerns raised by Indigenous groups.

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## Policies, assessments, and international commitments with regard to climate change and potential effects of the physical activities

Canada has prepared a Strategic Assessment of Climate Change (SACC) under section 95 of the IAA<sup>20</sup>. The SACC applies to designated projects under the IAA in order to enable consistent, predictable, efficient and transparent consideration of climate change throughout the impact assessment process. If designated, the physical activities would be subject to the SACC. The SACC describes the greenhouse gas (GHG) and climate change information that project proponents need to submit at each phase of a federal impact assessment and requires proponents of projects with a lifetime beyond 2050 to provide a credible plan that describes how the project will achieve net-zero emissions by 2050.

On December 20, 2019<sup>21</sup>, Canada launched the Strategic Assessment of Thermal Coal Mining to provide guidance on how future new thermal coal mine physical activities will be assessed under IAA. However, as a result of the Government of Canada's June 11, 2021, Policy Statement on future thermal coal mining projects and project expansions, the strategic assessment was cancelled as it was no longer needed.

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<sup>18</sup> Ibid., Coal Mine Site Permit: FNC Adequacy

<sup>19</sup> Alberta Department of Energy, Alberta Department of Environment and Sustainable Resource Development. 2014. Energy Ministerial Order 105/2014; Environment and Sustainable Resource Development Ministerial Order 53/2014. [https://static.aer.ca/prd/documents/actregs/MO105\\_2014.pdf](https://static.aer.ca/prd/documents/actregs/MO105_2014.pdf)

<sup>20</sup> Government of Canada. 2020. Strategic Assessment of Climate Change. Environment and Climate Change Canada, Ottawa. 26 pp.

<https://www.canada.ca/en/services/environment/conservation/assessments/strategic-assessments/climate-change.html>

The June 11, 2021, Policy Statement on future thermal coal mining states that the Government of Canada considers that new thermal coal mining or expansion projects are likely to cause unacceptable environmental effects within federal jurisdiction, and are not aligned with Canada's domestic and international climate change commitments. International thermal coal contributes up to 30% of global carbon emissions and coal burning is the largest contributor to climate change and a major source of toxic pollution<sup>21</sup>. The Government of Canada announced an ambitious national emissions reductions target under the Paris Agreement of 40 – 45% reduction below 2005 levels by 2030. In 2018, the federal government introduced regulations to phase out conventional coal fired electricity across Canada by 2030.

The policy statement on future thermal coal mining indicates that it will inform the Minister's use of the discretionary authority under Section 9 of the IAA to designate any proposed new thermal coal project or expansion that is not listed in the *Physical Activities Regulations*, and the Minister's opinion under Section 17 of the IAA<sup>22</sup>. Thus, on June 11, 2021, the Minister also issued a notice under section 17 of the IAA to the Proponent to inform them of his opinion that the physical activities would cause unacceptable environmental effects within federal jurisdiction<sup>23</sup>.

The Agency understands that activities associated with the physical activities will result in increases to GHG emissions both in Canada and internationally. The 2021 Intergovernmental Panel on Climate Change (IPCC) has indicated that, in order to limit future climate change, further to limiting cumulative carbon dioxide emissions, strong, rapid and sustained reductions in methane emissions, would also limit warming effects and air quality<sup>24</sup>. The IPCC concluded that deep reductions in greenhouse gases is required over the coming decades to prevent significant global warming (1.5 and 2 degrees Celsius) this century.

Sources of GHG emissions include the operation of diesel machinery and fugitive emissions of coal mine methane release associated with coal extraction. Greenhouse gases are also anticipated from the export and burning of thermal coal produced by the physical activities for electricity generation outside of Canada.

The Proponent indicates that underground mining proposed for the VUM uses electrical equipment and reduces the volume of overburden that needs to be hauled; therefore, overall GHG emissions would be reduced. The IPD notes that coal mine methane is one of the largest sources of GHG emissions in coal mining and underground mining has higher fugitive emissions than surface mining. There is potential for fugitive methane capture for underground mining, however these are to be explored during the VUM development. In Alberta, bituminous coal releases 0.55 thousand tonnes of methane per kilotonne of run of mine coal extracted for surface mining compared to 1.69 thousand tonnes of methane per kilotonne of run of mine coal from underground mining – more than 3 times greater. Sub-bituminous coal, such as that extracted from the physical activities, releases 0.2 thousand tonnes of methane per kilotonne of run of mine

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<sup>21</sup> Government of Canada. 2021. Statement by the Government of Canada on thermal coal mining. <https://www.canada.ca/en/environment-climate-change/services/managing-pollution/energy-production/electricity-generation/statement-government-canada-thermal-coal-mining.html>

<sup>22</sup> Ibid.

<sup>23</sup> <https://iaac-aeic.gc.ca/050/documents/p80731/139341E.pdf>

<sup>24</sup> IPCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J. B. R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press. Pg 41.

coal from surface mining. Emissions factors for sub-bituminous coal from underground mining was not provided by the Proponent.

The physical activities are expected to release an average of 35,000 tonnes of direct GHG emissions per year (43,000 tonnes total considering direct plus acquired emissions from power generation) over 9 years; a total net emissions of 388,000 tonnes of CO<sub>2</sub> emissions. The physical activities will be subject to federal greenhouse gas emissions reporting requirements, pursuant to the *Canadian Environmental Protection Act, 1999*, if it emits 10 kilotonnes or more of greenhouse gas emissions, in carbon dioxide equivalent units per year.

## Legislative and Regulatory Oversight

The Agency considered that all physical activities must be carried out in compliance with applicable federal legislation including the *Fisheries Act*, *Migratory Birds Convention Act, 1994* and *Species at Risk Act* (Annex II). The Proponent has been advised that the activities, as currently understood, will require an authorization under the *Fisheries Act*. The Proponent will be required, if authorized, to abide by the conditions of the authorization.

Authorizations, approvals and licences will be required under Alberta provincial legislation, including the *Water Act*, the *Coal Conservation Act* and the *Environmental Protection and Enhancement Act*. These provide additional tools to manage and mitigate the adverse impacts of the physical activities (Appendix II). At the time of writing, an integrated application, which includes amendments to the provincial licenses and permits plus a new mine licence for the VUM, is under review by the AER. The provincial process includes opportunities for public input. The AER notified the Proponent on December 13, 2018, that the Phase II Expansion would require a provincial Environmental Impact Assessment and issued the Final Terms of Reference on July 11, 2019. Similarly, the Phase II Expansion will require an integrated application to be submitted to the AER for review. To date, the Proponent is yet to submit an Environmental Impact Assessment Report to the AER with respect to the Phase II Expansion.

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## Conclusion

To inform its analysis, the Agency considered new information provided through the Reconsideration Process, the planning phase, and information from the previous 2019 and 2020 designation request processes. This information included that provided by the Proponent, relevant federal authorities and provincial ministries, potentially affected Indigenous groups, issues from the public of which the Agency is aware, and relevant publically available information. Further, the Agency considered the potential for the physical activities to cause adverse impacts on the rights that are recognized and affirmed by section 35 of the *Constitution Act, 1982*.

The physical activities have the potential to adversely affect fish and fish habitat, including individuals and the critical habitat of Rainbow Trout (Athabasca River populations). There is uncertainty regarding the extent to which the Proponent will be able to mitigate effects to fish and fish habitat including the destruction of habitat for fish species at risk (including Bull Trout), the ability to offset impacts to fish habitat,

and impacts from the potential deposition of deleterious substances into waters frequented by fish and cumulative effects.

There are concerns regarding the GHG emissions that the physical activities may create and the Government of Canada's ability to meet its commitments in respect of climate change. The physical activities will produce thermal coal, which will hinder the Government of Canada's international commitments in respect of global decarbonisation and climate change.

The Agency is aware that the physical activities may result in economic benefits for some Indigenous communities. The Agency is also aware that the physical activities may also 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. For some Indigenous groups with recognized and affirmed Aboriginal and Treaty rights in the area, there is potential for adverse impacts to the practice of these rights.

# APPENDIX I

## Appendix I: Analysis Summary Table

Area of Federal Jurisdiction	Potential Effects, Mitigation Proposed by the Proponent, Advice from Federal Experts, and Public and Indigenous Concerns	Relevant Legislative Mechanisms
<p>A change to fish and fish habitat, as defined in subsection 2(1) of the <i>Fisheries Act</i></p>	<p><b>Context:</b></p> <p>Rainbow Trout (Athabasca River populations) are listed as Endangered and Bull Trout are listed as Threatened under the <i>Species at Risk Act</i>. A study<sup>25</sup> estimates that a comparatively high population of Rainbow Trout (Athabasca River populations) are present in the regional watersheds that could potentially be impacted by the physical activities, including pure strain individuals.</p> <p>Provincially, Spoonhead Sculpin are listed as May be at Risk.</p> <p><b>Proponent:</b></p> <p>As provided in the 2019 Phase II Expansion Analysis Report, several tributaries to McPherson Creek are located within the Phase II Expansion mine pit footprint. Both Bull Trout (Saskatchewan– Nelson Rivers populations) and genetically pure strain Rainbow Trout (Athabasca River populations) were documented within the regional study area.</p> <p>The Proponent recognizes that a federal offsetting plan may be required in relation to the Phase II Expansion and will work with DFO to determine an appropriate path forward. The Proponent is considering their activities within a regional recovery and offsetting plan for the protection of genetically pure Rainbow Trout (Athabasca River populations).</p> <p>The Proponent identified the following as potentially affecting fish and fish habitat:</p> <ul style="list-style-type: none"> <li>• potential changes to physical habitat components;</li> <li>• potential changes to flow regime;</li> <li>• potential changes to water quality (sediment and other chemical contaminants); and</li> </ul>	<ul style="list-style-type: none"> <li>• Impacts to fish and fish habitat and aquatic species at risk are prohibited unless authorized under the <i>Fisheries Act</i> and <i>Species at Risk Act</i>.</li> <li>• A <i>Species at Risk Act</i> authorization is required if there are impacts to an aquatic species at risk, any part of their critical habitat or the residences of their individuals where affecting the species is incidental to the carrying out of the activity.</li> <li>• A <i>Fisheries Act</i> paragraph 34.4(2)(b) authorization would be required if the Project is likely to result in the death of fish.</li> <li>• A <i>Fisheries Act</i> paragraph 35(2)(b) authorization would be required if the</li> </ul>

<sup>25</sup> Canadian Science Advisory Secretariat, 2020. Information for identification of candidate critical habitat of Athabasca Rainbow Trout (*Oncorhynchus mykiss*). Science Response 2020/029. [Information for identification of candidate critical habitat of Athabasca Rainbow Trout \(\*Oncorhynchus mykiss\*\) \(publications.gc.ca\)](#)

Area of Federal Jurisdiction	Potential Effects, Mitigation Proposed by the Proponent, Advice from Federal Experts, and Public and Indigenous Concerns	Relevant Legislative Mechanisms
	<ul style="list-style-type: none"> <li>potential changes to the fisheries resource access and utilization.</li> </ul> <p>During the designation process resulting in the 2020 VUM Analysis Report and in the IPD, the Proponent indicated no effects to fish and fish habitat were anticipated in the VUM as it is located in the existing Phase I operation footprint and would utilize existing mitigation and monitoring plans.</p> <p>The Proponent has proposed the following monitoring, mitigation and avoidance measures:</p> <ul style="list-style-type: none"> <li>a 100 metre buffer from the main stream of McPherson Creek implemented for expansion activities, as is done for Phase I;</li> <li>streamflow augmentation to maintain adequate water volume in fish bearing streams;</li> <li>a surface water management plan and adaptive management plan based on continuous monitoring within the receiving stream;</li> <li>development of activities in a way to avoid direct impacts to fish habitat; and</li> <li>monitoring quality and quantity parameters in multiple locations south of the mine disturbance before, during and after operations.</li> </ul> <p>A fish toxicity program was implemented which included Rainbow Trout (Athabasca River populations). The Proponent stated that they are near completion on a technical and environmental assessment for fisheries resources.</p> <p><b>Federal Authorities:</b>  <i>Fisheries and Oceans Canada</i></p> <p>DFO noted that the physical activities could result in the death of fish and/or harmful alteration, disruption or destruction of fish habitat, including impacts to aquatic species at risk and indicated that an Application for Authorization under the <i>Fisheries Act</i> would be required. In January 2021, DFO informed the Proponent that an Application for Authorization under the <i>Fisheries Act</i> would be required for the physical activities (DFO File: 19-HCAA-00804). An application has not been received to date. Species at risk in the vicinity of the proposed physical activities include Rainbow Trout (Athabasca River populations).</p>	<p>Project is likely to cause the harmful alteration, disruption, or destruction of fish habitat.</p> <ul style="list-style-type: none"> <li>Deposit of deleterious substances into waters frequented by fish, unless authorized by regulations or other federal legislation, is prohibited under the <i>Fisheries Act</i>.</li> <li>An authorization under Alberta's <i>Water Act</i> is required for temporary disturbances to wetlands including marshes and for the temporary diversion of water enter any such water.</li> </ul>

Area of Federal Jurisdiction	Potential Effects, Mitigation Proposed by the Proponent, Advice from Federal Experts, and Public and Indigenous Concerns	Relevant Legislative Mechanisms
	<p>DFO advised that there is significant uncertainty regarding effects from the physical activities to aquatic species at risk, including their habitat, survival, and recovery. For the physical activities it is probable that the proposed water management plan would change stream flow through water withdrawal and discharge, which has the potential to cause the harmful alteration, disruption or destruction of fish habitat, and effects to listed aquatic species at risk which are prohibited under subsection 35(1) of the <i>Fisheries Act</i> and sections 32, 33 and subsection 58(1) of the <i>Species at Risk Act</i>, respectively, unless authorized.</p> <p>There is potential for the VUM to result in changes to fish and fish habitat, including but not limited to base flow losses due to groundwater dewatering, flow increases due to water discharge required to dewater the VUM, and any associated water quality changes.</p> <p>DFO stated that to determine the potential of harmful alteration, disruption, or destruction of fish habitat, or death of fish, it requires the Proponent to describe the specific locations of where genetically pure strain Rainbow Trout (Athabasca River populations) were captured and identified in 2019, how it overlaps with the Phase II Expansion footprint, and population status of potentially-affected Rainbow Trout (Athabasca River populations). They would also require accounting of the fish habitat that will be impacted, an assessment of any potential for death of fish, and proposed methods to avoid and mitigate impacts to fish and fish habitat (or to avoid the death of fish). DFO's pathways of effects should be used to guide identification of potential effects on fish and fish habitat. Once all residual effects on fish and fish habitat have been identified, the Proponent would be required to develop an offsetting plan that aligns with DFO's <i>Policy for applying measures to offset adverse effects on fish and fish habitat under the Fisheries Act and Species at Risk Act Permitting Policy – Document search – Species at risk registry</i>.</p> <p>DFO notes that the deposition of deleterious substances from the physical activities may impact the survival and recovery of Rainbow Trout (Athabasca River populations).</p> <p><i>Environment and Climate Change Canada (ECCC)</i></p> <p>ECCC stated that mining activities in general can result in adverse effects to fish and fish habitat through the release of suspended solids, ammonia, nitrate, hydrocarbons,</p>	



Area of Federal Jurisdiction	Potential Effects, Mitigation Proposed by the Proponent, Advice from Federal Experts, and Public and Indigenous Concerns	Relevant Legislative Mechanisms
	<p>selenium, and other contaminants to surrounding waters through erosion, sedimentation or runoff processes. Airborne particulate matter can also be a source of surface water contamination upon deposition. Contact water contains contaminants that could potentially effect fish and fish habitat at all mining stages. The potential exposure of acid-generating rock to air and water can also result in adverse effects on fish and fish habitat, as can mining operations that expose rock containing soluble minerals. Finally, surface water quality may be degraded by interaction between groundwater and surface waters in the physical activities area.</p> <p>ECCC notes that runoff from coal mining operations typically contain contaminants (including selenium) which may enter the McPherson Creek watershed and the McLeod River. ECCC notes that selenium concentrations in the McLeod River are elevated above water quality guidelines, due to cumulative contributions from coal mines in the headwaters.</p> <p>ECCC also notes that the physical activities have the potential to adversely affect fish habitat through the release of calcite to receiving waters.</p> <p><i>Natural Resources Canada</i></p> <p>As provided in the 2019 Phase II Expansion Analysis Report, Natural Resources Canada indicated that due to bedrock extraction below the water table, dewatering activities, and discharging wastewater, there is the potential for effects to fish habitat.</p> <p><b>Public and Indigenous Concerns:</b></p> <p>As reflected in the Summary of Issues, concerns included potential effects to fisheries access, use of fish species harvested by Indigenous peoples, and fish that are culturally significant to Indigenous peoples (such as Athabasca Rainbow Trout and Bull Trout) that occur in close proximity to and downstream of the physical activities, including in McPherson Creek. Concerns were also raised about potential effects, including cumulative effects, to fish and fish habitat and the related impacts to the rights and traditional practices of Indigenous peoples from changes to water quantity and quality, including concentrations of heavy metals and other contaminants.</p>	

Area of Federal Jurisdiction	Potential Effects, Mitigation Proposed by the Proponent, Advice from Federal Experts, and Public and Indigenous Concerns	Relevant Legislative Mechanisms
	<p>Concerns identified in the 2019 Phase II Expansion Analysis Report included impacts to water quality and quantity; permanent alteration or destruction of fish habitat including destruction of a fish-bearing tributary; and alterations to McPherson Creek.</p> <p>Concerns identified in the 2020 VUM and 2019 Phase II Expansion Analysis Reports included alteration and destruction of fish habitat; threats to fish from water quality changes; waste management; and water quality and quantity.</p> <p>Potential effects to water, fish and fish habitat were a common concern to Indigenous groups within the reconsideration process (Appendix III)</p>	
<p>A change to aquatic species, as defined in subsection 2(1) of the <i>Species at Risk Act</i> [fish or marine plants]</p>	<p>See the section “A change to fish and fish habitat, as defined in subsection 2(1) of the <i>Fisheries Act</i>” for fish species at risk.</p> <p>The physical activities will not impact the marine environment so marine plants will not be affected.</p>	<p>See fish and fish habitat section.</p>
<p>A change to migratory birds, as defined in subsection 2(1) of the <i>Migratory Birds Convention Act, 1994</i></p>	<p><b>Proponent:</b></p> <p>In the IPD, the Proponent stated that there are 134 migratory bird species that could potentially be within the physical activities area. Potential impacts to migratory birds include habitat alteration, increased mortality, effects to health through exposure to deleterious substances, sensory disturbance, habitat fragmentation, and movement obstruction. Mitigation described for habitat loss includes conducting bird sweeps, constructing outside nesting window, and progressive reclamation.</p> <p>In the 2020 VUM and 2019 Phase II Expansion Analysis Reports, it is noted that the Proponent proposes to use the existing mitigation and monitoring plans developed for Phase I.</p> <p><b>Federal Authorities:</b></p> <p><i>Environment and Climate Change Canada (ECCC)</i></p> <p>As reflected in the Summary of Issues, ECCC stated that individual mortality and the destruction of nests, eggs or any other structure necessary for the reproduction and</p>	<ul style="list-style-type: none"> <li>• Compliance with the <i>Migratory Birds Convention Act, 1994</i> is required.</li> <li>• Compliance with the <i>Species at Risk Act</i> is required.</li> </ul>

Area of Federal Jurisdiction	Potential Effects, Mitigation Proposed by the Proponent, Advice from Federal Experts, and Public and Indigenous Concerns	Relevant Legislative Mechanisms
	<p>survival of species of risk could occur during all phases of the physical activities. Large-scale land clearing activities usually associated with mining activities can also lead to the destruction, disturbance and fragmentation of habitat, habitat avoidance, and sensory disturbance. There is a higher risk that these effects would be more severe for migratory birds that are also species at risk and species where habitat is sensitive to disturbance (or where there is already a high degree of cumulative effects to habitat). If any new road infrastructure is required or an increase in road traffic volumes is expected, this could likely result in increased wildlife mortality and injury. Adverse direct effects to migratory birds and their nests are typically managed through appropriate scheduling of activities outside of the breeding season. The construction, operation, and decommissioning of mines may impact wildlife directly and indirectly through impacts to habitat through changes in geomorphological processes. Birds that land on wastewater run the risk of off-site mortality, and the potential for harmful substances to enter or be spilled into the receiving environment may also negatively affect wildlife. Finally, noise, vibrations and light from construction/operation activities may result in habitat disturbance, avoidance of use, collisions with lit structures, and disorientation/exhaustion while circling a light source.</p> <p>Similar concerns were reflected in the 2019 Phase II Expansion Analysis and 2020 VUM Analysis Reports.</p> <p><b>Public and Indigenous Concerns:</b></p> <p>As reflected in the Summary of Issues, concerns were raised about potential impacts to migratory birds, including habitat alteration, increased mortality, effects to health through exposure to deleterious substances, sensory disturbance, habitat fragmentation and movement obstruction. Concerns were also raised about potential effects to species of cultural significance to Indigenous peoples, including waterfowl and eagles. More clarity was requested on which species of migratory birds listed in the <i>Species at Risk Act</i> may be impacted and the proposed avoidance, mitigation, and offset measures.</p> <p>The 2019 Phase II Expansion Analysis Report included public concerns surrounding the loss of wetland habitat and water quality impacts as well as concerns surrounding the inadequacy of processes to consider impacts to migratory birds.</p>	

Area of Federal Jurisdiction	Potential Effects, Mitigation Proposed by the Proponent, Advice from Federal Experts, and Public and Indigenous Concerns	Relevant Legislative Mechanisms
	<p>The 2020 VUM and 2019 Phase II Expansion Analysis Reports noted concerns related to the inadequate assessment of Project effects on migratory birds; impacts of noise; impacts to wetlands; and increases in toxicity to air, soil, and water resulting in effects to wildlife.</p> <p>Impacts to the traditional use of migratory birds and their eggs by Indigenous peoples was raised as a concern.</p>	
<p>A change to the environment that would occur on federal lands</p>	<p><b>Proponent:</b></p> <p>The 2019 Phase II Expansion Analysis Report indicated that the Proponent identified the nearest federal land as Jasper National Park approximately 35 kilometres from the physical activities. The nearest reserve lands identified are Alexis Nakoda Sioux Nation Alexis Cardinal River #234, located approximately 73 kilometres southwest of the physical activities and Alexis Elk River Reserve #233, located approximately 76 kilometres south of the physical activities.</p> <p>The Proponent indicated in their IPD that there are no federal lands included in the Phase II Expansion or the VUM.</p> <p><b>Public and Indigenous Concerns:</b></p> <p>Multiple Indigenous groups indicated that a federal impact assessment should be carried out, there are often effects to federal lands from projects that 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.</p> <p>The 2019 Phase II Expansion Analysis Report notes that concern was expressed that the physical activity would have significant impacts on the surrounding Rocky Mountain ecosystem near Jasper National Park.</p>	<ul style="list-style-type: none"> <li>• Alberta Energy Regulator environmental assessment and regulatory process apply (<i>Alberta Environmental Protection and Enhancement Act, Water Act, Coal Conservation Act, and the Public Lands Act</i>).</li> </ul>
<p>A change to the environment that would occur in a province other than</p>	<p><b>Proponent:</b></p> <p>The Proponent has indicated in their IPD that neither the VUM nor the Phase II Expansion are expected to have any interprovincial environmental effects and changes are not expected outside of Canada.</p>	

Area of Federal Jurisdiction	Potential Effects, Mitigation Proposed by the Proponent, Advice from Federal Experts, and Public and Indigenous Concerns	Relevant Legislative Mechanisms
the one in which the project is being carried out or outside of Canada		
<p>With respect to the Indigenous peoples of Canada, an impact - occurring in Canada and resulting from any change to the environment - on physical and cultural heritage</p>	<p><b>Proponent:</b></p> <p>In the IPD, the Proponent states that the physical activities' proximity to Hinton and the historical coal branch towns could raise the potential of uncovering sites of physical heritage. A regional physical and cultural heritage assessment was completed for both Phase I (including the VUM) and the Phase II Expansion areas.</p> <p>The Proponent also states that they have supported the completion of traditional land use studies with its First Nations partners.</p> <p><b>Federal Authorities:</b></p> <p>As expressed in the 2020 VUM and 2019 Phase II Expansion Analysis Reports, both ECCC and DFO indicated to the Agency that changes to the environment, such as changes to fish and fish habitat may affect the use of the physical environment used by Indigenous peoples. Effects to traditional resources impacts cultural heritage.</p> <p><b>Public and Indigenous Concerns:</b></p> <p>As provided in the Summary of Issues, potential impacts to Indigenous peoples through the loss of heritage, culture, and identity, and the ability to ensure cultural continuity through intergenerational knowledge transfer due to effects of the physical activities to wildlife and wildlife habitat and plant species of cultural significance.</p> <p>Comments received in relation to the 2020 VUM and 2019 Phase II Expansion Analysis Reports included potential impacts to physical and cultural heritage.</p> <p>Adverse impacts to physical and cultural heritage through environmental effects related to the physical activities (including potential effects to air, water, plants, and animals, and direct loss of land) are noted in Appendix III. These include adverse impacts to cultural well-being, cumulative effects from taking up of lands, impacts to current use of traditional lands and resources, and the importance of reclamation and</p>	<ul style="list-style-type: none"> <li>• The Alberta Energy Regulator must consider the potential adverse impacts of energy resource applications on the existing rights of Indigenous peoples as recognized and affirmed under Part II of the <i>Constitution Act, 1982</i> within its statutory authority under the <i>Responsible Energy Development Act</i>.</li> </ul>

Area of Federal Jurisdiction	Potential Effects, Mitigation Proposed by the Proponent, Advice from Federal Experts, and Public and Indigenous Concerns	Relevant Legislative Mechanisms
	restoration to support the continuation of cultural heritage practices for future generations.	
<p>With respect to the Indigenous peoples of Canada, an impact - occurring in Canada and resulting from any change to the environment - on current use of lands and resources for traditional purposes</p>	<p><b>Proponent:</b></p> <p>In the IPD, the Proponent said that physical activities will limit the use of the area for traditional land use, hunting, and gathering. The Proponent stated that they are committed to working with Indigenous groups on reclamation activities to ensure that the landscape is reclaimed to a condition that best suits the long-term needs of people and wildlife.</p> <p>According to the IPD, past Indigenous consultation and engagement activities included information sharing and access to the site for completion of Traditional Land Use Studies and incorporation of Traditional Ecological Knowledge into reclamation/planning. The proponent provides regular updates to the Indigenous communities they are consulting and ongoing consultation will continue throughout the life of the physical activities. Mitigation plans are reviewed and discussed with community members and incorporated into plans. The Proponent developed a mining sequence that maximizes the amount of overburden placed back in the pit, allowing for quicker reclamation of mined out areas.</p> <p>The 2020 VUM and 2019 Phase II Expansion Analysis Reports indicated that the Proponent noted that Traditional Land Use Knowledge and Traditional Ecological Knowledge collected for the Phase I EIA covers the footprint of the physical activities. The Proponent stated it would inform Indigenous communities of the proposed physical activities.</p> <p><b>Federal Authorities:</b></p> <p>Health Canada noted that noise from the proposed physical activities may impact Indigenous communities who have a greater expectation of “peace and quiet” when they are undertaking traditional activities on lands and water surrounding the physical activities. There is also the potential for the physical activities to limit the use of this area for traditional land use, hunting and gathering.</p> <p>The 2020 VUM and 2019 Phase II Expansion Analysis Reports include that Health Canada noted that there may be potential for contamination of country foods; ECCC</p>	<ul style="list-style-type: none"> <li>• At the time of this analysis, the Alberta Energy Regulator is reviewing the application for the VUM.</li> <li>• The Phase II Expansion requires a provincial Environmental Impact Assessment.</li> <li>• The Alberta Energy Regulator must consider the potential adverse impacts of energy resource applications on the existing rights of Indigenous peoples as recognized and affirmed under Part II of the <i>Constitution Act, 1982</i> within its statutory authority under the <i>Responsible Energy Development Act</i>.</li> <li>• Authorization under the <i>Fisheries Act</i> may be required if the Project is likely to cause the harmful alteration, disruption, or destruction to fish habitat or is likely to result in the death of fish.</li> </ul>

Area of Federal Jurisdiction	Potential Effects, Mitigation Proposed by the Proponent, Advice from Federal Experts, and Public and Indigenous Concerns	Relevant Legislative Mechanisms
	<p>noted impacts to migratory birds, federally-listed species at risk and traditional use of wildlife species by Indigenous peoples; and DFO indicated there would likely be adverse effects to fish and fish habitat, including species at risk, and resultant effects on current use of lands and resources for traditional purposes.</p> <p>As reflected in the Summary of Issues, Indigenous Services Canada noted that the proposed physical activities will likely result in environmental contamination which could result in adverse effects to traditional harvesting of fish and other country foods in general.</p> <p><b>Public and Indigenous Concerns:</b></p> <p>As indicated in the 2019 Phase II Expansion and the 2020 VUM Analysis Reports, 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 Métis engagement, and the Alberta Government's lack of Indigenous consultation.</p> <p>As reflected in the Summary of Issues, concerns were raised around potential effects to wildlife movement and subsequently hunting by Indigenous peoples due to an increase in traffic and noise resulting from the physical activities.</p> <p>Many of these concerns were reiterated during the Reconsideration process (Appendix III).</p>	<ul style="list-style-type: none"> <li>• Deposit of deleterious substances into waters frequented by fish, unless authorized by regulations or other federal legislation, is prohibited under the <i>Fisheries Act</i>.</li> </ul>
<p>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</p>	<p><b>Proponent:</b></p> <p>The Proponent received an Alberta <i>Historical Resources Act</i> approval in October 2018 for the Phase II Expansion.</p> <p>In the IPD, the Proponent said that the paleontological field assessment for the physical activities found no paleontological remains in the development zones. A total of 179 archaeological sites were discovered in the regional area. Following development of the physical activities, the majority of these sites will be left intact for future study and many of the sites already removed have been appropriately studied prior to removal. A total of four significant historical resource sites were recorded within</p>	<ul style="list-style-type: none"> <li>• The Alberta Energy Regulator has a responsibility to consider the potential adverse impacts of energy resource applications on the existing rights of Indigenous peoples as recognized and affirmed under Part II of the</li> </ul>

Area of Federal Jurisdiction	Potential Effects, Mitigation Proposed by the Proponent, Advice from Federal Experts, and Public and Indigenous Concerns	Relevant Legislative Mechanisms
<p>historical, archaeological, paleontological or architectural significance</p>	<p>or directly adjacent to the Phase I and Phase II Expansion areas and no impact to these sites from the mining operations are proposed.</p> <p><b>Public and Indigenous Concerns:</b></p> <p>Concerns brought forward in the 2020 VUM and 2019 Phase II Expansion Analysis Reports were related to the physical activities potential adverse effects from any change to the environment on any structure, site or thing that is of historical, archaeological, paleontological or architectural significance. Additionally, concerns were raised related to the Proponent's proposed mitigation measures.</p> <p>Concerns were noted in the Summary of Issues with respect to potential impacts to physical and cultural heritage and structures, sites, and things of historical, archaeological, paleontological, or architectural significance to Indigenous communities, including cultural and ceremonial sites, through land disturbance associated with construction and operation of the physical activities. These concerns included the potential impacts to archaeological sites, ceremonial sites, and burial sites. One group indicated that there are historical artifacts and cabins of cultural significance within the physical activities area.</p>	<p>Constitution Act, 1982 within its statutory authority under the <i>Responsible Energy Development Act</i>.</p> <ul style="list-style-type: none"> <li>An Alberta Historic Resources Application under the <i>Alberta Historical Resources Act</i> is required.</li> </ul>
<p>Any change occurring in Canada to the health, social or economic conditions of the Indigenous peoples of Canada</p>	<p><b>Proponent:</b></p> <p>In the IPD, the Proponent said that they received concerns from Indigenous groups about potential impacts to food security and medicines. In response, the Proponent stated that the reclamation plan includes monitoring and targeting for both plants and animals. The Proponent remains committed to working with Indigenous groups on its reclamation activities to address future food and medicine security. The Proponent responded to concerns about employment opportunities for Indigenous peoples with information that several onsite projects have been completed by Indigenous-owned businesses/contractors; there are currently 16 Indigenous workers at the mine, and the Proponent looks forward to working with local Indigenous peoples. Through the establishment of Impact Benefit Agreements, the Proponent believes they can balance employment opportunities with traditional land use and lessen impacts after the mining phase is complete.</p>	<ul style="list-style-type: none"> <li>Deposit of deleterious substances into waters frequented by fish, unless authorized by regulations or other federal legislation, is prohibited under the <i>Fisheries Act</i>.</li> </ul>



Area of Federal Jurisdiction	Potential Effects, Mitigation Proposed by the Proponent, Advice from Federal Experts, and Public and Indigenous Concerns	Relevant Legislative Mechanisms
	<p>The 2019 Phase II Expansion Analysis Report notes that the Proponent identified potential impacts to human health as a result from the Phase II Expansion from increases in air emissions, changes in water quality, and health issues from Project-related noise.</p> <p>It is noted in the 2020 VUM Analysis Report that the Proponent does not anticipate any additional adverse effects to Indigenous peoples as the VUM physical activities are located within the existing Phase I footprint.</p> <p><b>Federal Authorities:</b></p> <p><i>Health Canada</i></p> <p>Health Canada stated that the proposed physical activities have the potential to result in human health impacts from the consumption of country foods that could be impacted by the physical activities. For example, the potential deposition of pollutants on terrestrial vegetation or surface water as a result of surface disturbance and emissions from construction activities and operation. The 2019 Phase II Analysis Report also noted impacts to human health from the consumption of fish impacted by methylmercury from the Project. 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. The 2020 VUM and 2019 Phase II Expansion Analysis Reports indicate that Health Canada noted that potentially affected receptors were not identified nor was information on what country foods may be consumed or affected by the physical activities provided.</p> <p><i>Indigenous Services Canada</i></p> <p>Indigenous Services Canada noted that the proposed physical activities will likely result in environmental contamination which may result in adverse health effects to Indigenous peoples in the area.</p> <p><i>Environment and Climate Change Canada</i></p>	

Area of Federal Jurisdiction	Potential Effects, Mitigation Proposed by the Proponent, Advice from Federal Experts, and Public and Indigenous Concerns	Relevant Legislative Mechanisms
	<p>Input from ECCC in the 2019 Phase II Expansion Analysis Report indicates that mine expansion would increase emissions, fine particulate matter, and dust as well as cumulative impacts to water quality. In addition to the points above, ECCC indicated that the physical activities may result in adverse effects to surface and ground water quality and quantity in the 2020 VUM and 2019 Phase II Expansion Analysis Reports.</p> <p><b>Public and Indigenous Concerns:</b></p> <p>The 2020 Phase II Expansion Analysis Report notes concerns from Indigenous groups that include concerns with respect to spills and contamination, reduction in the ability to use the land for traditional purposes including harvesting country foods, intergenerational knowledge transfer and long-term cultural impacts to Indigenous culture, and the loss of experiencing tranquility and relationships with the land.</p> <p>The Summary of Issues identified potential effects to wildlife health and the quality of country foods through uptake and bioaccumulation of selenium and other contaminants released from the Project, and subsequent effects to Indigenous peoples' health through consumption and use of these resources. Concerns were also raised about potential impacts from the physical activity and cumulative impacts to Indigenous peoples' mental and physical health and well-being through reduced food security and loss of connection and solace in the land due to dramatic environmental change. Similar concerns were reiterated during the Reconsideration Process (Appendix III).</p> <p>Public concerns identified in the 2019 Phase II Expansion Analysis Report include about how GHG emissions would cause consequential impacts on the health, social or economic conditions of the Indigenous peoples of Canada.</p>	
Adverse direct or incidental effects	<p>Transport Canada may be required to exercise a power or perform a duty or function with respect to the <i>Canadian Navigable Waters Act</i> (CNWA).</p> <p>DFO indicated that a <i>Fisheries Act</i> authorization and likely a <i>Species at Risk Act</i> permit are required.</p> <p>Depending on the scope of the physical activities, ECCC may need to issue permits related to the <i>Migratory Birds Convention Act, 1994</i> and/or the <i>Species at Risk Act</i>.</p>	<ul style="list-style-type: none"> <li>• Powers, duties, or functions may be exercised under the <i>Species at Risk Act</i>, the <i>Fisheries Act</i>, <i>Migratory Birds Convention Act, 1994</i>, and/or the</li> </ul>

Area of Federal Jurisdiction	Potential Effects, Mitigation Proposed by the Proponent, Advice from Federal Experts, and Public and Indigenous Concerns	Relevant Legislative Mechanisms
<p>Public concerns related to the following effects: effects on endangered and threatened species and their habitats</p>	<p><b>Proponent:</b></p> <p>In its IPD, the Proponent identified that 60 species that are listed as species at risk either provincially or federally could occur in the area of the physical activities. This includes 45 bird, 10 mammal, three amphibian, and two reptile species.</p> <p>The Proponent did not anticipate any impacts to endangered or threatened wildlife species or their habitats, however the Proponent would submit a Wildlife Mitigation and Monitoring plan as required for their <i>Environmental Protection and Enhancement Act</i> approval.</p> <p><b>Federal Authorities:</b></p> <p><i>Environment and Climate Change Canada</i></p> <p>As provided in the Phase II Expansion Analysis Report, ECCC identified fifteen species at risk including six endangered or threatened species (Barn Swallow, Common Nighthawk, Gypsy Cuckoo Bumble Bee, Little Brown Myotis, Northern Myotis, Olive-sided Flycatcher), whose ranges overlap with the area of the physical activities. Effects include changes to key and critical habitat, mortality, and changes in movement as a result of the physical activity.</p> <p>As indicated in the 2020 VUM and 2019 Phase II Expansion Analysis Reports, ECCC identified the potential for adverse effects to species at risk, but there was insufficient data to understand the potential effects of the physical activities on the species at risk located near the physical activities.</p> <p><b>Requester and Indigenous Concerns:</b></p> <p>The 2019 Phase II Expansion Analysis Report noted Indigenous concerns included changes to wildlife habitat and behaviour; increases in toxicity to air, soil and water, and resulting effects to wildlife. Similar concerns were brought forward in the 2020 VUM Analysis Report and during the Reconsideration Process (Appendix III).</p>	<p><i>Canadian Navigable Waters Act.</i></p> <ul style="list-style-type: none"> <li>• Compliance with the <i>Species at Risk Act</i> is required.</li> <li>• <i>Environmental Protection and Enhancement Act</i> approval requires submission of mitigation and monitoring plans.</li> </ul>

# APPENDIX II

## Appendix II: Relevant Potential Federal and Provincial Authorizations

Authorization	Description
<p><i>Fisheries Act</i> Authorization</p>	<p>Authorization under paragraph 34.4(2)(b) of the <i>Fisheries Act</i> is required when any activity that is not fishing results in the death of fish.</p> <p>Authorization under paragraph 35(2)(b) of the <i>Fisheries Act</i> is required when any activity that is not fishing results in the harmful alteration, disruption, or destruction to fish habitat (HADD). Prior to issuing such authorizations, consultations with potentially impacted Indigenous groups would be undertaken and potential accommodation for adverse impacts could be considered as appropriate.</p> <p>The <i>Fisheries Act</i> 36(3) prohibits the deposit of deleterious substances into waters frequented by fish, unless authorized by regulations or other federal legislation.</p>
<p><i>Species at Risk Act</i> Authorization</p>	<p>Authorization may be required if there are impacts to a species at risk, any part of their critical habitat or the residences of their individuals in a manner which is prohibited under sections 32, 33 and subsection 58(1) of the <i>Species at Risk Act</i>. Prior to authorization, the Competent Minister under this Act must be satisfied that the activities will not jeopardize survival or recovery of the species at risk.</p> <p>For non-aquatic species listed in Schedule 1 of the <i>Species at Risk Act</i> as Extirpated, Endangered or Threatened, a permit may be required from Environment and Climate Change Canada (e.g. under section 73 of the <i>Species at Risk Act</i>) 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.</p> <p>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.</p> <p>Prohibitions are in place for individuals and residences on federal lands in a province, reserve or any other lands under the <i>Indian Act</i>, or lands under the authority of the Minister of Environment, and for birds listed under the <i>Migratory Birds Convention Act, 1994</i> wherever they occur regardless of land tenure.</p>
<p><i>Migratory Birds Convention Act, 1994</i></p>	<p>The <i>Migratory Birds Convention Act, 1994</i> prohibits killing, harming, or collecting adults, young and eggs of migratory birds and screens and</p>

Authorization	Description
	provides regulatory responses for effects to migratory birds. A permit is required for all activities affecting migratory birds, with some exceptions detailed in the Migratory Birds Regulations.
<i>Canadian Environmental Protection Act, 1999</i>	Greenhouse gas emissions reporting is required if ten kilotonnes or more of GHGs are emitted in carbon dioxide equivalent units per year. This would be in addition to reporting required from the Strategic Assessment of Climate Change, should an impact assessment be required.
<i>Explosives Act</i>	<p>Natural Resources Canada issued a Factory Licence under 7(1) of the Explosives Act on August 31, 2018, for the operation of a bulk explosives plant at the Phase I site. Natural Resources Canada consulted with four Indigenous groups prior to the issuance of the Factory Licence.</p> <p>Natural Resources Canada granted an amendment to the Factory Licence in April 2020, to allow the relocation of the emulsion plant.</p> <p>Natural Resources Canada does not expect any further modifications to explosives licences under the <i>Explosives Act</i> for the physical activities considered herein.</p>
Coal Mining Effluent Regulations (pending)	The Coal Mining Effluent Regulations (CMER; proposed under the <i>Fisheries Act</i> ) are being developed by Environment and Climate Change Canada and would provide effluent quality standards to deposit deleterious substances (selenium, nitrate and suspended solids). The target to pre-publish proposed regulations in Canada Gazette, Part I is in the summer of 2022. Final regulations are targeted for 2023, at which time they would be law. This Project would be subject to these regulations.
Clean Fuel Standard Regulations (pending)	The proposed Clean Fuel Standard (CFS) Regulations will reduce the lifecycle carbon intensity of fossil fuels used in mobile and stationary equipment in the construction and operational phases of activities. In addition to the use of lower carbon fossil fuels that would be supplied, the CFS would incent some GHG reduction measures (such as the use of electric or zero emission technologies in lieu of fossil fuel equipment) that would enable the Proponent to generate credits for trade. The regulations for the liquid fossil fuel class are being developed first, with draft regulations published in Canada Gazette, Part I, in December 2020 and Environment and Climate Change Canada will continue consultations with interested parties with final regulations to be published in late 2021, with the coming into force of the regulatory requirement in December 2022.
<b>Alberta</b>	
<i>Environmental Protection and Enhancement Act</i> (EPEA)	EPEA supports and promotes the protection, enhancement and wise use of the environment. The Alberta Energy Regulator reviews applications under EPEA to assess the potential environmental impacts of a proposed project.

Authorization	Description
	<p>The Proponent has submitted two applications for amendments to the Phase I EPEA approvals. The Alberta Energy Regulator is reviewing these applications.</p>
<i>Coal Conservation Act</i>	<p>To regulate the exploration of coal, the site development for coal extraction and the commercial operation of a coal extraction site.</p> <p>The Proponent will be required to apply for a new mine license for the construction, methodologies, and operation for both the Phase II Expansion and VUM. The Proponent will also require an amendment to pre-existing permits to increase the production levels due to the Phase II Expansion and VUM.</p>
<i>Water Act</i>	<p><i>Water Act</i> approval for the construction and operation of water management structures. Existing and new water management facilities will be required for the Phase II Expansion and VUM.</p>

# APPENDIX III



## Appendix III: Indigenous Concerns Known to the Agency in Relation to the Physical Activities

Indigenous Concerns Expressed During the Reconsideration Process and Planning Phase
<b>Consultation and Impact Assessment Process</b>
Concerns about the provincial processes being inadequate to regulate coal mining
Different Indigenous groups have varying levels of engagement and interaction with the proponent
Need for consultation to be meaningful, include impacts to rights, and be tailored to each group
Challenges with the rapid timelines associated with designation consideration processes under IAA
<b>Health, Social, and Economic Conditions</b>
Interest in potential economic and educational opportunities for Indigenous peoples
Concerns about the loss of medicinal plants and trees
Concerns about the introduction of contaminants into the environment, particularly selenium and its effects on vegetation, water quality and wildlife and resultant adverse impacts to food security, safety of food and water consumption, and health
Concern that adverse effects to water quality will have negative health and social impacts, as water is medicine; the project is in the heart of source water for at least one community
<b>Cultural Well-being</b>
Potential loss of ceremonial lands and resources of cultural importance (including fish, plants, game) may adversely impact intergenerational transfer of knowledge, language, and culture
<b>Cumulative Effects</b>
Increased traffic, anthropogenic footprint, and fragmentation of lands are having an adverse impact on the ability to undertake traditional activities in locations that are meaningful and accessible.
Concerns regarding cumulative impacts to climate change and the amount of greenhouse gases produced by thermal coal mining
Concerns regarding the ability to continue to practice treaty rights to hunt, fish, gather and harvest within the physical activities footprint and surrounding areas

## Indigenous Concerns Expressed During the Reconsideration Process and Planning Phase

Concerns about the cumulative impacts of mining operations on the surrounding landscape on water (including selenium), wildlife, fish, and plants

Concerns surrounding what has been considered baseline for the purpose of biophysical assessments and the lack of Indigenous Knowledge incorporated

### Current Use of Traditional Lands and Resources

Concerns regarding the potential for displacement and altered movement patterns of wildlife from habitat loss and fragmentation, increased traffic and sensory disturbance (e.g. noise, smells) associated with the physical activities, which would impede traditional hunting

Potential adverse effects to fish habitat related to flow, altered water quality, fisheries resource access, fish diversity, and direct loss of tributaries and impacts to traditional use of fish and aquatic resources

Loss of medicinal plants

### Historical, Archaeological, Paleontological and/or Architectural Resources

Lack of directed traditional land and resource use studies impedes knowledge of whether archaeological, burial, ceremonial, or paleontological sites are present

Importance of notification of finds of potential significance and for elders to undertake surveys pre-development

Concern that sedimentation may affect historical ancestral sites downstream on the McLeod River

### Water

Concerns about water quality, particularly selenium, sedimentation, and any other contaminants was a key theme intersecting with most other concerns

Lack of clarity on the source and quantity of water proposed for use in the physical activities, the end result of tailings upon closure, and the potential for accidents and malfunctions including spills and leaks

### Reclamation and Restoration

Concerns about reclamation and long term effects on the landscape for use by future generations and the need to restore to a pre-disturbance state in a timely manner, including water