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Ajax Mine Project Report on Final Environmental Assessment Public Comment Period

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1. INTRODUCTION

This report summarizes the issues raised during the final public comment period in the coordinated federal provincial environmental assessment (EA) of the Ajax Mine Project (Ajax), proposed by KGHM Ajax Mining Inc. (KAM) to be located immediately south of Kamloops, British Columbia. The Canadian Environmental Assessment Agency (the Agency) and British Columbia's Environmental Assessment Office (EAO) recognized the high levels of public interest in Ajax since the start of the EA process in 2011, and therefore, carried out enhanced public engagement activities. These activities included five public comment periods, multiple open houses, question and answer sessions and public presentations, and direct engagement with stakeholder groups. The Agency and EAO would like to thank all parties who participated in this multi-year EA process.

On August 8, 2017, the Agency and EAO issued a joint federal Comprehensive Study/provincial Assessment Report (the Report) for Ajax, to inform separate EA decisions by federal and provincial governments. The Report includes the Agency's and EAO's conclusions and recommendations regarding the implementation of mitigation measures and whether the project is likely to cause significant adverse environmental effects. The EAO also developed proposed EA Certificate Conditions, a draft Certified Project Description, and a draft Summary Assessment Report. All of these documents were subject to a 63-day joint federal and provincial public comment period, in which the public and Indigenous groups were invited to provide feedback on the documents. The comment period closed on October 10, 2017.

The Agency and EAO received over 1,000 submissions during the final public comment period which were posted to the EAO's Electronic Project Information Centre. This report summarizes the comments received and provides the Agency and EAO's responses, including references to EAO's proposed Table of Conditions or post-EA permitting requirements where relevant. It also describes, where applicable, revisions that the EAO made to the draft provincial documents as a result of the comments received. This report has been included in the respective referral packages for federal and provincial decision-makers.

2. SUMMARY OF COMMENTS

The Agency and EAO appreciate that contributors spent considerable time and effort reviewing the documents and preparing their submissions. Comments were largely received from individuals, with some provided by businesses or other groups, including organizations that were members of the EAO's Community Advisory Group. Submissions were also received from the City of Kamloops, Whispering Pines/Clinton Indian Band and the Métis Nation of British Columbia.

Most comments, in addition to remarks on effects of the project, also indicated support or opposition to Ajax. A large number of submissions made reference to the proximity of Ajax to Kamloops. The Agency and EAO recognize that, over the course of the EA process, Ajax has generated strong views about whether it should proceed. While the Agency and EAO acknowledge expressions of support or opposition to Ajax, it is important to note that the comment period was not intended to quantify or verify public support or opposition to Ajax.

The comments covered the breadth of value components assessed in the EA. The key topics were:

- **Air quality:** Concern regarding Ajax's contribution of emissions in the Kamloops area and whether the air quality effects would be effectively and adequately mitigated to the levels that KAM committed, especially in areas closest to the mine.
- **Human health:** Concern about respiratory effects related to air emissions from Ajax, especially from dust and particulate matter, and related health impacts to vulnerable populations such as the very young, the elderly, and those with pre-existing respiratory conditions. The public also raised concerns regarding bioaccumulation of metals and other contaminants through ingestion of water and country foods.
- **Surface water:** Concern that water use by Ajax would affect sensitive water systems, including Peterson Creek, Kamloops Lake and the Thompson River system, which would affect licensed water users, wildlife and aquatic species. The public was also concerned that Ajax would increase the concentration of contaminants in surface water, which would affect aquatic life, wildlife, agriculture, ranching, and drinking water in nearby communities. Some members of the public indicated that the level of assessment for both surface water and groundwater was not sufficiently robust and that too many uncertainties remain.
- **Groundwater:** Concern that Ajax would cause changes in groundwater flow which would affect ground stability, especially in the Aberdeen neighbourhood. The public was also concerned that Ajax would result in degraded groundwater quality, which would affect groundwater uses including drinking water (and related health impacts), irrigation and livestock. The public raised concerns that use of groundwater would adversely affect sensitive water ecosystems, which would affect licensed water users, wildlife, and aquatic species.
- **Vegetation and wildlife:** Concern that Ajax would destroy important grassland and wetland habitat which could result in decreases in local wildlife populations and potential extirpation of local threatened species. Members of the public also expressed concern that grasslands remediation and/or offsetting programs would not be successful.
- **Community wellbeing:** Concern that Ajax would adversely affect access to healthcare, the visual quality of areas south of Kamloops, and its brand as a tournament capital, as well as its tourism image locally, nationally, and internationally; and concern about the sense of well-being of residents living closest to the mine.
- **Local and regional economy:** Concern about the need for local, well-paying jobs; and whether local economic benefits of Ajax met or exceeded the potential environmental and social risks of the project.
- **Property values:** Concern that the real and/or perceived effects from dust deposition, noise, vibration, visual quality, and changes in water quantity and quality could reduce local property values in the near- and long-term. Using a hedonic pricing model, some commenters recommended that a property value protection program, administered by KAM, be a condition of the EA Certificate.
- **Aboriginal Interests:** Commenters acknowledged Stk'emlupsemc te Secwepemc Nation (SSN)'s decision not to support Ajax and remarked on the importance of upholding the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).
- **Accidents and malfunctions:** Concern that there would be a breach of the tailings storage facility, which would affect the safety and security of Kamloops residents.

3. SUMMARY OF GOVERNMENT RESPONSES TO COMMENTS

The Agency and EAO reviewed all of the submissions, summarized the issues by topic and provided government responses to the full list of topics, in Table 1. For ease of reference, the topics are presented in the same order as the valued components in the Report. The Agency and EAO jointly responded to comments regarding environmental, health and heritage values. The EAO provided responses to comments about the social and economic valued components (i.e., community wellbeing, local and regional economy, and property values) as these areas are part of the provincial environmental assessment legislation. Issues raised in the comments that are not specific to valued components are presented at the end of Table 1.

In developing responses to the comments, the EAO additionally considered revisions to the draft provincial documents that were made available for public comment, including the proposed Table of Conditions, draft Certified Project Description, and draft Summary Assessment Report. The Table of Conditions for Ajax establishes the specific measures that KAM would have to implement to prevent or mitigate adverse environmental, social, economic, health or heritage effects, as well as potential impacts to Aboriginal Interests. In the event that provincial ministers decide to issue an EA Certificate, the Certified Project Description and the Table of Conditions (and any documents produced to meet those conditions) would become legally-binding and subject to compliance and enforcement under BC's *Environmental Assessment Act*.

A summary of government responses to key topics is presented below.

Air quality:

The Agency and EAO note that mitigation of dust from haul roads will be particularly important to manage dust levels, which would increase as a result of Ajax. The Agency and EAO assessed and acknowledged uncertainties associated with both air dispersion modeling and the mitigation effectiveness. To help address these uncertainties, the EAO proposed an Air Quality Management and Monitoring Plan condition that would require KAM to monitor actual air quality conditions at Ajax and verify these against the predictions in the EIS/Application. The plan would also describe the specific mitigation measures that KAM would apply to reduce air quality effects, including the adaptive management measures that KAM would apply in the event that measured concentrations of air contaminants were greater than predicted. The EAO also proposed an Air Quality Reviewer condition that would require KAM to contract a third party to review and examine the quality of data collected under the Air Quality Management and Monitoring Plan.

Human health:

The proposed EA conditions would require KAM to continuously monitor PM_{2.5} and PM₁₀ upwind and downwind of the mine site, and implement mitigation measures when trigger levels are approached. Measures include ceasing non-essential activities in affected areas, up to and including ceasing haul road activity. The EAO also proposed a Human Health Reporting condition that would require KAM to retain a qualified professional to evaluate the human health risks associated with exposures to contaminants in air, water and country foods. The qualified professional would conduct an analysis of dust deposition, water quality, soil, plant, and fish tissue for metals, to determine their combined effect on human health risk, during mine construction, operations and closure. Proposed EAO conditions that support the human health reporting include requirements for monitoring and management of air and water quality, to verify predicted effects and enable pre-determined adaptive management actions if required.

Surface water:

Public comments indicated concern regarding water use at Ajax and the protection of water resources in the Kamloops region. The effects of Ajax on surface water flow in Peterson Creek, Jacko Lake, and the Thompson River were assessed in the Report and included climate change considerations. In consideration of streamflow impacts in the Peterson Creek watershed, the EAO proposed a condition that would require KAM to further develop a long-term streamflow management strategy to address environmental flow needs and the rights of potentially-affected water license holders. In consideration of comments received during the public comment period, the EAO revised the proposed condition to also consider BC's *Policy for Mitigating Impacts on Environmental Values* and require that KAM provide a range of options to avoid, minimize, restore and, if necessary, offset for effects on streamflow in the Peterson Creek watershed.

With regard to water quality, the Agency and EAO determined that Ajax would result in increased concentrations of some water quality contaminants in lower Peterson Creek and Humphrey Creek and acknowledged that there are uncertainties associated with the potential related effects to ecological receptors from changes in surface water quality. The EAO proposed an EA Certificate condition that would require KAM to develop a surface water quality monitoring plan that includes monitoring, verification, and adaptive management. In consideration of public comments, the EAO revised the proposed condition to also require consideration of BC's *Policy for Mitigating Impacts on Environmental Values*. The EAO notes that, should Ajax proceed, there would be further details required from KAM in order to obtain additional permits.

Groundwater:

The public expressed concern that changes to groundwater quality in the vicinity of Ajax would affect their water use and potentially their health. The Report considered potential sources of groundwater contamination and the potential for activities and conditions at Ajax to cause metal leaching/acid rock drainage. The EAO proposed an EA Certificate condition that would require KAM to implement mitigation measures to avoid and reduce impacts to groundwater near Ajax, to monitor groundwater conditions, and to apply adaptive management to adjust the mitigation approach to reflect actual conditions encountered. The EAO reviewed additional information received during the public comment period and revised the proposed condition to require additional groundwater monitoring locations in the Peterson Creek aquifer, and to describe mitigation options that consider BC's *Policy for Mitigating Impacts on Environmental Values*. These adjustments provide additional certainty related to the range of actions that KAM would be required to take to monitor and mitigate effects to groundwater quality (including groundwater well users) that may be affected by Ajax.

Members of the public, particularly in the Aberdeen neighbourhood, stated concerns that Ajax would cause changes in groundwater movement that could exacerbate slope stability issues in Aberdeen. The Report concluded that Ajax would cause changes in groundwater levels near the mine site and decreasing with distance. In consideration of the results of KAM's sensitivity scenarios and the interpreted groundwater divide to the north of Ajax, as well as input from members of the working group, the Agency and EAO are of the view that groundwater levels in Aberdeen would not be affected. However, as slope stability in the Aberdeen area may be sensitive to relatively small changes in groundwater levels, the EAO proposed an EA Certificate condition that would require KAM to develop a slope stability and pore water pressure monitoring plan for the area between Ajax and Aberdeen. The EAO also proposed a condition requiring KAM to undertake further groundwater investigations at Ajax prior to construction and to incorporate the results in project design, and a condition requiring ongoing groundwater management and monitoring throughout all phases of the mine.

Vegetation and Wildlife:

The Report indicates that Ajax would result in the loss of grassland and wetlands within the mine site, which provides habitat for rare plant and animal species. The Report also acknowledged lengthy timeframes for mine site reclamation to become effective, and determined that additional mitigation measures were required. The EAO proposed a condition requiring that KAM develop a Grassland Restoration and Enhancement plan outside the mine site, to support improved grassland habitat and use by species that would be affected by Ajax. In addition, the EAO also proposed conditions for Pre-Construction Vegetation and Wildlife Surveys, a Wildlife Management and Monitoring Plan, a Vegetation Management and Monitoring Plan, and a Wetland Offsetting Plan. In consideration of comments regarding uncertainties associated with the effectiveness of mitigation measures, the EAO revised these proposed conditions to ensure that the plans would be consistent with the mitigation hierarchy in BC's *Policy for Mitigating Impacts on Environmental Values*.

Community wellbeing:

Commenters were concerned that Ajax may affect the livability of Kamloops and the well-being of its residents. In the Report, the EAO assessed multiple potential effects that relate to community wellbeing (access to healthcare, visual quality, dark sky) and determined that, with mitigation measures, Ajax was not likely to cause significant adverse effects. However, changes from baseline conditions of healthcare access, light pollution and visual quality may be noticed by some residents. Based on the data provided and the analytical techniques used to support the assessment the EAO has low-to-moderate confidence in the assessment of impacts to community wellbeing. The proposed Table of Conditions included a number of requirements that would help to reduce potential effects to community wellbeing such as the development and implementation of a Community Liaison Group, a Construction Workforce Accommodation and Health Services Plan, a Light Pollution Management and Monitoring Plan, in addition to the conditions related to air quality, noise and vibration and human health. The EAO revised the summary assessment report, in consideration of public comments, to acknowledge the uncertainties associated with assessing Ajax-related impacts to community wellbeing.

Local and regional economy:

Most submissions regarding the local or regional economic impacts of Ajax included statements of support or opposition to the project. The provincial EA legislation includes the potential adverse economic effects, and the Report considered the effects of the project on other commercial and industrial employment and business opportunities. In recognition of the public's interest in monitoring the employment and business opportunities, for example, the proposed EA Certificate conditions would require that KAM monitor and report on local and regional training, employment and procurement, as well as effects associated with the construction workforce including health services. The EAO is of the view that the Report's conclusions and the provincial draft Table of Conditions adequately and accurately considered the public concerns regarding the potential effects of Ajax on the local economy. Provincial ministers must consider the Report in their decision, and they may consider other matters in the public interest. Based on the public submissions, the Summary Assessment Report section on weighing benefits which includes employment, taxation and other types of social or economic benefits was revised to include the range of public perspectives on benefits.

Property values:

The EAO considered the hedonic pricing analysis provided during the comment period and remains of the view that there are multiple complex and interacting factors that influence market housing values, and that a hedonic pricing model would not have resulted in different predictions or a higher level of confidence in the property values effects assessment. The EAO also considered the submissions regarding property value protection programs and remains of the view that an EA condition requiring a property value protection

program is not feasible or appropriate. The Report concluded that overall adverse impacts to property values in Kamloops would be negligible to moderate. The highest magnitude would be on properties located within 1 km of the mine site that may receive overlapping nuisance effects (e.g. dust and noise or other combinations). Future development lands at the south end of the Kamloops development boundary may also experience similar nuisance effects, depending on the overlaps in timing of future residences and Ajax development and operations. In consideration of concerns regarding effects on property values, the EAO revised the minimum distances required for monitoring noise and vibration in the Table of Conditions. The proposed approach of requiring KAM to monitor and manage potential nuisance effects through EA conditions relating to air quality, noise, vibration and light pollution would help mitigate effects on property values.

Aboriginal Interests:

The Government of Canada has committed to renew the relationship between Canada and Indigenous peoples based on recognition of rights, respect, co-operation and partnership. These principles align with United Nations Declaration on the Rights of Indigenous Peoples and are consistent with the Government of Canada's approach to consultation with Indigenous peoples. The Province of British Columbia is committed to fully adopting and implementing the United Nations Declaration on the Rights of Indigenous Peoples.

Accidents and malfunctions:

The Agency and EAO assessed potential accidents and malfunctions, including failure of the tailings storage facility. In March 2015, the EAO issued additional information requirements to KAM regarding tailings storage facility alternatives to ensure that this issue was fully considered in the EA. If the project proceeds, Ajax would be designed, operated, and monitored consistent with the new provincial Mining Code regime, which was updated in 2016 following the Mount Polley Independent Expert Engineering Investigation and Review Panel's recommendations on the tailings storage facility breach at Mount Polley. In the unlikely event of a tailings storage facility or pit wall breach, KAM would be liable and responsible for clean-up and remediation efforts. In addition, the EAO has proposed a condition requiring KAM to develop an Accidents and Malfunctions Communication Plan that describes communication with affected parties in the event of an accident or malfunction.

Table 1. Ajax Final Public Comment Period – Summary of Comments and Responses from the Agency and EAO

Key Issue	Summary of comments	Response and applicable report conclusions and proposed provincial conditions
Topic: Surface Water (raised in 15% of comments)		
Surface water quantity	<p>Members of the public expressed views that water use at Ajax would be enormous and that Ajax would place additional stress on vulnerable water supplies in the Peterson Creek and Cherry Creek watersheds, as well as in Kamloops Lake and the Thompson River system. Commenters were concerned that Ajax would divert water from sensitive water ecosystems and reduce the amount of water available to fish and wildlife, as well as to people who use the water. Concerns were also raised that climate change could potentially exacerbate these effects and cause unpredictable challenges for water management at Ajax.</p>	<p>The issue of water use and how Ajax would change surface water flows near the mine site was carefully considered during the EA. The Agency and EAO understand that the Kamloops area currently experiences water restrictions in the summertime and that protection of water resources is important to the public. KAM provided additional information that included a strategy for managing the predicted streamflow reductions in Peterson Creek and related effects to ecosystems and licence holders, as well as clarification regarding the potential effects of climate change.</p> <p>The Agency and EAO concluded that there would be negligible residual effects to surface water quantity in the Thompson River system under average climate conditions and also taking into account climate change. Ajax would result in a maximum predicted reduction in average monthly flow, and 10-year low monthly flow, in the Thompson River at Savona of less than 0.25% and 0.33%, respectively. See section 2.4.2 of the Report for details.</p> <p>To address uncertainties regarding KAM's mitigation measures for streamflow, the EAO proposed EA Certificate Condition Water Management and Hydrometric Monitoring Plan that would require KAM to further develop a long-term streamflow management strategy for addressing environmental flow needs and for addressing the effects of Ajax on the water supply requirements of water license holders upstream and downstream of the mine. The plan would include requirements for monitoring, verification, and adaptive management.</p> <p>In consideration of comments received during the public comment period, the Report and discussions with relevant provincial agencies, the EAO revised this Condition to include requirements for KAM to describe mitigation options that reflect BC's <i>Policy for Mitigating Impacts on Environmental Values</i> for existing surface water licence holders on Peterson Creek and Jacko Lake.</p>
Surface water quality	<p>Members of the public raised the concern that activities at Ajax would compromise surface water quality, which would have cascading effects on aquatic life, wildlife, and people who use the water (e.g. for drinking water and agricultural use). Commenters including the City of Kamloops, the Kamloops Area Preservation Association, and Métis Nation of British Columbia raised concerns regarding bioaccumulation of selenium, and resulting impacts on fish.</p> <p>Some members of the public were of the view that the provincial and federal governments failed to require a sufficiently rigorous assessment of impacts on surface and groundwater and the potential impacts on downstream water users.</p> <p>Commenters expressed concern that acid rock drainage</p>	<p>The Agency and EAO assessed the effects of Ajax on surface water quality (and groundwater quality – see below) under average climate conditions and in consideration of various sensitivity scenarios in order to determine the range of potential residual effects that could be experienced. The assessment considered KAM's water quality modelling results, which included potential sources of contamination such as the tailings and mine rock storage facilities, and the application of KAM's proposed mitigation measures. The Agency and EAO required KAM to provide further evaluation of the potential effects of climate change on existing conditions, and factored this information into the assessment.</p> <p>The Agency and EAO concluded that Ajax would result in increased concentrations of some parameters in surface water in lower Peterson Creek and Humphrey Creek. The residual effects associated with selenium, sulphate and aluminum were considered to be high magnitude residual effects. The effects were considered irreversible and moderately likely to occur. The habitat in Lower Peterson creek is of marginal value, and the Agency and EAO consider that this reduces the likelihood that there would be effects to ecological receptors. For Humphrey Creek, the Agency and EAO note that it is not considered fish habitat. While Humphrey Creek supports amphibians and invertebrates, there are uncertainties regarding the suitability of the creek as habitat, due to flow conditions.</p> <p>The Report noted that there are uncertainties associated with the potential effects to ecological receptors such as aquatic life and wildlife from changes in surface water quality and that selenium has the potential to bioaccumulate in the food chain.</p> <p>The Agency and EAO recognize the importance of monitoring and verifying actual water quality results against KAM's predictions, and</p>

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	<p>and leaching of tailings from Ajax would increase concentrations of heavy metals in groundwater and surface water. Many comments raised concerns regarding the potential for uncontrolled runoff to occur as a result of extreme weather events and climate change, which could contaminate water resources and affect downstream receptors including Peterson Creek (a source of drinking water for Knutsford) and downstream communities.</p> <p>The public also expressed concern regarding the effectiveness of mitigation measures and noted there is no guarantee that mitigation would be successful at preventing pollution. Some members of the public suggested that Ajax would create another contaminated site in Canada.</p> <p>Some members of the public were concerned that degraded surface water quality could affect their health.</p>	<p>ensuring that correct actions are taken to mitigate effects. The EAO proposed EA Certificate Condition Surface Water Quality Management and Monitoring Plan that would require KAM to develop a surface water quality monitoring plan that would include requirements for monitoring, verification, and adaptive management.</p> <p>In consideration of comments received during the public comment period, the EAO added a requirement to the Water Management and Hydrometric Monitoring Plan Condition for KAM to describe mitigation options that reflect BC's <i>Policy for Mitigating Impacts on Environmental Values</i>; the addition would help to address uncertainties related to the steps that KAM would be required to take to address effects to surface water quality. Additionally, there are comprehensive regulatory requirements under the BC <i>Environmental Management Act</i> and BC <i>Mines Act</i> for water quality management, monitoring and reporting that would form part of permitting processes following the EA, should Ajax proceed.</p> <p>Refer to sections 2.3 and 2.4 of the Report for further details regarding the surface water quality assessment.</p> <p>The Agency and EAO assessed the effects of Ajax on human health risk in section 10 of the Report. The assessment of effects to human health considered numerous inputs including surface water and groundwater quality; see section 10 of the Report for details. In recognition of the multiple inputs to human health and the need to monitor and verify predictions from the EA, the EAO proposed EA Certificate Condition Human Health Reporting that would require KAM to analyse environmental monitoring data from Ajax, including surface water quality, and assess changes to human health risk.</p>
Use of assay data	<p>Members of the public were concerned that KAM was not required to provide complete chemical assay data, and stated that this lack of information contributes to uncertainties regarding the types and quantities of potential contaminants of concern (e.g. mercury) that were assessed in the EA. The Kamloops Area Preservation Association submitted reports from Dr. Kevin Morin that contended the EA was not sufficient without additional data.</p>	<p>The public's interest in chemical assay data was raised throughout the EA. The Agency and EAO recognized that geochemical data is a key input to water quality and air quality modelling. The EAO provided technical reports received during the EA to the relevant provincial and/or federal experts, as appropriate, for consideration. The Ministry of Energy, Mines, and Petroleum Resources (EMPR) indicated that mining proponents are required to provide average assay values and reserve information for the economic metals of interest at proposed mine sites. EMPR further noted that proponents are required to demonstrate that they have accurately characterized the metal content variability and central tendency for the different geologic units comprising the mine rock, tailings, ore, and other material stockpiles.</p> <p>EMPR's geochemical experts advised that they were satisfied that KAM has provided sufficient assay data for the purposes of the EA. As part of the EA process, experts at EMPR conducted a thorough review of the geochemical information as it relates to the water quality model, mine management plan, and the environmental effects assessment.</p>
Topic: Groundwater (raised in 8% of comments)		
Groundwater quality and acid rock drainage	<p>Members of the public raised concerns that acid rock drainage and seepage from mine facilities, including the tailings and mine rock storage facilities, would affect groundwater quality which could affect drinking water quality in downgradient wells. Some members of the</p>	<p>The Agency and EAO's assessment of the effects of Ajax on groundwater quality considered potential sources of groundwater contamination, including the tailings and mine rock storage facilities, and the potential for activities and conditions at Ajax to cause metal leaching/acid rock drainage. The Agency and EAO considered the RES-2 residential well as a proxy to evaluate potential impacts to downgradient groundwater users within 2 km of Ajax, and noted that any impacts to groundwater uses further downgradient of this location would be expected to be smaller. During the EA, the Agency and EAO considered information from members of the working group, Indigenous groups, and the public</p>

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	<p>public indicated that the provincial and federal governments failed to require a rigorous assessment of impacts on groundwater, including the impacts to parties in proximity to the mine who may use groundwater for drinking or irrigation.</p>	<p>in reviewing KAM's modelling results and proposed mitigation measures, which included procedures to prevent the generation of acid rock drainage from mine facilities and minimize the impact of metal leaching/acid rock drainage on groundwater.</p> <p>The Agency and EAO concluded that groundwater quality in proximity to Ajax would be degraded as a result of uncaptured seepage (contact water) migrating from mine facilities to local groundwater. Ajax would cause an increase in concentrations of fluoride, sulphate, copper, iron, manganese, molybdenum, and zinc in groundwater near the mine site. Exceedances of the health-based drinking water guidelines were not predicted; however, exceedances of the aesthetic drinking water quality objectives were predicted for sulphate, iron, and manganese, which could affect the smell and taste of the groundwater.</p> <p>The Agency and EAO also noted that Ajax would cause an increase in the concentration of arsenic in groundwater in Knutsford. The predicted concentration (1.8 mg/L) would be below the Canadian drinking water guideline (10 mg/L) and within average naturally occurring background arsenic levels in BC. While an increase in concentration of arsenic in drinking water can increase the risk of developing cancer, residents of Knutsford would not be subject to lifetime cancer risks higher than residents of other Canadian communities who rely on potable water with baseline arsenic levels higher than the negligible risk concentration established by Health Canada. Refer to section 3.4 and 10 of the Report for details.</p> <p>The Agency and EAO recognize the importance of having a robust monitoring and management plan for groundwater at Ajax. The EAO proposed EA Certificate Condition Groundwater Management and Monitoring Plan that would require KAM to monitor groundwater quality and quantity conditions and to apply adaptive management as needed. In consideration of additional information received during the public comment period, the EAO adjusted this Condition to include requirements for KAM to identify monitoring locations that include existing groundwater wells in the Peterson Creek aquifer, and to describe mitigation options that reflect BC's <i>Policy for Mitigating Impacts on Environmental Values</i> for these registered groundwater wells.</p> <p>The EAO proposed the Condition Groundwater Investigation Plan that would require KAM to undertake additional groundwater investigations at Ajax to support the development of the monitoring and management plan. This would include an evaluation of groundwater quality in the Peterson Creek aquifer at a location nearer to the mine site than the RES-2 monitoring well.</p> <p>The Agency and EAO assessed the effects of Ajax on human health risk, including potential effects on drinking water, and considered information provided by members of the working group, Indigenous groups and the public in the assessment. The human health risk assessment considered numerous inputs, including groundwater and surface water quality; refer to section 10 of the Report for further details. To provide a framework for regularly reviewing and assessing changes to human health risk associated with Ajax, the EAO proposes the EA Certificate Condition Human Health Reporting that would require KAM to analyse environmental monitoring data, including groundwater quality, and to assess changes to human health risk.</p>
Groundwater and drinking water quality	<p>Members of the public, the Kamloops Area Preservation Association, and Whispering Pines/Clinton Indian Band submitted that Ajax would create health hazards by modifying the quality of the drinking water in the Peterson Creek and Davidson Creek aquifers. The Kamloops Area Preservation Association included a report from hydrogeologist Gilles Wendling (GW Solutions Inc.) dated</p>	<p>The Agency and EAO acknowledge the importance of having a robust assessment of effects to groundwater, including receptors that may use this water. The Agency and EAO assessed the effects of Ajax on groundwater quality and concluded that Ajax would cause groundwater quality to be degraded as a result of uncaptured seepage migrating from mine facilities to local groundwater.</p> <p>KAM submitted a response to the GW Solutions Inc. report that described existing work related to groundwater and indicated that the conclusions reached by GW Solutions did not appear to take into consideration all available information.</p> <p>The Agency and EAO have considered the August 8, 2017 GW Solutions Inc. report, KGHM's response memo, as well as extensive</p>

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	<p>August 8, 2017 that presented the author's views on the limitations and weaknesses in KAM's assessment of the risks to drinking water sources from Ajax. The GW Solutions report expressed concern that that mining activities at Ajax would create health hazards by modifying the quality of the drinking water in the Peterson Creek and Davidson Creek aquifers.</p>	<p>groundwater information from multiple parties that informed the development of the Report's conclusions in the Report. The Agency and EAO are of the view that that the analysis and conclusions in the Report remain valid, and also note that the EAO proposed the EA Certificate Condition Groundwater Management and Monitoring Plan.</p> <p>As described above, the EAO adjusted this Condition in consideration of additional information received during the public comment period. The revisions to this condition provide additional certainty related to the monitoring requirements and the range of actions that KAM would be required to take to mitigate effects to groundwater quality (including groundwater well users) that may be affected by Ajax.</p>
Groundwater movement in Aberdeen	<p>Members of the public raised concerns that changes in groundwater levels could affect ground stability and the structural integrity of infrastructure near the mine. There were concerns that Ajax could re-activate historic landslides in the Aberdeen area. Commenters expressed concern that the movement of groundwater and potential related effects on landslides in Aberdeen had not been adequately assessed. Members of the public noted that Aberdeen currently requires 24-hour pumping in order to manage ground stability issues due to groundwater in the neighbourhood.</p>	<p>The Agency and EAO acknowledge the public's concerns related to groundwater movement near Ajax and the importance of understanding the potential implications to ground stability and infrastructure. The Agency and EAO's assessment of effects to groundwater quantity concluded that Ajax would cause changes in groundwater levels and groundwater recharge and discharge within 2 km of project facilities. The magnitude of the effect would be high near the open pit and tailings storage facility, and would decrease to below the range of natural variation by approximately 2 km from these facilities.</p> <p>The Agency and EAO are of the view that the level of investigation and modelling undertaken by KAM is appropriate for the purposes of the EA and conservatively brackets the range of potential effects to groundwater. However, uncertainties were identified in the EA related to the groundwater conceptual and numerical models, and the interpretation of the hydrogeology of the area. The Agency and EAO determined that monitoring and management of groundwater movement in the Ajax area would be required throughout the life of Ajax in order to verify and adaptively manage effects, which may include application of additional mitigation measures.</p> <p>The EAO proposed the EA Certificate Condition Groundwater Management and Monitoring Plan that would require KAM to develop a plan that describes how groundwater would be monitored and managed at Ajax, including the adaptive management measures that would be applied in the event that actual effects to groundwater were greater than predicted. To support the development of this plan and to address uncertainties identified in the EA, the EAO also proposed Condition Groundwater Investigation Plan that would require KAM to undertake additional groundwater investigations at Ajax prior to construction and to incorporate the results in project design and groundwater management and monitoring planning.</p> <p>With respect to the public's concerns regarding slope stability in the neighbourhood of Aberdeen, the Agency and EAO are of the view that the groundwater levels in the Aberdeen area to the north of Ajax would not be affected. This conclusion was reached in consideration of the results of KAM's sensitivity scenarios and the interpreted groundwater divide to the north of Ajax, as well as input from members of the working group. However, the Agency and EAO acknowledge that slope stability in the Aberdeen area may be sensitive to relatively small changes in groundwater levels. As such, the EAO proposed the EA Certificate Condition Slope Stability Monitoring Plan that would require KAM to develop a slope stability and pore water pressure monitoring plan for the area between Ajax and Aberdeen that would include requirements for sharing monitoring data with the City of Kamloops and the public.</p>
Topic: Fish and Fish Habitat (raised in 8% of comments)		
Fish and fish habitat	<p>The public and Whispering Pines/Clinton Indian Band expressed concerns that effects from Ajax on water quality and quantity would have impacts to the fishery in</p>	<p>Throughout the EA federal and provincial fisheries experts evaluated KAM's application and, where necessary, requested additional information regarding potential effects on fish and fish habitat in Jacko Lake and at the water intake location on Kamloops Lake.</p> <p>Based on the EIS/Application information, technical memos during the EA, and feedback from experts on the working group, the Agency and</p>

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	Jacko Lake and Peterson Creek, and would have downstream impacts on salmon in the Thompson River system.	<p>EAO are of the view that Ajax water withdrawals from Kamloops Lake would not result in residual effects to fish and fish habitat in Kamloops Lake or downstream in the Thompson River (see section 4.3.7 of the Report), and that Ajax would not result in residual effects to water quality or the salmon fishery in Kamloops Lake.</p> <p>The Agency and EAO evaluated both the potential physical and water quality related residual effects to fish and fish habitat in the Peterson Creek watershed. The EAO proposed the EA Certificate Condition Fisheries and Aquatic Life Management and Monitoring Plan that would require KAM to undertake measures to avoid, minimize, and monitor effects to fish and fish habitat in Jacko Lake, Peterson Creek and Kamloops Lake.</p> <p>Fisheries and Oceans Canada was satisfied with KAM's proposed Conceptual Fish Habitat and Fishery Offsetting Plan at the EA stage. KAM would be required to further refine the plan before applying for an authorization under the <i>Fisheries Act</i>.</p>
Topic: Vegetation (raised in 7% of comments)		
Vegetation and grasslands mitigation	Members of the public expressed concern that grasslands remediation and/or offsetting programs would not successfully mitigate the adverse effects of Ajax on vegetation and grasslands. Some commenters also questioned the feasibility of reclaiming native grasslands.	<p>The Agency and EAO identified vegetation loss (due to clearing for site construction) and invasive species as residual effects on grasslands and vegetation. In the EA, experts on the working group questioned the adequacy of KAM's proposed grasslands offsetting and remediation mitigation measures. The EAO worked with the provincial experts and KAM to enhance the proposed grasslands mitigation measures. The results of these efforts are included in the proposed EA Certificate Condition Grasslands Restoration and Enhancement Plan. This condition would require KAM to undertake comprehensive baseline studies, provide details on the proposed grasslands restoration and enhancement methods, outline how provincial recovery strategies will be incorporated into the plan, describe how KAM would provide for long term viability of the enhanced or reclaimed grasslands, and describe the means by which Indigenous knowledge would be incorporated into the plan. The plan must be developed in consultation with the Ministry of Energy, Mines, and Petroleum Resources, the Ministry of Environment and Climate Change Strategy, the Ministry of Forests, Lands, Natural Resource Operations, and Rural Development, Environment and Climate Change Canada, the Agricultural Land Commission and Indigenous groups.</p> <p>With mitigation measures, the Agency and EAO concluded there would be direct loss of grasslands within the mine infrastructure footprint. The Agency and EAO did not consider mine site reclamation would mitigate for the loss of grasslands for decades or longer, but acknowledge KAM's closure objective of recontouring and restoring the site to a natural condition that is ecologically sustainable and able to support grassland-dependent species, conducting research on grassland reclamation, and restoring and enhancing an area of grasslands that is slightly larger than what would be lost in mine development.</p>
Topic: Wildlife (raised in 9% of comments)		
Wildlife and local threatened species	Some comments, including those received from Métis Nation British Columbia, expressed concern that Ajax would result in decreases in local wildlife populations and potential extirpation of local threatened species such as the badger, sharp tailed grouse, and great basin spade-foot. The presence of badger families and their dens within the proposed mine site was highlighted in	<p>Potential impacts to local wildlife species were identified at an early stage of the EA and evaluated during the EA. Based on working group feedback, the Agency and EAO assessed impacts to amphibians, migratory birds, raptors, non-migratory game birds, American badger, and bats. Species level effects as a result of habitat loss and alteration, chemical exposure, direct mortality, and sensory disturbance were assessed as applicable.</p> <p>Taking into account the working group review, and input from federal and provincial experts, the Agency and EAO concluded that Ajax is not likely to cause significant adverse environmental effects on amphibians, non-migratory game birds, and badger.</p>

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	some comments.	<p>The EAO proposed the following EA Certificate Conditions to help mitigate, either directly or indirectly, potential Ajax effects on local wildlife populations:</p> <ul style="list-style-type: none"> • Pre-Construction Vegetation and Wildlife Surveys: KAM would be required to confirm vegetation and wildlife presence, distribution, and movement corridors and the means by which the results of the surveys will be considered in the final project design. • Wildlife Management and Monitoring Plan: KAM would be required to describe the habitat affected by Ajax, identify specific measures to mitigate effects, sensitive habitat areas and times to be avoided during construction and operations, and the means by which wildlife encounters and mortalities will be recorded and reported. • Vegetation Management and Monitoring Plan: KAM would be required to provide a detailed list and location of rare plants potentially affected by Ajax including mitigation measures to reduce project impacts. • Grasslands Restoration and Enhancement Plan: KAM would be required to provide a detailed baseline of current grassland habitat, as well as the various restoration and enhancement activities to be undertaken during operations, decommissioning, and closure. • Wetland Offsetting Plan: KAM would be required to develop a detailed baseline of existing wetlands that may be affected by Ajax, and a description of the offsetting or compensation measures to be implemented. <p>The plans listed above must be developed in consultation with the Ministry of Energy, Mines, and Petroleum Resources, the Ministry of Environment and Climate Change Strategy, the Ministry of Forests, Lands, Natural Resource Operations and Rural Development, Environment and Climate Change Canada, Indigenous groups, and for the Grasslands Restoration and Enhancement Plan also the Agricultural Land Commission.</p> <p>For details on the assessment of Ajax effects on wildlife, see section 6.4 of the Report.</p>
Bird habitat	Members of the public expressed concern that the creation of tailings storage, would result in the loss of Goose Lake which they noted was important bird habitat.	<p>The Agency and EAO assessed effects on migratory bird habitat in Section 6.4 of the Report. The Report notes that habitat loss and alteration within the mine site area, which includes the loss of Goose Lake, would result in residual impacts to species such as waterfowl, sandhill crane, and great blue heron. However, suitable wetland-associated migratory bird habitat will continue to exist in the local study area and regional study area during operations and the Agency and EAO concluded that Ajax is not likely to cause significant adverse environmental effects to migratory bird populations in the region. As well, KAM would create wetland habitat compensation to offset the impacts during construction and operations, and would include wetland and riparian features as part of the reclamation plan during closure. The EAO proposed the EA Certificate Condition Wetlands Offsetting Plan that would require KAM to create wetland habitat to offset the impacts during construction and operations, and to include wetland and riparian features as part of the reclamation plan during closure. KAM must retain a qualified professional to develop a plan that would offset unavoidable losses of wetland functions caused by Ajax. The plan must be developed in consultation with the Ministry of Energy, Mines, and Petroleum Resources, the Ministry of Environment and Climate Change Strategy, the Ministry of Forests, Lands, Natural Resource Operations and Rural Development, Environment and Climate Change Canada, and Indigenous groups.</p> <p>In addition, the EAO proposed the EA Certificate Condition Wildlife Management and Monitoring Plan that would require KAM to describe the habitat affected by the project, identify specific measures to mitigate effects, sensitive habitat areas and times to be avoided during</p>

Key Issue	Summary of comments	Response and applicable report conclusions and proposed provincial conditions
		construction and operations, and the means by which wildlife encounters and mortalities will be recorded and reported.
Topic: Greenhouse Gases (GHG) /Climate Change (raised in 1% of comments)		
Scope of GHG assessment	Members of the public contended that diesel emissions from mine equipment, long-haul truck traffic going to and from the mine site, as well as emissions from processing and manufacturing of products using the ore were not accurately reflected in the EA. The comments suggested that the inclusion of these emissions would show a larger carbon footprint for Ajax than what was reported in the EIS/Application.	In section 7.4 of the Report, the Agency and EAO considered that the emission intensity from Ajax would be comparable to other mining projects in BC. KAM estimated the greenhouse gas (GHG) emissions for mine related equipment, passenger vehicles involved in mine activities, and concentrate trucks traveling to and from the mine site during construction and operation. KAM would be required to report GHG emissions annually to the Ministry of Environment and Climate Change Strategy and Environment and Climate Change Canada. The Agency and EAO noted Ajax's contribution to provincial and national GHG emission levels is relatively small, and concluded that Ajax is not likely to be a significant contributor to GHGs emitted within BC or Canada.
Effects of climate change	Concern was expressed that climate change will magnify the residual effects on all valued components above what was assessed in the EIS/Application. Climate change could result in unpredictable and dangerous effects at Ajax due to drought, floods, forest fires, and other extreme weather events.	The Agency required KAM to consider the potential effects of the environment on Ajax, which included consideration of the effects of climate change. As per section 21.4 of the Report, the Agency and EAO are satisfied that KAM has adequately identified and considered the potential effects of the environment (including climate change) on Ajax. The Agency and EAO agree with KAM that appropriate design, best management practices, and adaptive management would be sufficient to address these effects.
Topic: Air quality (raised in 29% of comments)		
Air quality and the Kamloops airshed	Many comments from the public, including Kamloops Area Preservation Association, Kamloops Moms for Clean Air, and the Aberdeen Neighbourhood Association, as well as Whispering Pines/Clinton Indian Band, were concerned that Ajax would contribute substantial amounts of dust and particulate matter to the Kamloops airshed and would further deteriorate air quality conditions in the region. Commenters expressed concern that the City of Kamloops is located downwind of Ajax and that Kamloops already experiences periods of poor air quality (e.g. smoke from forest fires this summer). Some commenters were concerned that Ajax would add further air contaminants to an airshed that already includes emissions from other local industries such as the	The Agency and EAO acknowledge high public concern that Ajax would add further air emissions to the Kamloops airshed, which currently experiences periods of degraded air quality, often due to temperature inversions. KAM's air quality modelling was subject to the scrutiny of provincial and federal air quality experts from the Ministry of Environment and Climate Change Strategy (ENV), and Environment and Climate Change Canada, as well as experts from SLR Consulting Ltd. on behalf of the City of Kamloops, all of whom participated as members of the Ajax working group. SSN (also a member of the working group) undertook a comprehensive assessment of Ajax and provided substantial input to the Agency and EAO for review and consideration. The Agency and EAO also received numerous technical submissions from members of the public, including Dr. Douw Steyn on behalf of the Kamloops Moms for Clean Air, Dr. Robert Schemenauer, and the Kamloops Area Preservation Association. The Agency and EAO recognize that air quality is a value of great importance to the people of Kamloops, and have reviewed and carefully considered all information received throughout the EA. The assessment of effects to air quality considered existing sources of emissions from the Kamloops area and contributions from Ajax. The Agency and EAO concluded there would be residual effects to air quality from Ajax. Specifically, the Agency and EAO concluded that Ajax would result in increases of ground-level concentrations of TSP, PM ₁₀ , PM _{2.5} , SO ₂ , NO ₂ , CO and dustfall that would be highest closest to the plant boundary. Ajax's contribution to these concentrations would decrease rapidly with distance from the mine site. The Agency and EAO concluded that concentrations of SO ₂ , NO ₂ , and CO would remain well within applicable regulatory criteria; however, concentrations of 24-hour TSP, 24-hour PM ₁₀ , and 24-hour PM _{2.5} would exceed the applicable regulatory criteria at the plant boundary. By upper Aberdeen, these concentrations would decrease to within applicable regulatory criteria, except for 24-hour average PM ₁₀ . The Report states that Ajax would

Key Issue	Summary of comments	Response and applicable report conclusions and proposed provincial conditions
	<p>pulp mill.</p> <p>Commenters also noted that temperature inversions are common in the area, and cause air contaminants to become trapped in the valley.</p>	<p>cause an increase in the exceedances of the BC Ambient Air Quality Objective for 24-hour average PM₁₀ in upper Aberdeen, mostly during the winter. Ajax would also result in occasional short periods (e.g. less than an hour) of very high levels of dust and particulate matter in areas closest to the mine during high wind events (i.e. dust storms), mostly during the summertime.</p> <p>The EAO proposed the EA Certificate Condition Air Quality Management and Monitoring Plan that would require KAM to monitor and adaptively manage emissions from Ajax. ENV advised that there would be extensive additional permitting requirements and compliance monitoring during the permitting stage, if Ajax proceeds.</p>
Dust mitigation effectiveness	<p>Members of the public were skeptical that KAM would be able to consistently and effectively mitigate dust emissions from haul roads to 90%. The public was also concerned that examples of other open pit mines that had successfully achieved 90% dust mitigation were lacking.</p> <p>Other members of the public stated their confidence in KAM's ability to achieve their commitment to dust mitigation. Some commenters expressed views that most of the dust from Ajax would settle near the mine site and would not affect downtown Kamloops.</p>	<p>The effectiveness of KAM's proposed mitigation measures and KAM's ability to mitigate dust from haul roads to 90% were issues that were raised frequently throughout the EA. The Agency and EAO received considerable comments and technical submissions from members of the working group, Indigenous groups, and the public related to mitigation effectiveness and took steps during the EA to develop a more robust understanding of the effects of mitigation effectiveness on air quality and related valued components. During the EA, the Agency and EAO required KAM to undertake sensitivity analyses to evaluate the effects of different levels of haul road dust mitigation effectiveness (including 70%, 80%, 90% and a 0% upset case scenario) on predicted concentrations of particulate matter. The results of the sensitivity analyses confirmed that roads are a major contributor to predicted particulate concentrations and that a decrease from 90% to 80% haul road mitigation effectiveness doubled the predicted particulate matter concentrations.</p> <p>The Agency and EAO concluded that Ajax would result in an increase in exceedances of the BC Ambient Air Quality Objective for 24-hour average PM₁₀ in upper Aberdeen for approximately 7 to 21 days per year, based on haul road dust mitigation effectiveness of 70-90%. The Agency and EAO are of the view that the frequency of these exceedances is likely closer to the upper bound of this range, but could possibly be higher. Most of the exceedances would be expected to occur during the winter months under poor dispersion conditions. While the sensitivity analyses and additional information assessed during the review period provided a better understanding of the range of possible effects, the Agency and EAO concluded that there is still substantial uncertainty associated with the air quality effects assessment. The Agency and EAO also concluded that 90% mitigation of dust from haul roads is unlikely to be achieved on a continuous basis at Ajax and that effective dust management would be critical to managing air quality, should Ajax proceed.</p> <p>The Agency and EAO accepted KAM's findings that Ajax's contributions to air quality in downtown Kamloops would be negligible to measure, relative to other anthropogenic sources and found that the effects from Ajax would be most noticeable in areas closest to the mine. Areas of Kamloops farther away from the mine site would continue to experience periods of elevated particulate matter concentrations due to sources other than Ajax. Refer to section 8.4 of the Report for further details.</p> <p>The EAO proposed the EA Certificate Condition Air Quality Management and Monitoring Plan that would require KAM to monitor actual air quality conditions at Ajax and verify these against the predictions in the EIS/Application. The plan would also describe the specific mitigation measures that KAM would apply to reduce air quality effects, including the adaptive management measures that KAM would apply in the event that measured concentrations of air contaminants were greater than predicted. The EAO also proposed the Condition Air Quality Reviewer that would require KAM to contract a third party reviewer to review and examine the quality of data collected in the Air Quality Management and Monitoring Plan condition.</p>
Air quality monitoring and	Members of the public, including the Aberdeen Neighbourhood Association, questioned how dust mitigation would be effectively measured and monitored in	The Agency and EAO's conclusions in section 8.4 of the Report note the importance of having an effective and robust dust monitoring and management program, should Ajax proceed. The Agency and EAO acknowledge that it is not feasible to monitor mitigation effectiveness directly. KAM's proposed Fugitive Dust Management Plan identified preliminary air quality trigger levels that are based on differences

Key Issue	Summary of comments	Response and applicable report conclusions and proposed provincial conditions
management	<p>practice. Related to this, the City of Kamloops requested that a qualified professional or independent environmental monitor be continually retained throughout the life of Ajax to conduct third party reviews of the air quality monitoring data and air quality reports.</p>	<p>between measured upwind and downwind air quality conditions, and corresponding levels of mitigation that KAM would implement up to, and including, curtailment of operations. KAM's proposed monitoring and trigger-based adaptive management plan would be supported by three permanent air quality monitoring stations, including a station upwind of the mine and a station downwind of the mine that would continuously monitor particulate matter, in order to inform on-site decision making and adaptive management. The Agency and EAO find that KAM's proposed approach would likely be effective in responding to conditions where there is a gradual accumulation of contaminants (such as during winter inversions), but that it would be less effective in detecting and responding to short-term dust storms.</p> <p>To support an overall air quality management strategy for Ajax, and to help address uncertainties related to the air quality effects assessment, the EAO proposed an EA Certificate Condition that would require KAM to further develop and implement an Air Quality Management and Monitoring Plan that would include mitigation and adaptive management measures that KAM would implement to reduce fugitive dust emissions from Ajax, up to and including curtailment of operations.</p> <p>To ensure independent and transparent reporting of the air quality monitoring data, the EAO proposed the EA Certificate Condition Air Quality Reviewer that would require KAM to retain a qualified professional who would review the quality of the monitoring data, and other data provided as part of the air quality management and monitoring plan.</p> <p>The qualified professional would be responsible for conducting regular data quality reviews of KAM's monitoring data, and providing information to stakeholders, including government agencies, Indigenous groups, and the public. The Air Quality Reviewer would be retained throughout the construction, operations, and decommissioning and closure phases of Ajax. Details of monitoring and management would be determined during the post EA permitting processes, should Ajax proceed.</p>
Uncertainties in the air quality dispersion modelling	<p>Members of the public raised questions and concerns regarding KAM's air dispersion modelling, including the methodology and characterization of the existing air quality and meteorological conditions within the model. Members of the public were concerned with how existing meteorological conditions were determined and considered in the model. Commenters, including the Kamloops Area Preservation Association, raised numerous concerns regarding the assumptions and calculations that supported the dispersion modelling and air quality effects assessment, including the emissions that would be produced from the handling of topsoil and overburden, the total amount of material to be moved, the composition/characteristics of the material, and emissions from the tailings storage facility. The City of Kamloops raised concerns that sources of emissions such as the concrete batch plant and rock crushing operation were not included in the air quality effects assessment. Commenters stated that the results of the modelling</p>	<p>During the EIS/Application review, members of the working group, as well as various community groups including the Kamloops Moms for Clean Air (Dr. Douw Steyn) and the Kamloops Area Preservation Association, raised questions and submitted technical comments regarding the inputs and assumptions that KAM applied to the air quality modelling and calculations. In response to these comments, and following technical discussions with the working group, KAM undertook various updates to the air quality modelling and calculations. It is the Agency and EAO's view that the air dispersion modelling undertaken for Ajax was comprehensive and consistent with the approved Detailed Dispersion Modelling Plan and the Addendum Model Plan. The additional information and updated results from KAM provided a better understanding of the range of potential effects that could be experienced if Ajax were to proceed; however, the Agency and EAO acknowledge that there is considerable uncertainty in the air quality assessment. Most of the uncertainty is related to the emission factors and their application in the dispersion model.</p> <p>The Agency and EAO acknowledge the submissions that identified questions or errors in emissions factors. The Agency and EAO are of the view that these issues contribute to the uncertainties, which were already considered in the Report, and do not alter the conclusions on air quality.</p> <p>To address the uncertainties and to support an overall air quality management strategy for Ajax, the EAO proposed the EA Certificate Condition Air Quality Management and Monitoring Plan that would require KAM to develop and implement a plan that would include the mitigation, verification, and adaptive management measures that KAM would implement to reduce fugitive dust emissions from Ajax, up to and including curtailment of operations. The plan would build upon KAM's proposed Fugitive Dust Management Plan and would describe the levels of air quality contaminants that would initiate adaptive management. Details of monitoring and management would be determined</p>

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	severely underestimated the actual effects that would be experienced if Ajax were to proceed.	through post EA permitting processes. The Ministry of Environment and Climate Change Strategy indicated that KAM's proposed monitoring and management approach is reasonable, but that further details would be required in KAM's application for a permit under the <i>Environmental Management Act</i> , should Ajax proceed.
Topic: Noise and Vibration (raised in 4% of comments)		
Blasting and slope stability	<p>Commenters raised concerns that blast vibrations would impact slope stability and building integrity in Aberdeen.</p> <p>Other commenters described their experiences living near the old Afton mine (situated within the proposed Ajax footprint) and indicated that they could not notice blasting effects from their homes in central Aberdeen.</p>	<p>KAM assessed the effects of blasting on slope stability in Aberdeen in the EIS/Application. The EAO and Agency required additional information during the review period about the potential effects of blasting. KAM reported that the blast management plan would ensure blast-induced vibration would be well below levels that could affect pore water pressure in Aberdeen (increased pore water pressure can reduce slope stability) and would be below the range of human perception which would be inherently protective of all structures outside the mine area. The Agency and EAO concluded there would not be residual blast induced vibration effects to human receptors or to structural integrity from Ajax.</p> <p>In consideration of input from the City of Kamloops regarding slope stability, the EAO proposed the EA Certificate Condition Slope Stability Monitoring Plan that would require KAM to develop a monitoring plan for slope stability, blast induced ground vibration levels, and pore water pressures between the Mine Site Area and the neighbourhood of Aberdeen.</p> <p>Potential unforeseen impacts to building integrity would be monitored through the proposed the EA Certificate Condition Vibration Management and Monitoring Plan that would require KAM to retain a qualified professional to develop vibration monitoring protocols to ensure vibration levels do not exceed thresholds for human annoyance at certain distances from the project boundary; this condition would preclude vibration levels from causing impacts to structures.</p> <p>Potential vibration effects from blasting will be further assessed during <i>Mines Act</i> permitting by the Ministry of Energy, Mines, and Petroleum Resources.</p>
Noise	Members of the public were concerned that noise emissions from Ajax would disrupt or otherwise negatively affect nearby residents.	<p>During construction and operations, average modelled noise emissions do not exceed baseline conditions or the thresholds established by the Oil and Gas Commission and Health Canada at residential or institutional receptors (daycares, schools, hospitals, and retirement homes) located within the current Kamloops city boundaries. The Agency and EAO determined that, on average, mine-related noise levels at residential and institutional receptors would tend to blend into the acoustic baseline or be slightly audible above background levels, and would therefore be unlikely to disrupt or annoy human receptors with any frequency during construction and operations.</p> <p>The EAO required further information from KAM regarding average and maximum modelled noise emissions, and determined there are approximately 22 homes which may experience project-related noise levels which may meet or, in a small number of cases, infrequently exceed the threshold for annoyance and/or sleep disturbance. The EAO concluded that these residual noise effects would have a low to medium magnitude effect on nearby residents. The EAO proposed the EA Certificate Condition Noise Management and Monitoring Plan that would help ensure project noise levels remain below applicable thresholds for annoyance and sleep disturbance.</p>
Topic: Human Health (raised in 27% of comments)		
Human health and inhalation	Potential impacts to human health as a result of mine related dust were consistently raised in the public	The Agency and EAO extensively considered the potential for health impacts associated with air quality effects from Ajax during the review. The Report acknowledged that Ajax would contribute to PM ₁₀ levels exceeding BC Ambient Air Quality Objectives occasionally, in the upper

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exposures	<p>comment period. Commenters asserted that statements in the Report regarding the potential for Ajax to cause PM₁₀ to exceed BC Air Quality Objectives for 70% and 80% mitigation scenarios represents an unacceptable risk to human health. The public expressed concern about the uncertainty related to the potential health risks (e.g. respiratory problems, cancer incidence) from exposure to air contaminants. Some residents described how they currently suffer respiratory problems during periods of poor air quality; commenters felt that Ajax would exacerbate these conditions by increasing the level of particulate matter in the Kamloops airshed.</p>	<p>Aberdeen area. These exceedances would increase in frequency and magnitude with decreasing efficiency of haul road dust mitigation levels. The Agency and EAO are of the view that KAM's Fugitive Dust Management Plan was a reasonable approach to address gradual increases in particulate matter. The Agency and EAO required KAM to prepare a Dust Action Response Plan, which includes the establishment of trigger levels for PM_{2.5} or PM₁₀ and additional mitigation actions if trigger levels are approached or reached. KAM would be required to monitor PM_{2.5} and PM₁₀ continuously at the existing upwind monitoring station on Stake Lake road and the existing downwind monitoring station in upper Aberdeen at Pacific Way Elementary School. Mitigation measures where PM_{2.5} or PM₁₀ trigger levels are approached include hourly monitoring, ceasing non-essential activities in affected areas, and minimizing the number and length of haul routes during dry and windy conditions. If trigger levels are reached, KAM would be required to implement a range of mitigative actions up to full cease of haul activity.</p> <p>The Report acknowledges uncertainties relating to efficacy of dust mitigation, and related uncertainties associated with the human health risk assessment predictions. The EAO proposed Conditions for monitoring and management of air quality and water quality to verify predicted effects and enable pre-determined adaptive management actions if required. Additionally, the EAO proposed the Condition Human Health Reporting that would require KAM to retain a qualified professional to develop a human health reporting plan. The plan would require the qualified professional to evaluate the human health risks associated with inhalation exposures to NO₂, SO₂, CO, PM₁₀, PM_{2.5}, particulate-bound metals and polycyclic aromatic hydrocarbons. As well, the qualified professional would conduct an analysis of dust deposition, water quality, soil, plant, and fish tissue for metals, for the purpose of determining their combined effect on the change in human health risk from baseline conditions, during construction, operations and closure.</p>
Low confidence in assessment of human health	<p>Members of the public noted that the Report states that the Agency and EAO have low confidence in the assessment of effects to human health. Some commenters interpreted this to mean that the Ajax mine is an unacceptable experiment with the health of Kamloops citizens.</p> <p>The City of Kamloops commented that use of the Health Canada accepted approach where maximum exposure concentrations are compared to appropriate risk-based screening criteria in all media would have increased confidence in the assessment, and better met the commitment of incorporating the Precautionary Principle.</p>	<p>During the EA, the Agency and EAO identified multiple sources of uncertainty related to the assessment of health effects, including uncertainty with efficacy of dust mitigation and KAM's reliance on modeling to characterize the baseline concentrations of contaminants of potential concern in air. Acknowledging the functional limits of modelling project effects, the Agency and EAO focused on identifying rigorous monitoring during all phases of the project to verify predictions and enable pre-determined adaptive management actions if required. The EAO proposed EA Certificate Conditions that would contribute to the monitoring of human health effect pathways and would allow for actions to be taken in a timely fashion to address potential health risks, including: Human Health Reporting, Air Quality Management and Monitoring Plan, Surface Water Quality Management and Monitoring Plan, Groundwater Management and Monitoring Plan, and Noise Management and Monitoring Plan.</p>
Health of vulnerable populations	<p>Members of the public expressed concern that the health of vulnerable populations would be at risk from the Ajax. Specifically, the young, elderly, and those with pre-existing conditions. According to research, those with existing conditions are at significant risk of aggravating existing health problems.</p>	<p>KAM's Human Health Risk Assessment considered potential health risks in relation to sensitive members of the population, who would be more susceptible to health effects associated with exposure to contaminants of potential concern than the general population. Sensitive members of the population are generally considered to be children, pregnant women and the elderly. For inhalation exposures, sensitive members of the population include those with asthma and/or chronic obstructive pulmonary disease.</p> <p>To help ensure that potential project impacts are avoided or mitigated where necessary, the EAO proposed the EA Certificate Condition Human Health Reporting that would require a qualified professional to develop a human health reporting plan that evaluates the human</p>

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		<p>health risks associated with inhalation exposures to NO₂, SO₂, CO, PM₁₀, PM_{2.5}, particulate-bound metals and polycyclic aromatic hydrocarbons. As well, the qualified professional would conduct an analysis of dust deposition, water quality, soil, plant, and fish tissue for metals, for the purpose of determining their combined effect on the change in human health risk from baseline conditions, during construction, operations and closure.</p> <p>The Agency and EAO consider that EA Certificate Conditions for air quality, water quality, and recreation would also be protective of vulnerable populations.</p>
Country foods	<p>Comments, including those received from the Kamloops Food Policy Council, stated that Ajax would negatively affect backyard garden foods, area ranches, Indigenous food systems and commercial agriculture in the Kamloops region due to mine contact exposure.</p>	<p>The Agency and EAO analyzed health impacts relating to consumption of country foods, and the nature of these effects are described in section 10.4.2 of the Report. Country foods are those that may be produced in an agricultural (non-commercial) or backyard setting or harvested through hunting, gathering or fishing activities. The Agency and EAO considered the aggregate effect of all direct contact exposure pathways (including incidental ingestion of soil, dermal contact with soil, and consumption of country foods and drinking water) to assess the overall direct contact health risk.</p> <p>The proposed EA Certificate Condition Human Health Reporting would require an analysis of dust deposition, water quality, soil, plant, and fish tissue for metals, for the purpose of determining their combined effect on the change in human health risk from baseline conditions, during construction, operations and closure.</p> <p>The Agency and EAO considered that the following EA Certificate Conditions would also reduce potential risks from inhalation or ingestion of dust or ingestion of affected water: Air Quality Management and Monitoring Plan, Surface Water Quality Management and Monitoring Plan, Groundwater Management and Monitoring Plan, and Fisheries and Aquatic Life Management and Monitoring Plan.</p>
Health impact assessment	<p>Members of the public, including community groups and advocacy groups, raised the concern that the assessment did not include a health impact assessment and was, therefore, deficient. Some members of the public also expressed views that there was insufficient representation on the Ajax working group by health specialists.</p>	<p>The Agency and EAO note that Human Health Risk Assessments (HHRA) are an accepted approach to evaluate project-related health risks for EAs in Canada. KAM's assessment of health effects considered factors that may also be found in health impact assessments, such as the social and economic considerations in the Health Living and Health Education and the Community Health and Well-Being valued components. KAM considered factors such as overall quality of life, impacts to housing availability and property values and loss of recreational activities through other valued components in addition to the physical determinants of health considered in the HHRA.</p> <p>To ensure potential effects to human health are monitored and reported to the public, the EAO proposes the EA Certificate Condition Human Health Reporting that would require KAM to retain a qualified professional to develop a human health reporting plan in consultation with the Ministry of Energy, Mines, and Petroleum Resources, the Ministry of Environment and Climate Change Strategy, Interior Health Authority, Health Canada, the City of Kamloops, and Indigenous Groups.</p>
Health effects from mercury and asbestos	<p>The Kamloops Area Preservation Association (KAPA) is concerned that the human health effects from multiple pathways of exposure to mercury were not assessed. KAPA is also concerned that KAM did not have a sampling protocol in place for asbestos.</p>	<p>Health effects from mercury have been considered in the Report, as KAM's Human Health Risk Assessment included an assessment of potential health effects from inhalation and direct contact exposures to mercury.</p> <p>KAM considered the potential for asbestos to be present at the project site, and identified there is a reduced likelihood the material sampled would contain asbestos. KAM would monitor for the occurrence of asbestiform materials during mining. Samples would be sent to an appropriate lab for quantification of asbestos by point count. Should asbestiform materials be identified, a safe handling procedure would be</p>

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		developed to prevent fibres from becoming airborne.
Topic: Community Wellbeing (raised in 16% of comments)		
Livability and mental health of residents	Members of the public expressed concerns about how project effects such as dust, noise, and visual disturbances as well as impacts from worker in-migration during construction would affect the mental health of residents and the livability and quality of life in Kamloops. Commenters also noted that the perceived risk of the mine may also affect the mental health of some residents.	<p>The EAO acknowledges the public's concern for impacts from Ajax to their and their community's wellbeing. In section 11.3.4 of the Report the EAO acknowledged stakeholder concerns about the potential for Ajax to result in emotional stress for some residents of Kamloops and the Thompson Nicola Regional District. In the EIS/Application, KAM commented that the perception of project risk tends to be related to lack of trust and confidence in the project and the Proponent. In response, KAM committed to be transparent in their information sharing in order to build trust with stakeholders. KAM also highlighted it intends to contribute and/or support initiatives beyond direct project effects through a community investment program.</p> <p>The EAO acknowledges commenters concerns for maintaining and enhancing community wellbeing. The EAO considered multiple social, economic, and environmental components and types of effects that relate to community wellbeing throughout the EA. Recognizing that community wellbeing is composed of a suite of environmental, social, economic, health, and heritage components, the EAO's assessment of community wellbeing considered conclusions in the sections of the Report where these valued components were assessed (air quality, water quality, recreation, local and regional economy, etc.). Under the Community Wellbeing section of the Report specifically, the EAO assessed impacts to community wellbeing through an evaluation of project impacts to healthcare services and project impacts to visual quality including dark sky quality at night.</p> <p>The proposed EA Certificate Conditions that are intended to directly address potential impacts to community wellbeing (as assessed in the Report) include:</p> <ul style="list-style-type: none"> • Construction Workforce Accommodation and Health Services Plan: would require KAM to develop a plan to manage impacts from in-migration of the construction workforce including retaining a general practitioner for the duration of the construction phase. • Light Pollution Management and Monitoring Plan: would require KAM to develop a plan to minimize light pollution through technical lighting design followed by monitoring and adaptive management as required. The plan must be developed in consultation with provincial and municipal officials. <p>Other EA Certificate Conditions that mitigate environmental impacts to air quality, water quality noise, and vibration are also expected to minimize effects to Community Wellbeing. As well, the Community Liaison Group condition and the Human Health Reporting condition are also expected to limit effects to community wellbeing as defined in the Report.</p>
Financial costs related to potential health risks	Commenters asserted that there will be financial costs associated with potential health risks (e.g. medical bills); additional strain will be put on the medical system due to increased respiratory problems.	<p>The Agency and EAO consider that the EA Certificate Conditions for air quality, water quality, and human health reporting would lower the likelihood of additional health costs associated with Ajax.</p> <p>The EAO notes that KAM engaged in discussions regarding a community benefits agreement with the City of Kamloops, although this agreement is not yet finalized. If an agreement is reached, KAM has indicated it may include contributions to community and social services, affordable housing, community amenities, local healthcare, and other financial and/or in-kind contributions to local services and wellbeing.</p>
Family Cohesion	Members of the public expressed interest in increased	The EAO acknowledges the views of commenters regarding local employment opportunities and socio-economic benefits associated with

Key Issue	Summary of comments	Response and applicable report conclusions and proposed provincial conditions
	<p>local employment opportunities noting that they would improve community wellbeing by allowing more Kamloops workers to reside where they work rather than spending prolonged periods of time away from home while on shift work in other locations. Commenters described the challenges that their families face with one member of the family having to work extended periods away from home. Other commenters described how their adult children had to move away from Kamloops in order to find work. Commenters remarked that the increased local jobs that Ajax would create would allow Kamloops residents to work close to home and would contribute to family cohesion.</p>	<p>Ajax. The EAO's summary of KAM's estimated economic benefits of the project is in section 1.7 of the Report.</p>
<p>Access to healthcare</p>	<p>Members of the public expressed concern that the project would cause medical professionals to leave Kamloops and make recruitment of new medical professionals more difficult.</p>	<p>The EAO understands that availability of physicians in Kamloops is an ongoing concern for many members of the community. As well, the EAO acknowledges that some physicians have stated their intentions to leave Kamloops should the project proceed to construction.</p> <p>Section 11.3.1 of the Report notes that KAM has committed to ensure that a dedicated general practitioner is contracted to provide healthcare services to the construction workforce to reduce potential incremental demands on the Royal Inland Hospital and local clinics/physicians (this commitment would be required under proposed EA Certificate condition Construction Workforce Accommodation and Health Services Plan). The EAO acknowledges that KAM has stated its commitment to work with the City of Kamloops, the Interior Health Authority, and other concerned community organizations, to identify ways in which KAM might support physician recruitment and retention, and improve access to health services.</p>
<p>Dark Sky</p>	<p>The Kamloops Astronomical Society (KAS) and the City of Kamloops raised concerns about KAM's assessment of the project impacts to dark sky and questioned the EAO's conclusions on residual effects of Ajax on dark sky qualities in and around Kamloops.</p>	<p>In section 10.4.3 of the Report, the EAO concluded that low magnitude impacts to dark sky as a result of increase in sky glow are anticipated for the Ajax regional study area. Some properties in close proximity and with a direct line of site of Ajax may experience medium magnitude effects from glare light or haul truck headlights. Dark sky impacts would occur sporadically during construction as industrial lighting may be used, continuously during night time operations, and would be reversed following decommissioning and closure.</p> <p>The EAO also acknowledges the City of Kamloops concerns regarding KAM's assessment of project impacts to dark sky. As noted by KAS, the assessment of dark sky effects under the EIS/Application is the first time this valued component has been included in an EA by the EAO. As such, although the City of Kamloops provided views regarding the inadequacy of the assessment methods, the EAO also recognizes that there is limited policy guidance from regulators or other experts regarding the significance analyses. This uncertainty is reflected in the Report, as EAO stated that there is low confidence in the assessment and significance determination based on the data provided and the analytical techniques to support the assessment. To account for the uncertainties in KAM's dark sky assessment identified by the City of Kamloops and account for the lack of information on lighting design given the early stages of the project, the EAO is the viewpoint that mitigation of light pollution effects are most appropriately addressed through EA conditions. To ensure that detailed mitigation of potential light pollution occurs during permitting the EAO proposed the EA Certificate Condition Light Pollution Management and Monitoring Plan. This would require KAM to retain a qualified professional experienced in monitoring and assessing artificial light at night, light engineering, and dark sky requirements for astronomical observatories to develop a light pollution management and monitoring plan. The plan would be</p>

Key Issue	Summary of comments	Response and applicable report conclusions and proposed provincial conditions
		developed in consultation with the Ministry of Energy, Mines, and Petroleum Resources, the Ministry of Forests, Lands, Natural Resource Operations and Rural Development, and the City of Kamloops and must be compliant with WorkSafe BC lighting requirements.
Topic: Recreation (raised in 4% of comments)		
Angling experience on Jacko Lake	Some commenters expressed concern that Ajax would reduce recreational fishing opportunities, or altogether ruin the fishing experience on Jacko Lake.	<p>The EAO assessed potential project impacts to the recreational fishing experience on and around the shores of Jacko Lake. In consideration of the changes to the visual quality of the surrounding area during operations, the once daily blasting that, at times, would require anglers to vacate the eastern portion of the lake, the noise from transportation of mine rock and finished product, and potential effects or perception of effects on fish quality for consumption, the EAO concluded that the angling experience at Jacko Lake during construction and operations would be significantly altered.</p> <p>The EAO's evaluation also considered that the magnitude of project effects on angling may vary with the project phase, in particular the blasting schedule, and that some angler's expectations for peace and quiet (or conversely tolerance for noise and disturbance) may be higher than others. The EAO is of the view that, following cessation of blasting activities and the reclamation of the mine site area, coupled with KAM's commitments to make improvements to the Jacko Lake recreational facilities and its fish habitat, the fishing experience on Jacko Lake post-closure would return to current conditions and may be improved over current conditions.</p> <p>To help mitigate potential project effects on recreation on and near Jacko Lake the EAO proposes the EA Certificate Condition Jacko Lake Recreation Management Plan that would require KAM to construct improvements to the Jacko Lake recreation site and boat launch as described in the EIS/Application and KAM's fish and fish habitat offsetting plan. KAM would also be required to retain a qualified professional to develop a recreation management and monitoring plan which describes the mitigation measures to help avoid project impacts to angling and that would also require KAM to convene a Jacko Lake Users Group that would assist KAM in the implementation of the plan.</p> <p>Potential project impacts to fish and fish habitat, that support the Jacko Lake recreational fishery, would be mitigated through the EA Certificate Condition Fisheries and Aquatic Life Management and Monitoring Plan. This condition would require KAM to manage and monitor blasting effects to avoid impacts on fish and other aquatic life as well as other project impacts on fish habitat. The plan would require the qualified professional to assess the mitigation measures that are developed for the plan.</p> <p>KAM would also require a <i>Fisheries Act</i> authorization and offsetting plan for unavoidable serious harm to fish associated with the permanent destruction of fish habitat in the northeast arm of Jacko Lake, and the diversion of a portion of Peterson Creek around the open pit.</p>
Effects on recreation experience	Commenters also indicated that they place a high value on other recreational opportunities in the region and the active lifestyle that the Kamloops area affords their families; some commenters were concerned that this way of life and these opportunities would be adversely affected by Ajax.	<p>The EAO notes that people vary widely in their perception of risk associated with Ajax. With respect to project effects on recreational opportunities in and around Kamloops, the Report concluded that access to recreation and the quality of recreational opportunities would be negligibly affected outside of the local study area. The EAO notes that the mine site area is on private land and is not open to the public for recreation. The EAO concluded that the angling experience on Jacko Lake would be significantly altered, and noted that there are sufficient alternative recreation opportunities outside of the mine site area and that Ajax would not have significant adverse effects on recreation opportunities locally or regionally.</p> <p>For further information, the EAO's assessment of the residual project effects to recreation is in section 12.4 of the Report.</p>
Topic: Accommodation, infrastructure, public facilities, and services (raised in 2% of comments)		

Key Issue	Summary of comments	Response and applicable report conclusions and proposed provincial conditions
Maintenance Costs to Municipality	<p>Some commenters questioned the veracity of the City of Kamloops claim that Ajax would affect municipal budgets by increasing infrastructure maintenance costs, noting that all businesses situated in Kamloops use local infrastructure and result in maintenance costs.</p> <p>Other commenters contended that the Ajax mine would increase operational costs for the City of Kamloops, shrink the city's tax base by devaluing properties and through the exodus of existing residents, and lastly, by reducing current sources of revenue from tourism.</p> <p>Some members of the public expressed concern that tax revenues from Ajax would not be returned to the Kamloops community which would be used to offset project impacts to infrastructure, public facilities, and services.</p>	<p>Using Statistics Canada input/out model, KAM calculated approximate estimates for municipal revenues that would accrue to the Thompson-Nicola Regional District and the City of Kamloops through construction and operation of Ajax. However, due to the process and policies by which tax revenue is distributed from Federal, Provincial, then to local levels of government, KAM concluded it was unable to provide detailed estimates on project contributions to local tax revenues. Following consultations with working group experts the EAO accepted KAM's assessment of the tax revenue estimates while highlighting the uncertainties inherent in the input/output model.</p> <p>The EAO notes that KAM engaged in discussions regarding a community benefits agreement with the City of Kamloops, although this agreement is not yet finalized. If an agreement is reached, it may help offset impacts to municipal revenues. The EAO acknowledges the City of Kamloops statements that a lack of finalized agreement creates uncertainty regarding the economic impacts to Kamloops from Ajax.</p> <p>Section 1.7 of the Report describes the information provided by KAM regarding taxation revenues and employment projections. The EAO notes that the <i>Environmental Assessment Act</i> does not require assessment of projected economic benefits.</p>
Topic: Local and Regional Economy (raised in 37% of comments)		
Economic diversification, labour competition, and local hires	<p>Many members of the public expressed strong views that Kamloops needs an economic boost and that Ajax would provide much-needed local employment. Commenters described their views regarding a decline in business in Kamloops in recent years and how family members had to move away from home to find employment elsewhere. Some commenters also noted that Ajax has provided substantial funding to many community groups to date and that the economic spin-offs that Ajax would create would have cascading positive effects for the Kamloops region. Many members of the public also described their past experiences working in the mining industry and noted that Kamloops has a history as a mining community and is supported by other resource-based industries such as pulp and paper.</p> <p>Other members of the public argued that Kamloops should instead focus on increasing local and regional employment in other sectors such as tourism, agriculture, technology, and renewable energy projects such as wind</p>	<p>The public's interest in enhancing employment opportunities within Kamloops was evident throughout the EA. Section 14.3.6 of the Report notes that the EAO is responsible for assessing the potential significant adverse effects of Ajax, in consideration of practical measures to avoid and reduce adverse effects. The <i>Environmental Assessment Act</i> does not require assessment of economic feasibility or projected economic benefits.</p> <p>With respect to potential adverse effects on the local and regional economy, the EAO concluded that the project is likely to result in increased labour competition during the construction phase.</p> <p>The Report also concluded that Ajax is unlikely to result in residual effects to local and regional economic diversification.</p> <p>The EAO assessed potential employment impacts of Ajax on the following economic VC: labour competition, income, business, and economic diversification. KAM provided estimates for low, medium, and high levels of local employment. The EAO reviewed the scenarios and concluded that Ajax would result in residual effects to labour competition that may affect local businesses ability to attract and retain employees.</p> <p>The assessment of whether Ajax would affect future business development in other sectors was not required under the Environmental Impact Statement Guidelines / Application Information Requirements.</p> <p>To provide the public with information regarding the predicted versus actual project benefits that may accrue within Kamloops and the surrounding area, the EAO proposes the Condition Local and Regional Training, Employment and Procurement that would require KAM to prepare monitoring reports on their local and regional training, employment, and procurement efforts, including a description of the</p>

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	<p>and solar power projects.</p> <p>Commenters questioned the risks of Ajax, compared with the projected employment benefits as outlined by KAM, and suggested that Ajax would negatively affect businesses such as tourism, technology and information management, and clean energy development and investment decisions in these sectors. Related comments also expressed concern that KAM would not (or would not be able to) hire the number of local employees they had committed to in the EIS/Application.</p>	<p>consultation undertaken with local businesses on maximizing business opportunities with Ajax.</p>
<p>Topic: Land and Resource Use (raised in 1% of comments)</p>		
<p>Agricultural Water Users</p>	<p>Pit development and mining activities would lower the groundwater table and would affect agricultural and residential water users near Ajax. Commenters raised concerns that the ability of some licensed water users to irrigate their fields would be impacted.</p>	<p>The EAO acknowledges this concern and would point out that under section 15.4.3 of the Report, the EAO concluded that pit development and mining activities would result in low to moderate magnitude impacts to certain licensed water users in the Peterson Creek watershed. Although the effect would be sporadic depending on seasonal precipitation rates the effect is not considered reversible upon closure. To address uncertainties related to the predicted streamflow reductions and related effects on water licence holders, the EA Certificate Condition Water Management and Hydrometric Monitoring Plan, would require KAM to develop a long-term streamflow management plan to address effects to water license holders upstream and downstream of Ajax. The EAO considers that the following EA Certificate Conditions would also mitigate potential project effects to licensed water users near Ajax:</p> <ul style="list-style-type: none"> • Surface Water Quality Management and Monitoring Plan would require KAM to develop a surface water quality monitoring plan that would include requirements for monitoring, verification, and adaptive management. • Groundwater Management and Monitoring Plan would help ensure the water supply of groundwater users near Ajax is maintained. The plan would require KAM to monitor groundwater quality and quantity and to apply adaptive management as needed.
<p>Future housing development areas in Aberdeen</p>	<p>Commenters, including the Aberdeen Highlands Development Corporation (ADHC), expressed concern that Ajax would affect the ability of the City of Kamloops to meet residential housing demands due to project impacts in lands to the south of Aberdeen which are currently zoned for this purpose. The ADHC added that, should Ajax proceed, they would not pursue their development of approximately 1,000 housing units, which the ADHC contends would render useless the infrastructure the City of Kamloops has already invested in the Aberdeen area, and which could also result in potential job losses in</p>	<p>In section 15.4 of the Report, the EAO evaluates potential impacts of the Ajax on the City of Kamloops and the Thompson-Nicola Regional District's land use objectives. The EAO notes that Ajax is within the Thompson Nicola Regional District's South Kamloops area, in an area that previously contained an open pit mine and whose zoning permits mineral extraction.</p> <p>The EAO concluded that, given the areas for residential growth identified in the KAMPLAN, the overall impact on the City of Kamloops' ability to meet its growth objectives was low although there may be higher effects on future development areas within Aberdeen. The EAO acknowledged there is some uncertainty about how residents and prospective residents of Kamloops might respond to the real and/or perceived impacts to land and resource use near the mine site, depending on the actual effects of the project and community perceptions.</p> <p>The EAO is of the view that it is appropriate to minimize impacts to future development through the requirement to address potential impacts through EA Certificate conditions for managing dust, light, noise and vibration. The Report acknowledges that, if future development lands in south Aberdeen close to the Kamloops boundary are constructed concurrent with Ajax operations (which would be roughly 800 metres from</p>

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	<p>Kamloops housing construction sector.</p> <p>The ADHC also stated that KAM should be required to financially compensate them for the loss of value of lands. Additionally, ADHC stated that KAM should be required to provide financial bonding for potential loss of property values for any and all residents within Kamloops as well as compensation to the City of Kamloops if they have to redirect infrastructure and housing development elsewhere in order to meet their population growth objectives.</p>	<p>the Kamloops boundary at full build-out), those future residences may experience downward pressure on their property values.</p> <p>The EAO is of the view that, at the environmental assessment stage, it is challenging to have certainty about the impacts to housing development in Aberdeen that may occur concurrent with construction and operations (should the project proceed). EAO is not of the view that requiring financial compensation, as suggested by ADHC, should be a Condition of an EA Certificate, if one is issued. The EAO considers that the following EA Certificate Conditions would mitigate potential project effects to future development lands in Aberdeen:</p> <ul style="list-style-type: none"> • Noise Management and Monitoring Plan: would help ensure project noise levels remain below applicable thresholds for annoyance and sleep disturbance. • Air Quality Management and Monitoring Plan: would include mitigation and adaptive management measures that KAM would implement to reduce fugitive dust emissions from Ajax, up to and including curtailment of operations. • Slope Stability Monitoring Plan: would require KAM to develop a slope stability and pore water pressure monitoring plan for the area between Ajax and Aberdeen which would address monitoring requirements and sharing of monitoring data with the City of Kamloops and the public. • Light Pollution Management and Monitoring Plan: would require KAM to manage and monitor project effects on dark sky qualities relative to pre-project baseline. The plan must be developed in consultation with the Ministry of Energy, Mines, and Petroleum Resources, the Ministry of Forests, Lands and Natural Resource Operations and Rural Development, and the City of Kamloops. <p>The EAO notes that based on comments and concerns raised for property values near the mine site, the EAO revised the minimum distances required for monitoring noise and vibration in the EA Certificate Conditions.</p> <p>The following EA Certificate Conditions would help reduce project impacts that otherwise may lower the desirability of future development lands within Aberdeen and would have a moderating effect on impacts to the City of Kamloops' land use objectives in the local study area: Surface Water Quality Management and Monitoring Plan; Water Management and Hydrometric Monitoring Plan; Grasslands Restoration and Enhancement Plan; and Human Health Reporting.</p> <p>The EAO notes that project bonding occurs during mines act permitting and is done on a site-specific basis in an amount acceptable to the chief inspector of mines. The security is set at a level that reflects outstanding reclamation and closure obligations associated with the site. The amount of any security may be increased or decreased at the discretion of the Chief Inspector based on the risks at any time. Securities can only be released by the authority of the Chief Inspector of Mines.</p>
Topic: Property Values (raised in 8% of comments)		
Property value impacts and mitigation measures	Commenters, including the Aberdeen Neighbourhood Association (ANA) and the Aberdeen Highlands Development Corporation, contended that Ajax would impact quality of life for residents, cause undue risks to health and property, and, as a result, lower property	The EAO recognizes the significant concerns and uncertainties identified by the ANA, the Aberdeen Highlands Development Corporation, and other commenters. In section 16.4 of the Report, the EAO recognized the potential for nuisance factors that are related to property values and that there may be a low magnitude effect in southern reaches of Aberdeen and that the effects would lessen with increasing distance from the project. For most properties in Kamloops, the EAO concluded that they are unlikely to be exposed to nuisance factors at levels that would

Key Issue	Summary of comments	Response and applicable report conclusions and proposed provincial conditions
	<p>values for homeowners in Aberdeen. The ANA also disagreed that that the proposed community liaison group will be able to effectively monitor/manage potential effects to property values.</p>	<p>result in long term downward pressure on property values.</p> <p>The EAO also remains of the view that property value impacts to the Aberdeen area, from dust, light, noise, vibration, are most appropriately managed at the source through a series of EA certificate conditions. The EAO considers that the following EA Certificate Conditions would mitigate potential project effects to property values of homes near Ajax:</p> <ul style="list-style-type: none"> • Community Liaison Group: KAM would be required to convene a community liaison group to provide a mechanism for communication and engagement between KAM, local governments and local stakeholder groups. • Noise Management and Monitoring Plan: would help ensure project noise levels remain below applicable thresholds for annoyance and sleep disturbance. • Air Quality Management and Monitoring Plan: KAM would include mitigation and adaptive management measures that KAM would implement to reduce fugitive dust emissions from Ajax, up to and including curtailment of operations. • Light Pollution Management and Monitoring Plan: would require KAM to retain a qualified professional to draft a plan to manage and monitor Ajax effects on dark sky qualities. The plan must be developed in consultation with the Ministry of Energy, Mines, and Petroleum Resources, the Ministry of Forests, Lands, Natural Resource Operations, and Rural Development, and the City of Kamloops. <p>The EAO notes that based on comments and concerns raised for property values near the mine site, the EAO revised the minimum distances required for monitoring noise and vibration in the EA Certificate Conditions.</p> <p>The following EA Certificate Conditions may also have a moderating effect on potential downward pressure on property values in the local study area: Surface Water Quality Management and Monitoring Plan; Water Management and Hydrometric Monitoring Plan; Grasslands Restoration and Enhancement Plan; and Human Health Reporting.</p>
<p>Property value protection program</p>	<p>Commenters, including the Aberdeen Neighbourhood Association (ANA) and the Aberdeen Highlands Development Corporation, recommended a property value protection program be a condition of the EA Certificate if Ajax proceeds. In support of their position, the ANA provided an assessment prepared by Nadlan Consulting that assessed project impacts to Aberdeen property values using a hedonic pricing method (regression analysis). The results suggest that Ajax was already responsible for lower appreciation rates in Aberdeen relative to Juniper Ridge from 2010 to 2016 by approximately \$20k. The ANA recommended that a property value protection program underway in Port Hope Ontario be adapted for Ajax and made a Condition of the</p>	<p>During the EA, the EAO considered requests from members of the public to evaluate project impacts using alternative analyses, specifically the hedonic pricing method. The EAO sought input from socio-economic impact assessment experts on the working group and determined that there was insufficient data to develop a robust or meaningful hedonic pricing model and that this method was not a better technique for predicting potential project impacts and mitigation measures.</p> <p>The EAO reviewed the Nadlan Consulting paper submitted by the ANA, which uses a simplified regression analysis to test the hypothesis of whether Ajax has resulted in depressed property value appreciation in Aberdeen relative to Juniper Ridge. The EAO considers that the Nadlan Consulting paper supports the EAO's view that there are multiple complex and interacting factors that influence market housing values, and that a hedonic pricing model would not have resulted in different predictions or a higher level of confidence in the property values effects assessment.</p> <p>The EAO's review of the Port Hope Property Value Protection Program indicates that the program struggles to define "effects" and attribute them to the project; the program is administratively complex and expensive for the Government of Canada; and the Program has not increased property owner's confidence that property value effects will be compensated.</p> <p>Notwithstanding that property value protection programs can present significant administrative hurdles that can frustrate and disappoint</p>

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	<p>EA Certificate.</p> <p>Commenters also suggested that properties near and around the mine site should be inspected prior to mining commencing with follow up inspections to ensure that mining activities are not affecting the structure or its stability. Those who are impacted, if any, should be compensated at market value.</p>	<p>applicants, the EAO considers there to be a number of intractable issues regarding the suggestion for a property value protection program for Ajax; this includes a lack of clarity regarding whether/how Aberdeen properties would be affected, how to attribute property value impacts to Ajax, and uncertainty about how to consider potential positive impacts on property values from Ajax, and at what point impacts to the value would be determined.</p> <p>In consideration of the predicted effects to property values, the technical challenges of attributing project effects on housing values, and the administrative complexities of property value protection programs such as the one in Port Hope, the EAO does not consider a property value protection program administered by KAM to be feasible or appropriate. The EAO considers it most reasonable to mitigate potential impacts to property values by avoiding and minimizing the nuisance factors (dust, noise, and changes to visual quality) that could contribute to a downward pressure on property values of nearby homes.</p>
<p>Topic: Current Use of Lands and Resources for Traditional Purposes and Aboriginal Interests (raised in 7% of comments)</p>		
<p><i>Pipsell</i></p>	<p>Members of the public and Whispering Pines/Clinton Indian Band acknowledged that SSN have a significant historical, cultural and spiritual connection to <i>Pipsell</i> territory. Ajax would adversely affect <i>Pipsell</i> which is an important fishing and hunting site for SSN.</p> <p>Some commenters questioned the use of the area by SSN.</p>	<p>The Agency and EAO engaged extensively with SSN throughout the EA and carefully considered the information brought forward by SSN. As stated in Appendix A of the Report, the Agency and EAO consider that the adverse residual effects of Ajax on the current cultural and ceremonial practices would be high in magnitude due to the cultural and spiritual significance of <i>Pipsell</i> to SSN.</p> <p>The Agency and EAO conclude that Ajax is likely to cause significant adverse environmental effects to the current use of land and resources for traditional purposes by aboriginal persons due to effects to fishing and cultural and ceremonial uses of <i>Pipsell</i>. See section 18.4.3 of the Report.</p>
<p>Topic: Heritage (raised in 2% of comments)</p>		
<p>Hunting blind complex</p>	<p>Members of the public and Whispering Pines/Clinton Indian Band expressed their support for SSN in stating that the Hunting Blind Complex is a unique archaeological feature that speaks to long term use and occupancy and also to title and rights for the Secwepemc. To destroy or attempt to mitigate this would be to erase solid evidence and eradicate a holistic look at ebbs and flows of the grasslands as a transition zone for many species of birds, wildlife, insects and plant life.</p>	<p>Section 19.6.3 of the Report states that the Agency and EAO acknowledge SSN's view that the mitigation proposed by KAM to offset the loss of the hunting blind complex, including relocation of the hunting blind complex, creation of a 3D model, or other means of partially or fully preserving the structures associated with the hunting blind complex, would not mitigate the loss of the hunting blind complex nor the corresponding impacts to SSN heritage.</p> <p>Appendix A of the Report states that the Agency and EAO considers the residual effects to Indigenous heritage to be high in magnitude, because Ajax would affect substantial portions of intact sites of high importance, regional in geographic extent, based on the impact on the entire SSN community, and far future in duration.</p> <p>The Agency and EAO concluded that Ajax is likely to cause significant adverse environmental effects to physical and cultural heritage based on effects to Indigenous heritage.</p>
<p>Topic: Accidents and Malfunctions (raised in 9% of comments)</p>		
<p>Mount Polley and risk of tailings storage facility</p>	<p>Members of the public and Whispering Pines/Clinton Indian Band commented that the Mount Polley panel recommendations were not adequately considered in the</p>	<p>The EAO respectfully disagrees with the view that the Mount Polley recommendations were not considered. As recommended in the Mount Polley Independent Panel report, the EAO required KAM to undertake an additional tailings storage alternatives assessment. Following the completion of the assessment, KAM convened an independent tailings review board to review their tailings storage alternatives assessment.</p>

Key Issue	Summary of comments	Response and applicable report conclusions and proposed provincial conditions
failure	<p>EA. For example the recommendation to not use wet tailings storage in areas where glacial till exists.</p> <p>Inadequate government oversight of Ajax may result in another Mount Polley type accident (i.e. failure of the tailings storage facility).</p> <p>There are inadequate financial securities to mitigate risks associated with temporary or early closure of Ajax.</p>	<p>The review board chaired by Dr. Dirk Van Zyl, a former member of the Mount Polley Independent Review Panel, stated that the proposed Ajax tailings storage facility is an appropriate design.</p> <p>The EAO notes that, following from the Independent Panel recommendations on the tailings storage facility breach at Mount Polley, Part 10 of the Mining Code was updated on July 20, 2016 to include design standards for tailings storage facilities that are tailored to the particular conditions encountered in BC and emphasize protecting the public and workers.</p> <p>In section 20.3.1 of the Report, the Ministry of Energy, Mines, and Petroleum Resources and the City of Kamloops indicated that they did not have concerns about the safety of the design of the tailings storage facility. SSN's geotechnical expert also indicated that the tailings storage facility design was safe.</p> <p>The Report concluded there is a low likelihood that the tailings storage facility would fail, and Ajax is not likely to result in significant adverse environmental effects as a result of accidents or malfunctions, including failure of the tailings storage facility.</p> <p>In the event accidents of any nature occur, the EAO proposes the Condition Accidents and Malfunctions Communication Plan, which would require KAM to develop a communication plan for accidents and malfunctions. This plan would identify the means by which KAM will notify affected parties, the type information they are required to provide, and a list of Indigenous, municipal, and community groups that would be notified in the event of an accident or malfunction.</p> <p>The Agency and EAO note that detailed tailings storage facility design and related mitigations for accidents and malfunctions involving the tailings storage facility would be subject to review during post-EA permitting processes, if Ajax proceeds, and finalized under a joint <i>Mines Act</i> and <i>Environmental Management Act</i> permit process¹ as well as under the Health, Safety, and Reclamation Code for Mines in BC.²</p> <p>The EAO notes that financial securities are established in the <i>Mines Act</i> permitting process and are reviewed regularly.</p>
Risk of failure of open pit high wall	<p>Members of the public and Whispering Pines/Clinton Indian Band commented that there is insufficient evidence to conclude that there would not be a failure of the open pit high wall, and subsequent drainage of Jacko Lake into the open pit.</p> <p>Commenters also raised concerns regarding KAM's proposed adaptive management measures.</p>	<p>Section 20.2.2 of the Report discusses the accident scenario of an open pit high wall failure resulting in a complete drainage of Jacko Lake to the open pit. The likelihood of such an accident occurring is considered low. KAM proposed measures to avoid or prevent this scenario from occurring including through project design and a monitoring plan, which would also include contingency and response plans.</p> <p>KAM has committed to undertaking additional hydrogeological investigations in the area between the open pit and Jacko Lake, including additional pumping tests, in support of subsequent permit applications to further define the subsurface conditions in this area. The EAO proposed provincial EA Certificate Conditions that would require these investigations and support an effective groundwater management and monitoring program at Ajax.</p>

¹ For more information on mine permitting under the mines act and the Environmental Management Act please see:
http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/permitting/minesact-ema_application_information_requirements_feb2016.pdf

² To review the Health, Safety, and Reclamation Code for Mines in BC see:
http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/health-and-safety/code-review/health_safety_and_reclamation_code_2017.pdf

Key Issue	Summary of comments	Response and applicable report conclusions and proposed provincial conditions
		<p>The EAO considers that the following EA Certificate Conditions would mitigate potential risk of open pit high wall failure:</p> <ul style="list-style-type: none"> • Groundwater Investigation Plan would require KAM to undertake additional groundwater investigations at Ajax prior to construction and to incorporate the results in project design and groundwater management and monitoring planning. • Groundwater Management and Monitoring Plan would require KAM to develop a plan that would describe how KAM would ensure the water supply of groundwater users near Ajax is maintained. The plan would require KAM to monitor groundwater conditions and to apply adaptive management as needed.
Traffic and road accidents	There will be additional traffic on the Coquihalla Highway from long haul semi-trucks which could increase risk and severity of road accidents.	<p>KAM conducted a Traffic Impact Assessment and concluded that Ajax is not expected to affect local highway use after mitigation measures have been applied (Appendix 8.1-A of the EIS/Application).</p> <p>KAM conducted a Failure Modes and Effects Analysis workshop to evaluate hypothetical accidents and malfunctions, including motor vehicle accidents. KAM concluded that the scenarios are credible and preventable.</p> <p>The Agency and EAO are satisfied that KAM adequately identified and assessed the potential accidents and malfunctions associated with Ajax. KAM proposed measures to avoid or prevent potential accidents and malfunctions including project design and a monitoring plan, through which contingency and response plans would be in place, should an accident or malfunction occur.</p>
Topic: Government oversight, regulation, compliance and enforcement		
Compliance and enforcement of mining projects in BC	<p>Members of the public expressed a lack of trust in the mining regulatory regime in BC, including compliance and enforcement of mining projects. There was apprehension that under the current regulatory regime there is insufficient government oversight and regulation of mining in BC. Concern that there would be a lack of compliance by the Proponent and limited enforcement capability by the regulators to ensure compliance.</p> <p>Other commenters argued that BC and Canada have among the most strict environmental standards and regulations in the world. Some members of the public described their experiences working at other mines and noted that environmental protection regulations and technology have made great advances in recent history.</p>	<p>Mines in BC are governed by a number of laws and policies to ensure mining activities are conducted in an environmentally sustainable manner. The principle regulator of mines in the Province is the Ministry of Energy, Mines, and Petroleum Resources. For Ajax, the Major Mine Permitting Office is coordinating the requisite provincial permit applications required for mine operations should an EA Certificate be granted.</p> <p>Should an affirmative federal Environmental Assessment Decision and provincial EA Certificate be issued, extensive permits under other federal and provincial legislation would also be required before the project could proceed. These include, but are not limited to, authorizations under:</p> <ul style="list-style-type: none"> • <i>Environmental Management Act</i> – administered by the Ministry of Environment and Climate Change Strategy • <i>Fisheries Act</i> – administered by Fisheries and Oceans Canada • <i>Explosives Act</i> – administered by Natural Resources Canada • <i>Forest Act</i> - administered by the Ministry of Forests, Lands, Natural Resource Operations, and Rural Development • <i>Land Act</i> - administered by the Ministry of Forests, Lands, Natural Resource Operations, and Rural Development • <i>Mines Act</i> – administered by the Ministry of Energy, Mines, and Petroleum Resources • <i>Transportation Act</i> – administered by the Ministry of Transportation and Infrastructure • <i>Water Sustainability Act</i> - administered by the Ministry of Forests, Lands, Natural Resource Operations and Rural Development <p>The EAO's compliance and enforcement program would be responsible for verifying compliance with the EA certificate throughout the pre-</p>

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		<p>construction, construction, operations and, if applicable, decommissioning phases of a project. Activities undertaken by EAO compliance and enforcement would include:</p> <ul style="list-style-type: none"> • Developing a compliance management plan; • Overseeing self-reporting by the certificate holder and monitoring undertaken by third parties (e.g. independent environmental monitors or qualified professionals); • Conducting administrative and field inspections as well as investigations; and • Taking enforcement action in cases where non-compliance is identified. <p>In situations of non-compliance, the Compliance Officer determines what enforcement is appropriate guided by the EAO Compliance and Enforcement Policy. There are a number of enforcement options available to EAO; the most common forms of enforcement include warnings, Orders to Cease (S. 34 of the <i>Environmental Assessment Act</i>), Orders to Remedy (S. 34 of the <i>Environmental Assessment Act</i>), and Compliance Agreements (S. 36 of the <i>Environmental Assessment Act</i>). EAO Compliance and Enforcement Officers are also designated as Natural Resource Officers under <i>the Natural Resource Compliance Act</i> and can enforce under those authorities as needed.</p> <p>The EAO Compliance and Enforcement Program coordinates with other agencies, including the Ministry of Energy, Mines, and Petroleum Resources to ensure mines comply with the various permits and licences required for mine operations in BC, although the specific permits are monitored and enforced by the issuing agency.</p>
Financial risk and KAM's liability	<p>The public raised concerns regarding KAM's financial feasibility study and indicated that the provincial and federal governments have not required Ajax to provide detailed cost estimates for the monitoring, mitigation, and compensation plans it has committed to, making it impossible to determine if the mine has the financial capability to fulfill these promises.</p> <p>Some members of the public also expressed concern regarding KGHM International's environmental track record and raised questions regarding financial liability in the event of an accident or malfunction. Members of the public were concerned that Ajax would be a substantial financial risk to the BC taxpayer and that there would be insufficient financial bonding in the event of an accident or malfunction.</p> <p>Other members of the public expressed confidence in KAM's commitment to environmental protection and indicated that KAM has been diligent in following the</p>	<p>The EAO appreciates the concerns regarding financial risk and liability for Ajax and notes that under the <i>Mines Act</i> of BC, as a condition of issuing a permit, the Chief Inspector may require a financial security for mine reclamation, and to provide for protection of, and mitigation of damage to, watercourses and cultural heritage resources affected by the mine.</p> <p>Following the release of the Auditor General's report on compliance and enforcement of the mining sector in May 2016, the Ministry of Energy, Mines, and Petroleum Resources (EMPR) commissioned Stantec Consulting Ltd. to examine how jurisdictions in Canada and abroad deal with the issue of reclamation security. The report, completed in September 2016, is available here: https://www2.qa.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/reclamation-and-closure/stantec_report_mine_reclamation_security_sept_30_2016.pdf</p> <p>For the next phase of the review, EMPR and the Ministry of Finance commissioned Ernst and Young, a leading auditing firm with experience and knowledge of the mining industry worldwide, to undertake an in-depth examination of reclamation securities practice. In its review, Ernst and Young found EMPR utilizes a financial security program based on sound principles that include elements of a risk-based approach.</p> <p>The Ernst and Young report offers EMPR some potential policy components to consider moving forward. EMPR is undertaking further analysis to support updates to its reclamation securities approach. This work will be completed in 2018. For background, the Ernst and Young report is available here: http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/reclamation-and-closure/bc_mem_ey_report_on_mine_reclamation_security_final.pdf</p>

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	<p>environmental assessment process, noting that the level of work and consultation undertaken by Ajax is unprecedented and a testimony to their commitment to completing the project in an environmentally acceptable manner.</p>	
Topic: EA Process		
<p>Rigour of the EA process</p>	<p>Comments and questions related to the rigour of the EA process such as, technical review, neutrality of EAO and transparency. Concerns were also raised that the EA process in BC is not well-suited to examine the effects of projects that are located near urban centers. Some commenters questioned how the level of confidence in the Agency and EAO's conclusions would be considered in the ministers' decisions regarding the Ajax. Commenters noted that it is not apparent in the Report that the level of confidence associated with the conclusions on residual effects is moderate or low for most valued components.</p> <p>Views expressing concern that the Ajax EIS/Application was not subject to the scrutiny of a public hearing panel, which raises questions of lack of scientific rigor, due process and fairness. Members of the public also questioned whether the Agency and EAO had visited the proposed site of Ajax and whether they had an appreciation for the area and the issues being raised by the public.</p> <p>Other members of the public expressed views that KAM had submitted one of the most complete and detailed applications ever reviewed in BC that was based on years of scientific study. The Agency and EAO's review of the application and conclusions were derived from a meticulous and thorough process held up by both levels of government.</p>	<p>The Agency and EAO appreciate the comments from members of the public related to the EA process and would like to thank these commenters for taking the time to provide their perspectives on the EA process. With respect to the concerns regarding the ability of the EA process to adequately assess effects of a project to nearby urban centers, it is the view of the Agency and EAO that the EA process followed for Ajax was tailored and, in many regards, enhanced to consider the unique circumstances of the proposed mine.</p> <p>While the Report provided for public comment was the final version and not subject to further change, the EAO has considered the public submissions regarding the information that was included in the provincial draft Summary Assessment Report and revised that document as appropriate. An example of these changes is the addition of a summary appendix of all residual adverse effects to the EAO's Summary Assessment Report.</p> <p>The EAO notes that the Report is considered the "assessment report" under the <i>Environmental Assessment Act</i>, and that the Ministers must consider the assessment report in their decision. Appendix A of the Report provides confidence levels associated with each valued component that was assessed.</p> <p>The Agency and EAO are also providing this report of public comments to federal and provincial decision makers for their consideration in making their respective environmental assessment decisions.</p> <p>Additionally, the EAO would like to acknowledge that public input related to Ajax has generated substantial learning regarding public engagement in the EA process in BC. The EAO has, and will continue to, carry those learnings forward into the EA revitalization process described in Premier Horgan's mandate letter to Minister Heyman in July 2017.</p>
<p>Review of federal EA process</p>	<p>Members of the public expressed concern that current environmental assessment processes are inadequate, and noted that this is substantiated by the fact that a</p>	<p>The Government of Canada is reviewing federal environmental assessment processes to build a new system that is fair and robust, respects the rights of Indigenous peoples, is based on scientific evidence, and protects our environment for generations to come.</p>

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	review of the federal environmental assessment process is currently underway.	The Agency ensured that the environmental assessment met the Government of Canada's Interim Principles to strengthen government decisions on major projects until changes to the environmental assessment and regulatory review system are in place, as well as fulfilling the requirements of the former <i>Canadian Environmental Assessment Act</i> .
Scope of assessment	Concern that valued components were missing from the assessment, including pollinating insects, quality of life, potential adverse effects of electromagnetic radiation from Hydro lines serving the site, and mental health.	<p>In the coordinated EA process, the Environmental Impact Statement Guidelines/Application Information Requirements (EISg/AIR) specified the information and studies required to assess the potential impacts of Ajax on selected Valued Components (VC) and on Aboriginal Interests. In EA practice, VCs are components of the natural and human environment that are considered by the proponent, public, Indigenous groups, scientists and other technical specialists, and government agencies involved in the EA to have scientific, ecological, economic, social, cultural, archaeological, historical, or other importance. The list of selected VCs will vary for each project to reflect the characteristics of the project and of the region and context within which it is located. When selecting VCs for assessment, appropriateness is a more important criterion than quantity.</p> <p>The VCs, taken together, provide a foundation for understanding the potential for the project to cause significant adverse effects after reasonable and practical mitigation measures are applied.</p> <p>As directed by the Agency and EAO, KAM developed a draft EISg/AIR that characterized the VCs and effects pathways to be assessed in the development of the EIS/Application for Ajax. The technical working group provided detailed review and input into the development of the guidelines, while the Agency and EAO jointly hosted two public comment periods on the draft EISg/AIR and incorporated the public's feedback into the finalized versions. On June 25, 2013, the Agency and EAO issued the final EISg/AIR to KAM as part of the coordinated environmental assessment. Updates were made on November 10, 2014 after KAM made some adjustments to the proposed project design. The EISg/AIR outlined the baseline studies, methods and information needed to identify and describe Ajax's potential environmental, social, economic, heritage and health impacts, as well as measures proposed by KAM to avoid or mitigate (eliminate, reduce, or control) those impacts, including those relating to Aboriginal Interests.</p>
Aboriginal Interests	Government must implement its commitment to the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).	The Government of Canada has committed to renew the relationship between Canada and Indigenous peoples based on recognition of rights, respect, co-operation and partnership. These principles align with UNDRIP and are consistent with the Government of Canada's approach to consultation with Indigenous peoples. The Province of British Columbia is committed to fully adopting and implementing UNDRIP. Each of the new provincial ministers' mandate letters includes a requirement to review policies, programs, and legislation to determine how to bring the principles of the declaration into action in BC.

List of Acronyms

The Agency	Canadian Environmental Assessment Agency
Ajax	Proposed Ajax Mine Project
DFO	Fisheries and Oceans Canada
EA	Environmental assessment
EAO	Environmental Assessment Office
ECCC	Environment and Climate Change Canada
EIS/Application	Environmental Impact Statement/Application for an Environmental Assessment Certificate
EISg/AIR	Environmental Impact Statement Guidelines/Application Information Requirements
FLNR	Ministry of Forests, Lands, Natural Resource Operations, and Rural Development
Former Act	<i>Canadian Environmental Assessment Act, S.C. 1992, c.37</i>
HC	Health Canada
HHRA	Human Health Risk Assessment
KAM	KGHM Ajax Mining Inc.
IRR	Ministry of Indigenous Relations and Reconciliation
EMPR	Ministry of Energy, Mines and Petroleum Resources
MMPO	Major Mine Permitting Office
ENV	Ministry of Environment and Climate Change Strategy
TRAN	Ministry of Transportation and Infrastructure
NRCan	Natural Resources Canada
The Report	Federal Comprehensive Study Report/provincial Assessment Report
TLU	Traditional land use
SSN	Stk'emlupsemc te Secwépemc Nation
TNRD	Thompson-Nicola Regional District
TMX	Trans Mountain Expansion Project
Working group	Joint Agency/EAO working group