MEMORANDUM

To: Stk'emlupsemc te Secwepemc Nation **Date:** 7 November 2016

From: KGHM Ajax Mining Inc.

CC: B.C. Environmental Assessment Office, Canadian Environmental Assessment Agency

Subject: Response to Ajax Project Application/EIS Panel Report: Observations, Comments and Questions on Ajax Mine Proposal by Grasslands Conservation Council of BC

1. INTRODUCTION

The KGHM Ajax Project Environmental Assessment Application/Environmental Impact Statement (the Application/EIS) for a Comprehensive Study was formally submitted for review to the BC Environmental Assessment Office and the Canadian Environmental Assessment Agency on January 18, 2016. The Stk'emlupsemc te Secwepemc Nation (SSN) provided KGHM Ajax (KAM) with comments associated with reports prepared by technical experts and provided to SSN in support of the SSN Panel Hearings which occurred May 2, 2016 through May 6, 2016. This memorandum documents the response for specific recommendations SSN- Z and AA based on the report Observations, Comments and Questions on Ajax Mine Proposal by Grasslands Conservation Council of BC. The comments are focused on the direct and periphery impacts of the proposed mine, reclamation and associated site management activities on the natural grasslands, grazing lands and the associated habitat and species dependent on them.

2. COMMENTS FOR RESPONSE

The specific recommendations submitted by the SSN and addressed within this memo are listed below.

- *Observations, Comments & Questions on Ajax Proposal, Grasslands Conservation Council, 2016*

Report Specific Recommendation SSN-Z: SSN recommends that grasslands VC comments from the Public comment period are responded to and additional information is provided to SSN's process.

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Report Specific Recommendation SSN-AA: SSN also recommends that the feasibility of mitigation and reclamation planning includes restoration to grasslands.

3. RESPONSES

The Grasslands Conservation Council of BC (GCC) comments are focused on the direct and periphery impacts of the proposed mine, reclamation and associated site management activities on the natural grasslands, grazing lands and the associated habitat and species dependent on them.

KAM has provided the following supplemental submissions to EAO/CEAA that are relevant to the concerns raised:

- *0707_KAM_Ephemeral Wetlands: includes quantification of ephemeral wetlands that will be lost as a result of the Project*
- *0708_KAM_Critical Habitat: includes quantification of the amount of draft critical habitat lost for multiple species*
- *0720_KAM_Mitigation Hierarchy and Offsetting: includes additional grassland offsetting measures and areas*
- *0725_KAM_Combined Stantec Responses to EAO 001-006: includes dust mitigation details and effectiveness and model sensitivities for scenarios of reduced mitigation effectiveness*

In addition to these supplemental submissions to EAO/CEAA, KAM has received similar comments through the public comment period and is responding via a Public Comment Response Report.

SSN-Z and SSN-AA: Grasslands Comment Responses for Inclusion in SSN Review Process and Grassland Restoration

The Grasslands Conservation Council (GCC) letter to EAO regarding the Ajax Application/EIS states: "Section 6.10.6.1 [of the Application/EIS] claims no cumulative effects to grasslands habitat which is incorrect and is contrary to the finding in table 6.10-11". We respectfully disagree with this assertion. Rather, Section 6.10.7 concludes that grasslands were assessed as a Valued Component to determine likely interactions with specific Project activities and how these interactions could result in an adverse effect. All potential effects, habitat loss and habitat alteration, arising from each Project activity were identified and evaluated. After the implementation of mitigation measures, **habitat loss was found to have a potential residual effect** and in-turn was assessed for potential interactions with other projects/activities, past, present, and future, occurring within the region.

Grasslands in the Thompson-Nicola region are important for a variety of reasons. They make up 13% of all of BC's grasslands, supplying valuable grazing opportunities for livestock as well as foraging opportunities for wildlife. Grasslands provide habitat for over 30% of BC's species at risk, and they are used by Aboriginal groups for both food and medicinal plants (BC Ministry of Water, Land and Air Protection and Grasslands Conservation Council of BC 2004). Much of the LSA has been included in Priority Grasslands Conservation Areas delineated by the Grasslands Conservation Council of BC (2009), and is listed as ecological communities at risk.

In the Application/EIS, habitat loss is considered not significant (moderate) for Project-related residual effects because although the loss of grassland in the LSA is considered moderate per the significance characterization criteria described, restoration efforts will mitigate these effects. Regionally, habitat loss is considered not significant (minor) for cumulative residual effects as less than 3% of the priority grassland areas within the RSA will be lost, and suitable habitat still exists within the region.

As described in the Section 6.10.4.2 of the Application/EIS – Effects on Grasslands, between 1,002 ha and 1,777 ha of grassland habitat will be lost as a result of Project infrastructure footprints and disturbance area. A range is provided because some grassland areas that are disturbed may not be lost. In the Application/EIS, KAM has committed to on-site restoration as part of closure and reclamation planning for the Project, with the objectives of having the end land uses of agriculture, wildlife habitat and recreation (Section 11.26.2.1). Restoration would occur progressively over the mine life. A total of 1,325 ha of restoration is anticipated based on the infrastructure footprint for the EA. Of the total area that is restored, 69% will be grassland and herbaceous/sagebrush grassland.

In response to comments received from GCC and from reviewers on the government's technical working group, KAM has acknowledged the time lag between grassland loss associated with Construction/Operation of the Project and the time of planned reclamation. To address this, additional grassland restoration treatments are proposed on Sugarloaf Ranch lands to improve grassland extent and condition during Project operations. The total area identified as potentially suitable for restoration treatments is 2,093 ha which will result in net gain of grasslands. These are further described in the memo 0720_KAM_Mitigation Hierarchy and Offsetting.

KAM maintains that the conclusions of the Application/EIS are appropriate including the conclusion that cumulative grassland habitat loss will result in a Not Significant (moderate) effect. In addition, considering the additional modelling information from the ALCES (2016) report, which aligns closely with the grassland baseline data presented in Appendix 6.8-A and Chapter 6.10-Grasslands and the additional 2,093 ha of grasslands that have been identified for restoration, this conclusion is strengthened.

KAM maintains that an adequate project-level cumulative effects assessment has been completed for the purposes of assessing the effects of the Project. KAM appreciates SSN's broader concerns about cumulative effects in the SSN traditional territory, and the back-dated ALCES modelling provides an interesting tool for further analysis and evaluation. Please refer to the response to SSN-U and V for a response to the ALCES report. The methodology used in ALCES (2016) cumulative effects modelling for grasslands and fish habitat used a different approach than comparisons to a range of natural variation. Instead, a reference condition approach was used that assigned pre-contact conditions a value of 1. This approach does not take into account natural variation that would exist without anthropogenic influences and is considered conservative.

Both grassland quantity and quality were investigated as part of the ALCES model. The methodology used in ALCES (2016) cumulative effects modelling for grasslands and fish habitat used a different approach than comparisons to a range of natural variation. Instead, a reference condition approach was used that assigned pre-contact conditions a value of 1. This approach does

not take into account natural variation that would exist without anthropogenic influences and is considered conservative. Both grassland quantity and quality were investigated as part of the ALCES model. We agree that a grassland quality evaluation would be of value to the grassland restoration efforts planned. We will endeavor to work with SSN to evaluate specific proposals for advancing grasslands restoration and mine reclamation efforts to reduce cumulative effects.

We understand that grassland restoration takes time to provide the same habitat characteristics as current native grasslands. The Closure and Reclamation Plan (Section 11.28) and Landscape Design and Restoration Plan (Section 11.26) describe progressive reclamation efforts that will begin as early as possible during operations once areas are no longer required for the Project. Grassland restoration efforts will begin during Project operations to provide high functioning grassland habitat as soon as possible. These efforts will reduce the time lag between grassland losses and functional, self-sustaining restored areas.

We recognize that in order to make the grassland restoration, enhancement and reclamation efforts successful, research programs and partnerships with Aboriginal Groups and local groups like TRU and the Grasslands Conservation Council will be necessary. Section 11.26 of the Application/EIS provides some key areas of reclamation research proposed for the Project. KAM has already initiated these efforts through support of reclamation research at TRU, and the company looks forward to opportunities to advance these types of programs to help ensure that restoration and reclamation efforts will be successful. We look forward to working with GCC should the Project be approved to understand how our Closure and Reclamation plan can be improved.

In addition to our response to GCC, we have reviewed the Polster (2015) report and acknowledge that fire can be an effective tool for grassland management and enhancement. At this time, fire has not been identified as a potential management approach for grassland restoration and reclamation due in part to the challenge of obtaining "social license" as described in Polster (2015). However, as stated in Section 6.10.4.3. of Chapter 6.10 Grasslands KAM would like to work collaboratively with Aboriginal Groups, the City of Kamloops, the Grasslands Conservation Council of BC, local landowners, and tenure holders to improve the function of grasslands. The Grasslands Conservation Council also supports the use of fire as a management tool for the maintenance and restoration of grasslands (http://www.bcgrasslands.org/index.php/grasslands-of-bc/managing-grasslands/162-grasslands-management). KAM is willing to explore opportunities with other local stakeholders for the use of fire as a grassland management tool.

Although they do not include fire use, additional grassland restoration treatments are proposed on Sugarloaf Ranch lands to improve grassland extent and condition as described in the memo 0720_KAM_Mitigation Hierarchy and Offsetting. A review of Sugarloaf Ranch lands that support native grassland was conducted to identify potential grassland restoration treatments. The review consisted of field reconnaissance of potential issues and treatment sites and follow-up delineation of treatment types using aerial imagery.

4. CONCLUSION AND PROPOSED PATH FORWARD

As outlined in our response to recommendations SSN-U to SSN-Y, related to the ALCES report, KAM has proposed to conduct a grassland condition assessment within the area identified for grassland restoration. Please refer to that response for further details. We hope that the information provided in this letter addresses the concerns noted in Section 2. We appreciate the comments received from SSN and look forward to continued collaboration.

References

Delesalle, B.P., B.J. Coupe, B.M. Wikeem, S.J. Wikeem. 2009. Grasslands Monitoring Manual for British Columbia: A Tool for Ranchers. Grasslands Conservation Council of British Columbia.