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From: Valentine (IAAC/AEIC)
Sent: Wednesday, July 7, 2021 9:55:20 AM
To: Tara Oak
Cc: Miller, Kirsten; Watton, Eric; James Powell
Subject: Review of Marathon Gold responses to Caribou IRs
Sensitivity: Normal
Attachments:
Summary table for Caribou non-conforming IR Responses FFA for proponent_edited.docx

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Hi Tara,
As per previous discussions and correspondence, the attached document provides the findings of the conformity review of Marathon Gold's responses to caribou specific IRs submitted on May 3, 2021.
This document is meant to replace what the Agency provided to you on June 9, 2020 related to the same topic. Please address the information gaps identified in the attached document. The Agency does not require a response to the June 9th correspondence. You will likely note though that there is overlap between the two documents and although it is not necessary, you are you are encouraged to use the June 9th document to inform your responses.
If you have any questions, please feel free to call to discuss.
Thanks,
Brent

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Valentine Gold Project - Summary Table for Non-Conforming Responses to Information Requirements issued on February 10, 2021 for Caribou IRs

IR Number	Original Context and Rationale for asking IR	Original Information Requirement	Missing information/Conformity Gaps
IR 60	The EIS Guidelines require an assessment of the potential adverse effects on caribou that could be caused by all project activities. The analysis of migration patterns of Buchan's caribou through the project area presented in the EIS (Section 11.2.2.1 page 11.31, also figures 11-12, and 11-13) indicate that there was 'only one distinct population level path identified'. Similarly, the caribou component study indicates heavy use of the project area by migrating caribou during spring and fall. Residual impacts for Buchans caribou are considered to be of a 'high' magnitude. The EIS needs to present detailed or effective mitigations related to key project components for all affected caribou. The potential impacts on caribou population, if caribou are unable to migrate to their calving grounds, need to be considered, even though calf mortality may be substantial in this case. The assessment of (indirect) habitat loss is based on a very conservative level of anticipated avoidance (500 m) and will likely underestimate impacts on caribou during construction and operation phases of the development. The EIS needs to discuss the risks to caribou migration due to specific project components (pit, road, waste rock pile) based on caribou movement through the project area as well as effective mitigation measures for caribou, in particular migrating caribou, based on best practices and degree of obstruction posed by specific project components to migration during construction and operation. For example, the impact of the waste rock pile, directly in the path of a migratory corridor, is a major concern that needs to be evaluated or discussed. The EIS needs to include a discussion of combined project impacts from disturbance, habitat loss, mortality, and potential changes in migration stemming from project development caribou. The EIS only indirectly addresses the effects of noise, lights and dust on caribou. All aspects of human activity (noise and light) are key disturbance stimuli for caribou and should be considered together. Moderating mining activity during critical periods (e.g. migration) may be an important tool for mitigation of the mine's effects, and should be measured and quantified. This information is needed to assess the significance of potential effects and for follow-up and monitoring programs.	a. Provide a comprehensive assessment of potential effects of the project as a whole (i.e. all project components) on caribou migration, calving and subsequently to caribou populations for all phases of the project. Include at a minimum the effects of dust, noise and vibrations on caribou. This must include impacts resulting from stress as well as habitat degradation. b. Provide an assessment of effects and risks for predicted caribou avoidance zones using distances consistent with scientific literature. This must include an assessment of the amount of direct and indirect caribou habitat loss resulting from avoidance at an appropriate distance(s) consistent with scientific literature. c. Describe in detail proposed measures that will be used to mitigate for predicted effects on caribou. This is to include, but not be limited, to targeted mitigations which address permeability of the migratory pathway to caribou and is also to address how the effects of noise, light and particulate will be mitigated during the different phases of the project. Describe in detail any associated monitoring and follow-up and monitoring programs. d. Provide an assessment and discussion of combined project impacts from disturbance, habitat loss, mortality, and potential changes in migration stemming from project development (past, present and future) on affected caribou.	a. The Proponents response to IR60(a) does not conform with the original information request. Synthesis of information for a comprehensive risk assessment has not been provided (i.e., a collective assessment which integrates potential impacts of changes in the migratory pathway or absence of migration, mortality of calves and adults and changes in habitat). The potential impacts to the population as a whole if caribou fail to migrate and calve successfully is not provided (as stated in original context). Calf mortality is not included as a source of indirect mortality in the effects pathway. This is a likely outcome of the failure to migrate and should be discussed. While there is some discussion in the document, the lack of direct inclusion in assessment of mortality risk serves to underestimate the influence of this possible outcome. The proponent should discuss the potential implications of poor body condition on pregnancy & calf survival. The response refers to several prior answers none of which directly assess the influence of high calf mortality on population size and declines as a consequence of changes to calving as a failure to migrate. The lack of baseline information on travel through the proposed road will continue to hamper assessments of impacts. A synthesized discussion of the impacts of the road is not provided. Questions such as: How will use of the proposed haul road change? How will this add to other impacts (e.g. the rock pile, & the pit)? How will these impacts be measured, and what specific mitigations will address passage of caribou across the haul road during migration, if caribou persist in using this migratory pathway? The effect of dust remains unaddressed (no plan to measure deposition or particle size, no mitigations). b. The Proponents response to IR60 (b) does not conform to the original information request. The assessment does not consider the cumulative effects of the numerous disturbance factors on caribou & how this will affect habitat selection.

IR Number	Original Context and Rationale for asking IR	Original Information Requirement	Missing information/Conformity Gaps
			The assessment should not only measure direct habitat loss, but also functionality of the remaining habitat and its connectivity. c. The Proponents response to IR60 (c) does not conform with the original Information Request. For example, there are no mitigations proposed if caribou do not avoid the mine site. d. The Proponents response to IR60 (d) does not conform to the original Information Request. The breadth of the potential combined project impacts (cumulative effects) are indicated but they are not applied to the assessment of risk faced by the Buchan's caribou herd in particular. While the determination is for 'Residual effects' for caribou, the lack of a comprehensive cumulative risk assessment undermines the potential adverse impacts to caribou from this project. While habitat 'loss' is addressed, changes to functionality (particularly the migratory corridor) are not. Because the project obstructs a narrow chokepoint in the migratory corridor, it is possible that functionality of the migratory path may be completely lost, and it is therefore hard to reconcile a designation of 'neutral' or 'low magnitude' to this impact.