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July 5, 2021

Brant Zeeman
Joyce Direct Iron Inc.
Century Global Commodities Corporation
200 University Ave., Suite 1401,
Toronto, Ontario M5H 3C6
E-mail: brant.zeeman@centuryglobal.ca

SUBJECT: Conformity review outcome for the Joyce Lake Direct Shipping Iron Ore Project Environmental Impact Statement

Dear Brant Zeeman:

The Impact Assessment Agency of Canada (the Agency) has completed review of the Environmental Impact Statement (EIS) and English EIS Summary submitted by Joyce Direct Iron Inc. on May 20, 2021 for the Joyce Direct Shipping Iron Ore Project (the Project), as well as of the French EIS Summary submitted on June 22, 2021 and additional information on migratory birds submitted June 24, 2021.

The Agency determined that the EIS does not conform to the requirements of the March 4, 2013 *Guidelines for the Preparation of an Environmental Impact Statement for an environmental assessment pursuant to the Canadian Environmental Assessment Act, 2012 for the Joyce Lake Direct Shipping Iron Ore Project* (the EIS Guidelines). The Agency received advice on the conformity of the EIS from federal authorities.

Annex 1 (attached) identifies the areas where information and/or clarity are required for the EIS to meet the requirements of the EIS Guidelines. The outcome of this conformity review, including this letter and annex, as well as submissions from federal authorities that informed this review, will be posted on the Canadian Impact Assessment Registry Internet Site, found at: <https://iaac-aeic.gc.ca/050/evaluations/proj/80015>. Please note that comments and advice from federal authorities should be considered throughout the preparation of the revised EIS, the remainder of the environmental assessment process, and the regulatory processes that follow, as applicable.

Joyce Direct Iron Inc. is required to provide a revised EIS that meets the requirements of the EIS Guidelines, as detailed in Annex 1. The timeline for the federal environmental assessment process will be paused while you complete this work.



Upon receipt of a revised EIS, the Agency will conduct a conformity review in accordance with its *Operational Policy Statement: Information Requests and Timelines, February 2016* (<https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/information-requests-timelines.html>)

Once the Agency determines that the EIS conforms with the EIS Guidelines, the environmental assessment can proceed to the technical review and public comment period.

The Agency welcomes the opportunity to discuss the outcome of this review with you and to provide further advice on how to best address the outstanding information required to move forward with the assessment process. If you have any questions about the content of this letter or conformity review table, please contact the undersigned at 902-233-4758 or via email at iaac.joycelakeironoremine-minedeferjoycelake.aeic@canada.ca.

Sincerely,

<Original signed by>

Shauna O'Brien
Project Manager

Cc:

J. Pulchan, Environment and Climate Change Canada
S. Zwicker, Environment and Climate Change Canada
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L. Davidson, Natural Resources Canada
J. Flanagan, Transport Canada
J. Reader, Health Canada
J. Reynolds, Environment, Climate Change and Municipal Affairs
J. Sweeney, Environment, Climate Change and Municipal Affairs

Annex 1

**Detailed Conformity Requirements for the Joyce Lake Direct Shipping Iron Ore Project
Environmental Impact Statement submitted May 20 2021**

Requirement of the EIS Guidelines (Please refer to the March 5, 2013 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement
HEALTH OF INDIGENOUS PEOPLES		
7.1.1 Valued Components 9.1.3 Human Environment 10.1.1 Methodology – Risk Assessment Framework 10.1.3 Effects of changes to the environment on Aboriginal peoples	Not applicable – there is no section of EIS that provides required health effects assessment	<p>Although health services are discussed in Chapter 21 of the EIS in a socioeconomic context, the EIS does not include an assessment of potential effects of changes to the environment on the health of Indigenous peoples. Update the EIS and EIS summary to provide a single section pertaining to the health of Indigenous peoples, including baseline information, a complete effects analysis, description of relevant mitigation measures and follow-up and monitoring activities; and determination of the significance of residual effects. Cumulative effects and effects of accidents and malfunctions should also be considered in applicable sections. This will include:</p> <ul style="list-style-type: none"> • baseline information relevant to human health (receptor locations, noise, air quality, drinking and recreational water quality, and country food quality); • information regarding exposure potential for all relevant exposure pathways associated with project activities using health based standards or guidelines; • identification of country food items (species as well as the specific tissues or parts of plants) that are consumed, preferably using surveys of potentially affected Indigenous communities. If a survey is not conducted, a detailed rationale should be provided for the selection of reference baseline information; • an inventory of potential COPCs relevant to country foods (including naturally-occurring contaminants such as methylmercury and arsenic) and their estimated or measured baseline concentrations in the country food items identified. <p>Should the proponent determine that quantitative HHRA is not required for any identified pathway, a rationale must be provided.</p>

Requirement of the EIS Guidelines (Please refer to the March 5, 2013 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement
ATMOSPHERIC ENVIRONMENT		
Section 9.1.2 – Biophysical Environment – Atmospheric Environment and Climate Section 10.1.1 Methodology Section 10.1.2 Changes to the Environment	Chapter 10 – Atmospheric Environment and Climate	<p>The EIS provided incomplete information on ambient air quality in the project area, including site specific data for the mine site. Reference data was dated, required parameters were missing (i.e. particulate matter less than 10 micrometres in diameter, volatile organic compounds), and background concentrations of some contaminants were assumed to be zero with no supporting rationale. Additionally, air quality modelling was not completed for relevant COPCs related to diesel exhaust (DE) emissions from the project. To address these deficiencies:</p> <ul style="list-style-type: none"> • Provide a complete baseline of recent ambient air quality conditions in the project areas, including the mine site, including for total suspended particulates (TSP), particulate (PM₁₀ and PM_{2.5}), volatile organic compounds (VOCs), carbon monoxide (CO), nitrogen oxides (NO_x), sulphur dioxide (SO₂) and metals of concern. Provide rationale for any reliance upon existing data and any assumptions made in the baseline description, including rationale for assumed background concentrations. • Include an inventory of all emissions and potential COPCs resulting from the proposed project, including those related to DE, in an air quality effects assessment. All sources should be considered, including project-related processes, on-site vehicle usage and fugitive emissions. Provide an evidence-based rationale for the omission of any COPCs from the assessment.
ACCIDENTS AND MALFUNCTIONS		
Section 7.1.2 Effects of potential accidents or malfunctions	2.6.3 Accidents and Malfunctions Throughout EIS	<p>Section 2.6.3 of the EIS identifies accidents considered, and a worst-case quantity of a hydrocarbon spill is identified, but key details required by the EIS Guidelines are not provided (e.g. probability and magnitude of events). There are also accident scenarios that have not been described in Section 2.6.3 that are considered later in the EIS (e.g. Section 15.8 of the EIS considers effects of accidents during truck transport of diesel and iron ore). To address these deficiencies:</p>

Requirement of the EIS Guidelines (Please refer to the March 5, 2013 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement
		<ul style="list-style-type: none"> • update Section 2.6.3 to be inclusive of all potential accidents identified and considered in the effects analysis in later chapters. Describe plausible worst-case scenarios for these accidents, with consideration of potential locations that would represent a worst-case (e.g. truck accident on the causeway or bridge); • for all accident scenarios (i.e. those noted above, as well as those already in EIS Section 2.6.3), provide information on rationale for identification of the plausible worst-case scenario, probability of the event, magnitude of the event (including quantity, mechanism, rate, form and characteristics of the contaminants and other materials likely to be released into the environment), and the spatial and temporal boundaries for potential effects; and • update the effects analysis in the EIS and EIS summary for all VCs to incorporate the additional information described above.
CUMULATIVE EFFECTS		
Section 3.5 Section 12.1.2 Cumulative environmental effects	Section 5.6 (Methods) Subsection 7 of each VC chapters Chapter 24 Cumulative Effects	<p>The EIS Guidelines require that cumulative effects assessment be a standalone section in the EIS. Cumulative effects were analysed in different chapters related to their corresponding VCs and the cumulative effects was not a standalone chapter. Furthermore, information was missing related to the temporal scoping and the rationale for inclusion or exclusion of specific projects.</p> <p>Update the EIS and EIS summary to provide a standalone section pertaining to cumulative effects as required in Section 3.5 of the EIS Guidelines. The analysis must:</p> <ul style="list-style-type: none"> • clearly identify past, present and future projects/activities in the area, and provide a rationale in the event that some projects/activities are excluded from consideration; and • describe temporal and spatial interaction of other project/activities with the Project, including rationale for how magnitude and duration terms were defined, a clear description of the overlapping environmental effects, and consideration of historical data where available.

Requirement of the EIS Guidelines (Please refer to the March 5, 2013 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement
		<p>The effects analysis for VCs should be updated to consider these additional details. Should the proponent determine that no cumulative effect is identified, a rationale must be provided.</p> <p>For further guidance, refer to the Agency’s Interim Technical Guidance on Assessing Cumulative Environmental Effects under the Canadian Environmental Assessment Act, 2012</p>
GENERAL – CORRECTIONS AND CLARIFICATIONS TO ENSURE EIS IS READY FOR PUBLIC RELEASE		
Section 3.5 Presentation and Organization of the EIS		<p>Section 3.5 of the EIS Guidelines outlines requirements for the presentation and organization of the EIS in order to facilitate easier access to readers. There are several instances where the EIS is not clear to the reader. Additional clarity should be provided for the following:</p> <ul style="list-style-type: none"> • Title Page – the EIS does not include a title page with the proponent’s name for the overall document. • Table of Contents – A full table of contents for the entire document is not included, only on a per chapter basis. • Table of Concordance – Several instances were noted where the table of concordance identified incorrect or non-existent section references (the Agency can provide examples request; it is not a complete list). Verify the table prior to submission of the final EIS. • Leaflet – The leaflet titled “Organizational and Regulatory Changes since Issuance of EIS Guidelines” is helpful to the reader and would be more accessible if it were included in the EIS document (e.g. as an appendix). Where possible, revise editorial issues identified in the leaflet (for example, remove remaining references to WISCO in the EIS). • Migratory Bird Addendum – As per the email of May 20, 2021 from the Agency, incorporate the additional information provided in the Migratory Bird Addendum into the Migratory Bird section of the EIS document.

Requirement of the EIS Guidelines (Please refer to the March 5, 2013 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement
		<ul style="list-style-type: none"> • EIS PDF file: The proponent should submit a full EIS file with a title page, executive summary, full table of contents (i.e. a list of chapter titles and a list of appendices), and the body of the EIS as one file. The appendices can remain as separate files.
Section 4 Summary of Environmental Impact Statement	Section 5, p. 8-9	<p>Section 4 of the EIS Guidelines requires a summary of the EIS. There are several discrepancies noted between the EIS Summary and the EIS. Update the following, as applicable:</p> <ul style="list-style-type: none"> • The summary table provided in Section 10 of the EIS Summary indicates overall significance ratings for each VC for operations, accidents and cumulative effects. No detail is provided on how these conclusions were reached, as required by the EIS Guidelines. Additionally, one rating is provided for each VC, whereas the summary tables in the VC chapters are broken down to give significance ratings by effect/interaction. Provision of the VC-specific residual effects tables in the EIS Summary may address this deficiency, along with a rationale for how multiple effects ratings were summarized as one overall significance rating. • The list of project components in the EIS Summary, section 2.3 is not the same as the list in the EIS, section 2.5. • There is conflicting information about the open pit surface area in section 2.3.1 of the EIS Summary and Section 2.5.1 of the EIS. • There is conflicting information on the length of the haul road connecting the causeway to the rail loop. Section 2.3.6 of the EIS Summary says 36.97 km, while Section 2.5.4.4 of the EIS says 43 km. The EIS Summary also lists road lengths for other roads that are not provided in the EIS.

Requirement of the EIS Guidelines (Please refer to the March 5, 2013 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement
		<ul style="list-style-type: none"> • There is conflicting information with the EIS regarding significance of accidents and malfunctions – Table 10.1 says significant effects on fish and fish habitat; Table 15.17 in the EIS says there are no significant effects. • The French and English EIS Summaries, and the EIS itself, are inconsistent in the speed limit units for the railway loop. All should be reported in kilometres per hour.
Section 5.6 – Project components	Section 2.5.4	<p>Section 5.6 of the EIS Guidelines requires a description of project components. Section 2.5.4 of the EIS includes conflicting information on the magnitude and scale of roads that should be clarified throughout the document. Some examples include:</p> <ul style="list-style-type: none"> • Road width seems to be used to also describe right of way width in the EIS and it is not clear when one or the other is being referred to. Section 2.5.4.1 indicates that roads in the mine area will be designed with width of 25 metres, but Section 2.5.4.2 indicates the crushing and screening plant access road will be 15 metres wide and Section 2.5.4.4 indicates that the haul road from the causeway to the rail loop will be 10 m wide. The right of way and road widths throughout this section should be clarified. • Section 3.5.4.1 indicates roads will be designed with a maximum grade of 10%, a sub-base of 1 m, and a base of 1.1 m. However, Section 2.5.4.4 indicates that the haul road from the causeway to the rail loop will be 10 m wide, with base thickness of 0.4 m.
Section 5.6 Project components	Section 1.6.3 and 2.4	<p>Section 5.6 of the EIS Guidelines requires a description of the project components. The EIS provides contradictory information on the tailings related to the Project. Section 1.6.3 of the EIS say there will be no tailings associated with the Project but Section 2.4 Mining Plan in Appendix Q -1 says that tailings will be required for phase 2 when the wet circuit is added in about year 3 of operations.</p> <ul style="list-style-type: none"> • Correct the information on tailings in the EIS and appendices accordingly.

Requirement of the EIS Guidelines (Please refer to the March 5, 2013 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement
Section 5.7 Project activities	Section 2.6.1.3	<p>Section 5.7 of EIS Guidelines requires a description of activities to be carried out during the Project, including the location, expected outputs and indication of the activity’s magnitude and scale. The following items should be addressed to meet this requirement:</p> <ul style="list-style-type: none"> • Section 2.6.1.3 of the EIS indicates that borrow and quarry pits are to be developed, and that three suitable areas have been identified. However, Section 13.5.3.3 indicates that <i>existing</i> borrow pits will be used for materials. No locations are provided in either case. • Section 2.6.2.3 of the EIS does not provide detail to indicate the magnitude and scale of road transport activities (i.e. contribution to traffic on existing roads, anticipated traffic on new haul and access roads, equipment to be used, etc.).
Section 6 Scope of Project	Section 4.6.2.2, Chapter 15, Chapter 16	<p>Section 6 of the EIS Guidelines requires information on dewatering of Joyce Lake and any associated infrastructure. Section 2.6.2.2 of the EIS indicates that data from a hydrogeological study in 2014 was used along with pit construction design to develop a detailed dewatering plan for Joyce Lake. This is not provided in the appendices. References to the dewatering plan in later chapters (15, 16) indicate that it is not yet developed.</p> <ul style="list-style-type: none"> • Provide the referenced study, or clarify if it is not yet developed.
Section 9.1.2 – Biophysical Environment Water Resources	Section 11.5.3.5	<p>Section 9.1.2 of the EIS Guidelines requires a description in the EIS of water resources. Section 11.5.3.5 of the EIS states several times (pp. 11-73, 11-74 and 11-76) that the “water quality results from the water and sediment baseline study (GENIVAR 2013) are generally in agreement with the water quality results in the present study...and are presented in Appendix J.” It is unclear what the “present study” is referring to and what is provided in Appendix J: the GENIVAR 2013 study, or the “present study.”</p>

Requirement of the EIS Guidelines (Please refer to the March 5, 2013 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement
		<p>The water and sediment baseline study (GENIVAR 2013) was not available for review. This is critical to the understanding of the baseline water and sediment conditions and the assessment of effects in water sediment.</p> <ul style="list-style-type: none"> Clarify what “the present study’ is referring to, and what is being referred to in Appendix J. Provide the complete GENIVAR 2013 report for review.
<p>Section 9.1.2 – Biophysical Environment <i>Fish and Fish Habitat</i></p>		<p>Section 9.1.2 of the EIS Guidelines requires information on fish and fish habitat in the EIS. There is information on fish habitat at the causeway location in the EIS but Appendix V does not contain data on this area. It was noted that there was to be an update to the fish habitat study included in Appendix V however the update provided is the 2014 project description update.</p> <ul style="list-style-type: none"> Provide the fish habitat update study in Appendix V and update the EIS as appropriate.
<p>Section 9.1.2 Biophysical Environment Lacustrine Environment</p>	<p>Section 11 and Appendix K</p>	<p>Section 9.1.2 of the EIS Guidelines requires the EIS to contain a description of lacustrine ice climate in the regional study area, including ice formation, thickness, ridging, breakup, and movement. Chapter 11 and Appendix K of the EIS make reference to a 2013 memo titled “Lacustrine Ice Environment in the RSA.” The memo does not appear to be in the EIS.</p> <ul style="list-style-type: none"> Provide the full memo in the EIS.
<p>Section 9.1.2 Biophysical Environment Species at Risk and Species of Conservation Concern</p>		<p>Section 9.1.2 of the EIS Guidelines requires an analysis of the Project’s effects on Species at Risk in the EIS.</p> <p>The EIS Summary, EIS, applicable Appendices (Appendices AA, X, Y, Z) and the EIS addendum (Avifauna in the Joyce Lake Region of Labrador) contain several inconsistencies. Review the EIS Summary, EIS, EIS Addendum, and applicable EIS</p>

Requirement of the EIS Guidelines (Please refer to the March 5, 2013 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement
		<p>appendices to ensure that information presented related to species at risk is consistent, and revise as necessary. Inconsistencies include:</p> <ul style="list-style-type: none"> • Section 17.5.3.3 of the EIS states “Although the George River Caribou Herd has experienced a drastic decline in numbers in recent years, this species is not yet considered a SAR or SOCC.” The Agency is aware that the Georges River Caribou Herd, as a subpopulation of the Eastern Migratory population, was designated as endangered by COSEWIC in 2017. The legal status of species at risk, including the Georges River Caribou Herd, must reflect the current status in the EIS and all supporting documents; • There are inconsistencies in the information in the EIS addendum (Avifauna in the Joyce Lake Region of Labrador) and Chapter 17 of the EIS. These include: <ul style="list-style-type: none"> - The addendum indicates that red-necked phalarope is a species of special concern under SARA and COSEWIC, however, Table 17.9 of the EIS does not include the legal status of the red necked phalarope; - The legal status of the short eared owl differs between the addendum and Table 17.96 of the EIS; - Bank swallow are identified as a species with potential to occur in suitable habitats in the project area, however this species is not included in Table 17.9 of the EIS as a bird species that may occur in the LSA; and - Belted kingfisher and American kestrel are included in Table 17.9 of the EIS as candidate species for listing by COSEWIC, however information on these species is not included in the addendum.
Section 13.1.1 Methodology		Section 13.1.1 of the EIS Guidelines requires the EIS to identify the criteria used to assign significance ratings to any predicted adverse effects. The EIS should be updated to address the following:

Requirement of the EIS Guidelines (Please refer to the March 5, 2013 EIS Guidelines for the complete text. Text in this column is for reference only.)	Section of the EIS	Information Requirement
		<ul style="list-style-type: none"> The definitions of significance for birds and wildlife, species at risk, and Indigenous land and resource use reference the requirements of FEARO 1994. This reference is outdated and should be updated to reflect current requirements (Determining Whether a Designated Project is Likely to Cause Significant Adverse Environmental Effects under the Canadian Environmental Assessment Act, 2012 - Canada.ca). Update the EIS as required.
Section 14 Summary Tables	<p>Table 10.39, Table 19.9 and Table 22.19</p> <p>Table 25.1</p>	<p>Section 14 of the EIS Guidelines requires tables in the EIS summarising potential residual environmental effects and the significance of the residual environmental effects. The following inconsistencies should be addressed the revised EIS:</p> <ul style="list-style-type: none"> Some of the residual effects tables (i.e. Table 10.39, Table 19.9, Table 22.19) in the EIS contain ratings where the significance rating uses both N (not significant) and S (significant). It is unclear what these ratings are meant to be. Update the tables in the EIS to reflect the appropriate significance effect ratings. Table 25.1 (Summary of Commitments) is not inclusive of all follow-up and monitoring commitments made elsewhere in the EIS.