



August 23, 2023

Tara Arko  
Director, Technical Services  
Nunavut Impact Review Board  
Cambridge Bay, NU

Via Email : [info@nirb.ca](mailto:info@nirb.ca)

**Government of Canada's Comments on the Revised Draft Scope and the Revised Draft Impact Statement Guidelines for De Beers Canada Inc's "Chidliak Diamond Mine" Project Proposal**

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Dear Tara Arko,

Further to the Nunavut Impact Review Board's (the Board) correspondence of July 28, 2023, the Government of Canada would like to provide additional comments on the revised draft scope and the revised draft impact statement guidelines for the "Chidliak Diamond Mine" Project Proposal (the Project).

The Northern Projects Management Office is responding on behalf of the following departments that are participating in the Board's review process: Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC), Environment and Climate Change Canada (ECCC), Natural Resources Canada (NRCan), Transport Canada (TC), Health Canada (HC) and Fisheries and Oceans Canada (DFO). Of the departments listed, DFO and HC do not have any additional comments at this time.

The Government of Canada looks forward to continued participation in the Board's process. If you have any questions regarding this correspondence, please contact me at [Kaitlyn.Bakker2@cannor.gc.ca](mailto:Kaitlyn.Bakker2@cannor.gc.ca) or 867-765-8057.

Sincerely,

Kaitlyn Bakker  
A/Senior Project Manager  
Northern Projects Management Office  
Canadian Northern Economic Development Agency

cc Felexce Ngwa, Manager, Impact Assessment, Crown-Indigenous Relations and Northern Affairs Canada

Melissa Pinto, Senior Environmental Assessment Officer, Environmental Protection Operations Directorate, Environment and Climate Change Canada



Alasdair Beattie, Team Leader, Aquatic Ecosystems, Central and Arctic Region,  
Fisheries and Oceans Canada,

David Kitchen, Regional Manager, Environmental Health Program, Health Canada

Rinaldo Jeanty, Associate Assistant Deputy Minister, Lands and Mineral Sector,  
Natural Resources Canada

Scott Kidd, Regional Environmental Supervisor, Programs, Transport Canada



# Government of Canada

## Revised Draft Scope List and Revised Draft Impact Statement Guidelines Comments

*For the Assessment of the “Chidliak Diamond Mine” Project  
Proposal*

Date: August 23, 2023



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## Executive Summary

### Crown-Indigenous Relations and Northern Affairs Canada

Crown-Indigenous Relations and Northern Affairs Canada has a broad mandate for the co-management of land and water resources in Nunavut, as well as the management of Crown land under various acts and regulations.

As set out in the Nunavut Agreement and the *Nunavut Planning and Project Assessment Act*, the Minister of Northern Affairs, in concurrence with other responsible Ministers, can have a decision-making role for proposed projects undergoing assessment, based on the Nunavut Impact Review Board's (the Board) report and recommendations (and after ensuring the Crown's duty to consult has been discharged). If a proposed project is approved to proceed, Crown-Indigenous Relations and Northern Affairs Canada is responsible for the enforcement of the terms and conditions of the Project Certificate, Crown land authorization, and water licences issued for the project, as applicable.

As part of the Board's assessment process, Crown-Indigenous Relations and Northern Affairs Canada acts as an intervenor, providing advice and expertise to the Board based on Crown-Indigenous Relations and Northern Affairs Canada's regulatory mandate and decision-making role.

Crown-Indigenous Relations and Northern Affairs Canada also administers the Northern Participant Funding Program, which supports meaningful participation of Inuit and other Indigenous peoples and Northerners in the assessment of major projects.

Crown-Indigenous Relations and Northern Affairs Canada's review of the revised documents resulted in five response comments and one new comment for further consideration by the Board. These comments, described in detail in this submission, are summarized below:

- In response to comment CIRNAC-01, the Board indicated that it is using the information supplied by the Proponent in its project proposal as maximums that would be required by the proposed Project and this allows flexibility for the Proponent in its assessment. Crown-Indigenous Relations and Northern Affairs Canada is of the view that the estimated quantities should not be considered as maximums.
- Crown-Indigenous Relations and Northern Affairs Canada acknowledges the Board's response to comment CIRNAC-02 and reiterates that it expects the Proponent to provide the requested information within its Environmental Impact Statement.
- Crown-Indigenous Relations and Northern Affairs Canada acknowledges the Board's response to comment CIRNAC-03. Crown-Indigenous Relations and Northern Affairs Canada has reviewed the edits made to the Draft Impact Statement Guidelines relating to Inuit Qaujimajatuqangit and supports the associated revisions to Section 11.3.
- Crown-Indigenous Relations and Northern Affairs Canada acknowledges the Board's response to comment CIRNAC-04 and associated revisions to section 7.4.4 of the Draft Impact Statement Guidelines. Crown-Indigenous Relations and Northern Affairs Canada recommends that the Board further specify that, groups whose asserted or established section 35 Rights within the Designated Area may be impacted should not be characterized as transboundary groups.



- Crown-Indigenous Relations and Northern Affairs Canada acknowledges the Board's response to comment CIRNAC-05 and associated revisions to the Draft Scope List. Crown-Indigenous Relations and Northern Affairs Canada notes that the project proposal includes further detail regarding potential project components, such as the use of hydroelectricity/fuels cells/alternative fuels, telecommunications infrastructure, and infrastructure within the city of Iqaluit.
- Revisions to the Draft Impact Statement Guidelines include instances referring to 'TK' or 'Traditional Knowledge'. It is unclear if the Board intended for these instances to instead refer to 'Inuit Qaujimajatuqangit, Indigenous Knowledge and Community Knowledge'.

## Environment and Climate Change Canada

The mandate of Environment and Climate Change Canada is determined by the statutes and regulations under the responsibility of the Minister of Environment and Climate Change. In delivering this mandate, Environment and Climate Change Canada is responsible for the development and implementation of policies, guidelines, codes of practice, inter-jurisdictional and international agreements, and related programs. Environment and Climate Change Canada's specialist advice is provided in the context of the *Canadian Environmental Protection Act* including the *Disposal at Sea Regulations*, the pollution provisions of the *Fisheries Act* including the *Metal and Diamond Mining Effluent Regulations*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Environment and Climate Change Canada is providing comments on the draft Impact Statement Guidelines to include specific requirements related to air quality, migratory birds and avian species at risk, water quality and quantity, climate change, accidents and malfunctions, geology, and Naturally Occurring Radioactive Materials.

## Natural Resources Canada

Natural Resources Canada works to improve the quality of life of Canadians by ensuring that our natural resources are developed sustainably, providing a source of jobs, prosperity and opportunity, while preserving our environment and respecting our communities and Indigenous peoples. The Minister of Natural Resources is a responsible Minister under the *Nunavut Project Planning and Assessment Act* when issuing explosives licences under the *Explosives Act*.

Natural Resources Canada's additional review of the revised Draft Impact Statement Guidelines resulted in two comments, one regarding Greenhouse Gas Emissions and the second regarding the potential for Acid Rock Drainage/Metal Leaching.

## Transport Canada

Transport Canada is responsible for the Government of Canada's transportation policies and programs. Transport Canada develops legislative and regulatory frameworks and conducts



oversight through legislative, regulatory, surveillance and enforcement activities. While not directly responsible for all aspects or modes of transportation, Transport Canada plays a leadership role to ensure that all parts of the transportation system across Canada work together effectively.





## LIST OF ACRONYMS

ARD	Acid Rock Drainage
BAT/BEP	Best Available Technologies / Best Environmental Practices
CAR	<i>Canadian Aviation Regulations</i>
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
CEPA	<i>Canadian Environmental Protection Act</i>
CNWA	<i>Canadian Navigable Waters Act</i>
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
DAS	Disposal at Sea
ECCC	Environment & Climate Change Canada
EQC	Effluent Quality Criterion
FA	<i>Fisheries Act</i>
FEIS	Final Environmental Impact Statement
DFO	Fisheries & Oceans Canada
GHG	Greenhouse Gas
GSC	Geological Survey of Canada
HC	Health Canada
IS	Impact Statement
LSA	Local Study Area
MBCA	<i>Migratory Birds Convention Act</i>
MDMER	Metal and Diamond Mining Effluent Regulations
ML	Metal Leaching
NIRB	Nunavut Impact Review Board
NORM	Naturally-Occurring Radioactive Material
NPA	<i>Navigation Protection Act</i>
NRCan	Natural Resources Canada
NuPPAA	<i>Nunavut Planning and Project Assessment Act</i>
RSA	Regional Study Area
SACC	Strategic Assessment of Climate Change
SARA	<i>Species at Risk Act</i>
TC	Transport Canada
VEC	Valued Ecosystemic Component
VOC	Volatile Organic Compound



## Introduction

### Mandate, Roles and Responsibilities

#### **Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)**

CIRNAC has a broad mandate for the co-management of land and water resources in Nunavut, as well as the management of Crown land under the following applicable acts and regulations:

- The *Department of Crown-Indigenous Relations and Northern Affairs Act*;
- The *Nunavut Land Claims Agreement Act* and the Nunavut Agreement;
- The *Nunavut Planning and Project Assessment Act* (NuPPAA);
- The *Arctic Waters Pollution Prevention Act* and Regulations;
- The *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and Regulations; and
- The *Territorial Lands Act* and Regulations.

As set out in the Nunavut Agreement and NuPPAA, the Minister of Northern Affairs, in concurrence with other responsible Ministers, can have a decision-making role for proposed projects undergoing assessment, based on the Nunavut Impact Review Board's (NIRB) report and recommendations (and after ensuring the Crown's duty to consult has been discharged). If a proposed project is approved to proceed, CIRNAC is responsible for the enforcement of the terms and conditions of the Project Certificate, Crown land authorization, and water licences issued for the project, as applicable.

As part of the Board's assessment process, CIRNAC, along with other parties, acts as an intervenor, providing advice and expertise to the NIRB. Based on CIRNAC's regulatory mandate and decision-making roles, CIRNAC participates in the assessment process by providing expertise on a variety of matters related to project works, activities, and associated management, mitigation and monitoring plans, such as:

- Environmental impact assessment methodology and best practices, including cumulative effects assessment;
- Surface water quality and quantity;
- Groundwater quality and quantity;
- Marine water quality as affected from land;
- Permafrost;
- Waste management;
- Vegetation;
- Crown land contamination/degradation (particularly closure and reclamation planning);
- Socio-economic impact assessment and monitoring; and
- Indigenous consultation and accommodation.

CIRNAC also administers the Northern Participant Funding Program, which supports meaningful participation of Inuit and other Indigenous peoples and Northerners in the assessment of major projects.



## Environment and Climate Change Canada (ECCC)

Environment and Climate Change Canada (ECCC) carries out its legislated responsibility under Article 12 of the *Nunavut Agreement* and Section 197 of *NuPPAA* by providing recommendations, advice, and information within its mandate to both the proponent and decision-makers. ECCC's advice may be used to develop potential conditions or measures that may accompany a final decision for the Project.

The mandate of ECCC is determined by the statutes and regulations under the responsibility of the Minister of Environment and Climate Change. In delivering this mandate, ECCC is responsible for the development and implementation of policies, guidelines, codes of practice, inter-jurisdictional and international agreements, and related programs. ECCC's specialist advice is provided in the context of the *Canadian Environmental Protection Act (CEPA)* including the Disposal at Sea (DAS) Regulations, the pollution provisions of the *Fisheries Act (FA)* including the *Metal and Diamond Mining Effluent Regulations (MDMER)*, the *Migratory Birds Convention Act (MBCA)*, and the *Species at Risk Act (SARA)*.

ECCC administers the pollution prevention provisions of the *FA*, which prohibits the deposit of a deleterious substance into water frequented by fish. The MDMER regulate the deposit of mine effluent and mine waste into water frequented by fish and places referred to in subsection 36(3) of the *FA*. Under MDMER, Environmental Effects Monitoring is a science-based performance measurement tool used to evaluate the adequacy of the effluent regulation in protecting fish, fish habitats and the usability of fisheries resources. ECCC also regulates DAS under *CEPA* with the objective of protecting the marine environment. Regulated aspects of DAS include the loading of material for disposal, the transport of that material to a disposal site and the disposal itself.

ECCC is responsible for protecting and conserving migratory bird populations and individuals under the *MBCA*. ECCC also administers *SARA* in cooperation with DFO and Parks Canada to prevent wildlife species from being extirpated or extinct; to provide for the recovery of wildlife species that are extirpated, endangered or threatened as a result of human activity; and to manage species of special concern to prevent them from becoming threatened, endangered or extirpated.

## Natural Resources Canada (NRCan)

Natural Resources Canada (NRCan) is committed to improving the quality of life of Canadians by ensuring the country's abundant natural resources are developed sustainably, competitively, and inclusively. NRCan develops policies and programs that seek to enhance the contribution of the natural resource sector to the economy, and conducts innovative science in facilities across Canada to generate ideas and transfer technologies. NRCan is an established leader in the fields of energy sources and distribution; forests and forestry; minerals and mining; earth science; energy efficiency; and, science and data. NRCan draws its expertise from the following areas within the department when providing its technical review: the Geological Survey of Canada (GSC), CanmetMINING and the Explosives Regulatory Division.

Since 1842, the GSC's Research Scientists have produced cutting-edge, authoritative geoscience to support mineral exploration, climate change research, marine and coastal resilience, and natural hazards mapping. The GSC provides expertise in hydrogeology, geology, natural hazards (seismic, stability aspects), and permafrost.



CanmetMINING is a world-class leader in research and development of mining innovation technologies related to extraction, processing and reducing impacts to the environment. Research scientists from CanmetMINING can support the review of areas of the Project related to mine waste management, acid rock drainage and metal leaching, and potential impacts to sediment and water quality.

The Explosives Regulatory Division administers the application of the *Explosives Act*, which is the role that makes NRCan a Regulatory Authority under NuPPAA. The Explosives Regulatory Division ensures that manufacturers, importers, exporters, and vendors of explosives, as well as those who store explosives or sell restricted components, comply with Canada's *Explosives Act* and its regulations. Explosives licensing by NRCan is limited to licensing of storage or manufacture of explosives. NRCan does not monitor or authorize their use.

### **Transport Canada (TC)**

Transport Canada (TC) is responsible for developing and overseeing the GOC's transportation policies and programs so that Canadians can have access to a transportation system that is safe and secure, green and innovative, and efficient. While not directly responsible for all aspects or modes of transportation, TC plays a leadership role to ensure that all parts of the transportation system across Canada work together effectively. TC may be a Regulatory Authority under NuPPAA for the "Chidliak Diamond Mine" (NIRB File No. 22MN025). Transport Canada is taking part in the NIRB assessment to provide expert advice and to ensure the process captures any regulatory requirements under acts administered by TC. Activities of the present Project that are relevant to TC's mandate are works that may impact navigation (access road crossings, tailings ponds) and changes to aerodromes.

The Proponent has identified that an all-weather road may be built over the McKeand River. In addition, the project may create tailings deposits. The *Canadian Navigable Waters Act* (CNWA) is an Act of Parliament that authorizes and regulates interferences with the public right of navigation. A primary purpose of the CNWA is to regulate works and obstructions that risk interfering with navigation in Canada's navigable waters. As part of its participation in the environmental assessment of the Project by the Board, TC will assess the Project's impacts, if any, to navigation.

The Proponent has identified that airships may be used for transporting goods. Canadian Aviation Regulation 307 (CAR 307) identifies the requirement to consult to include anyone seeking to undertake a prescribed aerodrome work at a certified or non-certified aerodrome, whether it is the creation of a new aerodrome or, at an existing aerodrome, lengthening an existing runway or making a new one. The Regulation also provides minimum expectations for how the consultation should be conducted, including timelines, who to notify and under what circumstances.



## Specific Comments

### Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)

Comment (Updated)	CIRNAC-01
Subject/Topic	Quantity of Fuel Storage, Water Use and Grey Water Generated
References	Revised Draft Scope List: Scope of the Project, Project Components; NIRB Response to Comments on Draft Scope List and Draft Impact Statement Guidelines
Summary	The quantities for fuel storage, water use and grey water generated could increase or decrease when the Proponent submits their Impact Statement, and current estimates should not be considered as maximums.
Importance of Issue to Impact Assessment Process	The information will enable reviewers to determine the appropriate mitigative measures to apply in order to reduce environmental risks.
Detailed Comment	<p>CIRNAC previously noted that the Draft Scope List does not seem to allow for potential increase in the quantities of fuel storage, water use and grey water generated.</p> <p>In response to comment CIRNAC-01, NIRB indicated that it is using the information supplied by the Proponent in the project proposal as maximums that would be required by the proposed Project and this allows flexibility for the Proponent in its assessment.</p> <p>CIRNAC notes that the Proponent has indicated that quantities for fuels storage, water use, and waste volumes are rough estimates and could either increase or decrease. Therefore, CIRNAC is of the view that the estimated quantities should not be considered as maximums.</p>
Recommendation/Request	CIRNAC recommends that the Revised Draft Scope List indicate that the quantities for fuel storage, water use and grey water generated could increase or decrease when the Proponent submits their Impact Statement.

Comment (Updated)	CIRNAC-02
Subject/Topic	Hazardous Materials and Progressive Reclamation
References	Revised Draft Scope List: Scope of the Project, Project Components; Revised Draft Impact Statement Guidelines; NIRB Response to Comments on Draft Scope List and Draft Impact Statement Guidelines
Summary	CIRNAC acknowledges NIRB's response to comment CIRNAC-02.



Comment (Updated)	CIRNAC-02
Importance of Issue to Impact Assessment Process	The information will enable reviewers to determine the appropriate mitigative measures to apply in order to reduce environmental risks.
Detailed Comment	<p>CIRNAC previously expressed that it is unclear how long, or where, hazardous materials would be stored before removal, or whether a land farm would be constructed for onsite remediation, and whether there would be any form of progressive reclamation as the mobile and modular accommodation facilities move from one location to another as kimberlite pipes are depleted.</p> <p>CIRNAC acknowledges NIRB's response to comment CIRNAC-02 that details related to this request are within relevant sections of the Revised Draft Impact Statement Guidelines. CIRNAC reiterates that it expects the Proponent to provide the requested information within its Environmental Impact Statement.</p>
Recommendation/Request	N/A

Comment (Updated)	CIRNAC-03
Subject/Topic	Inuit Qaujimagatuqangit and Indigenous Knowledge from Project Monitoring into Evolving Project
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 11.3 Monitoring and Mitigation Plans; NIRB Response to Comments on Draft Scope List and Draft Impact Statement Guidelines
Summary	CIRNAC has reviewed the edits made to the Draft Impact Statement Guidelines relating to Inuit Qaujimagatuqangit and supports the associated revisions to Section 11.3.
Importance of Issue to Impact Assessment Process	The update will aid in informing the public on the process the Proponent will use to incorporate information as the Project progresses.
Detailed Comment	<p>CIRNAC previously expressed that there is benefit to the inclusion of a discussion in the Impact Statement on how the Proponent intends to include evolving Inuit Qaujimagatuqangit and Indigenous Knowledge in any Project changes.</p> <p>CIRNAC acknowledges NIRB's response to comment CIRNAC-03. CIRNAC has reviewed the edits made to the Draft Impact Statement Guidelines relating to Inuit Qaujimagatuqangit and supports the associated revisions to section 11.3: "The Proponent shall also discuss how it engaged and will continue to engage Inuit in the development and implementation of its</p>



Comment (Updated)	CIRNAC-03
	monitoring and mitigation plans, and what Inuit Qaujimajatuqangit-informed and Inuit-led monitoring it is committed to in relation to the project."
Recommendation/Request	N/A

Comment (Updated)	CIRNAC-04
Subject/Topic	Reference to Transboundary Groups
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 7.4.4 Transboundary Impacts; NIRB Response to Comments on Draft Scope List and Draft Impact Statement Guidelines
Summary	Further nuancing is required in the Revised Draft Impact Statement Guidelines regarding transboundary impacts, including in relation to identification of 'transboundary groups' versus groups with asserted or established section 35 rights within Nunavut.
Importance of Issue to Impact Assessment Process	Clarification of the current text supports respectful engagement and consultation with Indigenous groups, and appropriate placement of information in Impact Statements.
Detailed Comment	<p>CIRNAC previously noted that nuancing is required in the Draft Impact Statement Guidelines regarding transboundary impacts, including in relation to the identification of 'transboundary groups' versus groups with asserted and established rights within Nunavut.</p> <p>CIRNAC acknowledges NIRB's response to comment CIRNAC-04 and associated revisions to section 7.4.4 of the Draft Impact Statement Guidelines: "If components of a proposed project are located within these areas in the designated area, the NIRB is required to recognize the appropriate Groups Asserting Section 35 Rights in Nunavut."</p> <p>CIRNAC requests that NIRB further specify that, groups whose asserted or established section 35 Rights within the Designated Area may be impacted should not be considered as transboundary groups.</p>
Recommendation/Request	CIRNAC recommends further nuancing the phrasing used in Section 7.4.4 to indicate that, groups whose asserted or established section 35 Rights within the Designated Area may be impacted should not be characterized as transboundary groups.





Comment (Updated)	CIRNAC-05
Subject/Topic	Project Components
References	Revised Draft Scope List: Scope of the Project, Project Components; NIRB Response to Comments on Draft Scope List and Draft Impact Statement Guidelines
Summary	Additional detail could be included for project components identified in the Revised Draft Scope List, based on information provided in the project proposal.
Importance of Issue to Impact Assessment Process	Clarification and communal understanding of relevant project components supports an effective and comprehensive review process.
Detailed Comment	<p>CIRNAC previously noted that additional detail could be included for project components identified in the Draft Scope List, based on information provided in the project proposal.</p> <p>CIRNAC acknowledges NIRB's response to comment CIRNAC-05 and associated revisions to the Draft Scope List. CIRNAC notes that the project proposal includes further detail regarding potential project components, such as the use of hydroelectricity/fuels cells/alternative fuels, telecommunications infrastructure, and infrastructure within the city of Iqaluit.</p>
Recommendation/Request	CIRNAC recommends that additional detail regarding potential project components, as indicated in the project proposal, be added to the Draft Scope List.

Comment (NEW)	CIRNAC-06
Subject/Topic	Reference to Traditional Knowledge versus Inuit Qaujimajatuqangit, Indigenous Knowledge, and Community Knowledge
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 8.1.10.1 Vegetation Baseline Information, Section 8.1.11.1 Terrestrial Wildlife and Wildlife Habitat Baseline Information, Section 8.1.13.1 Marine Environment Baseline Information, Section 8.2.6 Traditional Activity and Knowledge, Section 8.2.8.1 Heritage Resources Baseline Information
Summary	Revisions to the Draft Impact Statement Guidelines include instances referring to 'TK' or 'Traditional Knowledge'. It is unclear if NIRB intended for these instances to instead refer to 'Inuit Qaujimajatuqangit, Indigenous Knowledge and Community Knowledge'.
Importance of Issue to Impact Assessment Process	Consistent application of terminology supports an effective and comprehensive review process.





Comment (NEW)	CIRNAC-06
Detailed Comment	<p>Several references to 'TK' or 'Traditional Knowledge' were added in the Revised Draft Impact Statement Guidelines.</p> <p>Pre-existing text generally referred to 'Inuit Qaujimajatuqangit, Indigenous Knowledge and Community Knowledge' instead.</p>
Recommendation/Request	CIRNAC recommends that NIRB consider whether reference to 'Inuit Qaujimajatuqangit, Indigenous Knowledge and Community Knowledge' is more appropriate than reference to 'TK' for relevant instances in the Revised Draft Impact Statement Guidelines.

## Environment and Climate Change Canada (ECCC)

Comment (NEW)	ECCC-11
Subject/Topic	Air Quality
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 8.1.1 Air Quality
Summary	The proposed modifications offer additional details regarding the scope of the air quality assessment expected from the proponent. The comments pertain to the air quality standards that could be considered, details about the extent air dispersion modeling, and the relevant air contaminants that could be evaluated throughout all phases.
Importance of Issue to Impact Assessment Process	Details surrounding the air quality analysis, such as providing rationale for the choice of model used, the emission factors and comparison of baseline and modelled results to relevant air quality standards, and effectiveness of mitigation measures are required to ensure a thorough understanding of the analysis presented, including potential impacts on the environment.
Detailed Comment	<p>Currently, Section 8.1.1.1 Item i. background ambient air quality data seems limited to particulate matter only. ECCC suggests including criteria air contaminants and other relevant air contaminants in baseline information collected so it can be compared to the analysis outlined in Section 8.1.1.2 Impact Assessment.</p> <p>ECCC notes the importance of air quality, specifically near sensitive receptors. Section 8.1.1.2 Impact Assessment should outline areas near sensitive receptors and should clarify that the analysis to be provided should be for all phases of the Project. Similar to baseline information, ECCC recommends that other relevant air contaminants also be included in the analysis.</p>



Comment (NEW)	ECCC-11
	<p>Section 8.1.1.2 Item iii. discusses the assessment of dispersion of Project emissions; however, limited supporting details are given. ECCC suggests including rationale for the choice of air quality model, relevant emission factors, and comparison to relevant air quality standards.</p>
Recommendation/Request	<p>ECCC recommends Section 8.1.1.1 Baseline Information be updated with the following additions in bold:</p> <p><i>i. Background ambient air quality data collected in the LSA and RSA including airborne dust (TSP, PM<sub>10</sub> and PM<sub>2.5</sub>), <b>criteria air contaminants and other relevant air contaminants. Comparison of ambient air contaminants concentration with relevant air quality standards (including Nunavut Ambient Air Quality Standards and Canadian Ambient Air Quality Standards).</b>;</i></p> <p><i>ii. Current sources of criteria air contaminants [TSP, PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, SO<sub>2</sub>, volatile organic compounds (VOCs), Ozone (O<sub>3</sub>) etc.], <b>any other relevant air contaminants</b>, and GHG emissions; and</i></p> <p><i>iii. Seasonal variations or climatic conditions associated with variations on air quality.</i></p> <p>ECCC recommends Section 8.1.1.2 Impact Assessment be updated with the following additions in bold:</p> <p><i>The Proponent is required to present a comprehensive impact analysis for all Project components and activities on air quality, <b>especially near sensitive receptors and for all relevant phases (including construction and operation).</b></i></p> <p><i>This analysis shall include the following:</i></p> <p><i>i. Discussion of the standards, guidelines and regulations that the Proponent will incorporate to minimize and mitigate effects to air quality;</i></p> <p><i>ii. Predictions of principle pollution emission sources from the Project at various stages, including:</i></p> <p><i>o Criteria air contaminants [TSP, PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, SO<sub>2</sub>, volatile organic compounds (VOCs), Ozone (O<sub>3</sub>), etc.], <b>any other relevant air contaminants</b>, and GHG emissions from the fuel consumption of mobile equipment such as vehicles <b>(on-road and off-road)</b>, marine vessels, aircraft, and stationary equipment such as diesel generators and other combustion sources;</i></p> <p><i>o Fugitive dust and gaseous emissions from construction activities and land clearing, extraction and ore processing, handling, tailings, waste rock and ore stockpiling, quarries and other Project components and works; and</i></p> <p><i>o Fugitive dust emissions from ground transportation and wind erosion at various Project components including the all-weather road, access roads and mine hauling roads.</i></p>



Comment (NEW)	ECCC-11
	<p><i>iii. Assessment of dispersion of Project emissions within the LSA and RSA, using appropriate modelling, and discussion of related impacts and mitigation strategies, <b>including:</b></i></p> <ul style="list-style-type: none"><li><i><b>o Providing a rationale for the choice of the air quality model, including the type and magnitude of emissions, the complexity of sources and terrain, and meteorology.</b></i></li><li><i><b>o Providing and referencing all relevant emissions factors. For all applicable emission sources, include the Tier and emission factor. Justify the effectiveness of mitigation and control measures used to reduce emission rates of contaminants from sources, including details of all assumptions associated with related mitigation measures, and their feasibility. Provide isopleth maps to visually represent the dispersion of modelled air contaminants, for all relevant air contaminants and averaging times.</b></i></li><li><i><b>o Comparing total predicted air contaminant concentrations (including baseline and modelled concentrations) with relevant air quality standards (including Nunavut Ambient Air Quality Standards and Canadian Ambient Air Quality Standards).</b></i></li></ul> <p><i>iv. Discussion of Project components and activities which may contribute to the potential for acidic input, and an evaluation of associated effects;</i></p> <p><i>v. Assessment of effects on air quality from Project emissions during various project stages including airborne dust (TSP, PM<sub>10</sub> and PM<sub>2.5</sub> and/or metals) and criteria air contaminants such as SO<sub>2</sub>, NO<sub>x</sub>, CO, VOCs, O<sub>3</sub>, etc., <b>and any other relevant air contaminants;</b></i></p> <p><i>vi. Assessment of the Project's GHG contributions to both Nunavut and Canada; and</i></p> <p><i>vii. A discussion of the potential effects of changes in air quality on human health and the environment.</i></p>

Comment (NEW)	ECCC-12
Subject/Topic	Migratory Birds and Avian Species at Risk
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 8.1.12 Birds and Bird Habitat
Summary	Update Section 8.1.12 Birds and Bird Habitat to include baseline information, including mortality rates and habitat use, for migratory birds and avian species at risk. This section should also be updated to include proposed mitigation measures and their effectiveness.
Importance of Issue to Impact Assessment Process	Currently there are gaps in the Revised Draft IS Guidelines with regards to baseline information for migratory birds and avian species at risk. Without this information, it will be difficult to determine projected impacts to these groups. There are



Comment (NEW)	ECCC-12
	also gaps in the impact assessment related to mortality rates associated with Project activities and proposed mitigation measures. This leads to a gap in understanding potential impacts to birds and whether mitigation measures will be effective.
Detailed Comment	<p>ECCC notes Items ii., iii. and iv. of Section 8.1.12.1 Baseline Information focus on bird valued ecosystem components (VECs) and do not include migratory birds or birds with special designations (i.e., SARA or Committee on the Status of Endangered Wildlife in Canada (COSEWIC) listed). Baseline information, including bird data collected on mortality rates and habitat use during various times of the year (i.e., nesting, staging), and results reports/summaries, will assist in determining whether Project activities/components (e.g., vehicle/collision mortality rates) may be negatively impacting these bird groups and help identify how Project activities will impact local species. Mortality rates due to Project activities should also be discussed in Section 8.1.12.2 Impact Assessment to understand how mortality from Project activities are altering natural mortality rates.</p> <p>ECCC notes Section 8.1.12.2 Impact Assessment does not include mitigation measures. The Proponent should outline what actions they will take to minimize Project activity impacts to birds along with highlighting outcomes from implementation of mitigation measures and their associated effectiveness.</p>
Recommendation/Request	<p>ECCC recommends the points under Section 8.1.12.1 Baseline Information be updated to include migratory birds and birds with special designations and results from collected baseline data, including habitat use during sensitive periods and mortality rates.</p> <p>ECCC recommends Section 8.1.12.2 Impact Assessment be updated to include proposed mitigation measures and their associated effectiveness as well as information on mortality rates due to Project activities.</p>

Comment (NEW)	ECCC-13
Subject/Topic	Climate Change and Water Quality
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 7.4.2.1 Climate Change
Summary	Include impacts from climate change on water quality
Importance of Issue to Impact Assessment Process	To obtain an accurate assessment of potential impacts to water quality.
Detailed Comment	ECCC-Comment #9 on the original draft Impact Statement Guidelines recommended additional wording related to water



Comment (NEW)	ECCC-13
	<p>quality in Section 7.4.2.1 Climate Change. The section is updated in the revised draft IS guidelines, but appears to include an error (duplication of water quantity rather than inclusion of water quality) and reads:</p> <p><i>Uncertainties related to climate change predictions, and the related effect on other predictions in the Impact Statement, including <b>water quantity</b>, <b>water quantity</b>, and permafrost thawing.</i></p>
Recommendation/Request	<p>ECCC recommends inclusion of the following bolded text in Section 7.4.2.1 Climate Change:</p> <p>Uncertainties related to climate change predictions, and the related effect on other predictions in the Impact Statement, including water quantity, <b>water quality</b>, and permafrost thawing.</p>

Comment (NEW)	ECCC-14
Subject/Topic	Surface Water Quality - Baseline Information
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 8.1.7 Groundwater and Surface Water Quality
Summary	ECCC is requesting additional clarification and details of parameters be included in the baseline assessment to ensure accurate baseline water quality data is obtained.
Importance of Issue to Impact Assessment Process	To obtain accurate baseline water quality data.
Detailed Comment	<p>Section 8.1.7.1 states:</p> <p><i>“iii. Description of the physical and chemical characteristics of groundwater and surface water in the LSA, with discussion of seasonal variations of water flow and quality. Chemical characteristics should include baseline levels of contaminants and should be compared to relevant water standards/guidelines, with identification of those which are naturally elevated;”</i></p> <p>ECCC notes this section could benefit from additional clarity and details on parameters to be considered to ensure all compounds of potential concern are considered and the physicochemical parameters are included to support data analysis.</p>
Recommendation/Request	ECCC recommends inclusion of the following in Section 8.1.7.1 Item iii.:



Comment (NEW)	ECCC-14
	<ul style="list-style-type: none"><li>physicochemical parameters may include temperature, pH, electrical conductivity, dissolved oxygen, turbidity, total suspended solids, total hardness, total dissolved solids.</li><li>relevant chemical constituents may include major and minor ions, total and dissolved trace metals, radionuclides, total mercury, methylmercury, polycyclic aromatic compounds, nutrients, organic and inorganic compounds, or other compounds of potential concern.</li></ul>

Comment (NEW)	ECCC-15
Subject/Topic	Surface Water Quality - Baseline Collection
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 8.1.7 Groundwater and Surface Water Quality
Summary	Additional information, such as quality assurance and quality control measures, are required on how baseline water quality data was collected in order to ensure accuracy of baseline data.
Importance of Issue to Impact Assessment Process	Additional information on how water quality baseline data was collected is required to obtain accurate baseline water quality data.
Detailed Comment	ECCC notes that Section 8.1.7.1 Baseline Information does not include requirements for a description of how the baseline characterization program was conducted. This information is required to ensure accuracy of baseline data.
Recommendation/Request	<p>ECCC recommends inclusion of the following text in Section 8.1.7.1 Baseline Information:</p> <p>Describe the surface water and ground water baseline characterization program, including sampling site selection and locations, monitoring duration and frequency, sampling methodology, and analytical protocol, including quality assurance and quality control measures;</p> <ul style="list-style-type: none"><li>Describe the incorporation of any applicable historical data or existing information.</li><li>Characterization program should include sampling locations within the project area, the local and regional study areas, and should include reference locations that are unlikely to be impacted.</li><li>Baseline surface water quality with sufficient years of baseline data to fully characterize, including possible variabilities due to groundwater–surface water interactions.</li></ul>





Comment (NEW)	ECCC-16
Subject/Topic	Surface Water Quality – Impact Assessment
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 8.1.7 Groundwater and Surface Water Quality
Summary	Include comparison of water quality to relevant guidelines for the protection of aquatic life
Importance of Issue to Impact Assessment Process	To obtain an accurate assessment of potential impacts to water quality
Detailed Comment	<p>Section 8.1.7.2 states:</p> <p>“ii. Provide predicted increases in contaminants in groundwater and surface water as a result of the Project, specifically identifying any waterbodies used as drinking water sources, for recreational purposes, that are important to local harvesting, the fish bearing status of identified waterbodies as well as specifically identifying any other fish bearing waterbodies. For any water sources identified as being current or future drinking water sources, compare concentrations of contaminants to relevant territorial drinking standards/guidelines and/or Health Canada Drinking Water Guidelines;”</p> <p>ECCC notes that changes to water quality in all waterbodies should be compared to applicable guidelines, objectives, and standards for protection of aquatic life.</p>
Recommendation/Request	<p>ECCC recommends inclusion of the following bolded text in Section 8.1.7.2 (ii):</p> <p>Provide predicted increases in contaminants in groundwater and surface water as a result of the Project, specifically identifying any waterbodies used as drinking water sources, for recreational purposes, that are important to local harvesting, the fish bearing status of identified waterbodies as well as specifically identifying any other fish bearing waterbodies. <b>Changes to surface water quality should be compared to applicable guidelines, objectives, and standards for protection of aquatic life.</b> For any water sources identified as being current or future drinking water sources, compare concentrations of contaminants to relevant territorial drinking standards/guidelines and/or Health Canada Drinking Water Guidelines;</p>

Comment (NEW)	ECCC-17
Subject/Topic	Surface Water Quality – Impact Assessment
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine



Comment (NEW)	ECCC-17
	Proposal, Section 8.1.7 Groundwater and Surface Water Quality
Summary	Include additional relevant requirements related to modelling.
Importance of Issue to Impact Assessment Process	Clarification related to water quality modelling is required to obtain an accurate assessment of potential impacts to water quality.
Detailed Comment	<p>Section 8.1.7.2 Item v. provides a description of requirements related to modelling, stating:</p> <p><i>“v. Potential impacts on groundwater quality and surface water quality of surrounding lakes, rivers and streams from discharges of Project wastewater treatment plants. A solute transport model based on numerical groundwater flow modelling should be used for ground water quality predictions and appropriate models selected (with rationale) to predict:</i></p> <ul style="list-style-type: none"><li><i>• Water quality from specific sources;</i></li><li><i>• Water quality discharged to the environment; and</i></li><li><i>• Dispersion, dilution and assimilation of effluent discharged to the environment;”</i></li></ul> <p>The guidelines would benefit from additional specificity related to receiving environment modelling, specifically, locations where models should assess potential changes to water quality.</p> <p>Additionally, ECCC notes that this section should include additional specificity related to expectations for modelling. Current wording is specific to water treatment plant discharge, but it may be more appropriate to speak broadly to effluent. In addition, the outputs related to water only specify quality, when the volumes of discharge are also important to understanding Project impacts on the environment.</p>
Recommendation/Request	<p>ECCC recommends the following additions in bold and deletions in strikethrough to Section 8.1.7.2 Item v.:</p> <p>v. <b>modelling to predict</b> potential impacts on groundwater quality and surface water quality of surrounding lakes, rivers and streams from <b>Project effluent</b> discharges of <del>Project wastewater treatment plants</del>. A solute transport model based on numerical groundwater flow modelling should be used for ground water quality predictions and appropriate models selected (with rationale) to predict:</p> <ul style="list-style-type: none"><li>• Water quality <b>and volume</b> from specific sources;</li><li>• Water quality <b>and volume</b> discharged to the environment; and</li><li>• Dispersion, dilution and assimilation of effluent discharged to the environment, <b>including receiving</b></li></ul>





Comment (NEW)	ECCC-17
	<p><b>environment water quality predictions with distance from discharge.</b></p> <p><b>Models should include:</b></p> <ul style="list-style-type: none"><li>- <b>A clear description and rationale for all input parameters and assumptions</b></li><li>- <b>Base case (e.g. most likely) and worst case (e.g. 99th percentile), plus applicable sensitivity scenarios</b></li><li>- <b>A clear description of locations at which potential changes to water will be assessed, including:</b><ul style="list-style-type: none"><li>○ <b>all point and diffuse sources of discharges;</b></li><li>○ <b>immediate receiving environment for any point of diffuse sources of discharges from the project;</b></li><li>○ <b>at outer boundary of mixing zone;</b></li><li>○ <b>where the water quality from the immediate receiving environment begins to meet Water Quality Guidelines, or background levels for that contaminant</b></li><li>○ <b>at project boundary;</b></li><li>○ <b>at LSA boundary; and</b></li><li>○ <b>at RSA boundary</b></li></ul></li></ul>

Comment (NEW)	ECCC-18
Subject/Topic	Surface Water Quality – Impact Assessment
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 8.1.7 Groundwater and Surface Water Quality
Summary	Guidelines do not explicitly include the development of a site water balance model
Importance of Issue to Impact Assessment Process	To obtain an accurate assessment of potential impacts to water quality
Detailed Comment	ECCC notes that Section 8.1.7.2 does not include requirements for a description of how water will be managed on site or development of an integrated site water balance model. This model is useful in understanding the water use, flows, discharges, and overall water management.
Recommendation/Request	<p>ECCC recommends inclusion of the following text in Section 8.1.7.2:</p> <ul style="list-style-type: none"><li>• Present an integrated site water balance model incorporating surface and groundwater fluxes to or from all major project components, for all project</li></ul>



Comment (NEW)	ECCC-18
	<p>phases. Include estimates of surface water runoff rates for major project components;</p> <ul style="list-style-type: none"><li>• Present key flow rates for all project components and water management structures, including inflow, outflow or surface run off from storage piles, dredge materials, contaminated material storage, and tailings management facilities; and</li><li>• Present a comprehensive site water management plan for the projects life cycle.</li></ul>

Comment (NEW)	ECCC-19
Subject/Topic	Sediment Quality Baseline Information
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 8.1.8 Sediment Quality
Summary	To describe how baseline sediment quality data was collected
Importance of Issue to Impact Assessment Process	To obtain accurate baseline sediment quality data
Detailed Comment	ECCC notes that Section 8.1.8.1 does not include requirements for a description of how the sediment quality baseline characterization program was conducted.
Recommendation/Request	<p>ECCC recommends inclusion of the following text in Section 8.1.7.1:</p> <ul style="list-style-type: none"><li>• Describe the sediment quality baseline characterization program, including sampling site selection and locations, monitoring duration and frequency, sampling methodology, and analytical protocol, including quality assurance and quality control measures;</li><li>• Describe the incorporation of any applicable historical data or existing information; and</li><li>• Characterization program should include sampling locations within the project area, the local and regional study areas, and should include reference locations that are unlikely to be impacted</li></ul>

Comment (NEW)	ECCC-20
Subject/Topic	Sediment Quality
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 8.1.8 Sediment Quality
Summary	Include comparison of sediment quality to relevant guidelines.



Comment (NEW)	ECCC-20
Importance of Issue to Impact Assessment Process	To accurately assess sediment quality
Detailed Comment	Neither Section 8.1.8.1 (Baseline Information) nor 8.1.8.2 (Impact Assessment) refer to sediment quality guidelines
Recommendation/Request	ECCC recommends both the baseline assessment and the impact assessment include comparison of sediment quality to relevant guidelines. The impact assessment should also include discussions of changes from baseline when sediment quality guidelines are not available.

Comment (NEW)	ECCC-21
Subject/Topic	Marine Environment
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 8.1.13 Marine Environment
Summary	Include marine water and sediment quality in the baseline assessment
Importance of Issue to Impact Assessment Process	To accurately assess marine water and sediment quality baseline
Detailed Comment	<p>Section 8.1.13 (Marine Environment) briefly reference that, “the marine environment shall include marine ecology, marine water and sediment quality...”</p> <p>However, it is noted that Section 8.1.13.1 (Baseline information) does not explicitly state requirements for collection of baseline marine water and sediment quality.</p>
Recommendation/Request	<p>ECCC recommends Section 8.1.13.1 incorporate the collection and assessment of baseline marine water and sediment quality. This should include:</p> <ul style="list-style-type: none"><li>• Sampling site selection and locations;</li><li>• Monitoring duration and frequency;</li><li>• Sampling methodology and analytical protocol;</li><li>• Incorporation of historical data or existing information; and</li><li>• Comparison of water and sediment quality data to relevant guidelines.</li></ul>

Comment (NEW)	ECCC-22
Subject/Topic	Marine Water Quality – Impact Assessment
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 8.1.13 Marine Environment
Summary	Include additional relevant requirements related to modelling



Comment (NEW)	ECCC-22
Importance of Issue to Impact Assessment Process	To obtain an accurate assessment of potential impacts to marine water quality.
Detailed Comment	<p>Section 8.1.13 (iii) states:</p> <p><i>iii. Potential impacts on marine water quality and sediment quality from discharges of Project wastewater treatment plants. A solute transport model based on numerical flow modelling should be used for water quality predictions and appropriate models selected, with rationale, to predict:</i></p> <ul style="list-style-type: none"><li>• <i>Water quality discharged to the environment; and</i></li><li>• <i>Dispersion, dilution and assimilation of effluent discharged to the environment</i></li></ul> <p>ECCC notes that this section should include additional specificity related to expectations for modelling. Current wording is specific to water treatment plant discharge, but it may be more appropriate to speak broadly to effluent. In addition, the outputs related to water quality only specify quality, when the volumes of discharge are also important to understanding of impacts.</p>
Recommendation/Request	<p>ECCC recommends the following additions in bold to Section 8.1.13.2:</p> <p>iii. <b>modelling to predict</b> Potential impacts on marine water quality and sediment quality from discharges of Project wastewater treatment plants. A solute transport model based on numerical flow modelling should be used for water quality predictions and appropriate models selected, with rationale, to predict:</p> <ul style="list-style-type: none"><li>• Water quality <b>and volume</b> discharged to the environment; and</li><li>• Dispersion, dilution and assimilation of effluent discharged to the environment, <b>including receiving environment water quality predictions with distance from discharge.</b></li></ul> <p><b>Models should include:</b></p> <ul style="list-style-type: none"><li>- <b>A clear description and rationale for all input parameters and assumptions</b></li><li>- <b>Base case (e.g. most likely) and worst case (e.g. 99th percentile), plus applicable sensitivity scenarios</b></li></ul>

Comment (NEW)	ECCC-23
Subject/Topic	Strategic Assessment of Climate Change (SACC)
References	Revised Draft Impact Statement Guidelines for the DeBeers Canada Inc. Chidliak Diamond Mine Project Proposal, Section



Comment (NEW)	ECCC-23
	7.4.2.1 Climate Change and Section 8.1 Ecosystemic Environment and Impact Assessment
Summary	ECCC notes the technical guidance related to the SACC and greenhouse gas (GHG) emissions was not sufficiently incorporated into the Revised Draft Impact Statement Guidelines. The SACC provides technical guidance for the Proponent on assessing climate change resilience and on quantifying GHG emissions and on related mitigation measures. ECCC is recommending the Proponent consider this technical guidance in its assessment and that GHG emissions are included in the Impact Statement Guidelines.
Importance of Issue to Impact Assessment Process	To ensure the impacts of climate change in the Project assessment are considered in a consistent, predictable, efficient and transparent manner.
Detailed Comment	<p>ECCC restates ECCC-Comment #10 on the original draft Impact Statement Guidelines as it has not been sufficiently incorporated. Although ECCC acknowledges edits made to Section 7.4.2.1 Climate Change of the Revised Draft Impact Statement Guidelines with regard to climate change resilience, it does not fully address the Project's GHG emissions which differ from the Project's climate change resilience (GHGs are not an impact of the environment on the Project). Therefore, ECCC suggests that the information below be added to a new GHG subsection under Section 8.1 Ecosystemic Environment and Impact Assessment.</p> <p>The <a href="#">Strategic Assessment of Climate Change (SACC)</a> was published in 2020 and works in conjunction with the new <i>Impact Assessment Act</i> to provide guidance on how to consider climate change throughout federal impact assessments. While the SACC does not apply directly to projects under NIRB, such as the Chidliak Project, NIRB and the Proponent may find the technical guidance of the SACC helpful in assessing the impacts to climate change and in ensuring consistent, predictable, efficient and transparent consideration of impacts to climate change.</p>
Recommendation/Request	<p>ECCC recommends the following information be requested as part of the Impact Statement, in consultation with the <a href="#">Draft Technical Guide Related to the Strategic Assessment of Climate Change: Guidance on quantification of net GHG emissions, impact on carbon sinks, mitigation measures, net-zero plan and upstream GHG assessment</a> ("the draft Technical Guide"):</p> <p><b>GHG emission estimate:</b></p> <ul style="list-style-type: none"><li>ECCC recommends that the proponent should provide the GHG information outlined in Section 5.1.1 of the SACC, including:</li></ul>



Comment (NEW)	ECCC-23
	<ul style="list-style-type: none"><li>○ a description of each of the project's main sources of GHG emission and their estimated annual GHG emissions over the lifetime of the project;</li><li>○ net GHG emissions by year for each phase of the project based on the project's maximum capacity (additional guidance at Section 2.1 of the Technical Guide);</li><li>○ each term of Equation 1 (Net GHG emissions = Direct GHG emissions + Acquired energy GHG emissions - Avoided domestic GHG emissions - Offset measures), per year for each phase of the project (additional guidance at Section 2.1 of the Technical Guide);</li><li>○ emissions intensity (Equation 4 of the Technical Guide) for each year of the operation phase of the project (additional guidance at Section 2.1.5 of the Technical Guide);</li><li>○ the quantity and a description of the "units produced" (tonnes of ore or other as appropriate) used in Equation 4 of the Technical Guide for each year of the operation phase of the project (additional guidance at Section 2.1.5 of the Technical Guide);</li><li>○ methodology, data, emission factors and assumptions used to quantify each element of the net GHG emissions (refer to Section 3.1.1 of the SACC and Section 2 of the Technical Guide);</li><li>○ a discussion on the development of emissions estimates and uncertainty assessment (refer to Section 3.3 of the SACC); and</li><li>○ when applicable, a description of large sources of GHG emissions that may be the consequence of accidents or malfunctions.</li></ul> <p><b>Mitigation measures:</b></p> <ul style="list-style-type: none"><li>• ECCC recommends that the proponent should provide a Best Available Technologies / Best Environmental Practices (BAT/BEP) Determination, as described in Section 3.2 of the Technical Guide. This BAT/BEP Determination process will assess potential mitigation measures throughout all phases of the project and put the emphasis on minimizing net GHG emissions as early as possible and throughout the project lifetime, as described in Section 5.1.4 of the SACC. Additional guidance is provided in Sections 3.4.1 and 3.4.2 of the Technical Guide.</li><li>• If it is anticipated that the project will produce GHG emissions in 2050 and beyond (including from post-</li></ul>



Comment (NEW)	ECCC-23
	<p>closure monitoring and activities), ECCC recommends that the proponent also provide a credible net-zero plan that would use and build off the BAT/BEP Determination to describe the mitigation measures that will be taken to minimize GHG emissions throughout all phases of the project and achieve net-zero emission by 2050, as described in Section 5.3 of the SACC. The net-zero plan must follow the principles outlined in Section 3.5.1 and include the information outlined in Section 3.5.2 of the Technical Guide.</p> <p><b>Carbon sinks:</b></p> <ul style="list-style-type: none"><li>• If the proposed project is anticipated to impact carbon sinks, ECCC recommends the proponent provide a quantitative and qualitative description of the project's positive or negative impact on carbon sinks, as indicated in Section 5.1.2 of the SACC. Additional guidance on the methodology to estimate losses or gains to carbon sinks is provided in Section 4 of the Technical Guide. The Impact Statement must also provide any mitigation measures planned to restore disturbed carbon sinks as described under Section 3.4.3 of the Technical Guide.</li></ul> <p><b>Impact of the Project on federal emissions reduction efforts and on global GHG emissions:</b></p> <ul style="list-style-type: none"><li>• ECCC recommends that the Impact Statement should provide an explanation of how the project may impact Canada's efforts to reduce GHG emissions but also a discussion on how a project could impact global GHG emissions, if applicable. Additional guidance is provided in Section 5.1.3 of the SACC.</li></ul>

Comment (NEW)	ECCC-24
Subject/Topic	Accidents and Malfunctions
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 8.4 Accidents and Malfunctions Assessment
Summary	Include spatial and temporal boundaries for the accident and malfunctions assessment.
Importance of Issue to Impact Assessment Process	To obtain an accurate assessment of potential impacts associated with accidents and malfunctions.
Detailed Comment	The spatial boundaries identified for effects from potential accidents and malfunctions will generally be larger than the boundaries for the project effects alone and therefore will need to be identified in order to thoroughly assess the environmental





Comment (NEW)	ECCC-24
	effects associated with an accidental release of contaminants into the surrounding environment.  Information is missing on spatial and temporal boundaries for the impact assessment associated with accidents and malfunctions.
Recommendation/Request	ECCC recommends that section 8.4 include providing a description of the spatial and temporal boundaries for effects from each potential accident and malfunction.

Comment (NEW)	ECCC-25
Subject/Topic	Emergency Management
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 8.4 Accidents and Malfunctions Assessment
Summary	Management and mitigation of accidents and malfunctions should not be limited to the examples provided in the guidelines.
Importance of Issue to Impact Assessment Process	To obtain a comprehensive emergency management plan
Detailed Comment	To allow the proponent to develop a comprehensive emergency management plan, the examples provided in the Impact Statement of how accidents and malfunctions would be managed and mitigated should not be limited to only those mentioned in the list provided in the guidelines.
Recommendation/Request	ECCC recommends the following additions in bold to Section 8.4: <ul style="list-style-type: none"><li>• A description of how each potential accident and malfunction would be managed and mitigated, including, <b>but not limited to</b>, a description of: ...</li></ul>

Comment (NEW)	ECCC-26
Subject/Topic	Geological Features, Surficial and Bedrock Geology and Geochemistry
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 8.1.5 Geological Features, Surficial and Bedrock Geology and Geochemistry.
Summary	The mineralogy, geological components, and acid rock drainage and metal leaching (ARD/ML) potential of the various rocks in the project area should be determined.
Importance of Issue to Impact Assessment Process	To obtain an accurate assessment of the potential impacts of the exposed rock material on the environment.
Detailed Comment	Section 8.1.5.1 lists the baseline information that will be collected; however, the list of baseline information only mentions





Comment (NEW)	ECCC-26
	<p>the geological units but it should also include the mineralogy and geochemistry of the various geological rocks in the units, that is providing the geochemical components of the different rock types.</p> <p>In addition, the impact assessment (section 8.1.5.2) should include the characterization of the various rock types to determine their acid rock drainage and metal leaching (ARD/ML) potentials to enable appropriate management of the rocks and the assessment of their environmental impacts. Determination of the ARD/ML potential of rock in the project area will help to define the management strategy should the rocks have potentials to generate acid and/or leach metals.</p>
Recommendation/Request	<p>ECCC recommends that:</p> <ul style="list-style-type: none"><li>• the mineralogy and geochemical components of the various rocks in the geological units be determined; and</li><li>• the various rock types be characterized to determine their ARD/ML potential.</li></ul>

Comment (NEW)	ECCC-27
Subject/Topic	Active Layer Depth
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Sections 8.1.6 Hydrological Features and Hydrogeology & 8.1.6.1 Baseline Information
Summary	Depth of the active layer should be included in baseline information
Importance of Issue to Impact Assessment Process	Determining the thickness of the active layer is necessary to inform the thickness of any proposed cover
Detailed Comment	Section 8.1.6.1 listed the baseline information that will be collected; however, ECCC is of the view that item (iv) of the Baseline information should also include the depth of active layer within the location of the mine. The determination of active layer will help to inform the thickness of any proposed cover ensuring that any encapsulated potentially acid generating material, if any, is below the active layer.
Recommendation/Request	ECCC recommends including depth of the active layer within the project area on the list of information in Section 8.1.6.1 item iv.

Comment (NEW)	ECCC-28
Subject/Topic	Naturally Occurring Radioactive Materials (NORMs)
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 6.1 Project Design, Section 8.1 Ecosystemic Environment and Impact Assessment



Comment (NEW)	ECCC-28
Summary	NORMs are usually associated with kimberlite formations and the Canadian Shield and will therefore likely be generated by the Project. NORMs should be discussed as part of the project design and be considered in the Project's assessment of impacts in relation to surface water, aquatic/marine environment, sediment quality and terrestrial environment.
Importance of Issue to Impact Assessment Process	To ensure the impacts of NORMs on the environment are assessed.
Detailed Comment	Section 6.1 where general project design information requirements are listed, the need for a discussion on the potential occurrence of NORMs in the ore and/or the surrounding environment, its potential effects on the human and non-human biota in the study area, has not been included. The association of NORMs with kimberlite is a known issue for the Canadian Shield and it was recommended as part of ECCC's comments to the Draft Scope and Draft Impact Statement Guidelines to be included in the scope of the assessment of the project. The assessment should include the potential effects of NORMs generated/released by the project on surface water, aquatic/marine environment, sediment quality and terrestrial environment. Furthermore, the consideration of NORMs should be included in section 8 where Ecosystemic Environment and Impact Assessments are described as relevant.
Recommendation/Request	ECCC recommends that section 6.1 include a requirement to discuss the potential occurrence of NORMs in the ore and/or the surrounding environment, its potential effects on the human and non-human biota in the study area. Furthermore, ECCC recommends that the ecosystemic environment/impact assessments in section 8.1 should include the potential effects of NORMs generated/released by the project on surface water, aquatic/marine environment, sediment quality and terrestrial environment.

## Natural Resources Canada (NRCan)

Comment (NEW)	NRCan-05
Subject/Topic	GHG Emissions
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 7.4.2.1 Climate Change
Summary	This section requires the Proponent to quantify the net GHG emissions, impact on carbon sinks, mitigation measures, net-zero plan, and upstream GHG assessment of the Project.



Comment (NEW)	NRCan-05
Importance of Issue to Impact Assessment Process	For an estimate of the net GHG emissions of the Project to be assessed, it needs to be determined following a process that is recognized and recommended.
Detailed Comment	The draft Technical Guide provides comprehensive guidance of how a project's GHG emissions are to be estimated through the Impact Assessment process. Although this project does not fall under this Process, following the guidance as opposed to only reviewing it, would ensure consistency with GHG emission estimates calculated for any project.
Recommendation/Request	Reword the sentence in section 7.4.2.1 from "The proponent shall review the draft Technical Guide [...]" to "The proponent shall follow the draft Technical Guide [...]"

Comment (NEW)	NRCan-06
Subject/Topic	Acid Rock Drainage (ARD) and Metal Leaching (ML)
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 8.1.7 Groundwater and Surface Water Quality, particularly Section 8.1.7.2 Impact Assessment and Section 8.1.8 Sediment Quality, particularly Section 8.1.8.2 Impact Assessment
Summary	These sections require the Proponent to present "Potential impacts [...]" from ARD and ML resulting from waste rock stockpiles, ore stockpiles, open pit and underground mine dewatering [...]" on groundwater and surface water quality and sediment quality, respectively.
Importance of Issue to Impact Assessment Process	If not properly managed, the generation of ARD and ML during and following mining can have environmental impacts. Responsible management of ARD and ML requires best practices for its prediction during the Impact Assessment (IA) Process.
Detailed Comment	Models to assess the impact of ARD and ML on groundwater, surface water, and sediment quality strongly depend on the source terms used as their inputs. In turn, the development of ARD and ML source terms depends on the appropriate and representative characterization of the mined and processed material (e.g., mine wall, waste rock, tailings, etc.). In their present form, the Draft IS Guidelines do not include any requirements for the Proponent to demonstrate the appropriateness or representativeness of their sampling program, nor do they include any guidelines or requirements for the development of ARD and ML source terms.
Recommendation/Request	NRCan recommends that the IS Guidelines require the Proponent to demonstrate the appropriateness and representativeness of their characterization program for all geological materials disturbed during mining and associated



Comment (NEW)	NRCan-06
	processing waste products. Complete characterization of the ARD/ML potential of geological material takes several months to complete. NRCan therefore recommends that guidance on the material characterization and ARD/ML prediction program, such as reference to the Mine Environment Neutral Drainage (MEND) report 1.20.1, is provided early in the IA process by included it in the IS Guidelines. Since the results of such a study inform both the impact assessment required by Section 8.1.7 and 8.1.8, NRCan recommends creating a separate section devoted to the characterization of mined and processed material, including ARD/ML predictions, as is now accomplished under new federal Tailored Impact Statement Guidelines where ARD/ML generation is required to be evaluated.

## Transport Canada (TC)

Comment (NEW)	TC-05
Subject/Topic	Regulatory Approvals
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 8.1.6 Hydrological Features and Hydrogeology, Section 8.1.6.2 Impact Assessment
Importance of Issue to Impact Assessment Process	This information will impact Transport Canada's involvement in the assessment of the Project and review of the Project.
Comment	Add text to clarify assessment against legislation:  vii. Assessment of each watercrossing and in-stream work against the <i>Canadian Navigable Waters Act (CNWA)</i> and <i>CNWA Minor Works Order to determine if Transport Canada approval is required</i> , and potential impacts to the navigability and safety of the watercourses;"

Comment (NEW)	TC-06
Subject/Topic	Navigation
Importance of Issue to Impact Assessment Process	This information will impact Transport Canada's involvement in the assessment of the Project and review of the Project.
References	Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 8.2.10 Community Infrastructure and Public Services, Section 8.2.10.1 Baseline Information
Recommendation	Add text to specify that modes and routes include waterways:



Comment (NEW)	TC-06
	"ii. Description of existing transportation modes and travel routes/roads, <b>including via water;</b> "

Comment (NEW)	TC-07
Subject/Topic	Navigation and Civil Aviation
Importance of Issue to Impact Assessment Process	This information will impact Transport Canada's involvement in the assessment of the Project and review of the Project.
References	<p>Revised Draft Guidelines for the Preparation of an Impact Statement DeBeers Canada Inc.'s Chidliak Diamond Mine Proposal, Section 6.3.1 Detailed Project Description</p> <p>The Proponent shall describe the proposed project by presenting project components and all activities associated with each in a systematic way including alternative means to undertake the project <b><del>including crossings for water courses, disturbance to navigable waters or aerodrome work.</del></b></p>
Importance of Issue to Impact Assessment Process	This information will impact Transport Canada's involvement in the assessment of the Project and review of the Project.
Recommendation	<p>Remove new text from 6.3.1 and move to its own bullet points in Section 6.1, for clarity:</p> <ul style="list-style-type: none"><li>• <b>An assessment of each watercrossing and in-stream work against the <i>Canadian Navigable Waters Act</i> (CNWA) and CNWA Minor Works Order to determine if Transport Canada approval is required.</b></li><li>• <b>A discussion on planned consultation in advance of an aerodrome work, as identified in Canadian Aviation Regulation 307.</b></li></ul>

## Conclusions

The Government of Canada appreciates the opportunity to provide additional comments for the NIRB's consideration on the revised draft Scope List and revised draft Impact Statement Guidelines, and is pleased to participate in the discussions with all parties at the upcoming workshop. The Government of Canada thanks the NIRB for its efforts and will continue to participate in the NIRB's assessment process moving forward.