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November 1, 2022

Environmental Assessment Office
836 Yates Street
Victoria, British Columbia V8W 1L8

Attention: Jessica Harris, A/Project Assessment Director

Re: Cedar LNG Project – Responses to Third Public Comment Period

Dear Ms. Harris,

Further to your request under Section 16.8 of the section 11 Order, Cedar LNG Partners LP., by its general partner Cedar LNG Partners (GP) Ltd. (Cedar) is pleased to provide additional information in relation to public comments received in response to the Environmental Assessment Office's (EAO) public comment period on the draft Assessment Report and draft conditions for the Cedar LNG Project (Project).

Given that many of the comments appeared to be in relation to other projects (e.g., Coastal GasLink, which received an Environmental Assessment Certificate [#E14-03] in 2014), we feel it is prudent to provide clarification about the proposed Project, its partners, and its scope.

The Cedar LNG Project is being led by the Haisla Nation as majority owners, in partnership with Pembina. The Project is a key element of the Haisla Nation's economic and social development strategy and will further advance reconciliation by allowing the Haisla Nation to – for the first time ever – directly own and participate in a major industrial development in its territory.

Specifically, the Project will:

- Be Canada's first Indigenous majority-owned and led LNG infrastructure project.
- Be powered entirely by renewable energy from BC Hydro, resulting in one of the lowest carbon intensity facilities in the world.
- Have a small terrestrial footprint and floating design to reduce overall land impacts.
- Utilize innovative technology to reduce environmental effects, including a commitment to use air cooling.
- Deliver substantial tax revenues to government, to support healthcare, education and other important services for British Columbians, year over year.

The Project has benefitted from over a decade of thorough research and analysis by the Haisla Nation and its partners, and has considered the input from many Indigenous and local communities, including residents and stakeholders. Cedar is committed to continuing to engage with Indigenous and local communities as the Project advances. As noted above, a substantive number of the comments either appear to be directed at other projects

and developments in British Columbia. Others fail to accurately reflect the fact that the Haisla Nation are leading the Project, which will be developed on Haisla-owned land in their territory. The Haisla Nation have consulted neighbouring Indigenous communities and are committed to ensuring Project benefits are enjoyed by other Nations and the region.

As requested, Cedar has attached a table providing responses to the comments, which are grouped by key topics. As the scope of the third public comment period pertains to the EAO's draft assessment report and conditions, we have not attempted to address questions or comments directed specifically to the EAO; however, we have provided additional information to assist in the EAO's review of comments and final determination in relation to its assessment.

If you have any questions regarding the above or attached, please do not hesitate to contact me via email at lara.taylor@cedarlng.com.

Sincerely,

Cedar LNG Partners LP

Lara Taylor
Environmental Assessment Lead

The following table summarizes the 173 comments received by the EAO as part of its third public comment period regarding the draft Assessment Report and Conditions for the Project.

Comments that pertain directly to the Project have been included in the summary table. As there are many similarities between comments, we have grouped comments by topic and not duplicated comments where the questions are substantively the same.

Some of the general themes noted during Cedar's review of the comments were:

Upstream activities – 60 comments were focused on activities that are outside the scope of the Project's assessment (e.g., upstream development). In accordance with the section 11 Order, Cedar's assessment of the Project does not consider upstream oil and gas infrastructure. Greenhouse gas (GHG) emissions associated with upstream activities are considered in accordance with the *Impact Assessment Act*.

General industry opposition – 33 comments expressed general opposition to all oil and gas development as opposed to specific concerns regarding the Project. The Project is consistent with both Canadian and British Columbian laws, which provide paths for the assessment and approval of responsible and sustainable resource development, including oil and gas activities. The Project is also consistent with municipal bylaws and zoning.

Indigenous rights – 20 comments mentioned opposition to infringing on Indigenous rights and title or mentioned the importance of the United Nations Declaration on the Rights of Indigenous Peoples and Free Prior and Informed Consent. Several of these comments appear generally to misunderstand the Project and the role of Indigenous Nations in the Project. The Project is majority-owned and led by the Haisla Nation and will be located on land owned by the Haisla in their traditional territory. Additionally, Cedar has demonstrated its commitment to consulting and engaging with Indigenous Nations potentially affected by the Project in accordance with the section 11 Order through all stages of Project planning and assessment. Cedar looks forward to ongoing engagement with Indigenous Nations as the Project advances.

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Public Comment	Cedar Response
Project Design	
I have a concern about the Condensate that is a by product of the LNG process. During a meeting with Cedar LNG proponents I asked how it would be stored, if they would build a storage tank on shore and how it would be transported to a condensate handling facility. I was told they would not be doing any of those things but that they would burn it for heat. That gave me more concerns as I can't find that in any EA documents and question whether the GHG's from that process are being taken into account.	The list of activities during the operations phase of the Project is provided in Section 1.5.2 of the Application. This list of activities includes the storage and combustion of natural gas liquids (condensate). More detailed consideration of the use of natural gas liquids (condensate) is provided in Section 1.6.2 and Section 1.9.5 of the Application. The combustion of natural gas liquids has been considered throughout the Application, including the air quality assessment (Section 7.2), the acoustic assessment (Section 7.3), and GHG assessment (Section 8.0).
My second concern is in regard to the 8 kilometre pipeline required to take the natural gas to the floating facility. We have had no information about that pipeline. It would have to go through District of Kitimat lands in part and would be in close proximity to where people live and work. It seems that the pipeline is not to be included in the EA process nor does Cedar Lng have to talk to any members of the public about it. This does not seem right nor fair to me. The LNG Canada project saw a huge number of trees including old growth removed from the Kitimat Estuary and those alone have caused changes in the local wildlife, removing more trees would be unsettling. I have been asking for a presentation for this part of the project on behalf of my group for well over 4 months now and despite receiving an acknowledgement for my request it has not happened as yet.	The 8-kilometre pipeline that will transport natural gas to the floating LNG facility will be subject to the approval process under the *Oil and Gas Activities Act.* While the pipeline is not included within the scope of the environmental assessment for the Project, Cedar is happy to discuss the interconnection pipeline with community groups and has provided information regarding the pipeline, including its alignment, through project materials including Cedar's website. The proposed alignment for the pipeline has been informed by detailed studies and is based on the 2014 the Ministry of Transportation and Infrastructure Kitimat West Douglas Channel Corridor Analysis. This analysis was undertaken to inform land use planning and permitting decisions related to infrastructure requirements for proposed projects on the west side of Douglas Channel in Kitimat.
My third concern involves the access road to the project. It is a crude road with a section that is single lane due to the impossibility of 2 laning it in a section that is subject to slippage. I have not heard of any updating of the road nor have I heard of any contingency plan for the safety and/or emergency shutdown of the facility should the road become unusable for any length of time.	Information regarding access to the Project Area is provided in Section 1.4.3 of the Application. As noted in this section, the Bish Creek Forest Service Road recently went through an extensive upgrade as part of the Kitimat LNG Project and further modification of the road is not currently deemed necessary. The section of single-lane traffic mentioned in this comment is located to the south of the Project Area and not required for project access.

Public Comment	Cedar Response
Natural gas is a finite, non-renewable resource, and therefore by definition it is not a sustainable resource over the long-term. The gas from this Project would not be used to provide energy for Canadians – instead it would be exported. Drilling for gas involves significant environmental disturbance through the construction of well pads, roads and substantial emissions as documented in Table 1. Most if not all of the gas for the Project would come from the Montney Formation of northeast B.C. The Montney is one of the last major sources of natural gas in Canada, and the B.C. portion of the Montney is forecast by the Canada Energy Regulator to provide 53% of all Canadian production over 2022-2050. As stated in the Cedar application, the Project is incremental, meaning that these resources and associated environmental disturbance would not occur without the Project, and hence without the Project these resources would remain for use by Canadians in the future should they be needed. The Project therefore potentially compromises the future energy security of Canadians.	Cedar has secured an export licence for the Project from the Canadian Energy Regulator (GL-327). This licensing process is intended to protect the energy security of Canadians. As part of the assessment of Cedar's application for an export licence, the Canadian Energy Regulator (then the National Energy Board) was satisfied that "the gas resource base in Canada and North America is large and can accommodate reasonably foreseeable Canadian demand, including the natural gas exports proposed under the License application, and a plausible potential increase in demand".
The "powered by electricity" statement is an insufficiently-explicit description–all LNG plants are electrically powered–differing only in the origin of the electricity. The intent is to ensure that the electricity source will be from the BC Hydro grid -not from gas-powered generators. It should say so. The IAAC condition states "5.4 The Proponent shall utilize, from the start of operation, electricity from the BC Hydro electrical grid to power the pre-treatment and liquefaction of natural gas, and shall continue to utilize it as the primary source of electricity during all of operation". For greater certainty and consistency, the BC EAO conditions draft should copy this wording.	Cedar defers to the EAO regarding its draft assessment report and conditions; however, we offer the following: Cedar intends to power its facility with renewable energy purchased from BC Hydro, as opposed to burning natural gas. It is this critical design decision that will enable Cedar to produce LNG with one of the lowest GHG intensities in the world. The EAO's Project Description describes the project components that can be constructed. Because the Project Description does not include a natural gas power plant, Cedar would not be able to self-generate electricity for the Project from natural gas.

Public Comment	Cedar Response
The application states that Cedar LNG will be powered either by (i) BC Hydro grid electricity or (ii) self-generated power from burning 8-10% its own gas supply. The report indicated that the choice will depend on negotiations, yet to conclude, between Cedar and BC Hydro. If the latter, most gas-powered LNG facilities emit about 3 tonnes of CO2e for every tonne of LNG produced (stated as a production intensity factor of 3). However, the EAO has assumed, in its assessment, that these negotiations will be successful, and has only calculated the emissions resulting from that choice, not yet made. This is highly misleading. We suggest that emission calculations for both power scenarios be included in the assessment report unless/if the parties come to agreement. This issue is important, as we believe, from other data, that a high-power tie line from Prince George would be required to bring local available power up to the level required by a 3 MTPA LNG plant. If correct, the report should explain the consequences of this to local and provincial power rates.	Cedar's Application, accepted on February 4, 2022, commits to utilizing renewable electricity from BC Hydro to power the Project as opposed to burning natural gas. It is this critical design decision that will enable Cedar to produce LNG with one of the lowest GHG intensities in the world. From Cedar's ongoing work with BC Hydro, we can confirm no additional transmission lines are required to ensure sufficient electricity is available at the Minette Substation for the Project.
The draft IAAC condition specifies "air-cooled liquefaction". The BC EAO BC EAO draft project description draft omits any reference to how the heat from the liquefaction process will be removed/ dealt with. The BC EAO conditions draft (Schedule 1) does state "air cooling systems", but it should be a stronger statement specifying that the liquefaction process will be air-cooled, and specifying the number and height of cooling towers. This is important because of the high likelihood of local fogging from these.	Cedar defers to the EAO regarding its draft assessment report and conditions; however, we offer the following: Details regarding the air-cooling system, including the number and height of cooling towers, will be addressed through the LNG Facility Permit process under the BC Oil and Gas Commission.
Noise from liquefaction-process air cooling fans has proven to be a significant annoyance issue in several U.S. LNG plants. As there is no local municipal noise bylaw for the proposed project area (RAA), we suggest that there should be a condition for this plant specifying allowable (and enforceable) above-ground, above-water, and underwater noise limits for (i) marine and terrestrial wildlife and (ii) human receptors.	Cedar defers to the EAO regarding its draft assessment report and conditions; however, we offer the following: Noise modelling is included in Section 7.3 of the Application. This modelling shows the Project meets applicable Health Canada guidelines. Additional noise modelling will be undertaken in support of the LNG Facility Permit process. In addition, Cedar has included a commitment to verify noise levels as part of its follow-up program under the *Impact Assessment Act*.

Public Comment	Cedar Response
BC EAO conditions draft states “5.6 The Proponent shall reduce the quantity of vented or flared gas and the duration of venting or flaring events to the minimum required for emergency or maintenance purposes”. This is weak/ unenforceable. The condition should specify the type and number, average and maximum frequency of use of the flares, flare heights, plus a (low) flared quantity limit triggering a formal, public, reporting requirement. Otherwise, the vagueness of the condition “minimum required” wording has no practical enforceability.	Cedar defers to the EAO regarding its draft assessment report and conditions; however, we offer the following: The environmental assessment includes consideration of flaring appropriate to the current phase of the Project. The LNG Facility Permit process, which is led by the Oil and Gas Commission, includes much more detailed consideration of Project design, including flaring. In addition, Cedar will require a Waste Discharge Permit for air emissions under the *Environmental Management Act*. Cedar notes the Project will be designed in accordance with the British Columbia Oil and Gas Commission’s *Flaring and Venting Reduction Guideline* (September 2022).
The condition sets are silent on the subject of expansion of the proposed plant, and whether any expansion would require a new assessment. Cedar has a CER-issued LNG export license for 6.2MTPA. This may indicate the likelihood of a later expansion application? The conditions should limit the plant to producing and exporting only LNG, and for the currently-proposed volume (3MTPA).	Cedar defers to the EAO regarding its draft assessment report and conditions; however, we offer the following: Cedar's Application is specific to its proposal to liquefy and export up to 400 million standard cubic feet per day (11.33 million cubic metres per day) of natural gas. The Project is not allowed to exceed the limits specified in the Project Description.
Current FLNG platforms typically process a maximum of 0.5-1.5 mega tonnes LNG per annum (MTPA). The Tango FLNG is 0.5 MTPA. Shell’s $19B Prelude is only 3.5MTPA. Delfin’s proposed 13 MTPA project in the Gulf of Mexico has 6 x 2.1 MTPA units. The conditions are silent on how many FLNG platforms are envisaged for Cedar, and what will be the combined length of their hulls, what length of the Douglas Channel shoreline will they collectively take up. All of these should be specified in the project description, and referenced in the IAAC and BCEAO condition set(s).	Cedar defers to the EAO regarding its draft assessment report and conditions; however, we offer the following: The Project’s Application clearly specifies that Cedar is proposing a single FLNG facility. This is described in Section 1.4.1 and shown in the renderings provided in Section 7.9. Section 1.4.1 also provides proposed dimensions of the FLNG facility. In addition, Cedar notes that Section 3.1 of the EAO’s Project Description specifically refers to the FLNG facility in the singular. The Project must conform to the Project Description if an Environmental Assessment Certificate for the Project is approved.
There should be a requirement for a decommissioning bond fully reflecting the future value of decommissioning costs, as exists with BCO&G for O&G wells? As at least 50% of the project will be foreign-owned, this would seem a prudent move.	Any required security is generally addressed through the British Columbia *Oil and Gas Activities Act* and the permitting processes thereunder. The Project is being advanced with the Haisla Nation as majority owners, in partnership with Pembina Pipeline Corporation, a Canadian owned and operated corporation with more than 65 years of history in Canada.

Public Comment	Cedar Response
I have seen so many companies come n destroy n cause pollution to the environment. I truly believe the elected government needs to pass a law that any company or industry needs to put down damage deposit that they will get back if there is no damage or pollution to the environment. We need environmentalist too be trained to police the companies. Thank you for listening.	Any required security is generally addressed through the British Columbia *Oil and Gas Activities Act* and the permitting processes thereunder. Section 21 of the Liquefied Natural Gas Facility Regulation under *Oil and Gas Activities Act* specifically addresses restoration of the property after operations cease at the LNG facility.
The conditions should require that Cedar LNG inform the public of the TPL (third-party -not hull, not cargo) liability insurance the project and its LNG carriers will carry (Note: The HNS 2010 insurance protocol has not yet come into force, and may never do so. Also, liability for the hazard loaded LNG tankers pose to in-transit communities along the transit route passes to the LNG carrier –not Cedar –once the vessel departs the loading dock). As a result, the BC public should be assured that TPL coverage, especially for LNG carriers loading at the plant and exiting through Douglas Channel, will be adequate to provide full compensation in the event of a mishap. A condition stating this requirement should be added.	Cedar will carry insurance that meets or exceeds applicable statutory requirements. Details of this coverage will be determined based on assessment of risk. During operations, Cedar anticipates that it will hold both property and liability insurance for onshore and offshore facilities. LNG carriers will be required to carry insurance in accordance with applicable Canadian and International law.
With respect to Condition 9.1, in addition to the entities listed, the Construction Environmental Management Plan (CEMP) should also be developed in consultation with the Kitimat Airshed Group.	Cedar looks forward to continuing to engage with Indigenous and local communities as the Project advances, including the Kitimat Airshed Group. However, Cedar does not believe it is appropriate for the Environmental Assessment Office to require engagement with a non-government organization regarding the Construction Environmental Management Plan. This is particularly the case given measures related to air quality will be very limited within the Construction Environmental Management Plan.
In addition to the CEMP covering the construction phase of the Project, the EAO should also require the Proponent to develop and implement a similar plan for the operational phase of the Project.	Cedar does not believe a stand-alone Operations Environmental Management Plan is required. Instead, required mitigation and monitoring programs will be incorporated into regulated plans that are required under the *Oil and Gas Activities Act* and Cedar's broader Health, Safety, Security and Environment program.

Public Comment	Cedar Response
Potential Effects to Indigenous Nations	
This project proposes to go through Indigenous owned land that has never been ceded. This project will pollute the waters that many people rely on for nourishment - both physically and spiritually. This project should not be allowed to move forward.	The Project is majority-owned and led by the Haisla Nation and will be located on land owned by the Haisla within their traditional territory. Additionally, Cedar has demonstrated through all stages of Project planning and assessment its commitment to consulting and engaging with Indigenous Nations potentially affected the Project. Cedar looks forward to ongoing engagement with Indigenous Nations as the Project advances. Haisla Nation are Indigenous peoples of Canada who reside at the head of Douglas Channel, near the confluence of the Kitimat River. The term “Haisla” means “People at the mouth of the river”, and Haisla people have occupied their lands for more than 9,000 years.
Also, is there consent from all the Indigenous rights and title holders along the proposed tanker route for more increased traffic that impacts whale and fish populations due to noise and hits, and from those where a pipeline would be needed to feed Cedar LNG?	Cedar has consulted with the Indigenous nations included in the section 11 Order to understand and mitigate potential environmental, social, economic, heritage and health effects of the Project since 2019. This includes Indigenous communities along the proposed shipping corridor. Further, Cedar is committed to continue working and collaborating with Indigenous Nations as project development progresses. Information regarding Cedar’s engagement with Indigenous nations is summarized in the Application and presented in our Indigenous Consultation Reports, which are available on the EAO’s EPIC website.
Greenhouse Gas Emissions and Climate Change	
To fully understand the GHG emissions and climate impacts of Cedar LNG, we must also consider upstream emissions, which are potentially some of the largest. The Impact Assessment Agency of Canada specifically requires that upstream emissions be included in the GHG count for any project.	Appendix 8B of Cedar’s Application for an Environmental Assessment Certificate is entitled *Strategic Assessment of Climate Change Technical Report* (Stantec November 2021). This was prepared to meet Environment and Climate Change Canada’s (ECCC) Strategic Assessment of Climate Change and the associated *Draft Technical Guide Related to the Strategic Assessment of Climate Change*. Section 3 of the Technical Report includes an upstream assessment in accordance with ECCC’s prescribed methods. In addition, ECCC issued its federal authority advice document entitled *Review of Estimated Greenhouse Gas Emissions Associated with the Cedar LNG Project* (revised 2022-09-02), which addresses upstream emissions in Section 2.3 (link). These documents have been considered in the assessment and the Assessment Report for the Project.

Public Comment	Cedar Response
BC is already going to miss its goals for greenhouse gas reduction by 10%. LNG Canada will increase the GHG emissions by 10% further. Cedar LNG would add further emissions.	According to the *2021 Climate Change Accountability Report*, released by CleanBC, British Columbia's 2030 GHG emissions are estimated to be 55.2 million tonnes CO_2e or about 40% of the way to its 2030 target. The projections in that report consider GHG emissions from LNG production of 14 million tonnes per year, starting in 2025 (from "Modelling CleanBC: 2021 Methodology Report"); this is the amount of LNG to be produced by the LNG Canada Project. After the release of that report, CleanBC released *CleanBC Roadmap to 2030*, which lays out additional policies and actions that are projected to enable British Columbia to reach its 2030 target. For perspective, the estimated net emissions from the Cedar Project represents approximately 0.6% of British Columbia's 2030 emission reduction target. The next accountability report is set to be released before the end of the year.
Lifecycle emissions from BC LNG, which is shipped to Asia to fuel power generation, are projected to be worse than best-technology coal generation.	The assessment considered the Project's emissions as required by applicable federal and provincial law and as required by the Application Information Requirements. This included consideration of upstream emissions, project-specific emissions, and shipping emissions to the Triple Island Pilot Boarding Station. Life cycle emissions are not a required scope of the assessment under British Columbia's *Environmental Assessment Act* or Canada's *Impact Assessment Act*.
Cedar LNG claims that it will be powered by hydro electricity. Currently the northwest electrical grid is not able to supply the necessary power and the Cedar LNG will resort to burning gas for electricity. The emissions of using gas to power Cedar LNG operations also must be included in the assessment of the project.	Cedar's Environmental Assessment Certificate Application, accepted on February 4, 2022, commits to utilizing renewable electricity from BC Hydro to power the Project as opposed to burning natural gas. It is this critical design decision that will enable Cedar to produce LNG with one of the lowest GHG intensities in the world. Cedar is actively working with BC Hydro, who has confirmed that it has sufficient electricity for the Project.
The report mostly sidesteps the emissions of electricity generation required to liquefy LNG. These emissions are off-site and are described, but do not factor into the environmental footprint of the project.	The Project's electricity consumption does factor into the estimated annual GHG emissions for the Project as presented in the Application.
Simply requiring Cedar LNG, under s.6.4.4 of the report, to hopefully arrive at net zero by 2050 is to allow the impact of all its pre-2050 emissions. To permit the Strategic Assessment of Climate Change to not estimate downstream emissions (s.6.7.4) and to accept Cedar LNG's assertion that its GHG emissions will have no effect on climate change damage complete this trilogy of cover-up and denial.	The Strategic Assessment of Climate Change, as designed, emphasizes reductions in GHG emissions sooner than 2050. Cedar, as part of its conditions of approval, must develop a net-zero plan to the satisfaction of ECCC. This plan will include more detailed measures to reduce GHG emissions ahead of 2050. Notably, downstream emissions from the combustion of the LNG in Asian markets are expected to displace emissions from coal combustion. This will have the effect of reducing GHG emissions in those Asian markets.

Public Comment	Cedar Response
LNG is problematic for the climate because it leaks out methane at every part of the process. Demand that leaking of methane is monitored and severely punished if it happens. We can't afford to have large amounts of methane dumped into the atmosphere, but if the methane emissions are cut back, LNG can cut down on GHG emissions overall.	Fugitive emissions from the oil and gas industry in British Columbia are regulated. Specific to LNG facilities, section 8(1)(c) of the Liquefied Natural Gas Facility Regulation under the *Oil and Gas Activities Act* requires the development of a fugitive emissions management plan in accordance with CSA Z276 *Liquefied natural gas (LNG) - Production, storage, and handling*. In addition, the Oil and Gas Commission published its Fugitive Emissions Management Guideline in July 2019 which supports the leak detection and repair requirements of the Drilling and Production Regulation under the *Oil and Gas Activities Act*. These regulations are intended to address this concern.
The Project would substantially hinder the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change. As noted above, the Project would add 1.2 megatonnes of emissions annually up to 2050 and approximately one megatonne per year thereafter assuming terminal emissions could be reduced to zero by purchasing offset credits. There is no mention or specific discussion in this document on dealing with upstream emissions, even though these emissions constitute 80% of the emissions associated with this Project. Therefore, this document is deficient in dealing with the actual impact of the Cedar Project on Canada's and B.C.'s emissions reduction commitments.	Cedar defers to the EAO regarding its draft assessment report and conditions; however, we offer the following: Cedar's Application provided a comparison of the Project's GHG emissions to national and provincial totals. Please see Table 8.6.10 of the Application. During operation, the Project is expected to emit 0.049% of the Government of Canada's total annual 2030 GHG emission target and 0.57%, 0.86%, and 1.72% of the Government of British Columbia 2030, 2040 and 2050 emissions targets, respectively. Cedar notes that draft Condition 5.1 of the Impact Assessment Act Decision Statement requires the Project to ensure that the Designated Project does not emit greater than net 0 kt CO_2 eq/year, as calculated in equation 1 of the Government of Canada's *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*. Cedar is confident that this requirement can be met. With respect to upstream emissions, Appendix 8B of Cedar's Application entitled *Strategic Assessment of Climate Change Technical Report* (Stantec November 2021) was prepared to meet ECCC's Strategic Assessment of Climate Change and the associated *Draft Technical Guide Related to the Strategic Assessment of Climate Change*. Section 3.0 of the Technical Report includes an upstream assessment in accordance with ECCC's methods. In addition, ECCC issued its federal authority advice document entitled *Review of Estimated Greenhouse Gas Emissions Associated with the Cedar LNG Project* (revised 2022-09-02) which addresses upstream emissions in Section 2.3 (link). These documents have been considered in the assessment and the Assessment Report for the Project.

Public Comment	Cedar Response
We disagree with the “prior to construction” timing of delivery of this NZ50 plan. It is inadequate to ensure that Canada and BC can each meet its legislated emissions reduction targets. Also unacceptable is that an Environmental Assessment Certificate decision could be made before knowing how, or if the proponent intends to meet this requirement.	Draft federal condition 5.1 requires Cedar to ensure that the Designated Project does not emit greater than net 0 kt CO_2 eq/year, as calculated in equation 1 of the Government of Canada’s *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*. Cedar is confident that this requirement can be met and a Net-Zero Plan will be prepared to demonstrate how this will be achieved. The Plan will be prepared early in the life of the Project, after the detailed engineering design is complete, and will be reviewed at least every five years. This review schedule will allow the plan to incorporate new technologies and advances in carbon offset initiatives that become available throughout the life of the Project.
Calculate the Project’s cumulative GHG emissions over the lifetime of the Project.	The assessment considered the Project’s emissions as required by applicable federal and provincial law and as required by the Application Information Requirements. This included consideration of upstream emissions, project-specific emissions, and shipping emissions to the Triple Island Pilot Boarding Station.
Assess the Project’s contribution, over its lifetime, to Canada’s fair share of the remaining global carbon budget consistent with Canada’s commitment under the Paris Agreement.	Cedar’s Application provided a comparison of the Project’s GHG emissions to national and provincial totals. Please see Table 8.6.10 of the Application. During operation, the Project is expected to emit 0.049% of the Government of Canada’s total annual 2030 GHG emission target and 0.57%, 0.86%, and 1.72% of the Government of British Columbia 2030, 2040 and 2050 emissions targets, respectively. Cedar notes that draft Condition 5.1 of the Impact Assessment Act Decision Statement requires the Project to ensure that the Designated Project does not emit greater than net 0 kt CO_2 eq/year, as calculated in equation 1 of the Government of Canada’s *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*. Cedar is confident that this requirement can be met.

Public Comment	Cedar Response
There is no consideration of downstream emissions in the Report, nor any mention of these emissions at all. Greenford previously estimated that downstream emissions would be 10 MT CO2 equivalent each year. As stated by Greenford in the attached report, recent precedents in Canadian environmental assessment have considered and quantified these emissions. The EAO's narrow interpretation of the scope of emissions to be considered in the assessment undermines the purposes of the IAA and EAA to allow the public and decision-makers to understand the actual impacts of a project.	The assessment considered all emissions required under law and by the Application Information Requirements. This included consideration of upstream emissions, project-specific emissions, and shipping emissions to the Triple Island Pilot Boarding Station.
The EAO's approach to assessing emissions on a terminal-by-terminal basis, with no weight placed on upstream emissions and no assessment of downstream emissions, undermines its obligation under the IAA by failing to consider significant cumulative effects of the project.	Cedar undertook the assessment in the Application in accordance with the *Impact Assessment Act* and the British Columbia *Environmental Assessment Act*. This assessment considered both project-specific effects and cumulative effects as required by both Acts. The assessment considered all emissions required under law and by the Application Information Requirements.
Greenford further finds that the EAO applies the wrong consideration in determining whether the Project will hinder Canada's international commitments. The EAO considers solely Canada's voluntary climate targets set out in its Nationally Determined Contribution ("NDC"), rather than it's more stringent obligations to limit warming under 1.5 ºC pursuant to the Paris Agreement.	Cedar defers to the EAO regarding its draft assessment report and conditions, and the EAO's assessment. The Project will have one of the lowest GHG production intensity of any facility globally. If Cedar does not meet this demand, other projects around the world with higher GHG production intensities will supply the LNG.

Public Comment	Cedar Response
The Report repeats the same error as the Application and continues to rely on the proponent's intention to purchase offset credits in the distant future. The effectiveness of credits offsetting large industrial emissions is far from certain, and as highlighted by Greenford in his first report, "[given] critical uncertainties inherent to emissions offsets, it is 'difficult to establish that an offset is equivalent in magnitude to the internal emissions it is offsetting.'"	Emission offset programs continue to develop across Canada under federal and provincial compliance frameworks as well as in voluntary carbon markets. Offsets are recognized in Canada and worldwide as an essential tool for achieving net-zero targets. To clarify, the definition of a GHG offset is one tonne of carbon dioxide equivalent reduced. If the Project purchases and retires one offset, then it is equivalent to one tonne of carbon dioxide equivalent produced by the Project. Draft condition 5.1 of the *Impact Assessment Act* Decision Statement will require Cedar to ensure that the Designated Project does not emit greater than net 0 kt CO2 eq/year, as calculated in equation 1 of the Government of Canada's *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*. Cedar is confident that this requirement can be met and a Net-Zero Plan will be prepared to demonstrate how this will be achieved. The Plan will be prepared early in the life of the Project, after the detailed engineering design is complete, and will be reviewed at least every five years. This review schedule will allow the plan to incorporate new technologies and advances in carbon offset initiatives that come available throughout the life of the Project.
As a result of the Report not containing adequate information on emissions, the proposed mitigation measures do not address the actual emissions from the Project and potential cumulative emissions from the broader LNG export industry. Instead, the Conditions are primarily directed at reducing direct emissions from the facility, including the use of electricity from the BC Hydro electrical grid for pre-treatment liquefaction, reductions to vented or flared gas, and a leak detection program for fugitive emissions. These Conditions do not and cannot account for the broader emissions from the Project from extraction, processing, transportation, and marine shipping, which again, vastly exceed the direct emissions produced by the Project. In summary, the gaps in the Conditions on emissions are a result of the previously described gaps in the Report itself, and the restrictive emissions scoping decision made by the proponent and accepted by the EAO	Cedar defers to the EAO regarding its draft assessment report and conditions, and the EAO's assessment; however, we offer the following additional information: An upstream assessment was conducted for the Project and can be found in the Strategic Assessment of Climate Change Technical Data Report (Appendix 8B of the Application). The draft conditions of the *Impact Assessment Act* Decision Statement and the British Columbia *Environmental Assessment Act* environmental assessment certificate cannot directly affect upstream emissions as these are beyond the control of Cedar. However, Canada has other legislative and policy means to influence these emissions.

Public Comment	Cedar Response
Air Quality	
The Kitimat airshed is already saturated with industrial emissions from Rio Tinto and the mega LNG Canada. Adding more pollutants will make things worse and illegal.	Cedar assessed effects to air quality in Section 7.2 of Cedar's Application. The assessment included modelling of all existing and approved projects plus all project-related equipment. Results from this dispersion modelling show a small increase to maximum predicted concentrations compared to the base case where predicted concentrations add 0%, 0.09%, 0.7% and 0% of nitrogen dioxide, sulphur dioxide, $PM_{2.5}$, and carbon monoxide, respectively. The extent of residual effects is limited to within the LAA/RAA and to the vicinity of the Project (less than 1 km) and is negligible to very small at increasing distance from the Project. Should the Project receive an Environmental Assessment Certificate under British Columbia's *Environmental Assessment Act* and a positive Decision Statement under Canada's *Impact Assessment Act*, it will be required to obtain a waste discharge permit under the provincial *Environmental Management Act* prior to commissioning the FLNG facility.
Cedar LNG is another one of those projects that will impact clean air, clean water, and pristine environments in B.C.	Cedar designed the Project with guidance and direction from the Haisla Nation, whose business philosophy is to advance commercially successful initiatives and promote environmentally responsible and sustainable development while avoiding or reducing adverse effects on land and water.
i am concerned about the increased levels of sulphur dioxide. as a rights holder i have not been consulted by my haisla beaver clan leadership. there has been no opportunity for clan members to sit and listen to any explanation regarding long term impacts of increased so2 releases into the receiving environment. lack of free prior and informed consent by way of clan meetings lead by clan chiefs with experts present to explain the project falls short of proper consultation.	Sulphur dioxide emissions associated with the Project are considered in Section 7.2 of the Application. The assessment includes modelling of all existing and approved projects plus all Project-related equipment. Results from this dispersion modelling show a small increase (0.09%) in the maximum predicted concentration of sulphur dioxide compared to the base case. Cedar has hosted numerous events specifically for members of the Haisla Nation as well as attended Haisla Nation events to provide information regarding the Project. The most recent example was a community dinner hosted by Cedar in September 2022. At this dinner, Cedar provided a project update, and made the Cedar team available to answer questions both in a town hall format as well as one-on-one. As the Project advances, we welcome feedback from Indigenous and local communities regarding how they wish to be engaged and will continue to seek the advice of the Haisla Nation regarding how they wish their community to be engaged.

Public Comment	Cedar Response
Conduct CALMET/CALPUFF air dispersion modelling using a gridded 1-km WRF output.	Dispersion modelling was conducted following the BC Air Quality Dispersion Modelling Guideline (2015) and an approved (by ENV) Dispersion Modelling Plan. These current guiding documents indicate the publicly available 4-km WRF data is appropriate for dispersion modelling within the assessment process. Should the Project receive an Environmental Assessment Certificate under British Columbia's *Environmental Assessment Act* and a positive Decision Statement under Canada's *Impact Assessment Act*, it will be required to obtain a waste discharge permit under the provincial *Environmental Management Act* prior to commissioning the FLNG facility. As a result, there will be additional assessment required at which time updates and changes to the methodologies will be considered in consultation with the Oil and Gas Commission.
Predicting the Project's contribution to air pollution by the difference in predicted pollutant concentrations between (1) a model accounting for the Project's emissions cumulatively with all existing and projected emission sources and (2) a model containing all existing and projected emission sources without the Project.	Effects to air quality are assessed in Section 7.2 of Cedar's Application. Cedar modelled three scenarios: Project Alone (the Cedar LNG Project in isolation); Base Case (existing conditions plus LNG Canada emissions); and Application Case (Project Alone and Base Case combined). Results from this dispersion modelling show a small increase to maximum predicted concentrations compared to the base case where predicted concentrations add 0%, 0.09%, 0.7% and 0% of nitrogen dioxide, sulphur dioxide, $PM_{2.5}$, and carbon monoxide, respectively. The extent of residual effects is limited to within the LAA/RAA and to the vicinity of the Project (less than 1 km) and is assessed as negligible to very small at increasing distance from the Project.
Analyze and report predicted exceedances of AQO in terms of number of days that the maximum daily concentration was exceeded.	Cedar modelled three scenarios: Project Alone (the Cedar LNG Project in isolation); Base Case (existing conditions plus LNG Canada emissions); and Application Case (Project Alone and Base Case combined). Please note that a Cumulative Effects case was not modelled because the Application Case included all proposed projects. Exceedances of the AQO for SO_2 and $PM_{2.5}$ are predicted in the Base Case as a result of Rio Tinto emission sources. There are no predicted exceedances of the AQO for the Project Alone. Results from this dispersion modelling show a small increase to maximum predicted concentrations compared to the base case where predicted concentrations add 0%, 0.09%, 0.7% and 0% of nitrogen dioxide, sulphur dioxide, $PM_{2.5}$, and carbon monoxide, respectively.

Public Comment	Cedar Response
In addition, KTCAC recommends that the Draft Report express ambient pollutant concentrations and AQO in units of "ppb" in addition to "µg/m^3".	Cedar defers to the EAO regarding its draft assessment report and conditions, and the EAO's assessment; however, we offer the following additional information: Parts per billion can be determined by converting micrograms per cubic meter (µg/m^3) using the ideal gas law and assuming ambient temperature is 25°C for comparison to the BC AQO. Using the units of µg/m^3 allows for a comparison of the results to the provincial AQO and federal CAAQS.
Address weakness in model scope, including but not limited to modelling and assessing the Project's contribution to the formation of ground level ozone and fugitive emissions.	The Project does not directly emit ozone; however, the Project has the potential to emit precursor pollutants (NOx) that contribute to the formation of ground-level ozone. Notably, the operation phase of the Project contributes 3.5% of the total NOx in the study area. The remaining 96.5% of NOx emissions comes from other industrial facilities (LNG Canada, Rio Tinto aluminum smelter). Further, LNG Canada has demonstrated that the incremental addition of precursor emissions as a result of its larger project is unlikely to alter the ozone production in the airshed (LNG Canada 2014). On this basis, as the much larger LNG Canada project will not meaningfully increase precursor emission to affect ozone production in the airshed, it is therefore unlikely that the smaller Cedar LNG Project will have an effect. Fugitive emissions are small and intermittent and therefore are difficult to include in a dispersion modelling exercise. To manage fugitive emissions during operations, Cedar will develop a fugitive emission management plan in accordance with the *Oil and Gas Activities Act.* This plan will identify components that may leak and establish a schedule for inspections and repair.
The Proponent should also be required to develop and implement an Air Pollution Reduction Plan, with provisions for plan development, consultation, review and approval, implementation, and updates similar to those for the Greenhouse Gas Reduction Plan.	The Project will use electricity from the BC Hydro grid, which will substantially reduce emissions. Results from dispersion modelling shows Project effects are expected to be within the vicinity of the facility (<1 km) in a remote and uninhabited area. Based on these results, an Air Pollution Reduction Plan is not warranted. Should the Project receive an Environmental Assessment Certificate under British Columbia's *Environmental Assessment Act* and a positive Decision Statement under Canada's *Impact Assessment Act*, it will be required to obtain a waste discharge permit under the provincial *Environmental Management Act* prior to commissioning the FLNG facility. As a result, further assessment will be required with oversight from the Oil and Gas Commission. Through this process, opportunities to further reduce air pollutants may be incorporated into the design.

Public Comment	Cedar Response
Condition 5.5.1 contemplates that emission control technologies may be removed for repair and maintenance. It is unclear from the Condition whether the facility may continue to emit air pollutants when such technologies have been removed. KTCAC submits that the Condition should specify in greater detail restrictions on air emissions during periods when emission control technologies are not operational, including but not limited to requirements relating to approvals and monitoring by relevant government agencies to ensure that adverse impacts from air pollutants during such episodes are minimized.	Cedar defers to the EAO regarding its draft assessment report and condition, and the EAO's assessment; however, we offer the following additional information: Should the Project receive an Environmental Assessment Certificate under British Columbia's *Environmental Assessment Act* and a positive Decision Statement under Canada's *Impact Assessment Act*, it will be required to obtain a waste discharge permit under the provincial *Environmental Management Act* prior to commissioning the FLNG facility. As a result, there will be conditions for the operation and maintenance of emissions control technology. Should emission sources be required to operate without emissions control technology this scenario would require assessment during the application for the permit.
Condition 5.6 and 5.7 contemplate reductions in flared gas and fugitive GHG emissions but lack specificity. KTCAC submits that these Conditions should specify in greater detail requirements relating to reduction targets, or the Conditions should require the Proponent to develop such reduction plans for appropriate government agencies to consider, approve, and monitor for compliance.	Cedar defers to the EAO regarding its draft assessment report and condition, and the EAO's assessment; however, we offer the following additional information: No routine flaring is proposed during operation; flaring will only occur during commissioning, maintenance, and emergency scenarios. To manage fugitive emissions during operations, Cedar will develop a fugitive emission management plan in accordance with the *Oil and Gas Activities Act.* This plan will identify components that could leak and establish a schedule for inspections and repair.
Condition 8.6.2 requires the Proponent to compare monitoring results against the CAAQS. However, as Dr. Onwukwe explains, the AQO sets more stringent standards for some pollutants such as PM2.5. The Proponent should be required to use whichever standard is more stringent for each pollutant	Cedar defers to the EAO regarding its draft assessment report and condition, and the EAO's assessment; however, we offer the following additional information: The British Columbia AQO are the applicable regulatory criteria for facility operations in British Columbia. Modelling predictions and monitoring data will therefore first be compared to the British Columbia AQO. For information purposes, the modelling results and monitoring data will be compared to the CAAQS.
Wildlife	
I have taken the time to analyse the environmental assessment data assembled for the Cedar LNG project and find some disturbing and inaccurate baseline assessment data. I make reference to the report submitted by Stantec after the EAO requested more detailed information be supplied by the project proponent regarding migratory birds. I should point out that all data regarding bird records is available in the public domain which can be accessed by citizens and researchers. I find it quite a shame that our group was not consulted for comment as a third party review, thereby possibly avoiding errors.	Cedar assumes that these comment regarding the occurrence of bird species in the Marine Terminal Local and Regional Study Areas are based on Cedar's response memo to Information Request IAA-026.1. Table 2 in that response is the same table, with notation indicating which species are migratory birds under the *Migratory Birds Convention Act*, as was provided in the Technical Data Report – Wildlife (Appendix 7.5A) as part of Cedar's Application for an Environmental Assessment Certificate. The boundaries for the Marine Terminal Local Study Area and the Marine Terminal Regional Study Area are depicted in Appendix 7.5A, Figure 1. These boundaries were used to determine whether a species was known to occur in each study area or not.

Public Comment	Cedar Response
Please see the following list of concerns, misleading information, and inaccuracies. It is my hope that the base line data will be corrected to reflect a more accurate look at development proposals within the area of Douglas Channel/Kitimat.	
The report tables one and two include a bird that currently does not exist on any list in Canada. I refer to the Mew Gull. Please note that that bird is now known as the Short Billed Gull.	Cedar recognizes that mew gull (*Laurus canus*) recently underwent a taxonomic split (August 18, 2021), forming two new species: common gull (now *Larus canus*) and short-billed gull (*Larus brachyrhynchus*). Where mew gull (*L. canus*) is referenced in Cedar's Application, this can be interpreted as being short-billed gull (*L. brachyrhynchus*).
The report includes the Boreal Chickadee. This is a species that has never been recorded vocally or photographed near here. It is more of an interior high elevation species.	When Table 2-1 was prepared there were two records of boreal chickadee in the Regional Study Area from 2016 (source: eBird). Without being able to independently verify the authenticity of these records, this species was included as a known occurrence. A third record has since been documented from within the Regional Study Area on July 2, 2022 (source: eBird).
The Base Line Bird Data presented in tables one and two vastly underrepresent the birds that are present in the Local terminal area. In my opinion, there are about 40 species present in the Terminal area which should have been included and weren't.	Appendix 7.5A, Appendix 1, Table 1.1 (Table 1 in response to IAA-026.1) provides a list of species that were included in the 'old forest songbird community' and the 'young forest songbird community' for the purpose of assessing these key species groups; these tables do not include references to the occurrence of species in the Local and Regional Study Areas. Appendix 7.5A, Appendix 2, Table 2.1 (Table 2 in response to IAA-026.1) provides a list species that are known to occur in the Local and/or Regional Study Areas based on publicly available records and project-specific field data. The British Columbia Conservation Data Centre Species and Ecosystems Explorer search function (Skeena Region) was used as a starting point for developing the table of known species. Species were then added or removed using information from several other data sources as indicated in Appendix 7.5A, Section 3.3.1 and in Appendix 7.5A, Appendix 2, Table 2.1, Note 1.
American Redstart is a beautiful little warbler, (picture attached) which extensively nests in the deciduous forest immediately adjacent to the Moon Bay site. Have biologists even been there in the summer nesting season? This species is deemed to not be in the local area.	Regarding errors of omission, Cedar acknowledges that American redstart and MacGillivray's warbler were inadvertently not indicated as occurring in the Local Study Area, though they are indicated in the Regional Study Area (Appendix 7.5A, Appendix 2, table 2.1). However, as shown in Appendix 7.5A, Table 9, American redstart was found in the Marine Terminal Local Study Area, and MacGillivray's warbler was recognized as occurring in mixedwood forests in the Kitimat area (Appendix 7.5A, Section 3.3.2.5) and was assessed as part of the 'young forest songbird community' key species group.

Public Comment	Cedar Response
	The assessment did consider the Project's effects on songbird communities and has put forward appropriate mitigation measures to reduce effects on these birds.
The McGillvray's Warbler is also not recognized as being present in the terminal area. We have picture records of this bird foraging during nesting season in the deciduous forests close by.	See above response regarding American redstart and MacGillivray's warbler.
The Marbled Murrelet, an important blue listed species is recognized as being present in the area but the report does not recognize the extent to which this bird is present, especially during the fall, winter and spring seasons. It is a frequent user of the waters in front of the terminal. Perhaps there should be special arrangements about this as this bird is globally endangered and industrial activity at Cedar LNG will certainly adversely affect this species.	The omission of marbled murrelet from the Local Study Area in Appendix 7.5A, Appendix 2, Table 2.1 (Table 2 in response to IAA-026-1) was an error. However, marbled murrelet was included in Cedar's Application as a key species and potential effects on this species were assessed in detail and mitigation and follow-up measures have been identified. Further, there are several references throughout Appendix 7.5A indicating that Cedar was aware that marbled murrelet occurs in the Local Study Area (e.g., Section 1.0, Section 3.3.2.2, Section 4.6.2). Regardless of the omission from the appendix, the assessment did consider effects on marbled murrelet and has put forward appropriate mitigation measures to reduce effects on the species.
The Peregrine Falcon according to the presented Tables is not present in the local terminal area. This again is inaccurate. We now have many local records.	Cedar was not able to confirm the occurrence of peregrine falcon within the Marine Terminal Local Study Area at the time of writing. A review of eBird records on October 17, 2022, shows there are no documented occurrences in the Local Study Area, but there are records in the Regional Study Area, near Kitamaat Village and Minette Bay; occurrence in the Regional Study Area was acknowledged in Appendix 7.5A, Appendix 2, Table 2.1 (Table 2 in response to IAA-026-1).
The Olive Sided Flycatcher, another blue listed species has been recorded frequently in the local area. It clearly would be foraging in migration in the terminal area. The Cedar LNG data presented in the table data indicates that it is not present.	Olive-sided flycatcher was acknowledged as occurring in the Local and Regional Study Area (Appendix 7.5A, Appendix 2, Table 2.1). This species was also included in the 'old forest songbird community' for assessment (Appendix 7.5A, Appendix 1, Table 1.1).
The Western Tanager is present, foraging often in the deciduous and coniferous areas close by the terminal. Again, the Cedar LNG tables indicate that it is not present.	Western tanager was acknowledged as occurring in the Local and Regional Study Areas (Appendix 7.5A, Appendix 2, Table 2.1). This species was also included in the 'old forest songbird community' for assessment (Appendix 7.5A, Appendix 1, Table 1.1), and noted in Incidental Detections (Appendix 7.5A, Table 9).

Public Comment	Cedar Response
The Harlequin Duck, a very pretty and classy looking creature, is abundant in the area during April, May, and June, prior to nesting upstream on various creeks and rivers. Cedar LNG table data show them as absent.	Cedar recognizes that harlequin duck are present in the Kitimat area and it was included in the list of species present in the Regional Study Area (Appendix 7.5A, Appendix 2, Table 2.1). Cedar acknowledges that there is a single occurrence record from the Local Study Area in eBird and that the species was observed during project-specific surveys (Appendix 7.5A, Table 7 and Figure 6). Potential impacts to harlequin duck have been considered in the Application as they are one of the species included in the "Marine Birds – Diving Ducks" group addressed within the effects assessment.
Three kinds of Grebes, (Horned, Red-Necked, and Western) are all quite abundant during the Fall, Winter, and Spring seasons, foraging for fish on the channel, close by the terminal area. This again is not recognized in the bird data presented in the Cedar LNG application.	Regarding horned grebe, Cedar can confirm that publicly available data do align with the assignments that Cedar provided relative to occurrence in the Local and Regional Study Areas. The omission of red-necked grebe and western grebe as occurring in the Local Study Area was an error; however, these species were recorded during marine bird surveys (Appendix 7.5A, Table 7).
The little Bufflehead Duck is another overlooked species. This species is one of the most abundant in the local terminal area, especially during Fall, Winter and Spring. Why did the Cedar LNG data not indicate its presence?	Cedar acknowledges that bufflehead was inadvertently not indicated as occurring in the Local Study Area (Appendix 7.5A, Appendix 2, Table 2.1), but was recognized as foraging in sheltered marine waters and nearshore areas in Kitimat Arm (Appendix 7.5A, Section 3.3.2.5). This species was also included in the Marine Birds – Diving Ducks species group for assessment.
Four species of Loons (Common, Pacific, Red-Throated, and Yellow Billed) are all seen foraging in the channel close by the terminal area. They are most prevalent during the Fall, Winter, and Spring seasons. This again is contrary to what the Cedar LNG data in the tables indicates.	The omission of red-throated loon from the Local and Regional Study Areas, of Pacific loon and common loon from the Local Study Area, and yellow-billed loon from the Regional Study Area were errors. Marine Birds – Loons and Cormorants were also included as a species group for assessment. Common loon was also recorded during project surveys (Appendix 7.5A, Table 7 and Table 9).
The Cedar LNG bird data in the two tables includes a few dubious species but omits others. The rare, Red Naped Sapsucker has been photographed in the late spring in the terminal area. This again is in the public records, yet there is no mention of this species.	Cedar acknowledges the single occurrence of red-naped sapsucker, which is outside of the Local Study Area but within the Regional Study Area. Cedar recognizes that this species is outside of its typical interior range in British Columbia. The species is not typically found in the region, nor is it typically found in similar northern coastal areas. Single species detections outside of their typical range would not generally be cause for inclusion on a regional species list.
Flaring methane or other toxic chemicals and metals present a hazard to birds from burning, entrapment in pipes or vents, or direct mortality from the flare flame. The flame emitted to burn off gas during a flaring event can attract birds, especially at night. Birds can fly through the superheated gas or flame resulting in feather damage grounding the bird or scalding of lungs or other tissues due to inhalation. Birds can also be killed or injured	An assessment of change in mortality risk was completed, and included effects from lighting, flaring events, and risk to terrestrial and marine birds during construction and operation (Application, Section 7.5.7.4). No routine flaring is proposed during operation; flaring will only occur during commissioning, maintenance, and emergency shutdown. The assessment of non-routine flaring events on wildlife was provided in Malfunctions and Accidents section of the

Public Comment	Cedar Response
if they perch on burner pipes. Flaring during peak spring and fall migrations, during foggy conditions and at night will no doubt lower our bird populations which are already suffering from large losses.	Application (Section 9.5.3). The likelihood of an interaction with birds during flaring events is low.
Marine Resources and Marine Use	
Reviewing the report shows an average of 57 vessels visited the port of Kitimat annually, however a projected 100+ LNG carriers will be using the same corridors every year and occupying the same spaces given that this project is granted approval. I see little consideration in the draft assessment report even though LNG carrier traffic will be a significant part of the adverse effects related to the Cedar LNG project once it is completed. Repeated movement of vessels through the Douglas Channel is bound to have significant negative impacts to marine habitats, aquatic movement, and marine mammal communication. Further, if this project is approved, what consideration is there for cumulative impacts of increased vessel traffic from other future projects or increased general vessel traffic? Although this project makes good use of land that has already been developed, I wish there had been more thought given to the increased vessel traffic.	Cedar assessed both project-specific and cumulative effects of shipping on the marine environment and marine use. With respect to large vessel traffic in Douglas Channel, these assessments took into consideration: • An average of 57 piloted vessels currently visit the port of Kitimat every year. • Once operation begins, 40 to 50 LNG carrier will visit the Cedar LNG Project per year. • An estimated 430 vessels will visit the LNG Canada and Rio Tinto facilities every year. • An estimated 125 vessels per year would visit the Kitimat LNG Project and Kitimat LPG Export Project every year. The cumulative effects of the combined vessel traffic were considered in each of the relevant assessments. In particular, they were assessed in the marine resources, wildlife, marine use, air quality, acoustics and the Indigenous interests sections of the Application. As the Kitimat LNG Project and Kitimat LPG Export Project are no longer expected to be advanced, the cumulative effects assessment is considered to be conservative.
The assessment similarly ignores coastal damage that will be caused by the project, Since the International Commission's outlawing of the industrial harvest of whales, their recovery has been a global success story. The number of Humpback, Grey and Fin whales have been increasing on the North Coast, a sign of power of environmental recovery, if we but allow it. An increase in Marine Protected Areas (MPA) through the development of a n MPA Network is being proposed for the BC Northern Shelf by the Federal, Provincial and Indigenous governments. Given the large increase in boat traffic through dangerous waters that Cedar LNG will require if approved, it would be advisable for the EAO to recommend an increase in the MPAs presently being considered as an appropriate mitigation of the disruption this project will cause.	Section 7.7 of the Application includes an assessment of the effects to marine resources, including marine mammals. As part of the assessment, Cedar identified the mitigation measures anticipated to be required to avoid or reduce effects to marine resources. Of particular note, Cedar committed to following the draft British Columbia North Coast Waterway Management Guidelines. These were finalized in September 2022 and establish several measures to reduce the effects of shipping on the marine environment. The guidelines were developed through a collaborative, consensus-based process involving officials and senior representatives from two Indigenous Nations, the Government of Canada, the British Columbia Coast Pilots, maritime authorities, and commercial shipping industry associations. It is noted that the guidelines will be reviewed after 12 months and adjustments may be made if additional measures are needed to improve their effectiveness.

Public Comment	Cedar Response
An expansion of the coastal Guardian and Watchman programs during the life of this project would be a second sensible mitigation.	
The Douglas Channel is already set to have it's marine ecosystem destroyed with the huge tankers that will be coming in to the LNG plant currently being built; whales will suffer from sonic pollution as well as ship strikes; ship collisions are likely and will probably result in oil spills.	Cedar assessed both project-specific and cumulative effects of shipping on the marine environment and marine use in Sections 7.7 and 7.10 of the Application. Malfunctions and accidents are considered in Section 9.0 of the Application. Please see the immediately above response for information on the British Columbia North Coast Waterway Management Guidelines which are intended to reduce the effects of shipping on the marine environment.
The use of ballast water and the proposal for desalinization of seawater does not describe the change in temperature and chemistry to the discharged water, nor appraise those effects on Douglas Channel. It makes no appraisal of cumulative effects of changes to water chemistry with regard to LNG Canada.	Effects to marine water quality, including cumulative effects, are assessed in Section 7.7 of the Application. Cedar provided additional information regarding discharges in a July 14, 2022 memo entitled *Responses to ECCC Information Requests Regarding Effects on Water Quality*. Cedar believes the level of detail provided is reasonable and appropriate for an environmental assessment. More detailed analyses will be undertaken as part of the waste discharge permitting process under the *Environmental Management Act*. Information regarding permitting is provided in Cedar's memo submitted to the EAO on July 14, 2022.
Ten LNG tankers per week in the Douglas Channel Has anyone really stopped to think what that will do to traditional and to casual marine use?	The Project is expected to have one LNG carrier visit the terminal every 7 to 10 days (up to 50 LNG carrier visits per year). Cedar's Application assessed both project-specific and cumulative effects of the vessel traffic in each of the relevant valued components (e.g., marine resources, wildlife, marine use, air quality, acoustics and the Indigenous interests sections). The assessment of marine uses and traditional marine uses were specifically addressed in Section 7.10 and Sections 11.0-19.0. The results of these assessments and Cedar's responses to comments and information requests during the Application review have informed the Assessment Report.
Adding a natural gas processing plant at the end of an inlet that is difficult to maneuver for most ships is illogical and short sighted.	The Project is located on Haisla Nation-owned land in Douglas Channel, one of the principal shipping routes on the British Columbia coast. The deep water inlet is ice-free year-round and has a history of industrial use and safe shipping going back to the 1950's. BC Coast Pilots and ship captains have confirmed that maneuvering ships in Douglas Channel and Kitimat Arm is safe.

Public Comment	Cedar Response
In the BC EAO Description, we question why only one tug is to accompany a loaded LNG carrier down the narrow, windy Douglas Channel, which will have ship traffic from the two other local industries (LNG Canada, RTZ). Questions the assessment should answer would include: Is the tug to be tethered? Of what bollard pull? Are there any tugs stationed permanently (or at least while LNG carriers are present) at the site, as recommended by the Society for International Tankers and Terminal operators (SIGTTO). See https://www.rivieramm.com/opinion/opinion/optimising-terminal-tug-response-in-an-emergency-35710and SIGTTO publications.	Cedar defers to the EAO regarding its draft assessment report and condition, and the EAO's assessment; however, we offer the following additional information: Shipping is well regulated in Canada. As part of the environmental assessment, Cedar committed to using tugs in accordance with Transport Canada and BC Coast Pilot requirements. Cedar also committed to following the draft British Columbia North Coast Waterway Management Guidelines, which were finalized in September 2022. The guidelines were developed through a collaborative, consensus-based process involving officials and senior representatives from two Indigenous Nations, the Government of Canada, the British Columbia Coast Pilots, maritime authorities, and commercial shipping industry associations.
Neither condition-set specifies a requirement for a TERMPOL review, as was done for neighbouring LNG facility LNG Canada, and is underway for the Woodfibre LNG facility. This should be added, as there is currently no port authority in Kitimat to coordinate vessel traffic for two LNG ports and the RTZ facility, each with its associated tug and bunkering traffic.	Cedar defers to the EAO regarding its draft assessment report and condition, and the EAO's assessment; however, we offer the following additional information: There have been three TERMPOLs completed for shipping to and from Kitimat since the mid-2000s. Based on feedback that Cedar received through its engagement with Transport Canada, there is a robust understanding of shipping safety along the shipping route and another TERMPOL is not required. As project development advances, Cedar will work with Transport Canada and the BC Coast Pilots to ensure they have all required information.
Socio-economic and Human and Community Well-Being	
The Cedar LNG Assessment Report recognizes that Cedar LNG has the potential to affect human and community well-being through non-resident workforce impacts on social cohesion and connectedness, community safety and crime, risks to the safety of Indigenous women and girls from an influx of temporary workers, and increased disposable income, coupled with a non-local temporary workforce, leading to increase in use of drugs and alcohol (EAO, 2022, pg 439). The assessment report says that women in the area have noted concerns about personal safety, particularly in relation to large influxes of men in the town associated with work camps, impacting their sense of safety and community cohesion (EAO, 2022, pg 441) The recommended mitigation measures include - Developing and implementing a gender equity and diversity program that focuses on hiring Haisla Nation members, local and Indigenous persons, and women to increase project employment among underrepresented populations.	Cedar defers to the EAO regarding its draft assessment report and condition, and the EAO's assessment; however, we offer the following additional information: Cedar acknowledges the importance of the safety of Indigenous and local communities as it relates to its plans to develop a small-footprint FLNG facility in Kitimat. Although Cedar will not be employing a large workforce during construction or operation, it is using an innovative design philosophy to reduce the requirement for non-local workers and will implement a local hire policy to reduce the need for non-local workers. Cedar's mitigation referenced in the comment will reduce the number of non-local workers in the region. As part of Cedar's follow-up program, it will also develop and implement a Gender Equity and Diversity Employment Plan as the commenter suggests, to increase benefits to under-represented groups in the region, including women and members of Indigenous groups. Cedar will also monitor the labour force, including the number of people working on the Project, where people are from and their accommodation (if non-local).

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- Develop and implement a drug and alcohol policy - Develop and implement workplace violence, harassment, bullying and discrimination processes (EAO, 2022, pg 446) I believe the EAOs recommended mitigation measures aimed at ensuring the safety of local women and girls are the bare minimum. The Cedar LNG project should consider the immediate and long-term effects that a temporary worker influx will have on the community of Kitimat and the surrounding areas. According to the RCMP database, there was a 38 percent increase in reported sexual assaults in northern B.C.'s Fort St. James area during one industrial project's first year, 2011 (Edwards, 2019, para 6). Many, if not most, non-resident workers arrive not knowing anyone in the region; they have no connection with the people or place, [and] there is a sense of freedom from accountability among transient workers (Edwards, 2019, para 7). Non-resident workers pose legitimate threats to the well-being of individuals, especially women and girls, and in the communities affected by non-resident worker camps, there should be a more substantial effort to eliminate the safety concerns associated with remote industrial projects such as the Cedar LNG project. More consideration into who is hired and brought into these communities ought to be taken if this project is to be in alignment with Canada's commitment to eliminating the genocide of Indigenous women and girls.	Cedar is committed to constructing and operating the Project in a manner that reduces effects on the residents of Kitimat and surrounding communities. As part of this commitment, Cedar will implement a community feedback process that aims to provide open and transparent means for the community to seek information and raise concerns as well as have inquiries addressed in a timely manner during construction and operation. Cedar will review the feedback with purpose of determining specific actions to address community questions, issues, or concerns.
Though one of the pillars of the EAC process, the subject of the economic and social impacts on local communities (Kitimat especially) of this project is inadequately detailed. Housing for construction work forces and interactions with local (indigenous, especially) populations are insufficiently detailed. As are the effects on housing local health and recreation amenities, and traffic. Kitimat (and surrounds) is already stressed by the LNG Canada project –this project will add to that stress.	Cedar believes that the Application addresses the requirements of the Application Information Requirements with respect to the effects of the Project on the socio-economic environment. Cedar will not be employing a large workforce during construction or operation, and will utilize an innovative design philosophy to reduce the requirement for non-local workers and will implement a local hire policy to reduce the need for non-local workers. Cedar's mitigation referenced in the comment will reduce the number of non-local workers in the region The assessment determined that with the proposed mitigation and enhancement measures, the effects of the proposed Project on infrastructure and services, including housing, recreation and transportation, are expected to be low to moderate in magnitude and not significant. In consideration of the existing pressures on healthcare services within the Northern Health Authority's jurisdiction, a follow-up program is proposed to determine whether the potential for

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	effects on health-related infrastructure and services vary from those predicted in the Application. In addition, Cedar has committed to a community feedback mechanism that will allow reporting of project-related concerns, including those associated with infrastructure and services. Timing of the Project also needs to be considered when considering the potential for cumulative socio-economic effects. Cedar notes that construction on the LNG Canada and Coastal GasLink projects will be ramping down or complete when Cedar's begins clearing work and construction. As a result, most of the pressures on Kitimat and surrounding communities that are causing the stresses referred to in this comment will have been significantly reduced or fully removed before Cedar's construction activities begin. The mitigation measures Cedar has committed to implementing are expected to be effective.
Accidents and Malfunctions	
Empty LNG vessels have a tremendous sail effect. The Douglas Channel is a windy place. Think worst case scenario, communicate that, and really plan for it. The risk may be low but the consequences could be catastrophic.	Shipping is well regulated in Canada. As part of the environmental assessment, Cedar committed to using tugs in accordance with Transport Canada and BC Coast Pilot requirements. Cedar also committed to following the draft British Columbia North Coast Waterway Management Guidelines, which were finalized in September 2022. As project development advances, Cedar will work continue to work with Transport Canada and the BC Coast Pilots.
The spill response sections of the document read like a buck-passing exercise, with the buck supposedly stopping with the federal government. Kitimat is not even a federally regulated port. Transport Canada has had more than a decade to address mega-industrial development in Douglas Channel with regard to shipping. How long will it take the federal government to get in-stride with the project? It is likely that the project will become operational with waters at risk and no meaningful federal response plan in place.	The *Canada Shipping Act, 2001* requires all carriers in British Columbia waters to have a shipboard oil pollution emergency plan, a declaration that identifies the ship's insurer, and a contract with Western Canada Marine Response Corporation. Western Canada Marine Response Corporation is the Transport Canada certified spill response organization in British Columbia. Western Canada Marine Response Corporation has a base of operation in Prince Rupert and vessel and crew in Kitimat. It is currently developing protection strategies to identify areas on the north coast of British Columbia where spill response equipment should be located to reduce the risk to both environmentally and culturally important areas. These are anticipated to be in place before Cedar goes into operation. Despite the importance of this response framework, Cedar believes that preventing an incident is a higher priority. Measures to prevent shipping incidents from occurring include using shipping routes approved through previous TERMPOL processes, having pilots overseeing LNG carrier transits between Cedar's FLNG facility and the BC Cost Pilots Triple Island Boarding Station, using tug escorts with these LNG carrier transits, and supporting implementation of the

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	British Columbia North Coast Waterway Management Guidelines (which were finalized in September 2022).
A rapid-phase transition is a well documented and very real risk of LNG operations, and poses the greatest immediate threat to human life and to wildlife. It is mentioned only twice in one paragraph of the report.	The malfunctions and accidents assessment considered all potential incidents and focused on those incidents with the greatest environmental consequences. A rapid-phase transition is a risk but has lower consequence than other potential incidents. Please note that potential malfunctions and accidents, including the potential for rapid-phase transitions, will be considered in more detail as part of the LNG Facility Permit process under the British Columbia *Oil and Gas Activities Act*. As part of that process, the HAZID and Quantitative Risk Assessment (QRA) for the Project will be reviewed by the Oil and Gas Commission to verify the Project meets their requirements for maintaining public safety. The QRA will be updated with more detailed design information as available through that process.
Neither condition-set specifies a requirement for control of where and how LNG carriers will be bunkered (refueled) for the long voyage to Asia. (Less than half the propulsion power of a typical LNG carrier is derived from its own boil-off gas ("BOG")). We suggest that, given the risk and consequences of bunker-fuel spills in Douglas Channel, the conditions for bunkering be clearly specified in the assessment.	Cedar does not anticipate the need to bunker the LNG carriers visiting the Project. It is expected that the carriers will have sufficient fuel on-board for their return trip to-and-from the Cedar site. With respect to potential incidents from a shipping-related accident, spills of hazardous materials are considered in Section 9.4 of the Application. In addition, Section 9.7 considers potential effects of a grounding, collision or allision that involves an LNG carrier. Please see the response above regarding the spill response framework that is in-place and the measures that will apply to the LNG carriers to reduce the potential for incidents.
Bunker fuel leaks are commonplace in marine operations. These effects will be continual and will compound. This is not addressed.	Cedar does not anticipate the need to bunker the LNG carriers visiting the Project. It is expected that the carriers will have sufficient fuel on-board for their return trip to-and-from the Cedar site. At this time there is insufficient information on the fuel source for the tugboats to be used by the Project. However, these will be owned and operated by a third-party company that is contracted by Cedar. It is expected that the tugboat company will have environmental protection measures to address any bunkering leaks.