

2 ENVIRONMENTAL ASSESSMENT PROCESS

The Aurora LNG Project (Project) has been determined to be a reviewable project under the British Columbia (BC) *Environmental Assessment Act* (BCEAA), and a designated project under the *Canadian Environmental Assessment Act 2012* (CEAA, 2012). The Project therefore requires an environmental assessment (EA) under both provincial and federal legislation, and the federal Minister of the Environment has approved substitution of the federal EA process with the provincial EA process.

2.1 Provincial Environmental Assessment Process

The EA process consists of three stages: pre-application, application review, and decision. Key milestones of the pre-application stage, related to the Project, are described in Section 2.3 below.

During the pre-application stage, Aurora LNG submitted a Project Description to the BC Environmental Assessment Office (BC EAO), who determined that the Project was reviewable as defined in the Reviewable Projects Regulation (BC Reg. 370/2002) pursuant to section 5 of the BCEAA. Under the BCEAA, reviewable projects require an Environmental Assessment Certificate (EAC) before they can be constructed. Based on the provincial criteria listed in the Reviewable Projects Regulation pursuant to the BCEAA, the BC EAO issued a Section 10(1)(c) Order to Aurora LNG on June 23, 2014 confirming that the Project is a reviewable project. The provincial criteria are described in Table 2-1.

Table 2-1 Provincial Criteria for the Aurora LNG Project

| Reviewable Projects Regulation Section | Applicable Category/ Criteria | Rationale |
|--|--|--|
| Part 4 (Energy Projects), Table 7 (Electricity Projects) | Project Category 1 (Power Plants) <ul style="list-style-type: none"> ▪ A new facility with a rated nameplate capacity of ≥ 50 megawatts (MW) of electricity that is (b) a thermal electric power plant | <ul style="list-style-type: none"> ▪ The Project may generate ≥ 50 MW of electrical power (currently estimated at 250 MW) |
| Part 4 (Energy Projects), Table 8 (Petroleum and Natural Gas Projects) | Project Category 1 (Energy Storage Facilities) <ul style="list-style-type: none"> ▪ A new energy storage facility with the capability to store an energy resource in a quantity that can yield by combustion >3 petajoules (PJ) of energy. | <ul style="list-style-type: none"> ▪ The Project will have the capability to store an energy resource, other than electricity, in a quantity that can yield by combustion ≥ 3 PJ of energy |
| | Project Category 3 (Natural Gas Processing Plant) <ul style="list-style-type: none"> ▪ A new natural gas processing plant facility b) that has the design capacity to process natural gas at a rate of >5.634 million cubic metres per day (Mm^3/day). | <ul style="list-style-type: none"> ▪ The Project's natural gas processing plant facility has a design capacity to process natural gas at a rate of >5.634 Mm^3/day |

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Table 2-1 Provincial Criteria for the Aurora LNG Project

| Reviewable Projects Regulation Section | Applicable Category/ Criteria | Rationale |
|--|--|---|
| Part 8 (Transportation Projects), Table 14 (Transportation Projects) | Project Category 4 (Marine Port Facilities) <ul style="list-style-type: none"> ▪ Modification of an existing facility, other than a ferry terminal, if the modification results in dredging, filling or other direct physical disturbance of <ul style="list-style-type: none"> • > 1,000 metres of linear shoreline, or • > 2 hectares (ha) of foreshore or submerged land, or a combination of foreshore and submerged land, below the natural boundary of a marine coastline or marine estuary. | <ul style="list-style-type: none"> ▪ The Project consists of a new marine port facility the construction of which may entail dredging, filling or other direct physical disturbance of ≥ 2 ha of foreshore or submerged land, below the natural boundary of a marine coastline or marine estuary |

On August 25, 2014, the BC EAO issued a Section 11 Order requiring the environmental assessment of the Project be conducted according to the scope, procedures and methods set out in the associated Schedules. A Section 13 Order amending the Section 11 Order was issued by the BC EAO on December 16, 2014. The Section 13 Order added Gitxaala Nation, Kitselas First Nation and Kitsumkalum First Nation from Schedule C to Schedule B Aboriginal Groups, on the basis that there was no procedural distinction between Schedule B and C with respect to consultation. A second Section 13 Order was issued by the BC EAO on August 30, 2016. This Section 13 Order updated Aboriginal consultation schedules pursuant to the Section 11 Order as shown in Table 2-2, including adding Gitga’at First Nation to Schedule B and adding Lax Kw’alaams Band and Metlakatla First Nation to a newly created Schedule C.

Table 2-2 Listing of Aboriginal Groups in August 30, Section 13 Order

| Schedule B | Schedule C | Schedule D |
|--|---|----------------------------------|
| Gitga’at First Nation Gitxaala Nation Kitselas First Nation Kitsumkalum First Nation Lax Kw’alaams Band Metlakatla First Nation | Lax Kw’alaams Band Metlakatla First Nation | Métis Nation of British Columbia |

Following issuance of the Section 11 Order, Aurora LNG prepared a draft Application Information Requirements (AIR) document that specified the terms of reference for the assessment, including the scope of issues that would be addressed and the methods that would be used. The public had the opportunity to review and comment on the draft AIR during a public consultation period and a BC EAO-led open house. Aurora LNG responded to all comments from the public and Working Group, with the results posted in Tracking Tables on the BC EAO’s website.

The BC EAO approved and issued the AIR for the Project on November 23, 2015.

The Application for an EAC (Application) was prepared by the proponent in accordance with the requirements of the AIR, and Section 11 Order, as amended, and submitted to the BC EAO for review. The Application identifies and assesses the potential adverse environmental, economic, social, heritage, and health effects that may result from the Project, and identifies mitigation measures to avoid, reduce or manage those adverse effects.

At the Application review stage, the BC EAO will screen the Application to verify that required information (per the AIR) is included and that consultation with Aboriginal Groups and potentially affected parties is adequate. The Working Group and public are then provided opportunity to review and comment on the Application. Aurora LNG is required to respond to all Working Group and public comments on the Application to the satisfaction of the BC EAO.

Following the BC EAO's review of the Application and comments received during the Working Group and public review processes, the BC EAO prepares an Assessment Report to document the findings of the assessment, and to provide their recommendation to the Ministers on whether the Project should be issued an EAC. The Assessment Report and related materials are submitted to the two provincial ministers for a decision – the Minister of the Environment and another minister responsible for that category of reviewable project – in this case, the Minister of Energy and Mines (and Responsible for Core Review). The Assessment Report is also submitted to the federal Minister of the Environment for a decision on the Project in accordance with CEAA (see Section 2.2).

2.2 Federal Environmental Assessment Process

The Project Description was also submitted to the Canadian Environmental Assessment Agency (CEA Agency), who determined that the project was a designated project pursuant to the Regulations Designating Physical Activities (SOR/2012-147) under CEAA 2012. These federal regulations identify projects and activities that may require an environmental assessment under CEAA. The federal criteria are described in Table 2-3.

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Table 2-3 Federal Criteria for the Aurora LNG Project

| Applicable Regulation Section | Applicable Criteria | Rationale |
|-------------------------------|---|--|
| Section 2(a) | The construction and operation, decommissioning and abandonment of a new fossil fuel-fired electrical generating facility with a production capacity of 200 MW or more. | The Project may construct and operate a fossil fuel-fired electricity generating station with a production capacity of between 200 MW and 550 MW (currently estimated at 250 MW). |
| Section 14(d) | The construction, operation, decommissioning and abandonment of a new facility for the liquefaction, storage or regasification of liquefied natural gas, with a liquefied natural gas processing capacity of 3,000 t/day or more or a liquefied natural gas storage capacity of 55,000 t or more. | The Project's will have an LNG processing capacity of more than 3,000 t/day or an LNG gas storage capacity of more than 55,000 t (currently estimated at 585,000 m ³). |
| Section 24(c) | The construction, decommissioning and abandonment of a marine terminal designed to handle vessels larger than 25,000 dead weight tonnage (DWT) unless the terminal is located on lands that are routinely and have been historically used as a marine terminal or that are designated for such use in a land-use plan that has been the subject of public consultation. | The Project's marine terminal is designed to handle vessels larger than 25,000 DWT (currently estimated at 109,500 DWT) |

On June 24, 2014, the BC EAO requested substitution of the federal process with the provincial process under section 3 of the federal-provincial Memorandum of Understanding (MoU) on Substitution of Environmental Assessments (BC EAO and CEA Agency 2013). The CEA Agency determined that a federal environmental assessment was required on August 20, 2014, and then approved the substituted process on August 21, 2014. The CEA Agency continues to provide guidance to the BC EAO, including through the Working Group process.

The federal Minister of the Environment and Climate Change granted substitution of this assessment to the BC EAO subject to the following conditions:

- The designated project to be assessed is the construction, operation and decommissioning of a natural gas liquefaction facility, marine terminal and any incidental physical activities, including marine shipping activities.
- The substituted process will include a consideration of the factors set out in subsection 19(1) of CEEA 2012 and the BC EAO will ensure that any orders under sections 11, 13 and 14 or 15 of BCEAA require subsection 19(1) factors.
- The public will be given an opportunity to participate in the EA and will have access to records in relation to the EA to enable their meaningful participation.
- At the end of the EA, in the decision stage of the assessment process, the BC EAO will submit a report to the CEA Agency and the report will be made available to the public.
- Expert federal authorities will be involved in the BCEAA assessment process.

- The BC EAO will provide the environmental assessment report to the Agency within a time frame that will enable the Minister to make decisions under subsection 52(1) of CEAA 2012 within the time limits set out in CEAA.
- The BC EAO will conduct procedural aspects of Aboriginal consultation in accordance with the process set out in the MoU.
- The BC EAO will make available to Aboriginal Groups funding provided by the Agency to support Aboriginal consultation during the substituted EA.

An overview of the approach to address CEAA 2012 requirements in the Application for this Project is shown in Table 2-4. The Application provides a detailed summary of how the requirements of section 5 and 19(1) of CEAA 2012 have been considered as part of the assessment (see Section 11.0 Summary of Statutory Requirements under CEAA 2012).

The CEAA 2012 requirements are integrated in the effects assessment of relevant valued components (VCs) in Part B of the Application. Environmental effects with a potential to adversely affect the health and socio-economic conditions, physical and cultural heritage, lands and resource use and heritage of Aboriginal Groups pursuant to section 5(1)(c) of CEAA 2012 are assessed in Section 11.3 of the Application.

Table 2-4 Summary of Approach to CEAA 2012 Requirements in the Application

| CEAA 2012 Effect or Factor | Assessment Approach in the Application |
|--|--|
| <p>Section 5(1)(a): A change that may be caused to:</p> <ul style="list-style-type: none"> ▪ fish and fish habitat, as defined in section 2 of the <i>Fisheries Act</i> and fish habitat ▪ aquatic species, as defined in subsection 2(1) of the <i>Species at Risk Act</i> (SARA) ▪ migratory birds, as defined in subsection 2(1) of the <i>Migratory Birds Convention Act, 1994</i> (MBCA) | <ul style="list-style-type: none"> ▪ Effects on freshwater fish and fish habitat, as defined in the <i>Fisheries Act</i> and freshwater aquatic species as defined under SARA are addressed in the Freshwater Fish and Fish Habitat VC (Section 4.8) assessment. ▪ Effects on marine fish and fish habitat, as defined in the <i>Fisheries Act</i> and marine aquatic species as defined under SARA are addressed in the Marine Fish and Fish Habitat VC (Section 4.9) and Marine Mammal VC (Section 10.0) assessments. ▪ Effects on migratory birds, as defined under the MBCA, are addressed in the Wildlife Resources (Terrestrial) VC (Section 4.7) and Marine Bird VC (Section 4.11) assessments. Species assessed include, but are not limited to, species of migratory bird families named in Article I of the MBCA as amended by the 1995 Protocol. |
| <p>Section 5(1)(b): A change that may be caused to the environment that would occur:</p> <ul style="list-style-type: none"> ▪ on federal lands, ▪ in a province other than the one in which the Act or thing is done or where the physical activity, the designated project or the project is being carried out, or ▪ outside Canada | <ul style="list-style-type: none"> ▪ The marine terminal component of the Project will be constructed on a water lot leased from the Prince Rupert Port Authority, which is within federal jurisdiction. Potential effects on the environment from marine construction are addressed in the Marine Fish and Fish Habitat VC (Section 4.9), Marine Mammal VC (Section 4.10), Marine Bird VC (Section 4.11), Visual Quality VC (Section 6.2) and Marine Use and Navigable Waters VC (Section 6.5) assessments. ▪ Air emissions (including greenhouse gas (GHG) emissions) may disperse over or deposit on nearby federal lands, such as Indian Reserves. Effects on air quality are addressed in the Air Quality VC (Section 4.2) assessment; effects of air quality on human health are addressed in the Human Health VC (Section 8.0) assessment. ▪ Effects of acidifying emissions (sulphur oxide (SO_x) and nitrogen oxide (NO_x)) are addressed in the Vegetation and Wetland Resources VC (Section 4.6) and Water Quality VC (Section 4.5) assessments. ▪ No changes to the environment in another province or outside Canada are anticipated, with the exception of GHG emissions, which become part of the atmosphere and are transboundary. The Project is located on Digby Island, along BC's west coast (see Section 1.0 Project Overview), approximately 50 km south-southeast of the border with the United States. GHG emissions are addressed in the GHG VC (Section 4.3) assessment. ▪ Shipping has the potential to affect the environment outside of Canada, but the assessment boundary and scope of the Project ends just west of Triple Island, on the west coast of BC. |

Table 2-4 Summary of Approach to CEAA 2012 Requirements in the Application

| CEAA 2012 Effect or Factor | Assessment Approach in the Application |
|--|---|
| <p>Section 5(1)(c): With respect to Aboriginal peoples, an effect occurring in Canada of any change that may be caused to the environment on:</p> <ul style="list-style-type: none"> ▪ health and socio-economic conditions ▪ physical and cultural heritage ▪ the current use of lands and resources for traditional purposes, or ▪ any structure, site or thing that is of historical, archaeological, paleontological or architectural significance | <ul style="list-style-type: none"> ▪ Section 5(1)(c) requirements are considered in Part B of the Application, specifically in the Economic Conditions VC (Section 5.0), Land and Resource Use VC (Section 6.4), Marine Use and Navigable Waters VC (Section 6.5), Community Health VC (Section 6.6), Archaeology and Heritage Resources VC (Section 7.0) and Human Health VC (Section 8.0) assessments. ▪ Section 5(1)(c) requirements are also considered in Part C (Section 12.0 Aboriginal Consultation) of the Application. The assessment in Part C includes consideration of cumulative adverse effects; measures to avoid, mitigate or otherwise manage potential environmental effects on these factors; and views of Aboriginal Groups regarding the mitigation measures. ▪ A summary of residual and cumulative adverse effects related to section 5(1)(c) is included in the Summary of Statutory Requirements under CEAA 2012 (Section 11.0). |
| <p>Section 5(2)(a): A change, other than those referred to in paragraphs (1)(a) and (b), that may be caused to the environment and that is directly linked or necessarily incidental to a federal authority's exercise of a power or performance of a duty or function that would permit the carrying out, in whole or in part, of the physical activity, the designated project or the project.</p> | <ul style="list-style-type: none"> ▪ Section 5(2)(a) requirements are considered in Part B (Sections 4.0 to 9.0) of the Application, and specifically in Summary of Statutory Requirements under CEAA 2012 (Section 11.0) Table 11-4 Changes to the Environment that are Directly Linked or Necessarily Incidental to Federal Decisions Under Acts other than CEAA 2012. This table identifies the federal decisions that are required, the potential environmental changes that are directly linked or incidental to those federal decisions, the physical activities linked to the decisions, and predictions of significance of any residual environmental effects. |
| <p>Section 5(2)(b): An effect, other than those referred to in paragraph (1)(c), of any change referred to in paragraph (a) on:</p> <ul style="list-style-type: none"> ▪ health and socio-economic conditions ▪ physical and cultural heritage, or ▪ any structure, site or thing that is of historical, archaeological, paleontological or architectural significance | <ul style="list-style-type: none"> ▪ Section 5(2)(b) requirements are considered in Part B (Sections 4.0 to 9.0) of the Application, and specifically in Summary of Statutory Requirements under CEAA 2012 (Section 11.0) Table 11-4 Changes to the Environment that are Directly Linked or Necessarily Incidental to Federal Decisions Under Acts other than CEAA 2012. This table identifies the federal decisions that are required, the potential environmental changes that are directly linked or incidental to those federal decisions, the physical activities linked to the decisions, and predictions of significance of any residual environmental effects. The section also identifies the effects of potential changes to health and socio-economic conditions, physical and cultural heritage, or any structure, site or thing that is of historical, archaeological, paleontological or architectural heritage, and the significance of those effects. |

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Table 2-4 Summary of Approach to CEAA 2012 Requirements in the Application

| CEAA 2012 Effect or Factor | Assessment Approach in the Application |
|---|--|
| <p>Section 19(1): The environmental assessment of a designated project must consider the following factors:</p> <ol style="list-style-type: none"> the environmental effects of the designated project, including the environmental effects of malfunctions or accidents that may occur in connection with the designated project and any cumulative environmental effects that are likely to result from the designated project in combination with other physical activities that have been or will be carried out | <ul style="list-style-type: none"> Potential environmental effects and potential Project contributions to cumulative effects of the Project are assessed in detail in Part B (Sections 4.0 to 9.0, and 11.0) of the Application, including accidents and malfunctions scenarios. |
| <ol style="list-style-type: none"> the significance of the effects referred to in paragraph (a) | <ul style="list-style-type: none"> The significance of residual effects and Project contributions to residual cumulative effects are assessed in detail in Part B (Sections 4.0 to 9.0, and 11.0). |
| <ol style="list-style-type: none"> comments from the public — or, with respect to a designated project that requires that a certificate be issued in accordance with an order made under section 54 of the <i>National Energy Board Act</i>, any interested party — that are received in accordance with this Act | <ul style="list-style-type: none"> Details of public consultation, including issues and resolution, are included in Part D (Section 13.0 Public Consultation) of the Application. Aurora LNG will continue to share information with the public and provide the opportunity for the public to provide input on the Application. |
| <ol style="list-style-type: none"> mitigation measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the designated project | <ul style="list-style-type: none"> Mitigation measures designed to avoid, reduce or limit potential adverse effects are included in Part B (Sections 4.0 to 9.0, and 11.0) and Part C (Section 12.0 Aboriginal Consultation) of the Application. |
| <ol style="list-style-type: none"> the requirements of the follow-up program in respect of the designated project | <ul style="list-style-type: none"> Follow up programs and other matters considered relevant to the EA are addressed under applicable VCs in Part B (Sections 4.0 to 9.0, and 11.0) of the Application, and are summarized in Part E (Section 15.0 Summary of Follow-up Programs and Compliance Reporting) of the Application. |
| <ol style="list-style-type: none"> the purpose of the designated project | <ul style="list-style-type: none"> The purpose of the Project is described in the Purpose of the Project (Section 1.2.1). |
| <ol style="list-style-type: none"> alternative means of carrying out the designated project that are technically and economically feasible and the environmental effects of any such alternative means | <ul style="list-style-type: none"> Alternative designs and technologies for undertaking the Project, including disposal of marine sediment and terrestrial overburden, power supply, and camp location and operation are described in Alternative Means of Undertaking the Proposed Project (Section 1.7). |

Table 2-4 Summary of Approach to CEAA 2012 Requirements in the Application

| CEAA 2012 Effect or Factor | Assessment Approach in the Application |
|---|--|
| 8. any change to the designated project that may be caused by the environment | <ul style="list-style-type: none"> ▪ Effects of the Environment on the Proposed Project (Section 10.0) includes an assessment of the environmental conditions that have the potential to adversely affect the Project. These include extreme weather, seismic events (including tsunamis) and forest fires. |
| 9. the results of any relevant study conducted by a committee established under section 73 or 74; and | <ul style="list-style-type: none"> ▪ No regional studies under section 73 or 74 of CEAA 2012 were requested by the CEA Agency. |
| 10. any other matter relevant to the environmental assessment that the responsible authority, or — if the environmental assessment is referred to a review panel — the Minister, requires to be taken into account. | <ul style="list-style-type: none"> ▪ Nothing additional was required by CEA Agency. |

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2.3 Summary of Pre-Application Milestones

Table 2-5 provides an overview of milestones in the provincial and federal EAC Application process completed to date.

Table 2-5 Overview of Key Provincial and Federal Pre-Application Milestones

| Milestone | Date | Discussion/Description |
|---|-------------------|---|
| Project Description submitted to CEA Agency | June 20, 2014 | Aurora LNG submitted a Project Description to the CEA Agency |
| BC EAO Section 10 Order | June 23, 2014 | BC EAO issued an order under Section 10(1)(c) stating that the Project was reviewable under BCEAA and that an EAC Application was required |
| BC EAO request substituted process | June 24, 2014 | BC EAO write to the CEA Agency to determine if a federal environmental assessment is required, or if the assessment will be substituted |
| Project Description posted by BC EAO | July 7, 2014 | BC EAO approved and posted the Project Description |
| CEA Agency determines federal environmental assessment required | August 20, 2014 | CEA Agency determined that a federal environmental assessment was required for the Project |
| CEA Agency substitution approval | August 21, 2014 | CEA Agency approved the environmental assessment be undertaken by the province of BC using a substituted process |
| BC EAO Section 11 Order | August 25, 2014 | BC EAO issued an Order under Section 11 requiring the environmental assessment of the Project be conducted according to the scope, procedures and methods set out in the associated Schedules |
| BC EAO Section 13 Order | December 16, 2014 | BC EAO issued an Order under Section 13, amending the Section 11 Order |
| BC EAO Working Group meeting | January 9, 2015 | Working Group meeting to discuss the draft AIR |
| Project Description revised | January 12, 2015 | Revised Project Description approved and posted to BC EAO website |
| BC EAO and CEA Agency meeting | April 29, 2015 | Conference call with the BC EAO and CEA Agency to discuss CEAA 2012 requirements to be included in the draft AIR under the substituted assessment process |
| Proposed Public Consultation Plan | July 14, 2015 | Proposed public consultation plan posted to BC EAO website |
| Draft AIR posted by BC EAO | August 20, 2015 | Draft AIR posted to BC EAO website |
| Public Consultation Plan approved by BC EAO | August 24, 2015 | Public Consultation Plan approved and posted by BC EAO |

Table 2-5 Overview of Key Provincial and Federal Pre-Application Milestones

| Milestone | Date | Discussion/Description |
|---|-------------------------------|---|
| BC EAO public comment period | September 1 – October 1, 2015 | Public comment period on the draft AIR |
| BC EAO open house | September 23, 2015 | BC EAO-led open house in Prince Rupert provided the public with information about the draft AIR. |
| Final responses to public and Working Group comments on draft AIR | November 23, 2015 | Public and Working Group Tracking Tables approved and posted by BC EAO. |
| AIR approved | November 23, 2015 | AIR approved and posted to BC EAO website |
| BC EAO community tour and workshop | December 7, 2015 | BC EAO undertook a community tour and BC EAO workshop at Dodge Cove to inform residents of the environmental assessment process |
| Public Consultation Report #1 approved by BC EAO | January 19, 2016 | Public Consultation Report approved and posted to BC EAO website |
| Aboriginal Consultation Plan approved by BC EAO | January 19, 2016 | Aboriginal Consultation Plan approved and posted to BC EAO website |
| Aboriginal Consultation Report #1 approved by BC EAO | January 20, 2016 | Aboriginal Consultation Report #1 approved and posted to BC EAO website |
| Aboriginal Consultation Report #1 revised | July 19, 2016 | Aboriginal Consultation Report #1 (revised version) approved and posted to BC EAO website |
| BC EAO Section 13 Order | August 30, 2016 | BC EAO issued a second Section 13 Order, amending the Section 11 Order |
| Application (including Aboriginal Consultation Report #2 and Public Consultation Report #2) submitted to the BC EAO | November 14, 2016 | Aurora LNG Application (including Aboriginal Consultation Report #2) submitted to BC EAO for Adequacy Review |

2.4 Environmental Assessment Review Process Participants and Their Key Issues and Concerns

2.4.1 Working Group

As per Section 4.1 of the Section 11 Order, the purpose of the Working Group is to provide input as requested by the Project Assessment Lead (BC EAO) on aspects of the environmental assessment, including:

- 4.2.1 The information required for the EA
- 4.2.2 The conformity of the Application with the AIR
- 4.2.3 The information and conclusions in the Application
- 4.2.4 Potential mitigation measures, including those which may be included in EAC conditions
- 4.2.5 Potential adverse effects on Aboriginal Interests and measures to avoid, address, or mitigate such potential adverse effects
- 4.2.6 The draft Assessment Report prepared by the BC EAO.

Several provincial and federal government agencies, municipal and regional representatives, and Aboriginal Groups were invited to become members of the Working Group by the BC EAO:

- Provincial agencies
 - BC Oil and Gas Commission
 - Environmental Assessment Office
 - Ministry of Community, Sport and Cultural Development
 - Ministry of Environment
 - Ministry of Forests, Lands and Natural Resource Operations, including the Heritage Branch
 - Ministry of Health
 - Ministry of Jobs, Tourism and Skills Training
 - Ministry of Transportation and Infrastructure.
- Federal agencies
 - Canadian Environmental Assessment Agency
 - Climate Action Secretariat
 - Environment and Climate Change Canada
 - Fisheries and Oceans Canada
 - Health Canada
 - Natural Resources Canada
 - Parks Canada
 - Transport Canada.

- Municipal and regional agencies
 - City of Prince Rupert
 - District of Port Edward
 - Northern Health
 - Prince Rupert Port Authority
 - Skeena-Queen Charlotte Regional District
 - Dodge Cove Improvement District.
- Aboriginal Groups (as per Schedules B and C of the Section 11 Order, as amended)
 - Lax Kw'alaams Band
 - Metlakatla First Nation
 - Gitxaala Nation
 - Kitselas First Nation
 - Kitsumkalum First Nation
 - Gitga'at First Nation¹.

These groups have participated (or had the opportunity to participate) in the environmental assessment, including attending Working Group meetings, providing comments on the draft AIR and VC selection, and/or meeting with Aurora LNG.

During the pre-application stage, the BC EAO held a number of meetings and conference calls with the Working Group, where members had the opportunity to review and comment on issues related to the Project and the assessment process, including the draft AIR and VC Selection Document (Nexen 2015, see Table 2-5). As part of this process, the Working Group had the opportunity to provide comments during two rounds of review of the draft AIR and VC Selection Document (January to February 2015, and September to October 2015).

Table 2-6 provides a summary of the key issues and concerns raised by members of the Working Group (government agencies and Aboriginal Groups) during the pre-application stage and how these issues have been addressed by Aurora LNG, including in the Application. In addition to the summary table, the Working Group Tracking Table, which details the comments received on the draft AIR and VC selection from the Working Group members, and Aurora LNG's responses to these comments, is accessible on the BC EAO website². Additional information on the consideration and status of resolution for issues raised by Aboriginal Groups during the pre-application stage is provided in Section 12 (Aboriginal Consultation) and Aboriginal Consultation Report #2.

¹ Gitga'at First Nation was added to Schedule B Aboriginal Groups in a second Section 13 Order (issued August 30, 2016). Gitga'at First Nation comments were originally included in the public comment Tracking Table, however, Aurora LNG has incorporated their key concerns/ issues in the table below.

²

http://a100.gov.bc.ca/appsdata/epic/documents/p416/1448316654180_JvGzWTNTTrbXHdlMx4vyDqW8DV3jBflkTwl8y9d2yp1sDnt1V0l3W!-1807974911!1448316206814.pdf

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Following submission of the Application to the BC EAO, the Working Group will have the opportunity to review and comment on the Application in accordance with their mandate, as described in section 4 of the Section 11 Order. The BC EAO will facilitate Working Group meetings where members can comment and provide input on the Application. Aurora LNG will provide a response to all public and Working Group comments on the Application in a format approved by the BC EAO. The Working Group will also review and provide comment for the draft Assessment Report on the Application, prepared by the BC EAO for provincial and federal Ministers.

Table 2-6 Summary of Key Concerns Raised by the Working Group during the Pre-Application Stage

| Topic | Concern (Working Group Member) | Aurora LNG Response and Status |
|----------------------------------|---|--|
| Air Quality | <ul style="list-style-type: none"> ▪ Air quality should be assessed for all phases and components of the Project. (HC, MOE) ▪ Assessment should be based on applicable objectives (e.g., the Interim Ambient Air Quality Objectives for SO₂ and NO₂ and the BC Air Quality Objectives for other substances). (MOE, EC) | <p>Air emissions for the construction, operations, routine flaring and decommissioning have been assessed in the Air Quality VC (see Section 4.2). Emergency operations, including upset flaring, are addressed in the Accidents and Malfunctions section (see Section 11.0) of the Application. Both the Air Quality and the Human Health VC (see Section 8.0) assessments refer to the upset flaring results, where appropriate.</p> <p>Applicable ambient air quality objectives have been defined and utilized within the assessment, including the Interim Ambient Air Quality Objectives for SO₂ and NO₂.</p> <p>Addressed in the Application</p> |
| Greenhouse Gases (GHG) | <ul style="list-style-type: none"> ▪ Emissions for the construction and operations phases for both the facility and shipping must be calculated. (CAS, EC) ▪ Ensure that the CEAA guidance document <i>Incorporating Climate Change Considerations in Environmental Assessments</i> (2003) is followed and the Application address how the operation of the Project would contribute to GHG emissions, and how those contributions compare with sector, provincial and federal targets and norms. (CAS) | <p>As part of the Greenhouse Gases VC (see Section 4.3), the GHG emissions for all stages of the Project, including construction, operation and decommissioning, for both the LNG facility and shipping were quantified. Summarized emissions were included in the GHG assessment and quantification methods, assumptions and emission factors were discussed in the separate GHG TDR (see Appendix B). The GHG assessment identifies mitigations and monitoring activities proposed for the Project and a separate GHG management plan and outlines specifics about how the mitigations and monitoring activities will be prepared and implemented when finalized Project design details are available.</p> <p>As part of the assessment in Section 4.3, the quantified GHG emission totals were compared to provincial and national inventory total. The quantified GHG emission intensity of the Project was also calculated and compared to a sector profile, as well as the intensity threshold included in relevant legislation.</p> <p>Addressed in the Application</p> |
| Acoustic Environment | <ul style="list-style-type: none"> ▪ Assessment of acoustic environment and the associated subcomponents of noise levels, low-frequency noise and vibrations (HC) ▪ Noise impacts associated with the Project, including the road access. (SQCRD) ▪ Vessel noises and the noise from increased flights into Prince Rupert Airport for the Project should be considered as part of the assessment. (TC) | <p>Following the receipt of the concerns, the AIR was revised to include Acoustic Environment as a VC (see Section 4.4) and change in overall noise levels, low-frequency noise levels and change in vibration levels were added as potential Project effects to be assessed as part of the VC.</p> <p>The result of the Acoustic Environment assessment, include the assessments of change in overall noise levels, low-frequency noise levels and change in vibration levels as potential Project effects are found in Section 4.4.</p> <p>As part of the Acoustic Environment VC (see Section 4.4), noise effects from the operation of the road, as well as LNG carriers and tug boats were considered. Potential increases in noise levels due to a change in air traffic were also addressed. Short-term noise events were addressed qualitatively.</p> <p>Addressed in the Application</p> |
| Water Quality | <ul style="list-style-type: none"> ▪ Water quality should be a VC. (Kitselas, MOE) ▪ The watershed is within the dispersal cloud of the Project. (SQCRD) ▪ Operational discharge/ bilge and ballast water should be included. (Gitxaala) ▪ Consideration of water quality at disposal at sea sites. (CEAA) | <p>Following the receipt of concerns, Water Quality was incorporated as a VC (see Section 4.5). This VC is assessed in comparison to BC water quality guidelines and integrated with the results from the Freshwater Fish and Fish Habitat (see Section 4.8), Marine Fish and Fish Habitat (see Section 4.9), Wildlife Resource (Terrestrial) (see Section 4.7), and Human Health (Section 8.0) VCs.</p> <p>Potential effects of the Project on air and water quality are assessed in the Air Quality (see Section 4.2) and Water Quality VCs (see Section 4.5) respectively. The air quality assessment includes air dispersion modeling within the LAA and RAA inclusive of any watersheds within those areas.</p> <p>Aurora LNG will require that Project-related LNG carriers and escort tugs comply with all relevant national and international shipping requirements regarding disposal of waste, bilge water discharge and ballast water discharge.</p> <p>The Marine Fish and Fish Habitat VC (see Section 4.9) considered potential effects of disposal at sea including effects of elevated TSS.</p> <p>Addressed in the Application</p> |
| Vegetation and Wetland Resources | <ul style="list-style-type: none"> ▪ The Federal Policy on Wetland Conservation may apply to the Project. Wetlands designated as ecologically or socio-economically important to BC should be identified. (ECCC) ▪ Information on effects to wetlands and mitigation measures should be included. (ECCC) ▪ A draft Wetland Compensation Plan should be provided as part of the Application. (ECCC) | <p>The Project does not overlay any geographic areas where continuing loss or degradation of wetlands has reached critical levels. Wetlands designated as ecologically or socio-economically important to BC are included in the assessment of change in abundance or condition of ecological communities of interest and change in wetland function, in the Vegetation and Wetland Resources VC (see Section 4.6).</p> <p>A description of wetlands extent surveys and wetland function assessments is included in the Vegetation and Wetland Resources VC (see Section 4.6). Mitigation measures are included under the assessment of change in abundance or condition of ecological communities of interest and assessment of change in wetland function.</p> <p>A draft Wetland Compensation Plan is included as part of the Vegetation and Wetland Resources VC (see Section 4.6).</p> <p>Addressed in the Application</p> |
| Wildlife Resources | <ul style="list-style-type: none"> ▪ Impacts to SARA-listed bat species should be considered, and mitigation plans for each species should be provided. (Gitga'at, ECCC, FLNRO-SR) ▪ Impacts from flaring should be considered and an Avian Management and Monitoring Plan should be developed. (Lax Kw'alaams, ECCC) | <p>Aurora LNG recognizes the recent change to the conservation status of Little Brown Myotis and acknowledges that it and Keen's Myotis may occur in the LAA. The Wildlife Resources (Terrestrial) VC (see Section 4.7) assesses potential effects on bat habitat, including hibernacula features, using appropriate survey methods.</p> <p>Mitigation measures are also identified in the Wildlife Resources VC (see Section 4.7) to reduce the potential impacts of planned flaring events on migratory birds. Such measures may include a plan for managing and monitoring the effects of flaring events on migratory birds.</p> <p>Addressed in the Application</p> |
| Freshwater Fish and Fish Habitat | <ul style="list-style-type: none"> ▪ Conceptual offsetting plans should be included in the Application (Kitselas, Kitsumkalum) | <p>Conceptual Freshwater and Marine Fish and Fish Habitat Offsetting Plans are included in the Application (see Sections 4.8 and 4.9).</p> <p>Addressed in the Application</p> |

Table 2-6 Summary of Key Concerns Raised by the Working Group during the Pre-Application Stage

| Topic | Concern (Working Group Member) | Aurora LNG Response and Status |
|------------------------------|---|---|
| Marine Fish and Fish Habitat | <ul style="list-style-type: none"> ▪ Non-fish species such as mussels, clams, oysters and eelgrass habitat should be included. (Lax Kw'alaams) ▪ Bladed kelp and seaweed should be addressed. (Metlakatla, Gitxaala) ▪ Marine fish must include invertebrates. (arthropods/molluscs) (Gitxaala) ▪ Conceptual offsetting plans should be included in the Application. (Kitselas, Kitsumkalum) ▪ Include impacts to marine fish and fish habitat at potential disposal sites. (CEAA) | <p>The Marine Fish and Fish Habitat VC (see Section 4.0), utilizes a definition of marine fish that is taken from the <i>Fisheries Act</i>, which defines fish as: parts of fish; shellfish, crustaceans, marine animals and any parts of shellfish, crustaceans or marine animals; and the eggs, sperm, spawn, larvae, spat and juvenile stages of fish, shellfish, crustaceans and marine animals.</p> <p>Potential Project effects on eelgrass are assessed as part of the 'Change in Habitat' effect under the Marine Fish and Fish Habitat VC (Section 4.9). Conceptual Freshwater and Marine Fish and Fish Habitat Offsetting Plans are included in the Application (see Sections 4.8 and 4.9).</p> <p>The Marine Fish and Fish Habitat VC (see Section 4.9) assessment of potential effects, includes an assessment of the effects associated with the Project and dredging activities including changes in marine fish health (associated with elevated levels of total suspended solids (TSS)), changes in fish mortality risk (associated with the crushing or burial) and changes in habitat.</p> <p>Effects to harvested species, including marine fish and intertidal species, are also included in the Summary of Statutory Requirements under CEAA 2012 (see Section 11.0)</p> <p>Addressed in the Application</p> |
| Marine Mammals | <ul style="list-style-type: none"> ▪ Presentation of data related to important habitat for marine wildlife, as well as data related to the abundance and availability of those habitats within the Project development area (PDA), Local assessment area (LAA) and Regional assessment area (RAA). (Kitselas) ▪ The Application should identify peak seasonal timing and abundance of marine mammals in the LAA and RAA. (DFO) ▪ "Potential for injury/mortality" must be added as a potential effect to marine mammals. (Lax Kw'alaams, Metlakatla, Gitxaala) ▪ Completion of underwater noise modelling work prior to the submission of the Application. (Kitsumkalum, Gitxaala, DFO) | <p>The assessment for the Marine Mammals VC is conducted in Section 4.10. Change in Mortality Risk was added as a Potential Adverse Project Effect for the marine mammals following the receipt of concerns. In the description of existing conditions, a summary of the seasonal distribution and abundance of marine mammals, as well as any known habitats of importance (e.g., haul out sites) has been presented. More detailed information is presented in the Marine Mammals TDR (see Appendix N).</p> <p>The Marine Mammals TDR presents the results of the vessel-based marine mammal surveys that were completed between July 2014 and June 2015. The TDR also includes information on marine mammals, including distribution and seasonal timing in the marine mammal LAA and RAA from field studies. Marine mammal abundance estimates within the RAA are also provided for species with sufficient sightings.</p> <p>Project specific underwater noise modelling was completed prior to submission of the Application and the results were used to support the assessment of potential changes to marine mammal and marine fish behaviour. Mitigation measures including, the potential implementation of Marine mammal exclusion zones for in-water construction activities, were considered and proposed.</p> <p>Addressed in the Application</p> |
| Marine Birds | <ul style="list-style-type: none"> ▪ Given the importance of the Lucy Islands group for marine birds it should be included within the RAA. (Metlakatla, Gitxaala Kitselas, Kitsumkalum) ▪ Presentation of data related to important habitat for marine wildlife, as well as data related to the abundance and availability of those habitats within the PDA, LAA and RAA. (Kitselas) | <p>Following the receipt of the concerns from Aboriginal Groups, the RAA for marine birds was revised to incorporate Lucy Islands.</p> <p>The assessment for the Marine Birds VC is conducted in Section 4.11. In the description of existing conditions, a summary of the seasonal distribution and abundance of marine birds, as well as any known habitats of importance (e.g., haul out sites) is presented. More detailed information is presented in the Marine Birds TDR (see Appendix Q).</p> <p>The assessment of the Marine Birds VC incorporates seasonal data on abundance and distribution of marine birds collected as part of field studies conducted between July 2014 and June 2015. The methods are more completely described within the TDR.</p> <p>The assessment of change in behaviour for marine mammals and marine birds considers changes in localized movement patterns or access to preferred habitats, and is informed by potential changes in the distribution or availability of prey resources as a result of Project-related activities (as identified in the Marine Fish and Fish Habitat VC).</p> <p>Addressed in the Application</p> |
| Economic Conditions | <ul style="list-style-type: none"> ▪ Terrace should be included in the RAA (Kitselas, Kitsumkalum, NH) and Kitimat in the RAA. (NH) ▪ Hartley Bay and the Gitga'at membership and community should be included in the LAA. (Gitga'at) | <p>The LAA and RAA for the assessment of Project effects on economic conditions (Section 5.0) include Terrace and adjacent communities, and Highway 16 from Terrace to Prince Rupert. Since Project residual effects are not anticipated to interact with similar effects from other projects and activities in the RAA, Kitimat was not included in the spatial boundary of the AIR.</p> <p>The LAA for economic conditions encompasses the communities most likely to be called upon to provide labour, goods and services for the proposed Project. As a result, the LAA includes the mainland portion of the Skeena-Queen Charlotte Regional District, as well as Highway 16 up to and including the Northwest Regional Airport Terrace Kitimat and Mills Memorial Hospital. Hartley Bay (Gitga'at First Nation) is included in the LAA for change in resource-based primary industries and subsistence economies and is also included in the RAA.</p> <p>Addressed in the Application</p> |
| Visual Quality | <ul style="list-style-type: none"> ▪ Visual quality should be a VC. (Lax Kw'alaams) ▪ For visual quality, the visual condition of both the facility and moving vessels should be assessed. (Gitga'at) | <p>Visual Quality was included as a VC (see Section 6.2) following the receipt of concerns.</p> <p>The Visual Quality VC considers the potential for the LNG facility with carriers docked to potentially result in changes to visibility, existing visual conditions and changes to nighttime lighting conditions adjacent to the LNG facility. Visual quality of the shipping lane is not assessed; however, a discussion of visual quality along the shipping route, based on previous studies conducted in the area, is provided as outlined in the AIR.</p> <p>Addressed in the Application</p> |

Table 2-6 Summary of Key Concerns Raised by the Working Group during the Pre-Application Stage

| Topic | Concern (Working Group Member) | Aurora LNG Response and Status |
|---------------------------------|---|--|
| Infrastructure and Services | <ul style="list-style-type: none"> ▪ Terrace should be included in the RAA (Kitselas, Kitsumkalum, NH) and Kitimat in the RAA. (NH) ▪ Hartley Bay and the Gitga'at membership and community should be included in the LAA. (Gitga'at) ▪ The scope and measurable parameters, particularly inclusion of traffic assessments and access information. (MOTI) ▪ Provision of a plan for worker and equipment transportation. (MOTI) | <p>The LAA and RAA for the assessment of Project effects on infrastructure and services (Section 6.3) include Terrace and adjacent communities, and Highway 16 from Terrace to Prince Rupert. Since Project residual effects are not anticipated to interact with similar effects from other projects and activities in the RAA, Kitimat was not included in the spatial boundary of the AIR.</p> <p>The LAAs for the assessment of potential Project effects on infrastructure and services and community health encompasses communities where Project-related change in population and employment and income could attribute to direct, predictable and measureable adverse change in community infrastructure and services or community health. As a result, the LAA for the Project includes communities within the mainland portion of the Skeena-Queen Charlotte Regional District, as well as Highway 16 up to and including Mills Memorial Hospital (Terrace) and Northwest Regional Airport (Terrace/Kitimat). Hartley Bay is included in the RAA.</p> <p>Measurable parameters for Section 6.3 were updated to include vehicle collisions (collisions/year) and access information, such as ferry volume (trips/day; passengers/day).</p> <p>Information on the transportation of workers and equipment is included in the Infrastructure and Services VC (Section 6.3), as well as the Marine Use and Navigable Waters VC (see Section 6.5).</p> <p>Addressed in the Application</p> |
| Land and Resource Use | <ul style="list-style-type: none"> ▪ Information on land and resource use should also be provided for First Nations reserve and traditional use areas. (HC) ▪ First Nation land and resource use should be analyzed separately from recreational users as well as non-indigenous business users. (Lax Kw'alaams, Kitsumkalum) | <p>The Land and Resource Use VC (see Section 6.4) includes an analysis of Project-related changes in non-tenured land use (including changes in the intensity of use and changes in area currently available for recreational use).</p> <p>As described in Section 6.4.2, traditional knowledge and use related information provided by Aboriginal Groups was reviewed and, where appropriate, integrated into the assessment of potential effects. Existing conditions for the Land and Resource Use was characterized using available information on land and resource use within the LAA and RAA (including information on traditional land and resource use by Aboriginal people both inside and outside First Nations reserves).</p> <p>Section 6.4 primarily addresses non-traditional land and resource use, which includes recreational use and commercial trapping. Aboriginal land and resource use is primarily addressed separately in Section 11.3 and Part C of the Application.</p> <p>In Section 11.3, an assessment of the potential effects on Aboriginal health and the current use of lands and resources for traditional purposes by Aboriginal people is completed to meet the requirements of CEAA 2012 section 5(1)(c).</p> <p>Addressed in the Application</p> |
| Community Health | <ul style="list-style-type: none"> ▪ Terrace should be included in the RAA (Kitselas, Kitsumkalum, NH) and Kitimat in the RAA. (NH) ▪ Hartley Bay and the Gitga'at membership and community should be included in the LAA. (Gitga'at) | <p>The LAA and RAA for the assessment of Project effects on community health include Terrace and adjacent communities, and Highway 16 from Terrace to Prince Rupert (Section 6.6). Since Project residual effects are not anticipated to interact with similar effects from other projects and activities in the RAA, Kitimat was not included in the spatial boundary of the AIR.</p> <p>The LAAs for the assessment of potential Project effects on infrastructure and services and community health encompasses communities where Project-related change in population and employment and income could attribute to direct, predictable and measureable adverse change in community infrastructure and services or community health. As a result, the LAA for the Project includes communities within the mainland portion of the Skeena-Queen Charlotte Regional District, as well as Highway 16 up to and including Mills Memorial Hospital (Terrace) and Northwest Regional airport (Terrace/Kitimat). Gitga'at First Nation has been added to the LAA and RAA for change in harvested foods.</p> <p>Addressed in the Application</p> |
| Marine Use and Navigable Waters | <ul style="list-style-type: none"> ▪ The LAA should be larger. (TC) ▪ Include barge traffic related to dredging and disposal at sea. (CEAA) ▪ Dredging and disposal at sea should be considered in the environmental assessment. (CEAA) | <p>LAAs for the Part B VCs were chosen to encompass the area in which both (a) Project-related effects can be predicted or measured with a level of confidence that allows for assessment and (b) there is a reasonable expectation that those potential effects are of concern. The 1 km buffer along the shipping route was chosen as the Marine Use and Navigable Waters VC (Section 6.5) LAA because potential effects of concern would be concentrated in this area. The RAA extends beyond this 1 km buffer to include the entire Pacific Fishery Management Area 04 plus a 16 km extension westward of Triple Island, providing context for the assessment of potential Project effects.</p> <p>The Marine Use and Navigable Waters VC (see Section 6.5) includes an assessment of effects from all Project-related marine traffic. Marine construction activities, including marine transport, are considered for interaction with the VC.</p> <p>The assessment of marine fish and fish habitat was expanded to include the potential effects of dredging and disposal at sea (see Section 4.9).</p> <p>Addressed in the Application</p> |

Table 2-6 Summary of Key Concerns Raised by the Working Group during the Pre-Application Stage

| Topic | Concern (Working Group Member) | Aurora LNG Response and Status |
|---------------------------------------|---|--|
| Archaeological and Heritage Resources | <ul style="list-style-type: none"> ▪ Impacts on historic places registered and designated under the Local Government Act should be considered, and communities should be consulted. (FLNRO-HB) ▪ Submerged sites should be included. (Metlakatla) | <p>The Provincial Heritage Register includes the BC Register of Historic Places as a subset of records, and was reviewed to assess existing conditions within the Archaeological and Heritage Resources VC (see Section 7.0) LAA and RAA. This included the identification of known archaeological sites, registered historic places and some non-registered historic places.</p> <p>Heritage information held by local governments, archives, museums and historical societies was also solicited and reviewed, where available, to identify historic places valued by a given community that have not yet been formally recognized or protected.</p> <p>Heritage values held by Aboriginal Groups not necessarily protected under the <i>Heritage Conservation Act</i> is included, where available, in Section 11.3 and Part C.</p> <p>Archaeological and heritage sites refer to anything that may have heritage value to stakeholders. This includes any archaeological site type and subtype as described in Appendix A of the British Columbia Archaeological Site Inventory Form Guide (Province of British Columbia 2010:27-34) including submerged sites.</p> <p>Addressed in the Application</p> |
| Human Health | <ul style="list-style-type: none"> ▪ Human Health Risk Assessment should be added to the assessment. (HC) ▪ Air quality and the change in human health should be assessed under the Human Health VC. (Gitga'at) ▪ Concerns regarding marine fish/biota (marine country foods) on human health. (MOE) ▪ Potential effects that acidification and eutrophication could have on drinking water with respect to human health should be included. (MOH) ▪ The assessment area for human health will be different for other pathways. (MOH) ▪ Requested more details on the health assessments related to air quality, water quality, sediment quality, and marine country foods. (MOH) | <p>As part of the Human Health VC (see Section 8.0), potential chemical-related human health effects are evaluated using a human health risk assessment framework, consistent with Health Canada guidance. Further details on the human health risk assessment are included in the Human Health TDR (see Appendix R).</p> <p>Potential effects of changes in air quality on human health were also assessed in Section 8.0.</p> <p>Tissue samples from marine harvested foods (crabs, clams) and country foods have been analyzed for a suite of chemicals of potential concern and the results included in as baseline data in Section 8.0.</p> <p>In addition, The Human Health VC assesses potential effects to human health, and includes discussion on water quality (Section 8.0). Potential effects of the Project on water quality, including acidification and eutrophication, are assessed in the Water Quality VC.</p> <p>The Human Health VC RAA coincides with the Air Quality VC RAA (a 50 km by 50 km area centered on the Project) and includes the individual RAAs for all topics within the Human Health VC (i.e., marine harvested foods quality, drinking water quality (freshwater)).</p> <p>Aurora LNG provided details on the assessment methods that are used in the Application and Human Health baseline data related to air quality, water quality and marine country foods (see Section 8.0). The Marine Sediment TDR (see Appendix F) provides details on the sediment quality.</p> <p>Addressed in the Application</p> |
| Accidents and Malfunctions | <ul style="list-style-type: none"> ▪ Significance of effects from accidents and malfunctions on VCs must be included. (Gitxaala) | <p>A significance determination for accidents and malfunctions is included in the Accidents and Malfunctions Section, as per requirements in section 19(1)(a) and (b) of CEEA 2012.</p> <p>Addressed in the Application</p> |
| Aboriginal Interests | <ul style="list-style-type: none"> ▪ Aboriginal Interests must include an analysis of the impact of the Project on Aboriginal Title. (Metlakatla) ▪ Lax Kw'alaams claim to Aboriginal title should be included and dealt with through targeted consultation. (Lax Kw'alaams) ▪ Cultural considerations are missing from the VCs. (Gitxaala) ▪ More than a description of information and concerns raised by Kitsumkalum First Nation should be included in the assessment. (Kitsumkalum) ▪ The Section 13 Order should be discussed. (Kitselas, Kitsumkalum) | <p>Part C of the Application includes an assessment of potential adverse effects of the Project on Aboriginal Interests (including Aboriginal Title).</p> <p>Aurora LNG has made reasonable efforts to gather sufficient background information on physical and cultural heritage required to complete its assessment. In its Application, Aurora LNG summarized relevant existing conditions regarding physical and cultural heritage, including any available information on cultural and traditional practices that may interact with the Project. A brief summary of data sources (both past sources and data collected for the proposed Project) is provided and any important data gaps identified. Assessments in Potential Heritage Effects (see Section 7.0) and Part C (see Section 12.0) describe how information obtained through consultation with Aboriginal Groups was taken into account and integrated.</p> <p>The Aboriginal Consultation Reports, required as per the Section 11 Order (as amended):</p> <ul style="list-style-type: none"> ▪ Summarize the efforts undertaken by Aurora LNG to consult with Aboriginal Groups in accordance with any relevant provisions in the Aboriginal Consultation Plan, ▪ Use tracking tables to record feedback received during consultation, ▪ Identify the potential adverse impacts of the Project on Aboriginal Interests, ▪ Identify how the potential adverse impacts of the Project on Aboriginal Interests will be avoided, mitigated, addressed or otherwise managed, and ▪ Outline next steps of future consultation activities, other than those outlined in the approved Aboriginal Consultation Plan. <p>An explanation noting that the Order under section 13 amends the section 11 Order is included in the Application (see Section 2).</p> <p>Addressed in the Application</p> |

Table 2-6 Summary of Key Concerns Raised by the Working Group during the Pre-Application Stage

| Topic | Concern (Working Group Member) | Aurora LNG Response and Status |
|-------------------------|---|---|
| Other Issues / Concerns | <ul style="list-style-type: none"> ▪ WCC LNG, Grassy Point LNG and other Prince Rupert area LNG proposals and the pipeline for the Project should be included. (Lax Kw'alaams, Metlakatla, Gitxaala) ▪ Metlakatla Development Corp Shellfish Aquaculture and Smith Island Quarry should be included in the project inclusion list. (TC) | <p>The Project and Physical Activities Inclusion List (see Section 3.0) includes WCC LNG, Prince Rupert LNG, Grassy Point LNG and Pacific NorthWest LNG. The Project and Physical Activities Inclusion List was also updated to include the Metlakatla Development Corp Shellfish Aquaculture and Smith Island Quarry.</p> <p>Addressed in the Application</p> |
| | <ul style="list-style-type: none"> ▪ Disposal at sea should be added to the list of construction activities (Gitxaala) | <p>Dredging and disposal at sea are included on the list of construction activities (Table 3-6).</p> <p>Addressed in the Application</p> |
| | <ul style="list-style-type: none"> ▪ Recycling and solid waste management are important to the regional district | <p>Section 1.0 of the Application describes Project waste management activities. Waste and landfill capacity are discussed in the Infrastructure and Services VC (see Section 6.3).</p> <p>Addressed in the Application</p> |

PROVINCIAL AGENCIES

MOE: BC Ministry of Environment
 FLNRO-HB: BC Ministry of Forests, Lands and Natural Resource Operations (Heritage Branch)
 MOH: BC Ministry of Health
 MOTI: BC Ministry of Transportation and Infrastructure

FEDERAL AGENCIES

CEAA: Canadian Environmental Assessment Agency
 ECCC: Environment and Climate Change Canada
 HC: Health Canada
 TC: Transport Canada

REGIONAL & LOCAL AGENCIES

NH: Northern Health
 FLNRO-SR: Ministry of Forests, Lands and Natural Resource Operations – Skeena Region
 SQCRD: Skeena-Queen Charlotte Regional District

ABORIGINAL GROUPS

Lax Kw'alaams: Lax Kw'alaams Band
 Metlakatla: Metlakatla First Nation
 Gitxaala: Gitxaala Nation
 Kitselas: Kitselas First Nation
 Kitsumkalum: Kitsumkalum First Nation
 Gitga'at: Gitga'at First Nation

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2.4.2 Public

The public was provided opportunities to participate in the pre-application stage of the environmental assessment process in accordance with the section 11 Order and Public Consultation Plan. These opportunities to participate included the draft AIR and VC Selection Document public comment period (September to October 2015), and the BC EAO's open house on September 23, 2015.

A summary of the key concerns raised by the public during the pre-application stage and how these issues are addressed by Aurora LNG in the Application are included in Table 2-7. In addition to the summary table, the Public Tracking Table, which details the comments received on the draft AIR and VC Selection Document from the public, and Aurora LNG's responses to these comments, is accessible on the BC EAO website³. Additional information on the consideration and status of resolution for issues raised by the public during the pre-application stage is provided in Section 13 (Public Consultation) and the Public Consultation Report #2. Additional information on the issues and concerns raised by Dodge Cove residents⁴ and Aurora LNG's consideration of the identified issues and concerns can be found in Aurora LNG's Response to Dodge Cove and EAO workshop summary regarding the Aurora LNG Project (dated July 28, 2016), which is accessible on the BC EAO website⁵.

Following submission of the Application to the BC EAO, the public will have the opportunity to review and comment on the Application. The BC EAO will facilitate this comment process and Aurora LNG will respond to all public comments received on the Application in a format approved by the BC EAO.

³

http://a100.gov.bc.ca/appsdata/epic/documents/p416/1448316686253_JvGzWTNTrbXHdIMx4vyDqW8DV3jBflkTwl8y9d2yp1sDnt1V0I3WI-1807974911!1448316206814.pdf

⁴ While the Dodge Cove Improvement District was added to the Working Group, comments received from the residents of Dodge Cove have been considered to form part of the public comment process.

⁵

http://a100.gov.bc.ca/appsdata/epic/documents/p416/1470178331706_ndSjXhjMQyRWXtDRWnkITxb3dN3PqxkXJn1mJpmCzvQrxy2Z41sX!1639636598!1470178124116.pdf

Aurora LNG

Environmental Assessment Certificate Application

Section 2: Environmental Assessment Process

Table 2-7 Summary of Concerns Raised by the Public

| Topic | Key Concern | Aurora LNG Response and Status |
|------------------------|--|---|
| Air Quality | <ul style="list-style-type: none"> ▪ Potential impact of emissions from facility construction and operation, and how they may affect residents on Digby Island ▪ Clarity regarding the types and quantities of emissions | <p>Air emissions for the construction, operations and decommissioning have been assessed in the Air Quality VC (see Section 4.2). The air quality assessment focuses on emissions of CACs, namely NO₂, CO, PM₁₀, PM 2.5, SO₂, H₂S, and total VOCs, emitted by the construction, operation and decommissioning of the LNG facility, including all vessels at berth for loading.</p> <p>Potential effects of changes in air quality on human health were assessed in Section 8.0.</p> <p>Addressed in the Application</p> |
| Greenhouse Gases (GHG) | <ul style="list-style-type: none"> ▪ The amount of GHG emissions released from construction and operation of the LNG facility ▪ Confirmation of which regulatory body will manage and monitor GHG emissions | <p>As part of the Greenhouse Gases VC (see Section 4.3), the GHG emissions for all stages of the Project for both the LNG facility and shipping were quantified. The GHG assessment identifies mitigations and monitoring activities proposed for the Project and a separate GHG management plan and outlines specifics about how the mitigations and monitoring activities will be prepared and implemented when finalized Project design details are available. The Application also outlines the provincial and federal regulatory regime related to GHG management and monitoring.</p> <p>As part of the assessment in Section 4.3, the quantified GHG emission totals were compared to provincial and national inventory total. The quantified GHG emission intensity of the Project was also calculated and compared to a sector profile, as well as the intensity threshold included in relevant legislation.</p> <p>Addressed in the Application</p> |
| Acoustic Environment | <ul style="list-style-type: none"> ▪ Noise impacts from construction, including traffic, facility operations and shipping ▪ Impact of increased helicopter and airport traffic on noise levels | <p>Following the receipt of the concerns, the AIR was revised to include Acoustic Environment as a VC (see Section 4.4) and change in overall noise levels, low-frequency noise levels and change in vibration levels were added as potential project effects to be assessed as part of the VC.</p> <p>The result of the Acoustic Environment assessment, include the assessments of change in overall noise levels, low-frequency noise levels and change in vibration levels, as potential project effects are found in Section 4.4.</p> <p>As part of the Acoustic Environment VC (see Section 4.4), noise effects from the operation of the road, as well as LNG carriers and tug boats were considered. Potential increases in noise levels due to a change in air traffic were also addressed. Short-term noise events were addressed qualitatively.</p> <p>Addressed in the Application</p> |

Table 2-7 Summary of Concerns Raised by the Public

| Topic | Key Concern | Aurora LNG Response and Status |
|----------------------------------|--|---|
| Water Quality | <ul style="list-style-type: none"> ▪ Impacts to fresh water quality, including impacts to the watershed, small waterbodies and acidification ▪ Impacts to drinking water obtained from surface collection ▪ Impacts to marine water quality from waste disposal and ballast water discharge | <p>Following the receipt of concerns, Water Quality was incorporated as a VC (see Section 4.5). This VC is assessed in comparison to BC water quality guidelines and integrated with the results from the Freshwater Fish and Fish Habitat (Section 4.8), Marine Fish and Fish Habitat (see Section 4.9), Wildlife Resource (Terrestrial) (Section 4.7), and Human Health (Section 8.0) VCs.</p> <p>Potential effects of the Project on air and water quality are assessed in the Air Quality (see Section 4.2) and Water Quality VCs (Section 4.5), respectively. The air quality assessment includes air dispersion modeling within the LAA and RAA inclusive of any watersheds within those areas.</p> <p>The Human Health VC (see Section 8.0) addresses the potential for changes to human health from changes in surface water quality. Project activities are not expected to have direct effects to surface water quality in a manner that would affect human health. There will be no discharges to the freshwater aquatic environment on Digby Island that could affect drinking water. Refer to Section 8.0 for additional detail.</p> <p>Aurora LNG will require that Project-related LNG carriers and escort tugs comply with all relevant national and international shipping requirements regarding disposal of waste, bilge water discharge and ballast water discharge.</p> <p>Addressed in the Application</p> |
| Vegetation and Wetland Resources | <ul style="list-style-type: none"> ▪ Impact to rare plants and ecosystems on Digby Island | <p>The Vegetation and Wetland Resources VC considers red- and blue-listed ecological communities, as well as vascular and nonvascular plants that are red- and blue-listed, SARA-listed and those listed by the Committee on the Status of Endangered Wildlife in Canada (see Section 4.6).</p> <p>Addressed in the Application</p> |
| Wildlife Resources | <ul style="list-style-type: none"> ▪ Potential impacts to wildlife and wildlife habitat, including species at risk, such as marbled murrelet and great blue heron ▪ Impacts of the flare stacks to local or migrating wildlife | <p>The Application evaluates potential effects to wildlife resources, including murrelets and herons, in the Wildlife Resources (Terrestrial) VC (Section 4.7) and Marine Birds VC (see Section 4.11). Mitigation measures are also proposed to reduce the potential impacts of planned flaring events on migratory birds.</p> <p>Addressed in the Application</p> |

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Table 2-7 Summary of Concerns Raised by the Public

| Topic | Key Concern | Aurora LNG Response and Status |
|-----------------------------|---|--|
| Fish and Fish Habitat | <ul style="list-style-type: none"> ▪ Impacts to fish and fish habitat, including spawning grounds for local fish species ▪ Impact of shoreline disturbances to fish and fish habitat ▪ Loss of eel grass in the vicinity of Digby Island | <p>The Freshwater Fish and Fish Habitat VC (see Section 4.8) assesses the following potential Project effects: change in fish habitat, change in fish mortality or health, and change in fish abundance or relative abundance.</p> <p>The Marine Fish and Fish Habitat VC (see Section 4.9) assesses the following potential Project effects: changes in habitat, behaviour, mortality risk and health. The assessment of change in habitat includes the total area (square metres [m²]) of marine fish habitat permanently altered or destroyed, which includes intertidal habitat.</p> <p>Potential Project effects on eelgrass are assessed as part of the 'Change in Habitat' effect under the Marine Fish and Fish Habitat VC (see Section 4.9).</p> <p>Conceptual Freshwater and Marine Fish and Fish Habitat Offsetting Plans are included in the Application (see Sections 4.8 and 4.9).</p> <p>Addressed in the Application</p> |
| Economic Conditions | <ul style="list-style-type: none"> ▪ Impacts on local business ▪ Contracting and employment opportunities | <p>The Economic Conditions VC (see Section 5.2) assesses the following potential Project effects: change in labour supply and demand, change in activities for commercial businesses affected by Project spending, and change in resource-based primary industries and subsistence economies. Mitigation measures are also proposed to avoid or reduce potential adverse effects.</p> <p>The Application also describes the economic benefits of the proposed Project in Section 1.3.</p> <p>Addressed in the Application</p> |
| Visual Quality | <ul style="list-style-type: none"> ▪ Degraded visual quality (from highly-valued land and marine sites around the project site). ▪ Potential visual effects (light pollution) due to construction and operations. | <p>The Application evaluates the predicted change in landscape character experienced from important viewpoints near the LNG facility in the Visual Quality VC (see Section 6.2). Mount Comblain was added as a viewpoint as a result of feedback received from the Dodge Cove community.</p> <p>The Visual Quality VC also considers changes to nighttime lighting conditions adjacent to the LNG facility.</p> <p>Addressed in the Application</p> |
| Infrastructure and Services | <ul style="list-style-type: none"> ▪ Impacts due to increased strain on services such as hospitals, RCMP, social services and emergency response ▪ Impact of construction camps on local services and proximity of workers to the community. | <p>The Infrastructure and Services VC (see Section 6.3) addresses the potential change in community, transportation and health care infrastructure and services that could result from the in-migration of temporary and/or permanent populations and Project activities. The Application includes mitigation measures proposed to manage potential demands on infrastructure and services as a result of the Project. In addition, the Application describes camp policies intended to avoid or reduce demand on community infrastructure and services.</p> <p>Addressed in the Application</p> |

Table 2-7 Summary of Concerns Raised by the Public

| Topic | Key Concern | Aurora LNG Response and Status |
|---------------------------------------|--|---|
| Land and Resource Use | <ul style="list-style-type: none"> ▪ Impacts to land used for recreational purposes and for food harvesting, hunting, and firewood collection ▪ Impacts to visitors and annual seasonal events | <p>The Land and Resource Use VC (see Section 6.4) includes an analysis of Project-related changes in non-tenured land use, including changes in the intensity of use (e.g., visitor trips/year) and changes in area currently available for recreational use. The Application includes mitigation measures proposed to avoid or reduce potential effects on non-tenured land uses.</p> <p>Addressed in the Application</p> |
| Community Health | <ul style="list-style-type: none"> ▪ Protection of community health, safety and mental wellness | <p>As a result of concerns, the Community Health VC was added to the Application. This VC addresses the potential change in community health and wellness resulting from the Project and includes measurable parameters related to health status and select social determinants of health. The Application includes mitigation measures proposed to avoid or reduce potential adverse effects and enhance beneficial effects on community health and wellness.</p> <p>Addressed in the Application</p> |
| Marine Use and Navigable Waters | <ul style="list-style-type: none"> ▪ Impact of increased harbour traffic and access to docks and marine recreational activity ▪ Location of LNG berths and associated impacts to marine traffic routes | <p>The Marine Use and Navigable Waters VC (see Section 6.5) includes an assessment of potential effects on marine navigation and marine fisheries and other uses from construction of marine infrastructure and Project-related marine traffic. The Application includes mitigation measures proposed to avoid or reduce potential effects on marine use and navigation.</p> <p>The Project will adhere to all applicable regulations and operating guidelines to ensure the safe operation and navigation of shipping vessels. Aurora LNG also intends to participate in the voluntary Transport Canada TERMPOL process, which is intended to provide a technical review of marine terminal system and transshipment sites.</p> <p>Addressed in the Application</p> |
| Archaeological and Heritage Resources | <ul style="list-style-type: none"> ▪ Impacts to coastal heritage landmarks | <p>The Application provides information on the archaeological and heritage background of the proposed Project site and includes an assessment of the loss of information about or alteration to site contents or context as a result of the proposed Project in Section 7.0.</p> <p>Addressed in the Application</p> |
| Human Health | <ul style="list-style-type: none"> ▪ Impacts to air quality and water quality on human health | <p>Potential effects of changes in air quality on human health were assessed in Section 8.0.</p> <p>In addition, the Human Health VC includes discussion on water quality (see Section 8.0). Project activities are not expected to have direct effects to surface water quality in a manner that would affect human health. There will be no discharges to the freshwater aquatic environment on Digby Island that could affect drinking water. Refer to Section 8.0 for additional detail. Potential effects of the Project on water quality were assessed in the Water Quality VC (see Section 4.5).</p> <p>Addressed in the Application</p> |

Table 2-7 Summary of Concerns Raised by the Public

| Topic | Key Concern | Aurora LNG Response and Status |
|----------------------------|--|---|
| Accidents and Malfunctions | <ul style="list-style-type: none"> ▪ Public safety in the event of an incident at the LNG facility, and safeguards in place for docking, fuelling and departure of LNG tankers | <p>Section 9 of the Application assesses the potential adverse environmental, social, economic, heritage or human health effects that may result from potential accidents or malfunctions related to the proposed Project. Several types of accidents or malfunctions have been considered. For these potential events, the Application will describe the event, methods for assessing the potential risk, an assessment of the likelihood and probability of the event occurring, mitigation measures to reduce the likelihood of occurrence, assessment of potential effects and/or consequences, and emergency response measures to mitigate the effects and/or consequences, amongst others.</p> <p>Aurora LNG has made safety a priority and takes the safety of its employees, contractors and the public extremely seriously. Aurora LNG also intends to participate in the voluntary Transport Canada Technical Review Process of Marine Terminal Systems and Transshipment Sites process, which will include a comprehensive risk assessment to ensure safety of vessel transits from the terminal to open ocean, the development of recommendations to improve safety and minimize risk and the development of detailed safety procedures and emergency response plans.</p> <p>Addressed in the Application</p> |
| Other Issues / Concerns | <ul style="list-style-type: none"> ▪ Proximity of the Project ▪ Site layout and location, including the flare stack and MOF ▪ Consideration of SIGTTO and Sandia report | <p>Site selection criteria and feedback from the public that resulted in changes to Project design are outlined in Section 1.2 of the Application. Alternative designs for the Project that have and continue to be considered are discussed in Section 1.7 of the Application.</p> <p>With respect to the application of guidance from the Society of International Gas Tanker and Terminal Operators (SIGTTO) and the Sandia report, Aurora LNG notes that it has and will continue to consider guidance from SIGTTO, including the Site Selection and Design Guidelines for LNG Ports and Jetties (SIGTTO 2000), and the Sandia Report entitled Guidance on Risk Analysis and Safety Implications of a Large Liquefied Natural Gas (LNG) Spill Over Water (Sandia 2004) as part of facility design, construction and operations. Aurora LNG refers to its technical assessment of the contents and applicability of these documents as provided in the Public Comment Tracking Table (posted 2015/11/23). For the reasons cited in this analysis, Aurora LNG is of the view that, while not currently legally enforced, its current facility component siting is consistent with the recommendations provided by SIGTTO and in the Sandia Report.</p> <p>Aurora LNG will continue to consult with local residents as Project design progresses.</p> <p>Addressed in the Application</p> |

2.5 References

- British Columbia Environmental Assessment Office and Canadian Environmental Assessment Agency (BC EAO and CEA Agency). March 6, 2013. Memorandum of Understanding on Substitution of Environmental Assessments. Available at:
http://www.eao.gov.bc.ca/pdf/EAO_CEEA_Substitution_MOU.pdf
- British Columbia Environmental Assessment Office (BC EAO). June 23, 2014. Order under Section 10(1)(c).
- British Columbia Environmental Assessment Office (BC EAO). August 25, 2014. Order under Section 11.
- British Columbia Environmental Assessment Office (BC EAO). December 16, 2014. Order Under Section 13, Amending Section 11 Order.
- British Columbia Environmental Assessment Office (BC EAO). August 30, 2016. Order Under Section 13, Amending Section 11 Order.
- British Columbia Environmental Assessment Office (BC EAO). 2015. Environmental Assessment Office User Guide. Available online at: <http://www.EAO.gov.bc.ca/guidance.html>. Accessed: February 2016.

