# TABLE OF CONCORDANCE

The table of concordance, provided below, summarizes all the requirements for content and methodological approaches of the approved Application Information Requirements and indicates where these are located in the Application.

**Table 1: Table of Concordance between Approved Application Information Requirements and the Application**

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| **Table of Concordance** | | | | |
| Table of Concordance | A table, in the format of Table 1, will summarize the concordance between the information requirements identified in the approved AIR and the Application. | Overview | Table of Concordance | ix |
| **Acronyms and Abbreviations** | | | | |
| Acronyms and Abbreviations | A list of acronyms and abbreviations used in the Application will be provided. | Overview | Acronyms and Abbreviations | cvii |
| **Glossary of Technical Terms** | | | | |
| Glossary of Technical Terms | A list of technical terms used in the Application will be provided. | Overview | Glossary | cxxxviii |
| **Authorship** | | | | |
| Authorship | The Application will include a list of parties involved in the preparation of the Application, their qualifications, and the section(s) for which they were responsible. | Overview | Authorship | cxxxix |
| **Executive Summary** | | | | |
| Executive Summary | The Executive Summary will provide an overview of the Application and will include the following information: | Overview | ES1 Introduction | ES-1 |
| | ▪ A brief description of the proposed Project including its scope, alternatives considered, land use, potential benefits, and applicable authorizations | Overview | ES2 Project Overview | ES-2 |
| | ▪ A statement indicating whether the Proponent is applying for concurrent permitting | Overview | ES2 Project Overview | ES-2 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | ▪ A brief overview of the assessment process, including Project reviewability and the pre-application and application review stages of the environmental assessment | Overview | ES3 Assessment Process | ES-14 |
| | ▪ A summary of consultations undertaken during the environmental assessment including with the working groups, Aboriginal Groups, and the public | Overview | ES3.3 Environmental Assessment Participants | ES-16 |
| | | Overview | ES13 Aboriginal Groups Information Requirements Background | ES-47 |
| | | Overview | ES18 Summary of Public Consultation | ES-55 |
| | ▪ A summary discussion of Valued Components, including the Proponent's conclusions on key potential effects, mitigation measures, residual effects, residual cumulative effects, and the significance of residual effects | Overview | ES4 Assessment Methods | ES-17 |
| | | Overview | ES5 Assessment of Potential Environmental Effects | ES-23 |
| | | Overview | ES6 Assessment of Potential Economic Effects | ES-34 |
| | | Overview | ES7 Assessment of Potential Social Effects | ES-36 |
| | | Overview | ES8 Assessment of Potential Heritage Effects | ES-42 |
| | | Overview | ES9 Assessment of Potential Health Effects | ES-43 |
| | | Overview | ES12 Summary of Proposed Environmental and Operational Management Plans | ES-46 |
| | | Overview | ES19 Summary of Project Residual Effects | ES-55 |
| | | Overview | ES20 Summary of Mitigation Measures | ES-56 |
| | ▪ A summary of potential effects on Aboriginal rights including title (Aboriginal Interests) | Overview | ES14 Aboriginal Interests | ES-48 |
| | | Overview | ES15 Statutory Requirements under CEAA 2012 Section 5(1)(c) | ES-50 |
| | | Overview | ES16 Other Matters of Concern to Aboriginal Groups | ES-53 |
| | ▪ A summary of compliance monitoring and follow-up programs proposed, if applicable, and | Overview | ES21 Summary of Follow-Up Programs and Compliance Reporting | ES-56 |
| | ▪ Proponent conclusions resulting from the environmental assessment. | Overview | ES22 Conclusion | ES-57 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| **PART A – INTRODUCTION AND BACKGROUND** | | | | |
| **1 Purpose of the Application** | | | | |
| Purpose of the Application | The Application will provide the British Columbia Environmental Assessment Office (EAO) with sufficient information to prepare its Assessment Report for the LNG Canada Export Terminal (the proposed Project) for the provincial and federal Ministers to make decisions pursuant to the *British Columbia Environmental Assessment Act* (BCEAA) and *Canadian Environmental Assessment Act, 2012* (CEAA 2012). | Part A | 1.0 Purpose of the Application | 1-1 |
| | In this section of the Application, LNG Canada Development Inc. (LNG Canada) will confirm that the Application meets the criteria specified in this Application Information Requirements (AIR) document. | Part A | 1.0 Purpose of the Application | 1-1 |
| **2 Project Overview** | | | | |
| **2.1 Proponent Description** | | | | |
| 2.1 Proponent Description | This section of the Application will describe the Proponent, including its management team and contacts, corporate history, environmental policies, and organizational structure. | Part A | 2.1 Proponent Description | 2-1 |
| **2.2 Description of Proposed Project** | | | | |
| 2.2.1 Provincial and Federal Scope | This section of the Application will describe the provincial and federal scope of the proposed Project. | Part A | 2.2.1 Provincial and Federal Scope | 2-3 |
| 2.2.2 Technical Project Information | This section of the Application will provide an overview of the proposed Project with a focus on the main features of the LNG facility, including the marine terminal, and associated shipping activities, and details on Project phases (i.e., construction, operation, and decommissioning). | Part A | 2.2.2 Purpose of the Project | 2-3 |
| | | Part A | 2.2.5 Project Components | 2-7 |
| | | Part A | 2.2.6 Project Activities | 2-26 |
| | The technical information section of the Application will provide the following details on the proposed Project:<br>▪ The purpose of the proposed Project, including a description of how objectives are related or contribute to broader private or public sector policies, plans, or programs, if relevant | Part A | 2.2.2 Purpose of the Project | 2-3 |
| | ▪ The location of the proposed Project within a provincial, regional and local context, including maps. Coordinates of the LNG facility and marine terminal will be provided in WGS-84 and UTM coordinate systems | Part A | 2.2.3 Project Location | 2-4 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | Information on the distances from the proposed Project to the following locations (written and on maps):<br>▪ the service centre of Kitimat<br>▪ residential areas of Kitimat<br>▪ Kitamaat Village<br>▪ Terrace<br>▪ the communities of Hartley Bay and Kitkatla and First Nation reserves along the marine access route | Part A | 2.2.3 Project Location | 2-4 |
| | A description of the relevant history of the proposed Project | Part A | 2.2.4 Project History | 2-6 |
| | A description of the following onsite and offsite infrastructure and facilities, including figures of:<br>▪ the LNG processing and storage site<br>▪ the marine terminal<br>▪ supporting infrastructure and facilities (including onsite power generation, if applicable)<br>▪ temporary infrastructure and facilities<br>▪ operation of LNG carriers and other supporting marine traffic between Kitimat Harbour Terminal and the pilot boarding location at or near Triple Island | Part A | 2.2.5 Project Components | 2-7 |
| | | Part A | 2.2.5.1 LNG Facility Layout | 2-9 |
| | | Part A | 2.2.5.2 LNG Processing and Storage | 2-12 |
| | | Part A | 2.2.5.3 LNG Loading | 2-17 |
| | | Part A | 2.2.5.4 Permanent Support Facilities | 2-17 |
| | | Part A | 2.2.5.5 Waste Management | 2-18 |
| | | Part A | 2.2.5.6 Power Supply | 2-20 |
| | | Part A | 2.2.5.7 Water Supply System | 2-20 |
| | | Part A | 2.2.5.8 Temporary Infrastructure and Facilities | 2-21 |
| | | Part A | 2.2.5.9 Marine Terminal | 2-23 |
| | | Part A | 2.2.5.10 Shipping | 2-26 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | A description of the following construction activities, including relevant figures, duration, and scheduling:<br>▪ site preparation (land-based and marine)<br>▪ onshore construction<br>▪ dredging<br>▪ marine construction<br>▪ waste management<br>▪ regional vehicle and rail traffic to/from the facility site<br>▪ shipping<br>▪ commissioning and start-up | Part A | 2.2.6 Project Activities | 2-26 |
| | | Part A | 2.2.6.1 Construction | 2-27 |
| | A description of the following operational activities, including duration and scheduling:<br>▪ natural gas treatment and natural gas liquids extraction<br>▪ LNG production<br>▪ LNG loading<br>▪ LNG shipping<br>▪ waste management<br>▪ transportation of dangerous goods | Part A | 2.2.6 Project Activities | 2-26 |
| | | Part A | 2.2.6.2 Operation | 2-32 |
| | A conceptual discussion of decommissioning and abandonment activities, based on current requirements for:<br>▪ dismantling of land-based and marine infrastructure<br>▪ remediation and reclamation of the site<br>▪ waste management<br>▪ post-closure monitoring and follow-up | Part A | 2.2.6. Project Activities | 2-26 |
| | | Part A | 2.2.6.3 Decommissioning | 2-35 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | An overview of environmental mitigation measures that were incorporated into the proposed Project planning and the benefits of these changes, including measures related to:<br>▪ site selection<br>▪ engineering design features<br>▪ feedback obtained from government agencies, Aboriginal Groups, stakeholders, and the general public. For the purposes of the AIR and the Application, Aboriginal Groups are those groups included in the section 11 Order (Schedules B, C and D), namely:<br>• Haisla Nation<br>• Gitga'at First Nation<br>• Gitxaala Nation<br>• Kitselas First Nation<br>• Kitsumkalum First Nation<br>• Lax Kw'alaams First Nation, and<br>• Metlakatla First Nation, and<br>• Métis Nation British Columbia | Part A | 2.2.7 Design Mitigation | 2-35 |
| | | Part A | 2.2.7.1 Site Selection | 2-36 |
| | | Part A | 2.2.7.2 Engineering Design Features | 2-36 |
| | | Part A | 2.2.7.3 Changes Based on Feedback | 2-37 |
| | A description of the capital construction phase and the lifetime of the proposed Project in years, and | Part A | 2.2.8 Capital Costs and Employment | 2-39 |
| | A summary of the environmental management system and adaptive management approach for the proposed Project. | Part A | 2.2.9 Environmental Management | 2-39 |
| **2.3 Alternative Means of Undertaking the Proposed Project** | | | | |
| 2.3 Alternative Means of Undertaking the Proposed Project | This section of the Application will describe each alternative considered and criteria used to evaluate each alternative, as will the rationale for selecting the preferred alternative. | Part A | 2.3 Alternative Means of Undertaking the Project | 2-40 |
| | | Part A | 2.3.1 Marine Access Route | 2-40 |
| | | Part A | 2.3.2 Marine Terminal and LNG Loading and Circulation System | 2-42 |
| | | Part A | 2.3.3 Power Supply | 2-44 |
| | | Part A | 2.3.4 Disposal of Marine Sediment | 2-45 |
| | | Part A | 2.3.5 Workforce Accommodation Centre Location(s) | 2-48 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| **2.4 Land and Marine Use** | | | | |
| 2.4 Land and Marine Use | This section of the Application will provide:<br>▪ A description of the land ownership and land use regime including licences or other authorizations that would potentially be required for or affected by the proposed Project | Part A | 2.4 Land and Marine Use | 2-55 |
| | ▪ A report on the status of consultation with private landowners on resolving issues with tenure and permit holders | Part A | 2.4 Land and Marine Use | 2-55 |
| | ▪ Zoning and the associated management objectives for lands affected by the proposed Project based on the zoning in the Kitimat Municipal Code and the District of Kitimat's OCP | Part A | 2.4 Land and Marine Use | 2-55 |
| | ▪ A summary of the following relevant government plans will be provided including maps where relevant:<br>• Kalum Land and Resource Management Plan<br>• District of Kitimat's Official Community Plan<br>• Kitimat Municipal Code, Part 9 – Planning<br>• Pacific North Coast Integrated Management Area<br>• Liquefied Natural Gas: A Strategy for BC's Newest Industry<br>• Marine Planning Partnership for the North Coast | Part A | 2.4.1 Land Use | 2-55 |
| | | Part A | 2.4.2 Marine Use | 2-57 |
| | ▪ A description of existing and proposed management and monitoring programs or regional studies | Part A | 2.4.1 Land Use | 2-55 |
| | | Part A | 2.4.2 Marine Use | 2-57 |
| | ▪ A summary of land and marine use plans as made available to LNG Canada during the environmental assessment process | Part A | 2.4.1 Land Use | 2-55 |
| | | Part A | 2.4.2 Marine Use | 2-57 |
| | ▪ Identification of parks, reserves, conservancies, and management areas, if any, potentially affected by the proposed Project | Part A | 2.4.3 Parks and Protected Areas | 2-59 |
| | ▪ Identification of other developments and/or land uses (e.g., recreational areas), even if not directly related to the proposed Project, that might result in overlapping effects with the proposed Project, and | Part A | 2.4.1 Land Use | 2-55 |
| | | Part A | 2.4.2 Marine Use | 2-57 |
| | ▪ Identification of future developments and/or land uses that are reasonably foreseeable and sufficiently certain to proceed. | Part A | 2.4.1 Land Use | 2-55 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| **2.5 Benefits of Proposed Project** | | | | |
| 2.5 Benefits of Proposed Project | This section of the Application will include the following information:<br>▪ A summary of initial capital construction cost estimates, indication of the potential for use of local facilities, and indication if local facilities are currently underutilized | Part A | 2.5.1 Introduction | 2-61 |
| | | Part A | 2.5.3 Project Costs | 2-63 |
| | A summary of estimated operating costs over the life of the proposed Project (for land, buildings, and equipment) including:<br>▪ estimated annual operating costs (excluding labour)<br>▪ an indication of how costs are measured (i.e., current dollar value or Net Present Value)<br>▪ high-level cost estimate for decommissioning, closure, abandonment, and reclamation, and | Part A | 2.5.3 Project Costs | 2-63 |
| | Employment estimates including:<br>▪ direct employment, stated in number of person years, to be created by major job category (e.g., labour, management, business services) during construction and operation, distinguishing among full-time, part-time, and seasonal workers<br>▪ wage levels, by major job category, for the construction and operating periods<br>▪ breakdown of the number of people that are expected to be hired locally, provincially, nationally, or internationally for the proposed Project<br>▪ potential for LNG Canada to use local human resources that are currently underutilized<br>▪ relevant employment policies and practices<br>▪ indirect employment for the construction and operation phases of the proposed Project including any assumptions relating to industry specific multipliers or other multipliers used. | Part A | 2.5.4 Employment | 2-67 |
| | Results from the British Columbia Input Output model (BCIOM) and Statistics Canada Interprovincial Input-Output model will be considered in estimates of direct, indirect and induced economic benefits. | Part A | 2.5.3 Project Costs | 2-63 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | LNG Canada is committed to bringing benefits to local communities by creating jobs and investment and will contribute to employment creation and business development both directly and indirectly. It is the Proponent's intention to build capacity and workforce development through the construction and operation phases of the proposed Project.<br>This section of the Application will provide summary information on these efforts and also provide information, where available, on:<br>▪ Contractor supply services including:<br>• summary list of the major types of businesses/contractors, broken down at the local, provincial, and national level, that would benefit from the proposed Project<br>• estimated value of supply of service contracts expected for both the construction and operation phases of the proposed Project<br>• Information about LNG Canada's local purchasing strategy, if any | Part A | 2.5.3 Project Costs | 2-63 |
| | | Part A | 2.5.4 Employment | 2-67 |
| | ▪ Estimate of annual government revenues for the construction and operation phases of the proposed Project including:<br>• local/municipal (property taxes, other)<br>• regional district (taxes, other)<br>• provincial (income tax, sales tax, lease, licence and tenure, royalties, other)<br>• federal (income tax, sales tax, payroll taxes, other) | Part A | 2.5.5 Government Revenue | 2-79 |
| | ▪ Assumptions and reference information sources for the above information, and | Part A | 2.5.2 Methods | 2-61 |
| | ▪ Contributions of the proposed Project to community development. | Part A | 2.5.9 Contributions by LNG Canada to Community Development | 2-86 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| **2.6 Applicable Authorizations** | | | | |
| 2.6 Applicable Authorizations | This section of the Application will provide an overview of the OGAA regulatory framework, how it is managed by the OGC, and its relationship to the proposed Project. | Part A | 2.6.1 Provincial Permits and Approvals | 2-87 |
| | The Application will also present a list of all applicable federal, provincial, and municipal licences, permits, authorizations and/or approvals required for the construction and operation of the proposed Project, including shipping activities, and identify the associated responsible regulatory body. | Part A | 2.6.2 Federal Permits and Approvals | 2-88 |
| | | Part A | 2.6.3 Municipal Permits and Approvals | 2-88 |
| | Further, the type of permitting options considered (i.e., concurrent and synchronous) will be discussed and the Application will state whether a request for concurrent permitting will be submitted under the Concurrent Approval Regulation pursuant to BCEAA. If concurrent permitting is pursued, the reason for this decision will be provided and the regulatory instruments that will be requested for concurrent review will be identified. | Part A | 2.6.1 Provincial Permits and Approvals | 2-87 |
| **3 Assessment Process** | | | | |
| 3 Assessment Process | This section of the Application will include:<br>▪ A brief description of the assessment process under BCEAA, including the role of the AIR in the pre-application stage and the Assessment Report that will be prepared by EAO for the federal and provincial Ministers | Part A | 3.1.1 Overview of the Provincial Assessment and Substitution Process | 3-1 |
| | ▪ A statement that the proposed Project is subject to review under BCEAA and CEAA 2012 and a description of the relevant provincial and federal triggers | Part A | 3.1 Regulatory Framework | 3-1 |
| | ▪ A statement that the federal Minister of the Environment has granted substitution to the EAO for the environmental assessment required under CEAA 2012, a description of the conditions for the substitution process, and a summary of how CEAA 2012 requirements have been fulfilled | Part A | 3.1.3 Federal Framework | 3-3 |
| | ▪ A statement indicating that the Application has been developed pursuant to the approved AIR and complies with requirements of the section 11 Order, and | Part A | 3.1.4 Summary of Pre-Application Stage | 3-7 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | ▪ A list of applicable federal and provincial milestones, including (but not limited to) the federal granting of substitution under CEAA 2012, issuance of section 10, 11, and 13 Orders, meetings of the Working Groups, and the public comment period on the draft AIR. | Part A | 3.1.4 Summary of Pre-Application Stage | 3-7 |
| **3.1 Environmental Assessment Participants** | | | | |
| 3.1 Environmental Assessment Participants | This section of the Application will include:<br>▪ A list of the federal and provincial government agencies, local government bodies and Aboriginal Groups, as identified in schedules B and C of the section 11 Order, that were invited to be a part of EAO's working groups. | Part A | 3.2 Environmental Assessment Participants – Working Groups | 3-8 |
| | ▪ A summary of how consultation was undertaken with the Working Groups in the preparation of the AIR and Application, in accordance with section 12 of the section 11 Order | Part A | 3.2 Environmental Assessment Participants – Working Groups | 3-8 |
| | ▪ A summary of the key issues and concerns raised by members of the Working Groups during the preparation of the AIR and the Application, how those issues were addressed, and the degree to which they were addressed | Part A | 3.2 Environmental Assessment Participants – Working Groups | 3-8 |
| | ▪ A link to the Working Group Issues Tracking Table on the EAO website, and | Part A | 3.2 Environmental Assessment Participants – Working Groups | 3-8 |
| | ▪ A summary of the proposed approaches for consulting Working Groups during the Application review and for resolving outstanding issues. | Part A | 3.2 Environmental Assessment Participants – Working Groups | 3-8 |
| **PART B – ASSESSMENT OF POTENTIAL EFFECTS, MITIGATION, AND SIGNIFICANCE OF RESIDUAL EFFECTS** | | | | |
| **4 Assessment Methods** | | | | |
| 4 Assessment Methods | This section of the Application will describe the assessment methods that will be used to prepare the Application. | Part B | 4 Assessment Methods | 4-1 |
| | The Application will outline the steps in the effects assessment (Figure 4-1) including:<br>1. identification of key issues and associated valued components (VCs) that are relevant to the proposed Project and the assessment, and that reflect the environmental effects to be considered as identified in section 5 of CEAA 2012 | Part B | 4 Assessment Methods | 4-1 |
| | | | 4.1 Valued Components | 4-3 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | 2. establishment of assessment boundaries for each VC (spatial, temporal, technical, and administrative) | Part B | 4.2 Assessment Boundaries | 4-17 |
| | | | 4.2.1 Spatial Boundaries | 4-17 |
| | | | 4.2.2 Temporal Boundaries | 4-18 |
| | | | 4.2.3 Administrative and Technical Boundaries | 4-18 |
| | 3. scope of assessment, including:<br>a. regulatory/policy setting<br>b. key issues<br>c. measurable parameters and significance thresholds<br>d. information limitations<br>e. traditional knowledge (TK) and traditional use (TU) information considered<br>f. role of consultation in the assessment | Part B | 4 Assessment Methods | 4-1 |
| | 4. baseline conditions in the local and regional study areas based on existing information, TK and TU information, and data collected for the proposed Project | Part B | 4.3 Description of Baseline Conditions | 4-19 |
| | 5. assessment of Project-specific effects including:<br>a. identification of interactions between the proposed Project and VCs<br>b. potential effects that include the environmental effects identified in sections 5 (1)(a) and (b) and 5(2) of CEAA 2012<br>c. mitigation of potential effects<br>d. characterization of predicted residual effects<br>e. description of the likelihood of predicted residual effects<br>f. significance of predicted residual effects<br>g. discussion of the predicted confidence and risk (as per 4.4.7) | Part B | 4.4 Assessment of Project-Specific Effects | 4-19 |
| | | | 4.4.1 Identification of Project-VC Interactions | 4-19 |
| | | | 4.4.2 Description of Project Effect Mechanisms | 4-25 |
| | | | 4.4.3 Mitigation of Potential Effects | 4-25 |
| | | | 4.4.4 Characterization of Residual Effects | 4-25 |
| | | | 4.4.5 Likelihood of Residual Effects | 4-26 |
| | | | 4.4.6 Determination of Significance for Residual Effects | 4-27 |
| | | | 4.4.7. Confidence and Risk | 4-27 |
| | | | 4.4.8 Residual Effects Summary | 4-27 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | 6. assessment of cumulative effects, which involves:<br>a. identifying past, present, and reasonably foreseeable projects or activities that would likely interact in a cumulative fashion with predicted residual proposed Project effects<br>b. establishing the context for cumulative effects<br>c. determining the potential for the proposed Project to interact with other projects and activities<br>d. determining the significance of the proposed Project's predicted contribution to cumulative effects, where necessary, that will include the following steps:<br>• description of cumulative effects<br>• mitigation of cumulative effects<br>• characterization of predicted cumulative effects<br>• likelihood of cumulative residual effects<br>• significance determination<br>• confidence and risk assessment, and | Part B | 4.5 Cumulative Effects | 4-28 |
| | | | 4.5.1 Project and Activities Inclusion List | 4-29 |
| | | | Table 4.5-1 Project and Activities Inclusion List | 4-29 |
| | | | 4.5.2 Cumulative Effects Assessment | 4-33 |
| | | | 4.5.2.1 Stage 1, -Cumulative Effects Context | 4-33 |
| | | | 4.5.2.2. Stage 2, -Determination of Potential Cumulative Interactions | 4-33 |
| | | | 4.5.2.3 Stage 3, -Determining Significance of Cumulative Effects | 4-34 |
| | | | 4.5.2.3.2 Mitigation of Cumulative Effects | 4-34 |
| | | | 4.5.2.3.3 Characterization of Cumulative Effects | 4-35 |
| | | | 4.5.2.3.4 Likelihood of Cumulative Effects | 4-35 |
| | | | 4.5.2.3.5 Determination of Significance for Cumulative Effects | 4-35 |
| | | | 4.5.2.3.6 Confidence and Risk | 4-35 |
| | | | 4.5.2.4 Summary of Cumulative Effects | 4-35 |
| | 7. follow-up programs and compliance monitoring. | Part B | 4.6 Follow-up Program and Compliance Monitoring | 4-36 |
| **4.1 Valued Components** | | | | |
| 4.1 Valued Components | This section of the Application will describe the process for selecting candidate VCs for assessment, briefly described herein. VCs and the rationale for their inclusion or exclusion in Part B of the assessment for the proposed Project are listed in Table 4.1 1. | Part B | 4.1 Valued Components | 4-3 |
| | Table 4.1-2 summarizes the topics addressed by each VC, potential adverse effects of the proposed Project and measurable parameters used to assess those effects. | Part B | 4.1 Valued Components | 4-3 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| **4.2 Assessment Boundaries** | | | | |
| 4.2.1 Spatial Boundaries | This section of the Application will describe the spatial boundaries and the rationale for their selection in detail for each VC. Should boundaries change, a rationale will be provided in the Application. | Part B | 4.2.1 Spatial Boundaries | 4-17 |
| 4.2.2 Temporal Boundaries | This section of the Application will describe the rationale for selecting temporal boundaries for each VC based on the phases of the proposed Project. The Application will also describe any annual or seasonal variability in temporal effects on VCs, as appropriate. | Part B | 4.2.2 Temporal Boundaries | 4-18 |
| 4.2.3 Administrative and Technical Boundaries | Where relevant, the Application will identify the administrative and technical boundaries for the VCs. Administrative boundaries might include specific aspects of provincial and federal regulatory requirements, as well as regional planning initiatives that are relevant to the assessment of the proposed Project's effects on a specific VC. | Part B | 4.2.3 Administrative and Technical Boundaries | 4-18 |
| **4.3 Description of Baseline Conditions** | | | | |
| 4.3 Description of Baseline Conditions | This section of the Application will describe baseline conditions for each VC (and associated subcomponents when applicable) in sufficient detail to enable potential Project-VC interactions to be identified, understood, and assessed. Baseline conditions will focus on information required to address measureable parameters defined for the VC. Key elements of the approach to describing baseline conditions include:<br>▪ appending and/or referencing existing reports and documents as appropriate<br>▪ collecting, analyzing, and presenting data following appropriate provincial or federal standards (e.g., Resource Information Standards Committee)<br>▪ providing rationale for the selection of sampling sites and analytical parameters as appropriate<br>▪ discussing the quality and reliability of these data sources and how they are used to support the assessment<br>▪ incorporating available TK into the Application, in addition to information collected through field studies, surveys, and other research methods<br>▪ describing field and laboratory methods, along with any quality assurance and quality control measures applied, and<br>▪ describing any modelling exercises and limitations of modelling | Part B | 4.3 Description of Baseline Conditions | 4-19 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 4.3.1 Standards and Guidelines for Baseline Conditions | Table 4.3 1 lists the standards and guidance that will be used for the description of baseline conditions for each VC. | Part B | 5.2.3 Baseline Conditions (Air Quality) | 5.2-12 |
| | | Part B | 5.3.3 Baseline Conditions (Greenhouse Gas Management) | 5.3-11 |
| | | Part B | 5.4.3 Baseline Conditions (Acoustic Environment) | 5.4-12 |
| | | Part B | 5.5.3 Baseline Conditions (Vegetation Resources) | 5.5-16 |
| | | Part B | 5.6.3 Baseline Conditions (Wildlife Resources) | 5.6-18 |
| | | Part B | 5.7.3 Baseline Conditions (Freshwater and Estuarine Fish and Fish Habitat) | 5.7-21 |
| | | Part B | 5.8.3 Baseline Conditions (Marine Resources) | 5.8-22 |
| | | Part B | 5.9.3 Baseline Conditions (Surface Water Quality) | 5.9-8 |
| **4.4 Assessment of Project-Specific Effects** | | | | |
| 4.4.1 Identification of Project-VC Interactions | This section of the Application will identify interactions of concern between the proposed Project activities and each of the selected VCs. Checkmarks will be placed in a Project-VC interaction matrix, such as Table 4.4 1, to indicate interactions of potential concern between each selected VC and Project activities. The interaction table also lists past, present, and other reasonably foreseeable future activities, and indicates for each VC which of these activities may act cumulatively on it. | Part B | 4.4.1 Identification of Project-VC Interactions | 4-19 |
| | Project interactions with VCs will be assessed in the Application's VC sections. A Project-effects interaction table for each VC, such as Table 4.4-2, will indicate the interactions that will potentially result in the effects being assessed. The extent of the assessment warranted for each interaction is determined by a consideration of the severity of the resulting potential effect, the level of understanding and acceptance of proposed mitigations, and the level of concern of regulators, the public, and Aboriginal Groups. Further review of the interactions may reveal that some are unlikely to result in a significant adverse residual effect while others will require a more extensive assessment. | Part B | 4.4.1 Identification of Project-VC Interactions | 4-19 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | The assessment of Project-specific effects will include the assessment of environmental effects as defined in sections 5(1) (a) and (b) and section 5(2) of CEAA 2012. The Application will provide sufficient information for a conclusion to be reached on the significance of any residual adverse effect. | Part B | 4.4.1 Identification of Project-VC Interactions | 4-19 |
| 4.4.2 Description of Project Effects Mechanism | For each VC, this section of the Application will describe mechanisms by which specific Project activities and actions are anticipated to result in environmental, economic, social, heritage, or health effects. Where possible, the spatial and temporal extent of these anticipated effects (i.e., where and when an effect might occur) will also be described. | Part B | 4.4.2 Description of Project Effect Mechanisms | 4-25 |
| 4.4.3 Mitigation of Project Effects | Mitigation measures that will reduce or eliminate an adverse environmental, economic, social, heritage, or health effect will be described in each assessment chapter in the Application, with an emphasis on how these measures will help alter or minimize the effect. Where possible, information will be provided on the anticipated time required for mitigation measures to become effective, and the effectiveness of the proposed mitigation measure(s) in terms of the expected change in the measurable parameter(s) for the effect. Mitigation measures might include monitoring to verify results. | Part B | 4.4.3 Mitigation of Potential Effects | 4-25 |
| | A description of the mitigation measures that have been incorporated into the site selection and design of the proposed Project will be provided in the Project description chapter of the Application; these measures will not be reiterated in the VC assessments. | Part B | 4.4.3 Mitigation of Potential Effects | 4-25 |
| | This section of the Application will summarize the process and methodologies used to identify and select mitigation measures to address potential adverse effects of the proposed Project. The Application will also report any views provided by Aboriginal Groups on mitigation measures. | Part B | 4.4.3 Mitigation of Potential Effects | 4-25 |
| 4.4.4 Characterization of Residual Project Effects | The following criteria will be used in the Application to characterize (describe) the residual adverse effects on the environmental, economic, social, heritage, and health VCs described in Table 4.1 1 of the AIR. Where possible, these criteria will be described quantitatively for each VC. When residual effects cannot be characterized quantitatively, characterization will be completed using qualitative terms (such as the examples below). Definitions will be provided when qualitative terms are used. | Part B | 4.4.4 Characterization of Residual Effects | 4-25 |
| | ▪ Magnitude—the expected size or severity of effect. Low magnitude effects may have negligible to little effect, while high magnitude effects may have a substantial effect. | Part B | 4.4.4 Characterization of Residual Effects | 4-25 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | ▪ Geographical Extent—the spatial scale over which the residual effects of the Project are expected to occur. The geographic extent of effects can be local or regional. Local effects may have a lower effect than regional effects. | Part B | 4.4.4 Characterization of Residual Effects | 4-25 |
| | ▪ Duration—the length of time the residual effect persists. The duration of an effect can be short term or longer term. | Part B | 4.4.4 Characterization of Residual Effects | 4-25 |
| | ▪ Frequency—how often the residual effect occurs. The frequency of an effect can be frequent or infrequent. Short term and/or infrequent effects may have a lower effect than long term and/or infrequent effects. | Part B | 4.4.4 Characterization of Residual Effects | 4-25 |
| | ▪ Reversibility—whether or not the residual effect on the VC can be reversed once the physical work or activity causing the disturbance ceases. Effects can be reversible or permanent. Reversible effects may have lower effect than irreversible or permanent effects. | Part B | 4.4.4 Characterization of Residual Effects | 4-25 |
| | ▪ Context—refers primarily to the sensitivity and resilience of the VC. Context draws heavily on an understanding of existing conditions, which reflect cumulative effects of other projects and activities that have been carried out, and information about the impact of natural and human-caused trends on the condition of the VC. Project effects may have a higher effect if they occur in areas or regions that:<br>• have already been adversely affected by human activities (i.e., disturbed or undisturbed)<br>• are ecologically fragile and have little resilience to imposed stresses (i.e., fragile). | Part B | 4.4.4 Characterization of Residual Effects | 4-25 |
| 4.4.5 Likelihood of Residual Project Effects | Likelihood refers to whether or not a residual effect is likely to occur. The probability of a residual adverse effect occurring and rationale for this determination are presented in table form. | Part B | 4.4.5 Likelihood of Residual Effects | 4-26 |
| 4.4.6 Determination of Significance of Residual Effects | This section of the Application will discuss the potential significance of any residual effects for all of the VCs included in the assessment. | Part B | 4.4.6 Determination of Significance for Residual Effects | 4-27 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 4.4.7 Confidence and Risk | The determination of significance will also include a discussion of the "prediction confidence" based on:<br>▪ scientific certainty relative to qualifying or estimating the effect, including the quality and/or quantity of data and the understanding of the effect mechanisms<br>▪ scientific certainty relative to the effectiveness of the proposed mitigation measures, and<br>▪ professional judgement from prior experience including proven mitigation measures. | Part B | 4.4.7 Confidence and Risk | 4-27 |
| 4.4.8 Residual Project Effects and Significance | The characterization of residual Project effects for each selected VC will be presented in the Application in a summary table following the format of Table 4.4 3. | Part B | 4.4.8 Residual Effects Summary | 4-27 |
| **4.5 Assessment of Cumulative Effects** | | | | |
| 4.5.1 Project and Activities Inclusion List | This section of the Application will assess potential cumulative environmental, economic, health, social, and heritage effects resulting from Project residual effects interacting cumulatively with similar effects of past, present, and future projects and activities. Future projects and activities considered in the cumulative effects assessment will be those that are reasonably foreseeable, including those that: (a) have been publicly announced with a defined project execution period and with sufficient project details that they can be included in the assessment, (b) are currently undergoing an environmental assessment, or (c) are in a permitting process. | Part B | 4.5.1 Project and Activities Inclusion List | 4-29 |
| | The initial list of projects and activities that will be considered in the cumulative effects assessment is provided in Table 4.5-1. This list will be finalized by March 15, 2014, as per discussions with the EAO. The Application will include a map showing the locations of the activities included in the cumulative effects assessment. | Part B | 4.5.1 Project and Activities Inclusion List | 4-29 |
| 4.5.2 Assessment Boundaries | This section of the Application will identify temporal boundaries for the cumulative effects assessment for each VC using the boundaries established for the Project-specific effects assessment, as appropriate. | Part B | 4.2 Assessment Boundaries | 4-17 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 4.5.3 Cumulative Effects Assessment | Cumulative effects will be considered for each Project-specific residual effect. The first stage, establishment of context, will for each VC summarize baseline information within the RSA, as well as baseline cumulative effects resulting from other past and present physical works and activities. Reasonably foreseeable future-project effects that may interact cumulatively with the proposed Project's residual effects will also be factored in for establishing an overview of cumulative effects prior to the potential contribution of Project residual effects. | Part B | 4.5.2 Cumulative Effects Assessment | 4-33 |
| | The second stage, determination of whether the proposed Project effects have the potential to interact with the effects of other projects and activities, proceeds with an analysis of whether the following two conditions are met:<br>▪ The proposed Project results in a demonstrable or measurable residual effect on the VC.<br>▪ The Project-specific residual effect on a VC does, or is likely to, act in a cumulative fashion with the effects on that VC of other past, existing, or future projects and activities in the area (i.e., there is an overlap of the proposed Project effects with similar effects of other projects and activities). | Part B | 4.5.2 Cumulative Effects Assessment | 4-33 |
| | The third stage of the assessment, determination of significance, proceeds if the potential for the proposed Project to contribute to cumulative effects has been established in the second stage. The assessment will make a determination of significance of the overall cumulative effect resulting from the addition of the proposed Project's residual effect. The assessment will also analyze the proposed Project's contribution to the cumulative effects to provide an understanding of the degree to which the Project may add to the cumulative effects. | Part B | 4.5.2 Cumulative Effects Assessment | 4-33 |
| | **Description of Cumulative Effects**<br>To support the more extensive assessment that follows, the Application will further describe the mechanisms whereby the adverse residual effects from the proposed Project interact with those from other projects and activities in the RSA for each VC. The spatial and temporal extent of these anticipated changes will also be described and quantified in terms of the degree of change in the measurable parameter(s) (i.e., where and when the interactions between the Project residual effects and the residual effects of other projects and activities are expected to occur). | Part B | 4.5.2 Cumulative Effects Assessment | 4-33 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | **Mitigation of Cumulative Effects**<br>The Application will describe measures available to LNG Canada to reduce any identified potentially adverse Project cumulative effects, including a discussion of how these measures might modify the characteristics of a cumulative effect. Proposed mitigation measures that would require government action or a broader industry approach will also be identified and briefly discussed. | Part B | 4.5.2 Cumulative Effects Assessment | 4-33 |
| | **Characterization of Residual Cumulative Effects**<br>This section of the Application will describe adverse residual cumulative effects, after application of the additional mitigation measures. The residual cumulative effects will be characterized by magnitude, geographic extent, frequency, duration, reversibility, and context to the extent possible. This will be done for both:<br>▪ the overall cumulative effect (i.e., the effect of all past, present, and reasonably foreseeable projects and activities in combination with the effect of the proposed Project), and<br>▪ the contribution of the proposed Project to overall cumulative effects. | Part B | 4.5.2 Cumulative Effects Assessment | 4-33 |
| | **Likelihood of Cumulative Residual Effects**<br>This section will describe the probability of an adverse residual cumulative effect occurring. | Part B | 4.5.2 Cumulative Effects Assessment | 4-33 |
| | **Determination of Significance of Cumulative Effects**<br>The Application will include a determination of the significance of cumulative effects using the same standards or thresholds established for the proposed Project effects on VCs. This section of the Application will also present conclusions on the proposed Project's contribution to cumulative effects. | Part B | 4.5.2 Cumulative Effects Assessment | 4-33 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | **Confidence and Risk**<br>The determination of significance will also include a discussion of the "prediction confidence" based on:<br>▪ scientific certainty relative to quantifying or estimating the effect, including the quality and/or quantity of data and the understanding of the effect mechanisms<br>▪ scientific certainty relative to the effectiveness of the proposed mitigation measures, and<br>▪ professional judgement from prior experience including proven mitigation measures.<br>Higher confidence in all three variables produces greater confidence in the effect predictions, assessment of significance, and the selection of mitigation measures. | Part B | 4.5.2 Cumulative Effects Assessment | 4-33 |
| **4.6 Follow-Up Programs and Compliance Monitoring** | | | | |
| 4.6 Follow-Up Programs and Compliance Monitoring | This section of the Application will identify and briefly describe any proposed follow-up and compliance monitoring programs to verify the accuracy of the environmental assessment predictions. A summary of follow-up programs and compliance monitoring will be provided in Section 21. | Part B | 4.6 Follow-up Program and Compliance Monitoring | 4-36 |
| | | | 21 Summary of Follow-up Programs and Compliance Reporting | 21-1 |
| **5 Assessment of Potential Environmental Effects** | | | | |
| **5.1 Environmental Background** | | | | |
| 5.1 Environmental Background | This section of the Application will include a description of the existing biophysical environment, including surrounding areas, to provide a general understanding of the area surrounding the proposed Project. More details will be provided in the baseline section of each VC chapter. | Part B | 5.1 Environmental Background | 5.1-1 |
| **5.2 Air Quality** | | | | |
| 5.2.1 Introduction | The Application will introduce the air quality assessment, describe the rationale for selecting air quality as a VC, and identify linkages to other sections of the Application. | Part B | 5.2.1 Introduction | 5.2-1 |
| 5.2.2 Scope of Assessment | Scenarios modelled will include Base case (existing regional facilities and their emissions), Project case (Project-related emissions) and Future case (emissions from approved and reasonably foreseeable projects and activities). | Part B | 5.2.5.1 Analytical Methods | 5.2-19 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | The assessment will focus on changes to the following:<br>▪ CACs, i.e., $SO_2$, $NO_X$, CO, $PM_{2.5}$, $H_2S$, and VOC, and | Part B | 5.2.2.4 Selection of Effects | 5.2-5 |
| | | Part B | 5.2.2.5 Selection Measurable Parameters | 5.2-5 |
| | ▪ Acidifying air emissions, i.e., $NO_2$ and $SO_2$. | Part B | 5.2.2.4 Selection of Effects | 5.2-5 |
| | | Part B | 5.2.2.5 Selection of Measurable Parameters | 5.2-5 |
| | Emissions of ozone will also be discussed in this section. | Part B | 5.2.2.4 Selection of Effects | 5.2-5 |
| | | Part B | 5.2.2.5 Selection of Measurable Parameters | 5.2-5 |
| | Abnormal emissions (i.e., flaring) will be assessed in Section 10, Accidents or Malfunctions. | Part B | 10.5 Emergency LNG Facility Shutdown | 10-26 |
| | The Application will include a description of legislation, guidelines, BMP, and guidance documents that are relevant to the management of air quality. | Part B | 5.2.2.1 Regulatory and Policy Setting | 5.2-1 |
| | The Application will describe how TK and TU information, as obtained through consultation with Aboriginal Groups and other sources, was used in the assessment. | Part B | 5.2.2.2 Consultations' Influence on the Identification of Issues and the Assessment Process | 5.2-4 |
| 5.2.3 Baseline Conditions | The Application will provide the following information to characterize current conditions:<br>▪ regional climate, and<br>▪ baseline ambient air quality. | Part B | 5.2.3.2.2 Regional Climate | 5.2-14 |
| | | Part B | 5.2.3.2.3 Baseline Air Quality, Kitimat | 5.2-14 |
| | | Part B | 5.2.3.2.4 Baseline Air Quality, North Coast | 5.2-15 |
| | The dispersion model will be described in the Application, including, but not limited to, the following details:<br>▪ existing regional facilities and their emissions<br>▪ Project-related emissions<br>▪ emissions from approved and reasonably foreseeable projects (refer to Table 4.5-1), and<br>▪ dispersion modelling of selected substances of interest for Base, Project, and Future (or cumulative) cases. | Part B | 5.2.5.1 Analytical Methods | 5.2-19 |
| | The dispersion modelling technical data report will be included with the Application. | | Air Quality Technical Data Report | |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 5.2.4 Effects Assessment | The Application will describe the specific approach and methods used to determine the proposed Project effects on air quality, including criteria used for characterizing Project effects and assessing effects significance. Interactions with potential to result in effects of concern, as indicated in the Project Interaction Table (Table 4.4 1), will be carried forward in this analysis. | Part B | 5.2.5.1.1 Analytical Assessment Techniques (Facility) | 5.2-19 |
| | | Part B | 5.2.6.1.1 Analytical Assessment Techniques (Shipping) | 5.2-25 |
| | The Application will present an assessment of potential adverse effects of the proposed Project on air quality. Project effects on air quality may occur during the construction, operation, and decommissioning phases. Table 5.2-1 provides a summary of the potential effects of the proposed Project on air quality that will be included in the assessment, and the measurable parameters that will be used to quantify these effects. | Part B | 5.2.5.2 Assessment of Change in Ambient Air Quality in the Kitimat Airshed | 5.2-20 |
| | | Part B | 5.2.6.2 Assessment of Change in Ambient Air Quality along the Marine Access Route | 5.2-26 |
| | | Part B | Table 5.2-3: Potential Project Effects on Air Quality and Measurable Parameters | 5.2-5 |
| | Mitigation measures designed to reduce or avoid predicted effects will be described, and any relevant environmental management plans will be referenced. | Part B | 5.2.5.2.2 Mitigation for Change in Ambient Air Quality in the Kitimat Airshed | 5.2-21 |
| | | Part B | 5.2.6.2.2 Mitigation for Change in Ambient Air Quality along the Marine Access Route | 5.2-26 |
| | The residual effects of the proposed Project will be characterized by the magnitude, geographic extent, duration, frequency, reversibility, and context of the potential effects, as outlined in Section 4.4.4. | Part B | 5.2.5.2.3 Characterization of Change in Ambient Air Quality in the Kitimat Airshed | 5.2-21 |
| | | Part B | 5.2.6.2.3 Characterization of Change in Ambient Air Quality along the Marine Access Route | 5.2-26 |
| | A summary of residual effects and an assessment of their significance, likelihood and a confidence prediction, based on Table 4.4-3 will be provided. | Part B | 5.2.5.3 Summary of Project Residual Effects from the LNG facility | 5.2-25 |
| | | Part B | 5.2.6.3 Summary of Residual Effects from Shipping | 5.2-28 |
| | | Part B | 5.2.7 Summary of Project Residual Effects | 5.2-28 |
| | The significance of residual effects will be determined, as outlined in Section 4.4.6. | Part B | 5.2.5.2.4 Determination of Significance for Change in Ambient Air Quality in the Kitimat Airshed | 5.2-24 |
| | | Part B | 5.2.6.2.4 Determination of Significance for Change in Ambient Air Quality along the Marine Access Route | 5.2-27 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 5.2.5 Cumulative Effects Assessment | The Application will identify the past, present, and reasonably foreseeable future projects that may affect regional air quality. A cumulative effects assessment will include:<br>▪ methods and rationale used to identify these other developments, and<br>▪ descriptions of any potential adverse effects to air quality resulting from these developments. | Part B | 5.2.8.1 Stage 1 - Cumulative Effects Context | 5.2-28 |
| | | Part B | 5.2.8.2 Stage 2 - Determination of Potential Cumulative Interactions | 5.2-31 |
| | Residual cumulative effects will be characterized for the Future case and aggregated within the proposed Project and Baseline cases. | Part B | 5.2.8.3.1 Cumulative Effects from Interactions between the Project and Planned and Announced Projects | 5.2-33 |
| | The significance of predicted potential cumulative effects and the proposed Project contribution to cumulative effects will then be assessed using the methods outlined in Section 4.5. | Part B | 5.2.8.3 Stage 3 - Determining Significance of Cumulative Effects | 5.2-33 |
| | Incremental mitigation or management measures designed to avoid or reduce cumulative effects will be described. | Part B | 5.2.8.4 Summary of Cumulative Effects | 5.2-34 |
| 5.2.6 Conclusion | This section of the Application will include a brief summary of the predicted Project residual and cumulative effects on air quality and a conclusion on the significance of these effects. | Part B | 5.2.12 Conclusion | 5.2-38 |
| **5.3 Greenhouse Gas Management** | | | | |
| 5.3.1 Introduction | This section of the Application will introduce the greenhouse gas (GHG) management assessment, describe the rationale for selecting GHG management as a VC, and identify linkages to other sections of the Application. | Part B | 5.3.1 Introduction | 5.3-1 |
| 5.3.2 Scope of Assessment | The GHG management assessment will focus on the following emissions associated with construction and operation of the LNG facility and shipping activities:<br>▪ $CO_2$, $CH_4$, $N_2O$, PFCs, HFCs, and $SF_6$ | Part B | 5.3.2.5 Selection of Measurable Parameters | 5.3-7 |
| | | Part B | 5.3.2.6 Boundaries | 5.3-8 |
| | The Application will include a description of legislation, policies and guidelines, mitigation measures, and BMP that are relevant to GHG management. | Part B | 5.3.2.1 Regulatory and Policy Setting | 5.3-2 |
| | | Part B | 5.3.5.2 Assessment of Greenhouse Gas Emissions | 5.3-23 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | The Application will discuss anticipated GHG emissions of the proposed Project in relation to current federal and provincial GHG emission levels and trends. | Part B | 5.3.2 Scope of Assessment | 5.3-1 |
| | | Part B | 5.3.2.4 Selection of Effects | 5.3-6 |
| | | Part B | 5.3.5.2 Assessment of Greenhouse Gas Emissions | 5.3-23 |
| | | Part B | 5.3.5.3 Determination of Significance for Greenhouse Gas Emissions | 5.3-29 |
| | | Part B | 5.3.6 Summary of Project Residual Effects | 5.3-30 |
| | International BMP relevant to GHG will also be discussed and reference will be made to the frequency with which these documents will be reviewed for updates. | Part B | 5.3.9.2 Detailed Management Plan | 5.3-34 |
| 5.3.3 Baseline Conditions | The Application will provide information on current estimated provincial, national, and global GHG emission levels. | Part B | 5.3.3.2 International, National, and Provincial Greenhouse Gas Emissions Inventory | 5.3-11 |
| 5.3.4 Effects Assessment | The Application will describe the specific approach and methods used to determine the proposed Project effects on GHG management, including criteria used for characterizing Project effects. Interactions with potential to result in effects of concern, as indicated in the Project Interaction Table (Table 4.4 1), will be carried forward in this analysis. | Part B | 5.3.4 Project Interactions | 5.3-16 |
| | | Part B | 5.3.5.1 Analytical Methods | 5.3-18 |
| | The Application will present an assessment of the proposed Project's GHG emissions and GHG management approach within the context of provincial and federal policy and/or legislation. | Part B | 5.3.5.2 Assessment of Greenhouse Gas Emissions | 5.3-23 |
| | | Part B | 5.3.5.3 Determination of Significance for Greenhouse Gas Emissions | 5.3-29 |
| | | Part B | 5.3.6 Summary of Project Residual Effects | 5.3-30 |
| | Potential mitigation measures to reduce GHG emissions will be described, and where possible emission reduction will be estimated and any relevant environmental management plans will be referenced. The Proponent will work with regulators to ensure that the proposed Project complies with provincial and federal policy on GHG management. Table 5.3-1 provides a summary of the potential effects of the proposed Project on GHG management, and the measurable parameters that will be used in the assessment. | Part B | 5.3.5.2 Assessment of Greenhouse Gas Emissions | 5.3-23 |
| | | Part B | 5.3.9 Follow-up Program and Compliance Monitoring | 5.3-34 |
| | | Part B | 5.3.10 Summary of Mitigation Measures | 5.3-35 |
| | | Part B | Table 5.3-2: Potential Project Effects on Greenhouse Gas Management and Measurable Parameters | 5.3-8 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | Project residual effects, after application of mitigation (where possible), will be described in the Application. GHG will be considered by: conducting a preliminary scoping of the Project GHG emissions, characterizing the residual effect (i.e., magnitude, duration), and comparing estimated Project GHG emissions to provincial, national, and global GHG emissions (pending any new approaches or guidelines released by the provincial or federal government). A summary of residual effects will be provided. | Part B | 5.3.2 Scope of Assessment | 5.3-1 |
| | | Part B | 5.3.5.2 Assessment of Greenhouse Gas Emissions | 5.3-23 |
| | | Part B | 5.3.6 Summary of Project Residual Effects | 5.3-30 |
| | The determination of significance will be based on CEA Agency guidance (2003), in the absence of any further policies and regulations being released by the Government of Canada or the Government of BC for regulating GHG emissions for the LNG sector. | Part B | 5.3.5.3 Determination of Significance for Greenhouse Gas Emissions | 5.3-29 |
| 5.3.5 Cumulative Effects Assessment | A cumulative effects assessment following methods outlined in Section 4.5 cannot be completed for project level GHG. In lieu of this, average project GHG will be compared to recent provincial, national and international emission inventories. | Part B | 5.3.7 Assessment of Cumulative Effects | 5.3-33 |
| | | Part B | 5.3.5.3 Determination of Significance for Greenhouse Gas Emissions | 5.3-29 |
| 5.3.6 Conclusion | This section of the Application will include a brief summary of the predicted residual effects of the proposed Project on GHG management. | Part B | 5.3.11 Conclusion | 5.3-36 |
| **5.4 Acoustic Environment** | | | | |
| 5.4.1 Introduction | This section of the Application will introduce the acoustic environment assessment, describe the rationale for its selection as a VC, and identify linkages to other sections of the Application (e.g., wildlife). | Part B | 5.4.1 Introduction | 5.4-1 |
| 5.4.2 Scope of Assessment | The Application will quantify acoustic emissions associated with construction and operation of the proposed Project. The assessment will focus on:<br>▪ Overall sound levels from the facility and shipping activities, and | Part B | 5.4.2.4 Selection of Effects | 5.4-4 |
| | | Part B | 5.4.2.5 Selection of Measurable Parameters | 5.4-4 |
| | ▪ Low frequency noise during facility construction and operation. | Part B | 5.4.2.4 Selection of Effects | 5.4-4 |
| | | Part B | 5.4.2.5 Selection of Measurable Parameters | 5.4-4 |
| | A major emphasis in the assessment will be on emissions generated by gas processing and liquefaction equipment, possible onsite power generation, and transportation activities. | Part B | 5.4.5.2.3 Characterization of Change in Overall Noise Levels and Low Frequency Noise | 5.4-22 |
| | | Part B | 5.4.6.2.3 Characterization of Change in Overall Noise Levels | 5.4-42 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | The town of Kitimat, located approximately 2 km to the northeast of the proposed Project, and Kitamaat Village, located some 7 km to the southeast of the project, are the nearest continually inhabited residential communities and will be considered in the assessment. Communities along the marine access route (i.e., Hartley Bay, Kitkatla, Lax Kw'alaams and Metlakatla) will also be assessed for potential effects of shipping noise, as will areas of importance or traditional use identified by Aboriginal Groups. | Part B | 5.4.2.6 Boundaries | 5.4-5 |
| | The Application will describe how TK and TU information as obtained through consultation with Aboriginal Groups and other sources was used in the assessment. | Part B | 5.4.2.2 Consultations' Influence on the Identification of Issues and the Assessment Process | 5.4-3 |
| | | Part B | 5.4.2.3 Traditional Knowledge and Traditional Use Incorporation | 5.4-4 |
| | The Application will include a description of the *British Columbia Noise Control Best Practices Guideline* (OGC 2009), section 9.12.1 of the Kitimat Municipal Code (Noise), and any other legislation, guidelines, BMP, and guidance documents that are relevant to management of noise levels. | Part B | 5.4.2.1 Regulatory and Policy Setting | 5.4-1 |
| | It will also expand on the rationale for the spatial boundaries identified in Table 4.2 1 and Table 4.2 2. | Part B | 5.4.2.6 Boundaries | 5.4-5 |
| 5.4.3 Baseline Conditions | Baseline conditions will be confirmed by conducting a continuous sound survey at various residential receptors around the proposed Project site and along the marine access route as identified through consultation with First Nations. | Part B | 5.4.3 Baseline Conditions | 5.4-12 |
| | The measurements will be conducted in accordance with the recommendations contained in the British Columbia Noise Control Best Practices Guideline (OGC 2009). The measurement results will be used in conjunction with the default values specified in these guidelines to establish baseline sound levels in the LSA and by extension the RSA. | Part B | 5.4.3.1 Baseline Data Sources | 5.4-12 |
| | | Part B | 5.4.3.2 Baseline Overview | 5.4-13 |
| 5.4.4 Effects Assessment | The Application will describe the specific approach and methods used to determine the proposed Project effects on the acoustic environment, including criteria used for characterizing Project effects and determining significance, following the methods described in section 4. Interactions with potential to result in effects of concern, as indicated in the Project Interaction Table (Table 4.4-1), will be carried forward in this analysis. | Part B | 5.4.5.1 Analytical Methods (Facility) | 5.4-18 |
| | | Part B | 5.4.6.1 Analytical Methods (Shipping) | 5.4-41 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | The Application will present an assessment of potential effects of the proposed Project on the acoustic environment during representative phases of the proposed Project. | Part B | 5.4.5.2 Assessment of Change in Overall Noise Levels and Low Frequency Noise | 5.4-20 |
| | | Part B | 5.4.6.2 Assessment of Change in Overall Noise Levels | 5.4-42 |
| | Significant sources of noise will be identified, described, and quantified in terms of noise emissions. Subsequently, sound levels over the entire LSA and at the identified receptors will be calculated for the proposed Project in accordance with the procedures stipulated by the OGC's British Columbia Noise Control Best Practices Guideline. | Part B | 5.4.5.2 Assessment of Change in Overall Noise Levels and Low Frequency Noise | 5.4-20 |
| | | Part B | 5.4.6.2 Assessment of Change in Overall Noise Levels | 5.4-42 |
| | Operational noise level predictions will be made using Cadna/A computer modelling software, or another proven computational tool. Noise modelling will be conducted in accordance with the ISO 9613 standard (propagation standard commonly accepted by numerous regulatory bodies and noise practitioners). The modelling results will be used to assess compliance with the guideline and the Kitimat Municipal Code. | Part B | 5.4.5.2 Assessment of Change in Overall Noise Levels and Low Frequency Noise | 5.4-20 |
| | | Part B | 5.4.6.2 Assessment of Change in Overall Noise Levels | 5.4-42 |
| | Appropriate mitigation measures will be recommended, as may be required to achieve compliance and/or reduce area noise effects. | Part B | 5.4.5.2 Assessment of Change in Overall Noise Levels and Low Frequency Noise | 5.4-20 |
| | | Part B | 5.4.6.2 Assessment of Change in Overall Noise Levels | 5.4-42 |
| | Table 5.4 1 provides a summary of the potential effects of the proposed Project on the acoustic environment that will be assessed, and the measurable parameters that will be used to quantify these effects. | Part B | Table 5.4-1 Potential Effects on Acoustic Environment and Measurable Parameters | 5.4-5 |
| | Mitigation measures designed to reduce or avoid potential adverse effects will be described and relevant management plans will be referenced. | Part B | 5.4.5.2 Assessment of Change in Overall Noise Levels and Low Frequency Noise | 5.4-20 |
| | | Part B | 5.4.6.2 Assessment of Change in Overall Noise Levels | 5.4-42 |
| | The assessment of potential effects of the proposed Project with the implemented noise control measures on the acoustic environment in the area during operation will be presented. The predicted mitigated Project noise levels will be used in conjunction with the established baseline noise levels to assess the Project effects. | Part B | 5.4.5.2 Assessment of Change in Overall Noise Levels and Low Frequency Noise | 5.4-20 |
| | | Part B | 5.4.6.2 Assessment of Change in Overall Noise Levels | 5.4-42 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | The residual effects of the proposed Project will be characterized by the magnitude, geographic extent, duration, frequency, reversibility, and context of the potential effects, as outlined in Section 4.4.4. | Part B | 5.4.5.2 Assessment of Change in Overall Noise Levels and Low Frequency Noise | 5.4-20 |
| | | Part B | 5.4.6.2 Assessment of Change in Overall Noise Levels | 5.4-42 |
| | A summary of residual effects and an assessment of their significance, likelihood, and a confidence prediction, based on Table 4.4-3, will be provided. The significance of residual effects will be determined as outlined in Section 4.4.6. | Part B | 5.4.7 Summary of Project Residual Effects | 5.4-48 |
| 5.4.5 Cumulative Effects Assessment | An assessment of cumulative effects on the acoustic environment will be provided following the procedures established in Section 4.5. | Part B | 5.4.8 Assessment of Cumulative Effects | 5.4-50 |
| 5.4.6 Conclusion | This section of the Application will include a brief summary of the predicted residual effects and cumulative effects of the proposed Project on the acoustic environment and a conclusion on the significance of these effects. | Part B | 5.4.12 Conclusion | 5.4-59 |
| **5.5 Vegetation Resources** | | | | |
| 5.5.1 Introduction | This section of the Application will introduce the vegetation resources assessment, describe the rationale for its selection as a VC, and identify linkages to other sections of the Application (e.g., wildlife resources and air quality). | Part B | 5.5.1 Introduction | 5.5-1 |
| 5.5.2 Scope of Assessment | The vegetation resources assessment in the Application will focus on:<br>▪ Federally or provincially listed species at risk ( as defined by the BC Conservation Data Centre, *Species at Risk Act* (SARA), and COSEWIC) | Part B | 5.5.2.4 Selection of Effects | 5.5-6 |
| | ▪ Traditional use plant species | Part B | 5.5.2.4 Selection of Effects | 5.5-6 |
| | ▪ Invasive plant species | Part B | 5.5.2.4 Selection of Effects | 5.5-6 |
| | ▪ Provincially-listed ecological communities | Part B | 5.5.2.4 Selection of Effects | 5.5-6 |
| | ▪ Old forest | Part B | 5.5.2.4 Selection of Effects | 5.5-6 |
| | ▪ Floodplain associations | Part B | 5.5.2.4 Selection of Effects | 5.5-6 |
| | ▪ Wetlands and wetland functions | Part B | 5.5.2.4 Selection of Effects | 5.5-6 |
| | ▪ Vegetation communities sensitive to air emissions | Part B | 5.5.2.4 Selection of Effects | 5.5-6 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | The Application will describe how TK and TU information as obtained through consultation with Aboriginal Groups and other sources was used in the assessment. | Part B | 5.5.2.3 Traditional Knowledge and Traditional Use Incorporation | 5.5-5 |
| | The Application will include a description of any legislation, guidelines, BMP, and guidance documents that are relevant to the protection and management of vegetation on private and public lands. | Part B | 5.5.2.1 Regulatory and Policy Setting | 5.5-1 |
| | It will also expand on the rationale for the spatial boundaries identified in Table 4.2 1 and Table 4.2 2. Technical boundaries, which include limitations in scientific information, data analyses, and interpretation, will also be defined through the assessment process. | Part B | 5.5.2.6 Boundaries | 5.5-7 |
| 5.5.3 Baseline Conditions | The Application will provide the following information for characterizing the baseline conditions for vegetation resources: | Part B | 5.5.3.2 Baseline Overview | 5.5-17 |
| | ▪ Descriptions of ecosystem units identified in the TEM completed for the proposed Project, (including uplands, wetlands, and floodplain associations) | Part B | 5.5.3.2.1 Terrestrial Local Study Area, Terrestrial Ecosystem Mapping | 5.5-17 |
| | ▪ Description of wetland functions within the LSA | Part B | 5.5.3.2.7 Wetlands in the Terrestrial Study Areas | 5.5-31 |
| | ▪ Descriptions of ecological communities at risk identified through TEM and fieldwork (including uplands, wetlands and floodplain associations) | Part B | 5.5.3.2.6 Ecological Communities at Risk in the Terrestrial Study Areas | 5.5-27 |
| | ▪ Identification of areas of old forest | Part B | 5.5.3.2.9 Old Forest in the Terrestrial Study Areas | 5.5-36 |
| | ▪ A summary of provincially and federally listed vascular and non-vascular plants, including lichens and mosses, identified through field surveys and a query of the Conservation Data Centre | Part B | 5.5.3.2.3 Plant Species at Risk in the Terrestrial Study Areas | 5.5-21 |
| | ▪ Information on the presence of non-native invasive plant species in the area where the proposed Project is located | Part B | 5.5.3.2.4 Non-Native Invasive Plant Species in the Terrestrial Study Areas | 5.5-23 |
| | ▪ A summary of plant species identified by Aboriginal Groups as being of importance for cultural, spiritual, or traditional use, including vegetation used as country food, and | Part B | 5.5.3.2.5 Traditional Use Plants in the Terrestrial Study Areas | 5.5-23 |
| | ▪ A summary of soil map units and associated measured chemical and physical soil parameters for acidification assessment. | | Emissions Assessment for Soils and Vegetation Technical Data Report | |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 5.5.4 Effects Assessment | The Application will describe the specific approach and methods used to determine the proposed Project effects on vegetation resources, including criteria used for characterizing Project effects and determining significance. Interactions with potential to result in effects of concern, as indicated in the Project Interaction Table (Table 4.4-1) will be carried forward in this analysis. | Part B | 5.5.2.7 Residual Effects Description Criteria | 5.5-14 |
| | | Part B | 5.5.2.8 Significance Thresholds for Residual Effects | 5.5-16 |
| | | Part B | Table 5.5-14 Potential Project Effects on Vegetation Resources | 5.5-40 |
| | | Part B | 5.5.5.1 Assessment of Change in Abundance of Plant Species of Interest | 5.5-42 |
| | | Part B | 5.5.5.2 Assessment of Change in Abundance or Condition of Ecological Communities of Interest | 5.5-45 |
| | | Part B | 5.5.5.3 Assessment of Change in Native Vegetation Health and Diversity due to Emissions | 5.5-57 |
| | The Application will present an assessment of potential adverse effects of the proposed Project on vegetation resources during the construction, operation, and decommissioning phases. Table 5.5 1 provides a summary of the potential effects of the proposed Project on vegetation resources, and the measurable parameters that will be used to quantify the effects. | Part B | Table 5.5-2 Potential Project Effects on Vegetation Resources and Measurable Parameters | 5.5-7 |
| | | Part B | 5.5.5 Assessment of Residual Effects from the LNG Facility | 5.5-42 |
| | Mitigation measures designed to reduce or avoid potential adverse effects will be described and relevant management plans will be referenced. | Part B | 5.5.5 Assessment of Residual Effects from the LNG Facility | 5.5-42 |
| | | Part B | 5.5.5.1.3 Mitigation for Change in Abundance of Plant Species of Interest | 5.5-42 |
| | | Part B | 5.5.5.2.3 Mitigation for Change in Abundance or Condition of Ecological Communities of Interest | 5.5-46 |
| | | Part B | 5.5.5.3.4 Mitigation for Change in Native Vegetation Health and Diversity due to Emissions | 5.5-62 |
| | The residual effects of the proposed Project will be characterized by the magnitude, geographic extent, duration, frequency, reversibility, and context of the potential effects, as outlined in Section 4.4.4. | Part B | 5.5.5 Assessment of Residual Effects from the LNG Facility | 5.5-42 |
| | | Part B | 5.5.5.1.4 Characterization of Change in Abundance of Plant Species of Interest | 5.5-43 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | Part B | 5.5.5.2.4 Characterization of Change in Abundance or Condition of Ecological Communities of Interest | 5.5-48 |
| | | Part B | 5.5.5.3.5 Characterization of Change in Native Vegetation Health and Diversity due to Emissions | 5.5-62 |
| | A summary of residual effects and an assessment of their significance, likelihood and a confidence prediction, based on Table 4.4-3 will be provided. The significance of residual effects will be determined, as outlined in Section 4.4.6. | Part B | 5.5.6 Summary of Residual Effects | 5.5-69 |
| | | Part B | Table 5.5-26 Summary of Residual Effects on Vegetation Resources | 5.5-71 |
| 5.5.5 Cumulative Effects Assessment | An assessment of the proposed Project's potential contributions to cumulative effects on vegetation resources will be provided following the procedures established in Section 4.5. | Part B | 5.5.7 Assessment of Cumulative Effects | 5.5-70 |
| 5.5.6 Conclusion | This section of the Application will include a brief summary of the predicted residual Project effects and cumulative effects on vegetation resources and a conclusion on the significance of these effects. | Part B | 5.5.11 Conclusion | 5.5-100 |
| **5.6 Wildlife Resources** | | | | |
| 5.6.1 Introduction | This section of the Application will introduce the wildlife resources assessment, describe the rationale for its selection as a VC, and identify linkages to other sections of the Application (e.g., acoustic environment, vegetation resources, surface water quality). | Part B | 5.6.1 Introduction | 5.6-1 |
| 5.6.2 Scope of Assessment | The wildlife resources assessment in the Application will focus on:<br>▪ habitat for key species (quality and quantity), | Part B | 5.6.2.4 Selection of Effects | 5.6-7 |
| | | Part B | 5.6.2.5 Selection of Measurable Parameters | 5.6-8 |
| | ▪ sensory disturbance, and | Part B | 5.6.2.4 Selection of Effects | 5.6-7 |
| | | Part B | 5.6.2.5 Selection of Measurable Parameters | 5.6-8 |
| | ▪ behavioural alterations. | Part B | 5.6.2.4 Selection of Effects | 5.6-7 |
| | | Part B | 5.6.2.5 Selection of Measurable Parameters | 5.6-8 |
| | Table 5.6-1 presents the species that will be used in the assessment to represent the different species groups and habitat requirements within the terrestrial and marine environment relevant to the proposed Project. | Part B | 5.6.2.5.1 Key Species | 5.6-8 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | The Application will also describe how TK and TU information as obtained through consultation with Aboriginal Groups and other sources was used in the assessment. | Part B | 5.6.2.3 Traditional Knowledge and Traditional Use Incorporation | 5.6-6 |
| | The Application will include a description of legislation, guidelines, BMP, and guidance documents that are relevant to management of wildlife and their habitats. It will also expand on the rationale for the spatial boundaries identified in Table 4.2 1 and Table 4.2 2 with an emphasis on specific consideration of these key species, as appropriate. | Part B | 5.6.2.1 Regulatory and Policy Setting | 5.6-2 |
| | | Part B | 5.6.2.6 Boundaries | 5.6-10 |
| | The assessment will also define technical boundaries that include limitations in available scientific information, data analyses, and interpretation, as defined through the assessment process. | Part B | 5.6.2.6.3 Administrative and Technical Boundaries | 5.6-15 |
| 5.6.3 Baseline Conditions | The Application will provide the following information that will be used to characterize baseline conditions for the wildlife VC:<br>▪ Summary of available existing wildlife inventory and habitat use information for the proposed Project terrestrial and marine study areas including the occurrence, distribution and population status of key species and species groups, as well as information on movement patterns, travel corridors, and potential breeding areas, | Part B | 5.6.3.1 Baseline Data Sources | 5.6-18 |
| | | Part B | 5.6.3.2 Baseline Overview | 5.6-19 |
| | ▪ Assessment of habitat availability for key species within the terrestrial wildlife LSA derived from habitat suitability modelling based on Terrestrial Ecosystem Mapping (TEM), | Part B | 5.6.3.2 Baseline Overview | 5.6-19 |
| | | Part B | 5.6.3.2.5 Terrestrial Wildlife Habitat Suitability Modelling | 5.6-32 |
| | ▪ Summary of important terrestrial wildlife and marine bird habitats and features (e.g., breeding colonies, staging areas, identified raptor nests, and dens), | Part B | 5.6.3.2 Baseline Overview | 5.6-19 |
| | ▪ Summary of the results of 2012 and 2013 field studies, including surveys for terrestrial wildlife and marine birds, including surveys for diurnal and nocturnal raptors, migrating birds in the estuary, breeding songbirds, amphibians and incidental observations of wildlife or wildlife signs, | Part B | 5.6.3.2.3 Field Studies | 5.6-22 |
| | | Part B | 5.6.3.2.4 Field Study Results | 5.6-28 |
| | ▪ BC Conservation Data Centre element occurrence records, | Part B | 5.6.2.1.7 BC Conservation Framework | 5.6-4 |
| | | Part B | 5.6.3.2.2 Species of Conservation Concern | 5.6-22 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | ▪ Wildlife species identified on provincial (red- and blue-listed) and federal (COSEWIC and Schedule 1 of the Species at Risk Act) lists of species of conservation concern with the potential to occur in the terrestrial and marine assessment areas, | Part B | 5.6.3.2 Baseline Overview | 5.6-19 |
| | | Part B | 5.6.3.2.2 Species of Conservation Concern | 5.6-22 |
| | ▪ A list of wildlife species of cultural, spiritual, or traditional importance to Aboriginal Groups with potential to occur in the assessment area, and | Part B | 5.6.3 Baseline Conditions | 5.6-18 |
| | ▪ Any other traditional ecological or community knowledge, where relevant and available. | Part B | 5.6.2.3 Traditional Knowledge and Traditional Use Incorporation | 5.6-6 |
| 5.6.4 Effects Assessment | The Application will describe the specific approach and methods used to determine the potential proposed Project-related effects on wildlife resources, including criteria used for characterizing effects and determining significance. Interactions with potential to result in effects of concern, as indicated in the Project Interaction Table (Table 4.4 1), will be carried forward in this analysis. | Part B | 5.6.4 Project Interactions | 5.6-35 |
| | | Part B | Table 5.6-2: Characterization of Residual Effects for Wildlife Resources | 5.6-16 |
| | | Part B | 5.6.4.1 Justification of Interaction Rankings | 5.6-37 |
| | The Application will present an assessment of potential adverse effects of the proposed Project on wildlife, including terrestrial wildlife and marine birds, during construction, operation, and decommissioning. Table 5.6-2 provides a summary of the potential effects of the proposed Project on wildlife resources to be included in the assessment, and the measurable parameters that will be used to quantify these effects. | Part B | 5.6.4 Project Interactions | 5.6-35 |
| | | Part B | 5.6.4.1 Justification of Interaction Rankings | 5.6-40 |
| | | Part B | Table 5.6-1: Project Potential Effects on Wildlife Resources and Measurable Parameters | 5.6-8 |
| | Mitigation measures will be described that are designed to reduce or avoid predicted effects. Relevant management plans will also be referenced. | Part B | 5.6.5.2.2 Mitigation for Loss or Change in Habitat | 5.6-41 |
| | | Part B | 5.6.5.3.2 Mitigation for Risk of Injury or Mortality | 5.6-50 |
| | | Part B | 5.6.5.4.2 Mitigation for Sensory Disturbance or Behavioural Alterations | 5.6-55 |
| | | Part B | 5.6.6.2.2 Mitigation for Risk of Injury or Mortality | 5.6-60 |
| | | Part B | 5.6.6.3.2 Mitigation for Sensory Disturbance or Behavioural Alterations | 5.6-62 |
| | The residual effects of the proposed Project will be characterized by the magnitude, geographic extent, duration, frequency, reversibility, and context of the potential effects, as outlined in Section 4.4.4. | Part B | 5.6.2.7 Residual Effects Description Criteria | 5.6-15 |
| | | Part B | 5.6.5 Assessment of Residual Effects from the LNG Facility | 5.6-40 |
| | | Part B | 5.6.5.2 Assessment of Loss or Change in Habitat | 5.6-41 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | Part B | 5.6.5.3 Assessment of Risk of Injury or Mortality | 5.6-50 |
| | | Part B | 5.6.5.4 Assessment of Sensory Disturbance or Behavioural Alterations | 5.6-54 |
| | | Part B | 5.6.5.5 Summary of Project Residual Effects from the LNG Facility | 5.6-593 |
| | | Part B | 5.6.6 Assessment of Residual Effects from Shipping | 5.6-60 |
| | | Part B | 5.6.6.2 Assessment of Risk of Injury or Mortality | 5.6-60 |
| | | Part B | 5.6.6.3 Assessment of Sensory Disturbance or Behavioural Alterations | 5.6-61 |
| | | Part B | 5.6.6.4 Summary | 5.6-64 |
| | A summary of residual effects and an assessment of their significance, likelihood and a confidence prediction, based on Table 4.4-3 will be provided. | Part B | 5.6.7 Summary of Project Residual Effects | 5.6-65 |
| | The significance of residual effects will be determined as outlined in Section 4.4.6. | Part B | 5.6.5.2.4 Determination of Significance for Loss or Change in Habitat | 5.6-49 |
| | | Part B | 5.6.5.3.4 Determination of Significance of Risk of Injury or Mortality | 5.6-54 |
| | | Part B | 5.6.5.4.4 Determination of Significance of Sensory Disturbance or Behavioural Alterations | 5.6-58 |
| | | Part B | 5.6.6.2.4 Determination of Significance of Risk of Injury or Mortality | 5.6-61 |
| | | Part B | 5.6.6.3.4 Determination of Significance of Sensory Disturbance or Behavioural Alterations | 5.6-64 |
| | | Part B | 5.6.7 Summary of Project Residual Effects | 5.6-65 |
| 5.6.5 Cumulative Effects Assessment | An assessment of the potential cumulative environmental effects on wildlife resources in the RSAs will follow the procedures established in Section 4.5. | Part B | 5.6.8 Assessment of Cumulative Effects | 5.6-75 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 5.6.6 Conclusions | This section of the Application will include a brief summary of the predicted residual and cumulative effects of the proposed Project on wildlife resources and a conclusion on the significance of these effects. | Part B | 5.6.7 Summary of Project Residual Effects | 5.6-65 |
| | | Part B | 5.6.8.3 Stage 3, Determining Significance of Cumulative Effects | 5.6-81 |
| | | Part B | 5.6.8.4 Summary of Cumulative Effects | 5.6-83 |
| | | Part B | 5.6.12 Conclusion | 5.6-92 |
| **5.7 Freshwater and Estuarine Fish and Fish Habitat** | | | | |
| 5.7.1 Introduction | This section of the Application will introduce the freshwater and estuarine fish and fish habitat assessment, describe the rationale for its selection as a VC, and identify linkages to other sections of the Application. | Part B | 5.7.1 Introduction | 5.7-1 |
| | | Part B | 5.7.2.2 Consultations' Influence on the Identification of Issues in the Assessment Process | 5.7-3 |
| | | Part B | 5.7.2.3 Traditional Knowledge and Traditional Use Incorporation | 5.7-9 |
| 5.7.2 Scope of Assessment | The freshwater and estuarine fish and fish habitat assessment in the Application will focus on:<br>▪ fish, as defined in the Fisheries Act (e.g., including shellfish and crustaceans), found in surface water bodies and that are part of commercial, recreational, or Aboriginal fisheries, or that support such a fishery, | Part B | 5.7.1 Introduction | 5.7-1 |
| | | Part B | 5.7.3.3 Baseline Overview | 5.7-25 |
| | ▪ Species-at-risk, | Part B | 5.7.2.1 Regulatory and Policy Setting | 5.7-3 |
| | | Part B | 5.7.2.4 Selection of Effects | 5.7-10 |
| | | Part B | 5.7.2.5 Selection of Measurable Parameters | 5.7-11 |
| | | Part B | 5.7.2.8 Significance Thresholds for Residual Effects | 5.7-20 |
| | | Part B | Table 5.7-1 Legislation and Regulations Applicable to the Freshwater and Estuarine Fish and Fish Habitat Valued Component | 5.7-4 |
| | | Part B | Table 5.7-3 Potential Effects on Freshwater and Estuarine Fish and Fish Habitat and Measurable Parameters | 5.7-12 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | Part B | Table 5.7-5 Residual Effects Significance Thresholds | 5.7-21 |
| | ▪ Fish habitat, | Part B | 5.7.2.4 Selection of Effects | 5.7-10 |
| | | Part B | 5.7.2.5 Selection of Measurable Parameters | 5.7-11 |
| | | Part B | 5.7.2.8 Significance Thresholds for Residual Effects | 5.7-20 |
| | | Part B | 5.7.3.3 Baseline Overview | 5.7-25 |
| | | Part B | Table 5.7-3 Potential Effects on Freshwater and Estuarine Fish and Fish Habitat and Measurable Parameters | 5.7-12 |
| | | Part B | Table 5.7 -6 Primary Information Sources for Freshwater and Estuarine Fish and Fish Habitat | 5.7-22 |
| | ▪ Water quality and quantity, and | | Freshwater and Estuarine Fish and Fish Habitat Technical Data Report | |
| | | Part B | 5.7.1 Introduction | 5.7-1 |
| | | Part B | 5.7.2.4 Selection of Effects | 5.7-10 |
| | | Part B | 5.7.2.5 Selection of Measurable Parameters | 5.7-11 |
| | | Part B | 5.7.3.3 Baseline Overview | 5.7-25 |
| | | Part B | 5.7.4.1 Justification of Interaction Ranking | 5.7-39 |
| | | Part B | 5.7.6.3 Change in Fish Health | 5.7-62 |
| | | Part B | Table 5.7-1Legislation and Regulations Applicable to the Freshwater and Estuarine Fish and Fish Habitat Valued Component | 5.7-4 |
| | | Part B | Table 5.7-3 Potential Effects on Freshwater and Estuarine Fish and Fish Habitat and Measurable Parameters | 5.7-12 |
| | | Part B | Table 5.7-5 Residual Effects Significance Thresholds | 5.7-21 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | Part B | Section 5.9 Surface Water Quality | 5.9-1 |
| | ▪ Sediment quality (in terms of the capacity for project effects to lead to flow obstructions or sediment release). | | Freshwater and Estuarine Fish and Fish Habitat Technical Data Report | |
| | | Part B | 5.7.4.1 Justification of Interaction Rankings | 5.7-39 |
| | | Part B | 5.7.5.2.2 Mitigation for Changes in Fish Habitat | 5.7-45 |
| | The Application will include a description of legislation, guidelines, BMP, and guidance documents that are relevant to the protection and management of these stocks. | Part B | 5.7.4.1 Justification of Interaction Rankings | 5.7-39 |
| | | Part B | 5.7.2.5 Selection of Measurable Parameters | 5.7-11 |
| | | Part B | 5.7.2.8 Significance Thresholds for Residual Effects | 5.7-20 |
| | | Part B | Table 5.7-1 Legislation and Regulations Applicable to the Freshwater and Estuarine Fish and Fish Habitat Valued Component | 5.7-4 |
| | | Part B | Table 5.7-2 Policies and Guidelines Applicable to the Freshwater and Estuarine Fish and Fish Habitat Valued Component | 5.7-7 |
| | It will also expand on the rationale for the spatial boundaries identified in Table 4.2-1 and Table 4.2-2. Technical boundaries, which include limitations in scientific information, data analyses, and interpretation, will also be defined, if necessary. | | Freshwater and Estuarine Fish and Fish Habitat Technical Data Report | |
| | | Part B | 5.7.2.6 Boundaries | 5.7-13 |
| | | Part B | 5.7.2.6.1 Spatial Boundaries | 5.7-13 |
| | | Part B | 5.7.2.6.2 Temporal Boundaries | 5.7-14 |
| | | Part B | 5.7.2.6.3 Administrative Boundaries | 5.7-14 |
| | | Part B | 5.7.2.6.4 Technical Boundaries | 5.7-17 |
| | The Application will also describe how TK and TU information as obtained through consultation with Aboriginal Groups and other sources was used in the assessment. | | Freshwater and Estuarine Fish and Fish Habitat Technical Data Report | |
| | | Part B | 5.7.2.3 Traditional Knowledge and Traditional Use Incorporation | 5.7-9 |
| | | Part B | 5.7.7.1 Stage 1, Cumulative Effects Context | 5.7-62 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 5.7.3 Baseline Conditions | The Application will include baseline studies of the freshwater and estuarine habitats potentially affected by the proposed Project and will document the quantity and quality of fish habitat by type and fish species assemblage using these habitats over time and space. The Application will provide the following information in written form and/or maps characterizing the baseline conditions for freshwater and estuarine fish and fish habitat:<br>▪ Habitat unit (pool, riffle, glide, side channel, cascade) location, quantification, qualification, photo documentation and mapping in potentially affected estuarine tidal channels and the anadromous sections of Anderson and Beaver creeks during low, moderate and high water levels (winter, spring, late spring-early summer and fall) | | Freshwater and Estuarine Fish and Fish Habitat Technical Data Report | |
| | | Part B | 5.7.3.3.2 Fish Habitat | 5.7-34 |
| | | Part B | Table 5.7-11 Wetted Area $W_A$ Measurements and Habitat Unit Estimates for Mainstem Aquatic Habitat | 5.7-35 |
| | ▪ Fish species assemblages (by life-stage), relative abundance in accessible anadromous habitat unit types during four seasons | | Freshwater and Estuarine Fish and Fish Habitat Technical Data Report | |
| | | Part B | 5.7.3.3.1 Fisheries | 5.7-25 |
| | | Part B | Figure 5.7-5 Pacific Salmon Observations in the Local Study Area | 5.7-26 |
| | | Part B | Figure 5.7-6 Trout Observations in the Local Study Area | 5.7-28 |
| | | Part B | Figure 5.7-7 Dolly Varden Observations in the Local Study Area | 5.7-29 |
| | | Part B | Figure 5.7-8 Eulachon Observations in the Local Study Area | 5.7-30 |
| | | Part B | Table 5.7-7 Fish Species of CRA Importance in Local Study Area Watercourses | 5.7-31 |
| | | Part B | Table 5.7-8 Mainstem Closed-site Electrofishing Catch-per-unit-area Data for all Seasonally Sampled Streams | 5.7-32 |
| | | Part B | Table 5.7-9 Winter Minnow Trap Catch-per-unit-effort (fish/hour) for Mainstem Streams and Overall Habitat | 5.7-33 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | ▪ Depth, velocity, substrate transects in all habitat unit types, and application of Habitat Suitability Indices (HSI; by species and life-stage) for use in Habitat Evaluation Procedures (HEP; USFWS 1980) assessment, and | | Freshwater and Estuarine Fish and Fish Habitat Technical Data Report | |
| | | Part B | 5.7.3.2.2 Freshwater Fish Habitat | 5.7-23 |
| | | Part B | Table 5.7-11 Wetted Area $W_A$ Measurements and Habitat Unit Estimates for Mainstem Aquatic Habitat | 5.7-35 |
| | | Part B | Table 5.7-12 Habitat Parameters for Juvenile Coho Salmon in Mainstem Habitats | 5.7-35 |
| | | Part B | Table 5.7-13 Seasonal Estimates of Available Off-channel Freshwater Aquatic Habitat in the Local Study Area | 5.7-37 |
| | | Part B | Table 5.7-14 Wetted Area WA of Expected Freshwater Off-channel Habitat as a Function of Median Monthly Discharge Q March | 5.7-37 |
| | ▪ Physical data, habitat assessment (for all life history requirements), basic water quality as related to freshwater and estuarine fish and fish habitat, fish capture and meristic information as described by the Resource Inventory Committee (RIC 2001) for all habitat unit types. | | Freshwater and Estuarine Fish and Fish Habitat Technical Data Report | |
| | | Part B | 5.7.3.2.1 Freshwater Fish | 5.7-22 |
| | | Part B | 5.7.3.2.2 Freshwater Fish Habitat | 5.7-23 |
| | | Part B | Table 5.7-8 Mainstem Closed-site Electrofishing Catch-per-unit-area Data for all Seasonally Sampled Streams | 5.7-32 |
| | | Part B | Table 5.7-9 Winter Minnow Trap Catch-per-unit-effort (Fish/hour) for Mainstem Streams and Overall Habitat | 5.7-33 |
| | | Part B | Table 5.7-10 Standardized Catch-per-unit-area by Species for all Estuarine Sampling Sites in the Local Study Area | 5.7-34 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 5.7.4 Effects Assessment | The Application will describe the specific approach and methods used to determine the proposed Project effects on freshwater and estuarine fish and fish habitat, including criteria used for characterizing residual Project effects and determining significance. Interactions with potential to result in effects of concern, as indicated in the Project Interaction Table (Table 4.4 1), will be carried forward in this analysis. | | Freshwater and Estuarine Fish and Fish Habitat Technical Data Report | |
| | | Part B | 5.7.4 Project Interactions | 5.7-38 |
| | | Part B | 5.7.5 Assessment of Residual Effects | 5.7-43 |
| | | Part B | 5.7.5.1.1 Analytical Assessment Techniques | 5.7-43 |
| | | Part B | 5.7.5.1.2 Assumptions and the Conservative Approach | 5.7-44 |
| | | Part B | 5.7.6 Summary of Project Residual Effects | 5.7-57 |
| | | Part B | Table 5.7-4 Characterization of Residual Effects for Freshwater and Estuarine Fish and Fish Habitat | 5.7-19 |
| | | Part B | Table 5.7-5 Residual Effects Significance Thresholds | 5.7-21 |
| | The Application will present an assessment of potential adverse effects of the proposed Project on freshwater and estuarine fish and fish habitat during the construction, operation, and decommissioning phases. Table 5.7-1 provides a summary of the potential effects and the measurable parameters to be assessed. | Part B | 5.7.5.2 Assessment of Changes in Fish Habitat | 5.7-45 |
| | | Part B | 5.7.5.3 Assessment of Change in Risk of Physical Injury or Mortality Fish | 5.7-51 |
| | | Part B | Table 5.7-3 Potential Effects on Freshwater and Estuarine Fish and Fish Habitat and Measurable Parameters | 5.7-12 |
| | | Part B | Table 5.7-15 Potential Effects on Freshwater and Estuarine Fish and Fish Habitat | 5.7-38 |
| | | Part B | Table 5.7-1 Type, Productivity, and Area of Serious Harm to Freshwater Fish | 5.7-50 |
| | | Part B | Table 5.7-17 Type, Productivity, and Area of Serious Harm to Estuarine Fish | 5.7-50 |
| | | Part B | Table 5.7-18 Summary of Project Residual Effects: Freshwater and Estuarine Fish and Fish Habitat | 5.7-58 |
| | | Part B | 5.7.8 Prediction Confidence and Risk | 5.7-69 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | Mitigation measures designed to avoid, eliminate or reduce predicted effects will be described, and any relevant environmental management plans (EMPs) will be referenced. | Part B | 5.7.4.1 Justification of Interaction Rankings | 5.7-39 |
| | | Part B | 5.7.5.2.2 Mitigation for Changes in Fish Habitat | 5.7-45 |
| | | Part B | 5.7.5.3.2 Mitigation for Change in Risk of Physical Injury or Mortality to Fish | 5.7-52 |
| | | Part B | 5.7.10 Summary of Mitigation Measures | 5.7-73 |
| | | Part B | Table 5.7-1 Legislation and Regulations Applicable to the Freshwater and Estuarine Fish and Fish Habitat Valued Component | 5.7-4 |
| | | Part B | Table 5.7-18 Summary of Project Residual Effects: Freshwater and Estuarine Fish and Fish Habitat | 5.7-58 |
| | The residual effects of the proposed Project will be characterized by the magnitude, geographic extent, duration, frequency, reversibility, and context of the potential effects, as outlined in Section 4.4.4. | Part B | 5.7.2.7 Residual Effects Description Criteria | 5.7-17 |
| | | Part B | 5.7.5.2.3 Characterization of Changes in Fish Habitat | 5.7-48 |
| | | Part B | 5.7.5.3.3 Characterization of Change in Risk of Physical Injury or Mortality to Fish | 5.7-55 |
| | | Part B | Table 5.7 -4 Characterization of Residual Effects for Freshwater and Estuarine Fish and Fish Habitat | 5.7-19 |
| | | Part B | Table 5.7-18 Summary of Project Residual Effects: Freshwater and Estuarine Fish and Fish Habitat | 5.7-58 |
| | A summary of residual effects and an assessment of their significance, likelihood and a confidence prediction, based on Table 4.4-3 will be provided. | Part B | 5.7.5.2.3 Characterization of Changes in Fish Habitat | 5.7-48 |
| | | Part B | 5.7.5.3.3 Characterization of Change in Risk of Physical Injury or Mortality to Fish | 5.7-55 |
| | | Part B | 5.7.5.2.4 Determination of Significance of Changes in Fish Habitat | 5.7-51 |
| | | Part B | 5.7.5.3.4 Determination of Significance for Change in Risk of Physical Injury or Mortality to Fish | 5.7-57 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | Part B | 5.7.6 Summary of Project Residual Effects | 5.7-57 |
| | | Part B | Table 5.7-18 Summary of Project Residual Effects: Freshwater and Estuarine Fish and Fish Habitat | 5.7-58 |
| | The significance of residual effects will be determined as outlined in Section 4.4.6. | Part B | 5.7.2.8 Significance Thresholds for Residual Effects | 5.7-20 |
| | | Part B | Table 5.7-5 Residual Effects Significance Thresholds | 5.7-21 |
| | | Part B | Table 5.7-18 Summary of Project Residual Effects: Freshwater and Estuarine Fish and Fish Habitat | 5.7-58 |
| 5.7.5 Cumulative Effects Assessment | An assessment of the proposed Project's potential contributions to cumulative effects on freshwater and estuarine fish and fish habitat will be provided following the procedures established in Section 4.5. | Part B | 5.7.7 Assessment of Cumulative Effects | 5.7-62 |
| | | Part B | 5.7.7.1 Stage 1, Cumulative Effects Context | 5.7-62 |
| | | Part B | 5.7.7.2.1 Changes in Fish Habitat | 5.7-65 |
| | | Part B | 5.7.7.2.2 Change in Risk of Physical Injury or Mortality to Fish | 5.7-67 |
| | | Part B | 5.7.7.2.3 Change in Fish Health | 5.7-68 |
| | | Part B | 5.7.7.3 Stage 3, Determining Significance of Cumulative Effects | 5.7-68 |
| | | Part B | 5.7.7.3.1 Changes in Fish Habitat | 5.7-68 |
| | | Part B | 5.7.7.3.2 Change in Risk of Physical Injury or Mortality to Fish | 5.7-68 |
| | | Part B | 5.7.7.3.3 Change in Fish Health | 5.7-69 |
| | | Part B | 5.7.7.4 Summary of Cumulative Effects | 5.7-69 |
| | | Part B | Table 5.7-19 Potential for Cumulative Effects on Freshwater and Estuarine Fish and Fish Habitat | 5.7-64 |
| | | Part B | Table 5.7-20 Summary of Cumulative Effects on Freshwater and Estuarine Fish and Fish Habitat | 5.7-70 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 5.7.6 Conclusion | This section of the Application will include a brief summary of the predicted residual Project effects and cumulative effects on freshwater and estuarine fish and fish habitat and a conclusion on the significance of these effects. | Part B | 5.7.8 Prediction Confidence and Risk | 5.7-69 |
| | | Part B | 5.7.9 Follow-up Program and Compliance Monitoring | 5.7-73 |
| | | Part B | 5.7.10 Summary of Mitigation Measures | 5.7-73 |
| | | Part B | 5.7.11 Conclusion | 5.7-77 |
| **5.8 Marine Resources** | | | | |
| 5.8.1 Introduction | This section of the Application will introduce the marine resources assessment, describe the rationale for its selection as a VC, and identify linkages to other sections of the Application. | Part B | 5.8.1 Introduction | 5.8-1 |
| 5.8.2 Scope of Assessment | The marine resources assessment will focus on:<br>▪ Marine fish part of commercial, Aboriginal and recreational fisheries | Part B | 5.8.2 Scope of Assessment | 5.8-2 |
| | ▪ Marine mammals | Part B | 5.8.2 Scope of Assessment | 5.8-2 |
| | ▪ Marine fish habitat | Part B | 5.8.2 Scope of Assessment | 5.8-2 |
| | ▪ Aquatic species-at-risk | Part B | 5.8.2 Scope of Assessment | 5.8-2 |
| | ▪ Sediment and water quality, and | Part B | 5.8.2 Scope of Assessment | 5.8-2 |
| | ▪ Underwater noise | Part B | 5.8.2 Scope of Assessment | 5.8-2 |
| | The Application will include a description of legislation, guidelines, BMP, and guidance documents that are relevant to the protection and management of marine resources including: fish and invertebrates (e.g., crabs, shrimp, bivalves) with commercial, recreational, and aboriginal fisheries, or fish that support such a fishery; fish habitat (e.g., algae, seagrass); marine mammals; aquatic species-at-risk; and general water chemistry and sediment quality. | Part B | 5.8.2.1 Regulatory and Policy Setting | 5.8-2 |
| | The Application will describe how TK and TU information as obtained through consultation with Aboriginal Groups and other sources was used in the assessment | Part B | 5.8.2.2 Consultations' Influence on the Identification of Issues and the Assessment Process | 5.8-8 |
| | | Part B | 5.8.2.3 Traditional Knowledge and Traditional Use Incorporation | 5.8-8 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | The Application will also expand on the rationale for the spatial boundaries identified in Table 4.2-1 and Table 4.2-2. Technical boundaries, which include limitations in scientific information, data analyses, and interpretation, will also be defined through the assessment process. | Part B | 5.8.2.6 Boundaries | 5.8-12 |
| 5.8.3 Baseline Conditions | The Application will characterize the baseline conditions for marine resources by providing the following information:<br>▪ descriptions of ecological communities and marine fish habitat identified through fieldwork and literature reviews (e.g., eelgrass beds and glass sponges), | Part B | 5.8.3 Baseline Conditions | 5.8-22 |
| | ▪ descriptions of marine fish species (e.g., Pacific salmon, herring) in relation to the LSAs and RSAs, | Part B | 5.8.3 Baseline Conditions | 5.8-22 |
| | ▪ descriptions of general water chemistry and sediment quality in relation to the facility LSA and RSA, | Part B | 5.8.3 Baseline Conditions | 5.8-22 |
| | | Part B | 5.8.3.2.3 - Sediment and Water Chemistry | 5.8-37 |
| | ▪ descriptions of important habitat and potential and candidate critical habitat for marine mammals, as identified through fieldwork and literature reviews, | Part B | 5.8.3 Baseline Conditions | 5.8-22 |
| | ▪ descriptions of abundance and distribution of marine mammal species in relation to the shipping LSA and RSA, | Part B | 5.8.3 Baseline Conditions | 5.8-22 |
| | ▪ summary of relevant life history of marine mammals in the shipping LSA and RSA (seasonal occurrence, underwater hearing physiology), | Part B | 5.8.3 Baseline Conditions | 5.8-22 |
| | ▪ a summary of federally listed species and species of conservation concern identified through a query of the SARA registry, COSEWIC assessments, and the BC Conservation Data Centre, and | Part B | 5.8.3 Baseline Conditions | 5.8-22 |
| | ▪ baseline data on ambient underwater noise in the facility and shipping RSAs. | Part B | 5.8.3 Baseline Conditions | 5.8-22 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 5.8.4 Effects Assessment | The Application will describe the specific approach and methods used to determine effects of the proposed Project on marine resources, including criteria used for characterizing effects and determining significance. Interactions with potential to result in residual effects (see Table 4.4-1), will be carried forward into this analysis. | Part B | 5.8.2.9 Residual Effects Description Criteria | 5.8-22 |
| | | Part B | 5.8.2.10 Significance Thresholds for Residual Effects | 5.8-22 |
| | | Part B | 5.8.5 Assessment of Residual Effects from the LNG Facility | 5.8-48 |
| | | Part B | 5.8.5.2 Assessment of Change in Fish Habitat | 5.8-49 |
| | | Part B | 5.8.5.3 Assessment of Change in Fish Health at the LNG Facility as a Result of Toxicity | 5.8-61 |
| | | Part B | 5.8.5.4 Assessment of Harm to Fish or Marine Mammals | 5.8-66 |
| | | Part B | 5.8.5.5 Assessment of Change in Behaviour of Fish or Marine Mammals Due to Underwater Noise or Pressure Waves (Facility) | 5.8-80 |
| | | Part B | 5.8.6 Assessment of Residual Effects from Shipping | 5.8-87 |
| | | Part B | 5.8.6.2 Assessment of Change in Behaviour of Fish or Marine Mammals Due to Underwater Noise or Pressure Waves (Shipping) | 5.8-89 |
| | The Application will present an assessment of potential adverse effects of the proposed Project on marine resources during the construction, operation, and decommissioning phases. Table 5.8 1 provides a summary of the potential effects of the proposed Project on marine resources that will be included in the assessment, and the measurable parameters that will be used to quantify these effects. | Part B | 5.8.2.5 Selection of Measurable Parameters | 5.8-10 |
| | | Part B | 5.8.5 Assessment of Residual Effects from the LNG Facility | 5.8-48 |
| | | Part B | 5.8.5.2 Assessment of Change in Fish Habitat | 5.8-49 |
| | | Part B | 5.8.5.3 Assessment of Change in Fish Health at the LNG Facility as a Result of Toxicity | 5.8-61 |
| | | Part B | 5.8.5.4 Assessment of Harm to Fish or Marine Mammals | 5.8-66 |
| | | Part B | 5.8.5.5 Assessment of Change in Behaviour of Fish or Marine Mammals Due to Underwater Noise or Pressure Waves (Facility) | 5.8-80 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | Part B | 5.8.6.2 Assessment of Change in Behaviour of Fish or Marine Mammals Due to Underwater Noise or Pressure Waves | 5.8-89 |
| | Mitigation measured designed to reduce or avoid potential adverse effects will be described and relevant management plans will be referenced. | Part B | 5.8.5 Assessment of Residual Effects from the LNG Facility | 5.8-48 |
| | | Part B | 5.8.5.2.3 Mitigation for Change in Fish Habitat | 5.8-53 |
| | | Part B | 5.8.5.3.3 Mitigation for Change in Fish Health at the LNG Facility as a Result of Toxicity | 5.8-62 |
| | | Part B | 5.8.5.4.3 Mitigation for Harm to Fish or Marine Mammals | 5.8-71 |
| | | Part B | 5.8.5.5.3 Mitigation for Change in Behaviour of Fish or Marine Mammals due to Underwater Noise or Pressure Waves | 5.8-83 |
| | | Part B | 5.8.6 Assessment of Residual Effects from Shipping | 5.8-87 |
| | | Part B | 5.8.6.2.2 Mitigation for Change in Behaviour of Fish or Marine Mammals Due to Underwater Noise or Pressure Waves | 5.8-89 |
| | The residual effects of the proposed Project will be characterized by the magnitude, geographic extent, duration, frequency, reversibility, and context of the potential effects, as outlined in Section 4.4.4. | Part B | 5.8.5.2 Assessment of Change in Fish Habitat | 5.8-49 |
| | | Part B | 5.8.5.2.4 Characterization of Change in Fish Habitat | 5.8-54 |
| | | Part B | 5.8.5.3.4 Characterization of Change in Fish Health at the LNG Facility as a Result of Toxicity | 5.8-63 |
| | | Part B | 5.8.5.4.4 Characterization of Harm to Fish or Marine Mammals | 5.8-72 |
| | | Part B | 5.8.5.5.4 Characterization of Change in Behaviour of Fish or Marine Mammals Due to Underwater Noise or Pressure Waves | 5.8-83 |
| | | Part B | 5.8.6.2 Assessment of Change in Behaviour of Fish or Marine Mammals Due to Underwater Noise or Pressure Waves | 5.8-89 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | Part B | 5.8.6.2.3 Characterization of Change in Behaviour of Fish or Marine Mammals Due to Underwater Noise or Pressures Waves | 5.8-90 |
| | | Part B | 5.8.7 Summary of Project Residual Effects | 5.8-99 |
| | A summary of residual effects and an assessment of their significance, likelihood and a confidence prediction, based on Table 4.4-3 will be provided. | Part B | 5.8.7 Summary of Project Residual Effects | 5.8-99 |
| | | Part B | Table 5.8-14 Summary of Project Residual Effects: Marine Resources | 5.8-100 |
| 5.8.5 Cumulative Effects | An assessment of cumulative effects on marine resources will be provided following the methods established in Section 4.5. | Part B | 5.8.8 Assessment of Cumulative Effects | 5.8-111 |
| 5.8.6 Conclusion | This section of the Application will include a brief summary of the predicted residual Project effects and cumulative effects on marine resources and a conclusion on the significance of these effects. | Part B | 5.8.12 Conclusion | 5.8-137 |
| **5.9 Surface Water Quality** | | | | |
| 5.9.1 Introduction | This section of the Application will introduce the surface water quality assessment, describe the rationale for the selection of surface water quality as a VC, and identify linkages to other sections of the Application. | Part B | 5.9.1 Introduction | 5.9-1 |
| 5.9.2 Scope of Assessment | The surface water quality assessment of streams and lakes will focus on:<br>▪ basic water chemistry, | Part B | 5.9.2.5 Selection of Measurable Parameters | 5.9-3 |
| | ▪ acid neutralising capacity, | Part B | 5.9.2.5 Selection of Measurable Parameters | 5.9-3 |
| | ▪ critical loads, and | Part B | 5.9.2.5 Selection of Measurable Parameters | 5.9-3 |
| | ▪ physical characteristics of water bodies. | Part B | 5.9.2.5 Selection of Measurable Parameters | 5.9-3 |
| | The Application will include a description of any legislation, guidelines, BMP, and guidance documents that are relevant to the protection of aquatic resources and the management the acidification potential in surface water. | Part B | 5.9.2.1 Regulatory and Policy Setting | 5.9-1 |
| | It will also expand on the rationale for the spatial boundaries identified in Table 4.2-1 and Table 4.2-2. Technical boundaries, which include limitations in scientific information, data analyses, and interpretation, will also be defined. | Part B | 5.9.2.6 Boundaries | 5.9-3 |
| | The Application will describe how TK and TU information as obtained through consultation with Aboriginal Groups and other sources was used in the assessment. | Part B | 5.9.2.3 Traditional Knowledge and Traditional Use Incorporation | 5.9-2 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 5.9.3 Baseline Conditions | The Application will include baseline surface water quality information gathered from readily available data including previously filed environmental impact assessments, publicly available data from other operators in the region, government sources, and surface topography. Surface water quality data, includes parameters with high relevance to acidification (e.g., pH, alkalinity, sulphate) in the local and regional study area (LSA and RSA). | Part B | 5.9.3 Baseline Conditions | 5.9-8 |
| 5.9.4 Effects Assessment | The Application will describe the specific approach and methods used to evaluate the potential acidification of freshwater systems due to sulphur dioxide (SO2) and nitrogen oxide (NOX) emissions. Those interactions with potential to result in effects of concern (see Table 4.4-1) will be carried forward into this analysis. | Part B | 5.9.5.1 Analytical Methods | 5.9-13 |
| | The Application will present an assessment of potential adverse effects of the proposed Project on surface water quality for freshwater environments during the construction, operation and decommissioning phases. Table 5.9-1 provides a summary of the potential effects and the measurable parameters. | Part B | 5.9.4 Project Interactions | 5.9-12 |
| | | Part B | Table 5.9-1: Potential Effects on Surface Water Quality and Measurable Parameters | 5.9-3 |
| | The residual effects of the proposed Project will be characterized by the magnitude, geographic extent, duration, frequency, reversibility, and context of the potential effects, as outlined in Section 4.4.4. | Part B | 5.9.2.7 Residual Effects Description Criteria | 5.9-6 |
| | A summary of residual effects and an assessment of their significance, likelihood and a confidence prediction, based on Table 4.4-3 will be provided. | Part B | 5.9.5.2.3 Characterization of Change in Acidification Potential | 5.9-16 |
| | | Part B | 5.9.5.3.3 Characterization of Change in Trophic Status Causing Eutrophication | 5.9-22 |
| | The significance of residual effects will be determined, as outlined in Section 4.4.6. | Part B | 5.9.5.2.4 Determination of Significance for Change in Acidification Potential | 5.9-21 |
| | | Part B | 5.9.5.3.4 Determination of Significance for Change in Trophic Status Causing Eutrophication | 5.9-24 |
| 5.9.5 Cumulative Effects Assessment | An assessment of the Project's potential contributions to the acidification cumulative effects on the surface water quality of freshwater systems will be provided following the procedures established in Section 4.5. | Part B | 5.9.8 Assessment of Cumulative Effects | 5.9-27 |
| 5.9.6 Conclusion | This section of the Application will include a brief summary of the predicted residual Project effects and cumulative effects on surface water quality and a conclusion on their significance. | Part B | 5.9.8.4 Summary of Cumulative Effects | 5.9-33 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| **5.10 Assessment Summary of Potential Environmental Effects** | | | | |
| 5.10 Assessment Summary of Potential Environmental Effects | This section of the Application will provide a summary table of predicted residual environmental effects of the proposed Project and their significance (as per the format of Table 5.10-1). | Part B | 5.10 Summary of Assessment of Potential Environmental Effects | 5.10-1 |
| | | Part B | Table 5.10-1 Summary of Project Residual Effects on Air Quality | 5.10-1 |
| | | Part B | Table 5.10-2 Summary of Project Residual Effects on Greenhouse Gas Emissions | 5.10-2 |
| | | Part B | Table 5.10-3 Summary of Project Residual Effects on the Acoustic Environment | 5.10-4 |
| | | Part B | Table 5.10-4 Summary of Project Residual Effects on Vegetation Resources | 5.10-6 |
| | | Part B | Table 5.10-5 Summary of Project Residual Effects on Wildlife Resources | 5.10-8 |
| | | Part B | Table 5.10-6 Summary of Project Residual Effects on Freshwater and Estuarine Fish and Fish Habitat | 5.10-11 |
| | | Part B | Table 5.10-7 Summary of Project Residual Effects on Marine Resources | 5.10-14 |
| | | Part B | Table 5.10-8 Summary of Project Residual Effects on Surface Water Quality | 5.10-20 |
| | A summary of cumulative effects of the proposed Project on the environmental VC will be provided in this section. | Part B | 5.10 Summary of Potential Environmental Effects | 5.10-1 |
| | | Part B | 5.10.1.2 Summary of Cumulative Effects on Air Quality | 5.10-1 |
| | | Part B | 5.10.1.4 Summary of Cumulative Effects on Greenhouse Gas Emissions | 5.10-3 |
| | | Part B | 5.10.2.2 Summary of Cumulative Effects on the Acoustic Environment | 5.10-5 |
| | | Part B | 5.10.3.2 Summary of Cumulative Effects on Vegetation Resources | 5.10-7 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | **Volume** | **Section** | **Page** |
| | | Part B | 5.10.4.2 Summary of Cumulative Effects on Wildlife Resources | 5.10-11 |
| | | Part B | 5.10.5.2 Summary of Cumulative Effects on Freshwater and Estuarine Fish and Fish Habitat | 5.10-12 |
| | | Part B | 5.10.6.2 Summary of Cumulative Effects on Marine Resources | 5.10-13 |
| | | Part B | 5.10.7.2 Summary of Cumulative Effects on Surface Water Quality | 5.10-20 |
| **6 Assessment of Potential Economic Effects** | | | | |
| **6.1 Economic Background** | | | | |
| 6.1 Economic Background | This section of the Application will include a description of the existing economic environment in the vicinity of the proposed Project and surrounding areas. More details will be provided in the baseline conditions section for the economic conditions VC. | Part B | 6.1 Economic Background | 6-1 |
| **6.2 Economic Conditions** | | | | |
| 6.2.1 Introduction | This section of the Application will introduce the assessment of economic effects, describe the rationale for selecting economic conditions as a VC and identify linkages to other sections of the Application (e.g., social environment, Aboriginal interests). | Part B | 6.2.1 Introduction | 6-1 |
| 6.2.2 Scope of Assessment | The economic conditions effects assessment will focus on:<br>▪ labour availability (persons), | Part B | 6.2.3.2.1 Labour Availability | 6-15 |
| | | Part B | Table 6.2-4 Labour Force Activity, LSA and RSA for 2011 | 6-15 |
| | | Part B | Table 6.2-5 Labour Force Activity by Gender, LSA and RSA for 2011 | 6-16 |
| | | Part B | Table 6.2-6 Aboriginal Labour Force Activity, LSA and RSA for 2011 | 6-17 |
| | | Part B | Table 6.2-7 Aboriginal Labour Force Activity, LSA and RSA for 2011 | 6-18 |
| | | Part B | Table 6.2-8 Changes in Labour Force Activity, LSA and RSA, 2006-2011 | 6-19 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | ▪ labour force skill levels (includes adult education and skills training), | Part B | 6.2.3.2.2 Labour Force Skill Levels | 6-21 |
| | | Part B | Table 6.2-10 Highest Level of Educational Attainment, Population Aged 25 to 64 for 2011 | 6-22 |
| | | Part B | Table 6.2-11 Highest Post-Secondary Enrollment Targets and Actual Enrollments 2008/2009 to 2013/2014 | 6-23 |
| | | Part B | Table 6.2-12 Employment by Industry, LSA and RSA for 2011 | 6-25 |
| | | Part B | Table 6.2-13 Employment by Occupation, LSA and RSA for 2011 | 6-26 |
| | ▪ labour wages, | Part B | 6.2.3.2.3 Labour Incomes | 6-27 |
| | | Part B | Table 6.2-14 Incomes and Earnings in the LSA and RSA for 2010 | 6-27 |
| | ▪ cost of living, | Part B | 6.2.3.2.4 Cost of Living | 6-28 |
| | | Part B | Table 6.2-15 Annual Cost of Living, Selected Communities for 2013 | 6-28 |
| | | Part B | Table 6.2-16 Annual Cost of Living Compared to Income | 6-29 |
| | | Part B | Table 6.2-17 Real Estate Sales and Prices for Selected Communities | 6-30 |
| | | Part B | Table 6.2-18 Households Spending Greater Than 30% of Income on Shelter Costs | 6-31 |
| | | Part B | Table 6.2-19 2006 to 2011 Shelter Costs and Average Home Values | 6-32 |
| | | Part B | Table 6.2-20 2007 to 2013 Vacancy Rates and Rental Market Survey Results | 6-33 |
| | ▪ economic activity, and | Part B | 6.2.3.2.6 Commercial Fishing and Marine-based Recreation | 6-33 |
| | | Part B | Table 6.2-21 Aboriginal Labour Force Employment by Industry | 6-34 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | ▪ goods and services. | Part B | 6.2.3.2.5 Availability of Goods and Services | 6-33 |
| | The assessment will include the potential adverse economic effects of the proposed Project to local and regional economies and economic aspects of overlap and interactions with other land users and tenures. | Part B | 6.2.2.4 Selection of Effects | 6-6 |
| | | Part B | Table 6.2-2 Potential Project Effects on Economic Conditions and Measurable Parameters | 6-8 |
| | Project benefits will be described in Section 2.5. | Part B | 6.2.5 Assessment of Residual Effects from the LNG Facility | 6-37 |
| | The Application will include a description of policies and BMP that are relevant to minimizing economic pressures and maximizing benefits of major projects. | Part B | 6.2.5.2.2 Mitigation for Change in Labour Supply and Demand | 6-41 |
| | | Part B | 6.2.5.3.2 Mitigation for Change in Economic Activity of Other Sectors | 6-51 |
| | | Part B | 6.2.6.2.2 Mitigation for Change in Economic Activity of Other Sectors | 6-60 |
| | It will also expand on the rationale for the spatial boundaries identified in Table 4.2-1 and Table 4.2-2. | Part B | 6.2.2.6.1 Spatial Boundaries | 6-8 |
| | The Application will define technical boundaries, if relevant, which include limitations in scientific information, data analyses, and interpretation as defined through the assessment process. | Part B | 6.2.2.6.3 Administrative and Technical Boundaries | 6-10 |
| | The Application will describe how TK and TU information as obtained through consultation with Aboriginal Groups and other sources was used in the assessment. | Part B | 6.2.2.2 Consultations' Influence on the Identification of Issues and the Assessment Process | 6-4 |
| | | Part B | 6.2.2.3 Traditional Knowledge and Traditional Use Incorporation | 6-5 |
| | | Part B | 6.2.3.1 Baseline Data Sources | 6-14 |
| 6.2.3 Baseline Conditions | The Application will describe the current characteristics of the economic environment. Information will be obtained from existing literature and other data sources, where available. Communications and interviews with representatives from appropriate government departments or agencies and other organizations (e.g., Aboriginal communities, local business organizations) will be carried out as necessary to fill data gaps. | Part B | 6.2.3 Baseline Conditions | 6-14 |
| | | Part B | 6.2.3.1 Baseline Data Sources | 6-14 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | This section of the Application will summarize:<br>▪ current economic conditions, including existing businesses and industry | Part B | 6.2.3 Baseline Conditions | 6-14 |
| | | Part B | Table 6.2-12 Employment by Industry, LSA and RSA for 2011 | 6-25 |
| | ▪ key economic indicators and trends in the absence of the proposed Project, based on statistical data (Census Canada, BC Stats), and other published and non-published reports, | Part B | 6.2.3.1 Baseline Data Sources | 6-14 |
| | ▪ labour market, including employment/unemployment, current employers, available labour supply and level of education/skills/training of the labour force, based on data from Census Canada, BC Stats, and Service Canada, Northwest Regional Workforce Table Regional Skills Training Plan (Ingenia Consulting 2013) and Labour Market Supply Side Scan for BC's Natural Gas Sector (Ingenia Consulting 2012), as well as primary information sources, and | Part B | 6.2.3.2.1 Labour Availability | 6-15 |
| | | Part B | Table 6.2-4 Labour Force Activity, LSA and RSA for 2011 | 6-15 |
| | | Part B | Table 6.2-5 Labour Force Activity by Gender, LSA and RSA for 2011 | 6-16 |
| | | Part B | Table 6.2-6 Aboriginal Labour Force Activity, LSA and RSA for 2011 | 6-17 |
| | | Part B | Table 6.2-7 Aboriginal Labour Force Activity by Gender, LSA and RSA for 2011 | 6-15 |
| | | Part B | Table 6.2-8 Changes in Labour Force Activity, LSA and RSA, 2006-2011 | 6-19 |
| | | Part B | Table 6.2-10 Highest Level of Educational Attainment, Population Aged 25 to 64 for 2011 | 6-22 |
| | | Part B | Table 6.2-11 Highest Post-Secondary Enrollment Targets and Actual Enrollments 2008/2009 to 2013/2014 | 6-23 |
| | ▪ supply of goods and services in the region based on information from the local government and chamber of commerce, other published and non-published data, and primary information sources. | Part B | 6.2.3.2.5 Availability of Goods and Services | 6-33 |
| 6.2.4 Effects Assessment | This section of the Application will describe the specific approach and methods used to determine the proposed Project effects on the economic environment, including criteria used for characterizing Project effects and predicting their significance. Interactions with potential to result in effects of concern (see Table 4.4-1) will be carried forward into this analysis. | Part B | 6.2.4 Project Interactions | 6-35 |
| | | Part B | Table 6.2-22 Potential Project Effects on Economic Conditions | 6-35 |
| | | Part B | 6.2.4.1 Justification of Interaction Rankings | 6-36 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | This section of the Application will present an assessment of potential effects of the proposed Project on the economic environment during construction, operation, and decommissioning. Table 6.2-1 provides a summary of the potential effects of the proposed Project on economic conditions that will be assessed, and the measurable parameters that will be used to quantify these effects. | Part B | 6.2.2.5 Selection of Measurable Parameters | 6-7 |
| | | Part B | Table 6.2-2 Potential Project Effects on Economic Conditions and Measurable Parameters | 6-8 |
| | Mitigation measures designed to reduce or avoid predicted adverse effects will be described, and any relevant management plans will be referenced. | Part B | 6.2.5.2.2 Mitigation for Change in Labour Supply and Demand | 6-41 |
| | | Part B | 6.2.5.3.2 Mitigation for Change in Economic Activity of Other Sectors | 6-51 |
| | | Part B | 6.2.6.2.2 Mitigation for Change in Economic Activity of Other Sectors | 6-60 |
| | The residual effects of the proposed Project will be characterized by their magnitude, geographic extent, duration, frequency, reversibility, and context of the potential effects, as outlined in Section 4.4.4. | Part B | 6.2.5.4 Summary of Residual Effects from the LNG Facility | 6-56 |
| | | Part B | 6.2.6.3 Summary of Residual Effects from Shipping | 6-61 |
| | | Part B | 6.2.7 Summary of Project Residual Effects | 6-61 |
| | | Part B | Table 6.2-26 Summary of Project Residual Effects: Economic Conditions | 6-62 |
| | A summary of residual effects and an assessment of their significance, likelihood and a confidence prediction, based on Table 4.4-3 will be provided. | Part B | 6.2.5.4 Summary of Residual Effects from the LNG Facility | 6-56 |
| | | Part B | 6.2.6.3 Summary of Residual Effects from Shipping | 6-61 |
| | | Part B | 6.2.7 Summary of Project Residual Effects | 6-61 |
| | | Part B | Table 6.2-26 Summary of Project Residual Effects: Economic Conditions | 6-62 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | The significance of residual effects will be determined, as outlined in Section 4.4.6. Significance criteria ratings will be supported, where possible, through reference to threshold criteria, management standards and objectives. Where management standards or threshold criteria do not exist, significance criteria will be defined and justifications for the criteria will be provided. | Part B | 6.2.2.8 Significance Thresholds for Residual Effects | 6-14 |
| | | Part B | 6.2.4.1 Justification of Interaction Rankings | 6-36 |
| | | Part B | 6.2.5.2.4 Determination of Significance for Change in Labour Supply and Demand | 6-48 |
| | | Part B | 6.2.5.3.4 Determination of Significance for Change in Economic Activity of Other Sectors | 6-55 |
| | | Part B | 6.2.6.2.4 Determination of Significance for Change in Economic Activity of Other Sectors | 6-60 |
| | | Part B | 6.2.7 Summary of Project Residual Effects | 6-61 |
| | | Part B | 6.2.9 Prediction Confidence and Risk | 6-77 |
| | | Part B | Table 6.2-26 Summary of Project Residual Effects: Economic Conditions | 6-62 |
| 6.2.5 Cumulative Effects Assessment | An assessment of the proposed Project's potential contributions to cumulative effects on economic conditions will be provided following the procedures established in Section 4.5. | Part B | 6.2.8 Assessment of Cumulative Effects | 6-64 |
| | | Part B | 6.2.8.1 Stage 1, Cumulative Effects Context | 6-64 |
| | | Part B | 6.2.8.2 Stage 2, Determination of Potential Cumulative Interactions | 6-67 |
| | | Part B | Table 6.2-28 Potential Cumulative Effects on Economic Conditions | 6-67 |
| | | Part B | 6.2.8.3 Stage 3, Determining Significance of Cumulative Effects | 6-69 |
| | | Part B | 6.2.8.4 Summary of Cumulative Effects | 6-72 |
| 6.2.6 Conclusion | This section of the Application will include a brief summary of the predicted residual effects and cumulative effects of the proposed Project on economic conditions and a conclusion on the significance of these effects. | Part B | 6.2.12 Conclusion | 6-79 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| **6.3 Summary of Assessment of Potential Economic Effects** | | | | |
| 6.3 Summary of Assessment of Potential Economic Effects | This section of the Application will provide a summary table of potential residual Project effects on economic conditions as per the format of Table 5.10-1. | Part B | 6.3 Summary of Assessment of Potential Economic Effects | 6-80 |
| | | Part B | Table 6.3-1 Summary of Project Residual Effects on Economic Conditions | 6-80 |
| | A summary of cumulative effects of the proposed Project on economic conditions will also be provided in this section. | Part B | 6.3.2 Summary of Cumulative Economic Effects | 6-81 |
| **7 Assessment of Potential Social Effects** | | | | |
| **7.1 Social Background** | | | | |
| 7.1 Social Background | This section of the Application will include a description of the existing social environment in the vicinity of the proposed Project and surrounding areas, to provide a general understanding of the region surrounding the proposed Project. More details will be provided in the baseline section of each VC chapter. | Part B | 7.1 Social Background | 7.1-1 |
| **7.2 Infrastructure Services** | | | | |
| 7.2.1 Introduction | This section of the Application will introduce the assessment of effects on infrastructure and services, describe the rationale for selecting infrastructure and services as a VC, and identify linkages to other sections of the Application (e.g., economic effects, and Part C). | Part B | 7.2.1 Scope of Assessment | 7.2-1 |
| 7.2.2 Scope of Assessment | The infrastructure and services assessment will focus on:<br>▪ accommodations, | Part B | 7.2.2.2.14 Housing and Accommodations | 7.2-37 |
| | ▪ transportation, | Part B | 7.2.2.2.13 Transportation | 7.2-34 |
| | ▪ utilities, | Part B | 7.2.2.2.6 Utilities | 7.2-22 |
| | ▪ communications, | Part B | 7.2.2.2.8 Communications Infrastructure | 7.2-25 |
| | ▪ education (includes education facilities, early childhood education), | Part B | 7.2.2.2.9 Education and Daycare Services | 7.2-25 |
| | ▪ land-based emergency services, | Part B | 7.2.2.2.10 Emergency and Protective Services | 7.2-26 |
| | ▪ social and recreational services and land-based recreation sites, and | Part B | 7.2.2.2.11 Land-based Recreational Resources | 7.2-28 |
| | ▪ community infrastructure (include community centres). | Part B | 7.2.2.2.11 Land-based Recreational Resources | 7.2-28 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | The Application will include a description of legislation, guidelines, BMP, and guidance documents that are relevant to minimizing negative effects on infrastructure and services. | Part B | 7.2.1.1 Regulatory and Policy Setting | 7.2-1 |
| | It will also expand on the rationale for the spatial boundaries identified in Table 4.2 1 and Table 4.2 2. Where logical and practical the assessment on accommodations, including government assisted housing, will be conducted at the community level. | Part B | 7.2.1.6.1 Spatial Boundaries | 7.2-4 |
| | | | 7.2.1.6.3 Administrative and Technical Boundaries | 7.2-7 |
| | | | 7.2.2.2.14 Housing and Accommodations | 7.2-37 |
| | | | Table 7.2-17 LSA Housing Characteristics | 7.2-38 |
| | | | Table 7.2-20 BC Housing Income Limits for Kitimat and Terrace, 2012 to 2013 | 7.2-46 |
| | The Application will describe how TK and TU information as obtained through consultation with Aboriginal Groups and other sources was used in the assessment. | Part B | 7.2.1.2 Consultations' Influence on the Identification of Issues and the Assessment Process | 7.2-2 |
| | | | 7.2.1.3 Traditional Knowledge and Traditional Use Incorporation | 7.2-3 |
| 7.2.3 Baseline Conditions | The Application will describe the approach and methods used to collect baseline social information (e.g., demographic data, housing information) required to support the assessment, and will identify the sources of this information. | Part B | 7.2.2.1 Baseline Data Sources | 7.2-9 |
| | | | Table 7.2-3 Infrastructure and Services Research Methods | 7.2-9 |
| | | | 7.2.2.1.1 Primary Research | 7.2-10 |
| | It will characterize baseline conditions and will include information relating to:<br>▪ official community plans, | Part B | 7.2.2.2.5 Governance | 7.2-21 |
| | ▪ regional Governance, | Part B | 7.2.2.2.5 Governance | 7.2-21 |
| | ▪ housing and accommodations, including government assisted housing, | Part B | 7.2.2.2.14 Housing and Accommodations | 7.2-37 |
| | | | Table 7.2-17 LSA Housing Characteristics | 7.2-38 |
| | | | Table 7.2-20: BC Housing Income Limits for Kitimat and Terrace, 2012 to 2013 | 7.2-46 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | ▪ community services, | Part B | 7.2.2.2.6 Utilities | 7.2-22 |
| | | | 7.2.2.2.10 Emergency and Protective Services | 7.2-26 |
| | | | 7.2.2.2.9 Education and Daycare Services | 7.2-25 |
| | | | 7.2.2.2.11 Land-based Recreational Resources | 7.2-28 |
| | ▪ land-based emergency services, | Part B | 7.2.2.2.10 Emergency and Protective Services | 7.2-26 |
| | ▪ sewage and water treatment facilities, | Part B | 7.2.2.2.6 Utilities | 7.2-22 |
| | ▪ garbage collection and disposal and recycling facilities, | Part B | 7.2.2.2.6 Utilities | 7.2-22 |
| | ▪ transportation infrastructure, | Part B | 7.2.2.2.6 Utilities | 7.2-22 |
| | ▪ energy and utilities, | Part B | 7.2.2.2.6 Utilities | 7.2-22 |
| | ▪ communications infrastructure, and | Part B | 7.2.2.2.8 Communications Infrastructure | 7.2-25 |
| | ▪ land-based recreational resources. | Part B | 7.2.2.2.11 Land-based Recreational Resources | 7.2-28 |
| | Infrastructure and services will be described using statistical information, published reports, academic literature and other qualitative data sources, where appropriate. Key informant interviews with representatives from appropriate government departments/agencies (municipal and provincial) and other organizations (e.g., Aboriginal Groups and community organizations) will be completed as required. | Part B | 7.2.2.1 Baseline Data Sources | 7.2-9 |
| | | | Table 7.2-3: Infrastructure and Services Research Methods | 7.2-9 |
| | | | 7.2.2.1.1 Primary Research | 7.2-10 |
| | | | 7.2.2.2 Baseline Overview | 7.2-11 |
| | The Application will include a description of the existing road network and use estimates along the principal access routes to the proposed Project area. | Part B | 7.2.2.2.13 Transportation | 7.2-34 |
| | | | Table 7.2-14 Traffic Counts for Roads and Intersections in the LSA | 7.2-35 |
| | | | Table 7.2-15 Traffic Counts for Highways in the RSA | 7.2-35 |
| | | | Table 7.2-16 Traffic Collisions for Roads and Intersections in the LSA, 2008 to 2012 | 7.2-36 |
| | The baseline will also describe other transportation modes in the LSA that may be affected by the proposed Project. Information will be developed from secondary data, and discussions with appropriate government agencies and other organizations as appropriate. | Part B | 7.2.2.2.13 Transportation | 7.2-34 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 7.2.4 Effects Assessment | This section of the Application will describe the specific approach and methods used to determine the proposed Project effects on infrastructure and services, including criteria used for characterizing Project effects and predicting their significance. Interactions with potential to result in effects of concern (see Table 4.4-1) will be carried forward into this analysis. | Part B | 7.2.1.7 Residual Effects Description Criteria | 7.2-7 |
| | | | Table 7.2-2 Characterization of Residual Effects for Infrastructure and Services | 7.2-8 |
| | | | 7.2.1.8 Significance Thresholds for Residual Effects | 7.2-9 |
| | | | 7.2.3 Project Interactions | 7.2-47 |
| | | | 7.2.3.1 Justification of Interaction Rankings | 7.2-49 |
| | | | 7.2.4.1 Analytical Methods | 7.2-50 |
| | | | 7.2.4.1.1 Analytical Assessment Techniques | 7.2-50 |
| | This section of the Application will present an assessment of potential effects of the proposed Project on infrastructure and services during construction, operations, decommissioning, and post-closure. Table 7.2-1 provides a summary of the potential effects of the proposed Project on infrastructure and services that will be assessed, and measurable parameters that will be used to quantify these effects. | Part B | 7.2.4 Assessment of Residual Effects from the LNG Facility | 7.2-50 |
| | | | Table 7.2-1 Potential Effects on Infrastructure and Services and Measurable Parameters | 7.2-4 |
| | Mitigation measures designed to reduce or avoid predicted effects will be described, and any relevant management plans will be referenced. | Part B | 7.2.4.2.2 Mitigation for Effects on Community Services and Infrastructure | 7.2-55 |
| | | | 7.2.4.3.2 Mitigation for Effects on Traffic and Pressure on Transportation Infrastructure | 7.2-67 |
| | | | 7.2.4.4.2 Mitigation for Change in Housing Availability | 7.2-71 |
| | The residual effects of the proposed Project will be characterized by the magnitude, geographic extent, duration, frequency, reversibility, and context of the potential effects, as outlined in Section 4.4.4. | Part B | 7.2.4.2.3 Characterization of Residual Effects on Community Services and Infrastructure | 7.2-57 |
| | | | 7.2.4.3.3 Characterization of Residual Effects on Traffic and Pressure on Transportation Infrastructure | 7.2-68 |
| | | | 7.2.4.4.3 Characterization of Residual Change in Housing Availability | 7.2-73 |
| | A summary of residual effects and an assessment of their significance, likelihood and a confidence prediction, based on Table 4.4-3 will be provided. | Part B | 7.2.5 Summary of Project Residual Effects | 7.2-76 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | The significance of residual effects will be determined, as outlined in Section 4.4.6. Significance criteria ratings will be supported, where possible, through reference to threshold criteria, management standards and objectives. Where management standards or threshold criteria do not exist, significance criteria will be defined and justifications for the criteria will be provided. | Part B | 7.2.4.2.4 Determination of Significance for Residual Demand on Community Infrastructure and Services | 7.2-66 |
| | | | 7.2.4.3.4 Determination of Significance for Residual Effects on Traffic and Pressure on Transportation Infrastructure | 7.2-71 |
| | | | 7.2.4.4.4 Determination of Significance for Residual Change in Housing Availability | 7.2-76 |
| 7.2.5 Cumulative Effects | An assessment of cumulative effects on infrastructure and services will be provided following the procedures established in Section 4.5. | Part B | 7.2.6 Assessment of Cumulative Effects | 7.2-82 |
| 7.2.6 Conclusion | This section of the Application will include a brief summary of the predicted residual Project effects and cumulative effects on infrastructure and services, and a conclusion on the significance of these effects. | Part B | 7.2.10 Conclusion | 7.2-103 |
| **7.3 Visual Quality** | | | | |
| 7.3.1 Introduction | This section of the Application will describe the rationale for selecting visual quality as a VC and identify linkages to other sections of the Application (e.g., economic effects, and Aboriginal Groups). | Part B | 7.3.1 Introduction | 7.3-1 |
| 7.3.2 Scope of Assessment | The visual quality assessment will focus on:<br>▪ Visual condition (facility and shipping) | Part B | 7.3.2 Scope of Assessment | 7.3-2 |
| | ▪ Important viewpoints as established through consultation | Part B | 7.3.2.2 Consultations' Influence on the Identification of Issues and the Assessment Process | 7.3-4 |
| | | Part B | 7.3.2.3 Traditional Knowledge and Traditional Use Incorporation | 7.3-5 |
| | As the proposed LNG facility is anticipated to alter the viewscape from the District of Kitimat and from the water in Kitimat Arm, the Application will consider changes in the visual quality relative to baseline conditions, in consideration of the existing visual condition, established visual quality objectives, and identified important viewpoints. The assessment will also include potential effects on visual quality at viewpoints along the marine access route. | Part B | 7.3.2.1 Regulatory and Policy Setting | 7.3-2 |
| | | Part B | 7.3.2.2 Consultations' Influence on the Identification of Issues and the Assessment Process | 7.3-4 |
| | | Part B | 7.3.2.3 Traditional Knowledge and Traditional Use Incorporation | 7.3-5 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | Part B | 7.3.2.4 Selection of Effects | 7.3-6 |
| | | Part B | 7.3.2.5 Selection of Measurable Parameters | 7.3-6 |
| | | Part B | 7.3.2.7 Residual Effects Description Criteria | 7.3-10 |
| | | Part B | 7.3.2.8 Significance Thresholds for Residual Effects | 7.3-12 |
| | The Application will expand on the rationale for the spatial boundaries identified in Table 4.2-1 and Table 4.2-2. | Part B | 7.3.2.6.1 Spatial Boundaries | 7.3-7 |
| | Technical boundaries, which include limitations in scientific information, data analyses, and interpretation, will also be defined through the assessment process. | Part B | 7.3.2.6.2 Temporal Boundaries | 7.3-7 |
| | | Part B | 7.3.2.6.3 Administrative and Technical Boundaries | 7.3-10 |
| | | Part B | 7.3.3.1 Baseline Data Sources | 7.3-13 |
| | | Part B | 7.3.5.1 Analytical Methods (Facility) | 7.3-29 |
| | | Part B | 7.3.6.1 Analytical Methods (Shipping) | 7.3-36 |
| | The Application will describe how TK and TU information as obtained through consultation with Aboriginal Groups and other sources was used in the assessment. | Part B | 7.3.2.2 Consultations' Influence on the Identification of Issues and the Assessment Process | 7.3-4 |
| | | Part B | 7.3.2.3 Traditional Knowledge and Traditional Use Incorporation | 7.3-5 |
| 7.3.3 Baseline Conditions | The Application will describe the approach and methods used to collect baseline information required to support the assessment, and will identify the sources of this information. Baseline information related to visual quality will be obtained from the following sources:<br>▪ consultation with community members to assist in identification of potential viewpoints of concern, | Part B | 7.3.2.2 Consultations' Influence on the Identification of Issues and the Assessment Process | 7.3-4 |
| | | Part B | 7.3.2.3 Traditional Knowledge and Traditional Use Incorporation | 7.3-5 |
| | | Part B | 7.3.3.1 Baseline Data Sources | 7.3-13 |
| | | Part B | 7.3.3.2 Baseline Overview | 7.3-18 |
| | ▪ existing land use plans, policy and legislation, | Part B | 7.3.2.1 Regulatory and Policy Setting | 7.3-2 |
| | ▪ provincial visual landscape inventory and visual quality objectives information, | Part B | 7.3.2.1 Regulatory and Policy Setting | 7.3-2 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | ▪ viewshed analysis of the proposed LNG facility to identify areas of potential visibility, | Part B | 7.3.3.1 Baseline Data Sources | 7.3-13 |
| | | Part B | 7.3.3.2 Baseline Overview | 7.3-18 |
| | ▪ literature review and information interviews to identify potentially sensitive viewpoints, including residences and recreation sites, | Part B | 7.3.3.1 Baseline Data Sources | 7.3-13 |
| | | Part B | 7.3.3.2 Baseline Overview | 7.3-18 |
| | ▪ field inventory and collection of photographic and attribute information from field observations at selected viewpoints, | Part B | 7.3.3.1 Baseline Data Sources | 7.3-13 |
| | | Part B | 7.3.3.2 Baseline Overview | 7.3-18 |
| | ▪ description of landscape character, calculation of baseline existing visual conditions and characterization of visual sensitivity at the proposed Project site based on MFLNRO guidance for visual landscape inventory procedures, and | Part B | 7.3.3.1 Baseline Data Sources | 7.3-13 |
| | | Part B | 7.3.3.2 Baseline Overview | 7.3-18 |
| | ▪ photo-documentation of views and viewshed analysis from identified viewpoints along the marine access route, description of landscape character along the marine access route and description of baseline shipping channel traffic. | Part B | 7.3.3.1 Baseline Data Sources | 7.3-13 |
| | | Part B | 7.3.3.2 Baseline Overview | 7.3-18 |
| 7.3.4 Effects Assessment | This section of the Application will describe the specific approach and methods used to determine the proposed Project effects on visual quality, including criteria used for characterizing Project effects and predicting their significance. Interactions with potential to result in effects of concern (see Table 4.4-1) will be carried forward into this analysis. | Part B | 7.3.4 Project Interactions | 7.3-27 |
| | | Part B | 7.3.5.1 Analytical Methods (Facility) | 7.3-29 |
| | | Part B | 7.3.5.2 Assessment of Reduction in Visual Quality (Facility) | 7.3-30 |
| | | Part B | 7.3.6.1 Analytical Methods (Shipping) | 7.3-36 |
| | | Part B | 7.3.6.2 Assessment of Reduction in Visual Quality (shipping) | 7.3-38 |
| | This section of the Application will present an assessment of potential effects of the proposed Project on visual quality during representative phases of the proposed Project. Table 7.3-1 provides a summary of the potential effects of the proposed Project on visual quality that will be assessed, and the measurable parameters that will be used to quantify these effects. | Part B | 7.3.4 Project Interactions | 7.3-27 |
| | | Part B | 7.3.5.1 Analytical Methods | 7.3-29 |
| | | Part B | 7.3.5.2 Assessment of Reduction in Visual Quality (Facility) | 7.3-30 |
| | | Part B | 7.3.6.1 Analytical Methods (Shipping) | 7.3-36 |
| | | Part B | 7.3.6.2 Assessment of Reduction in Visual Quality (Shipping) | 7.3-38 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | Mitigation measures designed to reduce or avoid predicted effects will be described, and any relevant management plans will be referenced. | Part B | 7.3.5.2 Assessment of Reduction in Visual Quality (Facility) | 7.3-30 |
| | | Part B | 7.3.6.2 Assessment of Reduction in Visual Quality (Shipping) | 7.3-38 |
| | The residual effects of the proposed Project will be characterized by the magnitude, geographic extent, duration, frequency, reversibility, and context of the potential effects, as outlined in Section 4.4.4. A summary of residual effects and an assessment of their significance, likelihood and a confidence prediction, based on Table 4.4-3, will be provided for effects of the Project on visual quality. | Part B | 7.3.5.2 Assessment of Reduction in Visual Quality (Facility) | 7.3-30 |
| | | Part B | 7.3.5.3 Summary | 7.3-36 |
| | | Part B | 7.3.6.2 Assessment of Reduction in Visual Quality (Shipping) | 7.3-38 |
| | | Part B | 7.3.6.3 Summary | 7.3-45 |
| | | Part B | 7.3.7 Summary of Project Residual Effects | 7.3-46 |
| | The significance of residual effects will be determined, as outlined in Section 4.4.6. Significance criteria ratings will be supported, where possible, through reference to threshold criteria, management standards and objectives. Where management standards or threshold criteria do not exist, significance criteria will be defined and justifications for the criteria will be provided. | Part B | 7.3.2.8 Significance Thresholds for Residual Effects | 7.3-12 |
| | | Part B | 7.3.5.2 Assessment of Reduction in Visual Quality (Facility) | 7.3-30 |
| | | Part B | 7.3.6.2 Assessment of Reduction in Visual Quality (Shipping) | 7.3-38 |
| | | Part B | 7.3.9 Prediction Confidence and Risk | 7.3-54 |
| 7.3.5 Cumulative Effects | An assessment of cumulative effects on visual quality will be provided following the procedures established in Section 4.5. | Part B | 7.3.8 Assessment of Cumulative Effects | 7.3-46 |
| 7.3.6 Conclusion | This section of the Application will include a brief summary of the predicted residual Project effects and cumulative effects on visual quality, and a conclusion on the significance of these effects. | Part B | 7.3.11 Summary of Mitigation Measures | 7.3-54 |
| | | Part B | 7.3.12 Conclusion | 7.3-55 |
| **7.4 Marine Transportation & Use** | | | | |
| 7.4.1 Introduction | This section of the Application will describe the rationale for selecting marine transportation and use as a VC and identify linkages to other sections of the Application (e.g., marine resources and Part C). | Part B | 7.4.1 Introduction | 7.4-1 |
| 7.4.2 Scope of Assessment | The marine transportation and use assessment will focus on:<br>▪ Marine navigation | Part B | 7.4.2 Scope of Assessment | 7.4-1 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | ▪ Marine traffic | Part B | 7.4.2 Scope of Assessment | 7.4-1 |
| | ▪ Aboriginal, commercial and recreational fisheries | Part B | 7.4.2 Scope of Assessment | 7.4-1 |
| | ▪ Marine and coastal recreation and tourism | Part B | 7.4.2 Scope of Assessment | 7.4-1 |
| | ▪ Marina use | Part B | 7.4.2 Scope of Assessment | 7.4-1 |
| | The assessment of effects on marine transportation and use will include the potential effects arising from interactions between the proposed Project infrastructure and users of navigable waters in the vicinity of the marine terminal, and the proposed Project associated shipping (e.g., construction, operation, and decommissioning) and other marine transportation or resource use activities (including marine-based tourism) within Kitimat Arm, Douglas Channel, Principe Channel, to the Pilot Boarding Station area near Triple Island. An assessment of the impacts of vessel wake on marine transportation and use will be included in this section. | Part B | 7.4.2.4 Selection of Effects | 7.4-4 |
| | | Part B | 7.4.2.5 Selection of Measurable Parameters | 7.4-4 |
| | The Application will expand on the rationale for the spatial boundaries identified in Table 4.2-1 and Table 4.2-2. | Part B | 7.4.2.6.1 Spatial Boundaries | 7.4-5 |
| | Technical boundaries, which include limitations in scientific information, data analyses, and interpretation, will also be defined through the assessment process. | Part B | 7.4.2.6.3 Administrative and Technical Boundaries | 7.4-6 |
| | The Application will describe how TK and TU information as obtained through consultation with Aboriginal Groups and other sources was used in the assessment. | Part B | 7.4.2.3 Traditional Knowledge and Traditional Use Incorporation | 7.4-3 |
| 7.4.3 Baseline Conditions | Baseline conditions will be characterized from primary and secondary data including: | Part B | 7.4.2.6.3 Administrative and Technical Boundaries | 7.4-6 |
| | ▪ planning initiatives: Pacific North Coast Integrated Management Area and the Marine Planning Partnership for the North Pacific Coast, | | 7.4.3.1.1 Literature | 7.4-12 |
| | ▪ DFO statistical data and reports on commercial, recreational, and Aboriginal fisheries, | Part B | 7.4.3.1.3 Commercial and Recreational Fisheries Data | 7.4-12 |
| | | | 7.4.3.1.4 Aboriginal Fisheries Data | 7.4-13 |
| | | | 7.4.3.2.3 Marine Fisheries | 7.4-24 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | ▪ geospatial data related to commercial, recreational and Aboriginal fisheries available from DFO and BC Marine Conservation Analysis, | Part B | 7.4.3.1.3 Commercial and Recreational Fisheries Data | 7.4-12 |
| | | | 7.4.3.1.4 Aboriginal Fisheries Data | 7.4-13 |
| | | | 7.4.3.2.3 Marine Fisheries | 7.4-24 |
| | ▪ observation data on marine users within the LSA and RSA based on field studies, | Part B | 7.4.3.1.2 Shipping Data | 7.4-12 |
| | | | 7.4.3.2.2 Shipping | 7.4-15 |
| | ▪ data and reports on recreational and tourism activities, | Part B | 7.4.3.1.5 Recreation and Tourism Data | 7.4-13 |
| | | | 7.4.3.1.7 Primary Research | 7.4-13 |
| | | | 7.4.3.2.1 Marine Terminal | 7.4-14 |
| | | | 7.4.3.2.2 Shipping | 7.4-15 |
| | | | 7.4.3.2.4 Recreation and Tourism | 7.4-48 |
| | ▪ consulting reports on marine use and navigation prepared for previous projects, including the Kitimat LNG project and the Northern Gateway project, | Part B | 7.4.3.1.1 Literature | 7.4-12 |
| | | | 7.4.3.1.4 Aboriginal Fisheries Data | 7.4-13 |
| | | | 7.4.3.2.2 Shipping | 7.4-15 |
| | | | 7.4.3.2.4 Recreation and Tourism | 7.4-48 |
| | ▪ marine traffic information provided by the Canadian Coast Guard Marine Communications and Traffic Services, | Part B | 7.4.3.1.2 Shipping Data | 7.4-12 |
| | | | 7.4.3.2.2 Shipping | 7.4-15 |
| | ▪ data from the Pacific Pilotage Authority, and | Part B | 7.4.3.1.2 Shipping Data | 7.4-12 |
| | | | 7.4.3.2.2 Shipping | 7.4-15 |
| | ▪ information interviews with Aboriginal Groups and members of the marine community. | Part B | 7.4.2.2 Consultations' Influence on the Identification of Issues and the Assessment Process | 7.4-3 |
| | | | 7.4.3.1.7 Primary Research | 7.4-13 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 7.4.4 Effects Assessment | This section of the Application will describe the specific approach and methods used to determine the proposed Project effects on marine transportation and use, including criteria used for characterizing Project effects and predicting their significance. Interactions with potential to result in effects of concern (see Table 4.4-1) will be carried forward into this analysis. | Part B | 7.4.2.4 Selection of Effects | 7.4-4 |
| | | | 7.4.2.7 Residual Effects Description Criteria | 7.4-9 |
| | | | 7.4.2.8 Significance Thresholds for Residual Effects | 7.4-9 |
| | | | 7.4.4 Project Interactions | 7.4-58 |
| | | | 7.4.4.1 Justification of Interaction Rankings | 7.4-60 |
| | This section of the Application will present an assessment of potential effects of the proposed Project on marine traffic and resource use during construction, operations, decommissioning, and post-closure. Table 7.4-1 provides a summary of the potential effects of the proposed Project on marine transportation and use that will be assessed, and the measurable parameters that will be used to quantify these effects. | Part B | 7.4.2.5 Selection of Measurable Parameters | 7.4-4 |
| | | | 7.4.5 Assessment of Residual Effects from the LNG Facility | 7.4-62 |
| | | | 7.4.6 Assessment of Residual Effects from Shipping | 7.4-69 |
| | Mitigation measures designed to reduce or avoid predicted effects will be described, and any relevant management plans will be referenced. | Part B | 7.4.5.2.2 Mitigation for Interference with Marine Navigation (Facility) | 7.4-63 |
| | | | 7.4.5.3.2 Mitigation for Effects on Marinas and Moorage Facilities | 7.4-65 |
| | | | 7.4.6.2.2 Mitigation for Interference with Marine Fisheries and Shoreline Harvesting (Shipping) | 7.4-72 |
| | | | 7.4.6.3.2 Mitigation for Interference with Marine Recreation and Tourism | 7.4-81 |
| | | | 7.4.11 Summary of Mitigation Measures | 7.4-102 |
| | The residual effects of the proposed Project will be characterized by the magnitude, geographic extent, duration, frequency, reversibility, and context of the potential effects, as outlined in Section 4.4.4. | Part B | 7.4.7 Summary of Project Residual Effects | 7.4-84 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | A summary of residual effects and an assessment of their significance, likelihood and a confidence prediction, based on Table 4.4-3 will be provided. | Part B | 7.4.5.2.3 Characterization of Interference with Marine Navigation | 7.4-64 |
| | | | 7.4.5.2.4 Determination of Significance of Interference with Marine Navigation | 7.4-64 |
| | | | 7.4.5.3.3 Characterization of Effects on Marinas and Moorage Facilities | 7.4-65 |
| | | | 7.4.5.3.4 Determination of Significance for Effects on Marinas and Moorage Facilities | 7.4-68 |
| | | | 7.4.5.4 Summary | 7.4-69 |
| | | | 7.4.6.2.3 Characterization of Interference with Marine Fisheries and Shoreline Harvesting | 7.4-74 |
| | | | 7.4.6.2.4 Determination of Significance for Interference with Marine Fisheries and Shoreline Harvesting | 7.4-80 |
| | | | 7.4.6.3.3 Characterization of Interference with Marine Recreation and Tourism | 7.4-81 |
| | | | 7.4.6.3.4 Determination of Significance for Interference with Marine Recreation and Tourism | 7.4-83 |
| | | | 7.4.6.4 Summary | 7.4-84 |
| | The significance of residual effects will be determined, as outlined in Section 4.4.6. Significance criteria ratings will be supported, where possible, through reference to threshold criteria, management standards and objectives. Where management standards or threshold criteria do not exist, significance criteria will be defined and justifications for the criteria will be provided. | Part B | 7.4.2.8 Significance Thresholds for Residual Effects | 7.4-9 |
| 7.4.5 Cumulative Effects Assessment | An assessment of the proposed Project's potential contributions to cumulative effects on marine transportation and use will be provided following the procedures established in Section 4.5. | Part B | 7.4.8 Assessment of Cumulative Effects | 7.4-88 |
| 7.4.6 Conclusion | This section of the Application will include a brief summary of the predicted residual Project effects and cumulative effects on marine transportation and use, and a conclusion on the significance of these effects. | Part B | 7.4.12 Conclusion | 7.4-104 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| **7.5 Community Health and Wellbeing** | | | | |
| 7.5.1 Introduction | This section of the Application will introduce the community health and wellbeing assessment, describe the rationale for its selection as a VC, and identify linkages to other sections of the Application (e.g., infrastructure and services). | Part B | 7.5.1 Introduction | 7.5-1 |
| 7.5.2 Scope of Assessment | The community health and wellbeing assessment will focus on:<br>▪ health infrastructure and services (includes counselling services), | Part B | 7.5.2.5 Selection of Measurable Parameters | 7.5-4 |
| | ▪ health outcome indicators, | Part B | 7.5.2.5 Selection of Measurable Parameters | 7.5-4 |
| | ▪ community and family cohesion, | Part B | 7.5.2.5 Selection of Measurable Parameters | 7.5-4 |
| | ▪ community health, and | Part B | 7.5.2.5 Selection of Measurable Parameters | 7.5-4 |
| | ▪ diet and nutrition (related to country foods). | Part B | 7.5.2.5 Selection of Measurable Parameters | 7.5-4 |
| | The assessment will include the potential proposed Project effects on community health factors in local communities including Kitimat, Kitamaat Village, and Terrace where community health and wellbeing may be affected directly or indirectly because of the proposed Project and project personnel. If available, anecdotal information regarding volunteerism will be considered in the Application. | Part B | 7.5.2.4 Selection of Effects | 7.5-4 |
| | | Part B | 7.5.2.5 Selection of Measurable Parameters | 7.5-4 |
| | | Part B | 7.5.2.6 Boundaries | 7.5-5 |
| | The Application will include a description of any legislation, guidelines, BMP, and guidance documents that are relevant to minimizing effects on community health. | Part B | 7.5.2.1 Regulatory and Policy Setting | 7.5-1 |
| | | Part B | 7.5.4.1 Justification of Interaction Rankings | 7.5-30 |
| | It will also expand on the rationale for the spatial boundaries identified in Table 4.2-1 and Table 4.2-2. | Part B | 7.5.2.6.1 Spatial Boundaries | 7.5-5 |
| | Technical boundaries, which include limitations in scientific information, data analyses, and interpretation, will also be through the assessment process. | Part B | 7.5.2.6.3 Administrative and Technical Boundaries | 7.5-7 |
| | The Application will describe how TK and TU information as obtained through consultation with Aboriginal Groups and other sources was used in the assessment. | Part B | 7.5.2.2 Consultations' Influence on the Identification of Issues and the Assessment Process | 7.5-3 |
| | | Part B | 7.5.2.3 Traditional Knowledge and Traditional Use Incorporation | 7.5-3 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 7.5.3 Baseline Conditions | The Application will describe the approach and methods used to collect baseline data required to support the assessment, and will identify the sources of this information. | Part B | 7.5.3.1 Baseline Data Sources | 7.5-9 |
| | | | Socio-Economic Baseline Report | |
| | It will characterize baseline conditions, and will include information relating to:<br>▪ local health services and infrastructure, | Part B | 7.5.3.2.1 Health Care Infrastructure and Services | 7.5-10 |
| | | | Socio-Economic Baseline Report | |
| | ▪ community health determinants/indicators, | Part B | 7.5.3.2.3 Community Cohesion and Resilience | 7.5-16 |
| | | Part B | 7.5.3.2.4 Factors Affecting Families | 7.5-19 |
| | | Part B | 7.5.3.2.5 Diet and Nutrition | 7.5-22 |
| | ▪ statistical indicators of dysfunctional families and weakness in community controls, and | Part B | 7.5.3.2.3 Community Cohesion and Resilience | 7.5-16 |
| | | Part B | 7.5.3.2.4 Factors Affecting Families | 7.5-19 |
| | ▪ health data such as birth and death rates, disease incidence, accident rates. | Part B | 7.5.3.2.2 Physical and Mental Health Outcomes | 7.5-14 |
| | Community health and wellbeing conditions will be described using existing and publicly available literature and other data sources, where appropriate. | Part B | 7.5.3 Baseline Conditions | 7.5-9 |
| | Discussions with representatives from appropriate government departments/agencies (municipal, aboriginal and provincial) and other organizations (e.g., Aboriginal Groups and community organizations) will be completed. | Part B | 7.5.3 Baseline Conditions | 7.5-9 |
| 7.5.4 Effects Assessment | This section of the Application will describe the specific approach and methods used to determine the proposed Project effects on community health and wellbeing conditions, including criteria used for characterizing Project effects and predicting their significance. Interactions with potential to result in effects of concern (see Table 4.4-1) will be carried forward into this analysis. | Part B | 7.5.2 Scope of Assessment | 7.5-1 |
| | | Part B | 7.5.2.7 Residual Effects Description Criteria | 7.5-7 |
| | | Part B | 7.5.2.8 Significance Thresholds for Residual Effects | 7.5-9 |
| | | Part B | 7.5.4 Project Interactions | 7.5-28 |
| | | Part B | 7.5.5.1 Analytical Methods | 7.5-32 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | This section of the Application will present an assessment of potential adverse effects of the proposed Project on community health and wellbeing during construction, operation and decommissioning. Table 7.5-1 provides a summary of the potential effects of the proposed Project on community health that will be assessed, and the measurable parameters that will be used to quantify these effects. | Part B | 7.5.2.5 Selection of Measurable Parameters | 7.5-4 |
| | | Part B | 7.5.5.2.1 Description of Project Effect Mechanisms for Change in Community Health and Wellbeing | 7.5-32 |
| | | Part B | 7.5.5.3.1 Description of Project Effect Mechanisms for Change in Diet and Nutrition | 7.5-42 |
| | | Part B | 7.5.6.2.1 Description of Project Effect Mechanisms for Change in Diet and Nutrition | 7.5-46 |
| | | Part B | Table 7.5-2 Potential Effects on Community Health and Wellbeing and Measurable Parameters | 7.5-4 |
| | Mitigation measures designed to reduce or avoid predicted effects will be described, and any relevant management plans will be referenced. | Part B | 7.5.5.2.2 Mitigation for Change in Community Health and Wellbeing | 7.5-35 |
| | | Part B | 7.5.5.3.2 Mitigation for Change in Diet and Nutrition | 7.5-43 |
| | | Part B | 7.5.6.2.2 Mitigation for Change in Diet and Nutrition | 7.5-46 |
| | The residual effects of the proposed Project will be characterized by the magnitude, geographic extent, duration, frequency, reversibility, and context of the potential effects, as outlined in Section 4.4.4. | Part B | 7.5.5.2.3 Characterization of Change Community Health and Wellbeing | 7.5-36 |
| | | Part B | 7.5.5.3.3 Characterization of Change in Diet and Nutrition | 7.5-43 |
| | | Part B | 7.5.6.2.3 Characterization of Change in Diet and Nutrition | 7.5-47 |
| | | Part B | 7.5.7 Summary of Project Residual Effects | 7.5-49 |
| | A summary of residual effects and an assessment of their significance, likelihood and a confidence prediction, based on Table 4.4-3 will be provided. | Part B | 7.5.5.2.3 Characterization of Change Community Health and Wellbeing | 7.5-36 |
| | | Part B | 7.5.5.3.3 Characterization of Change in Diet and Nutrition | 7.5-43 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | **Volume** | **Section** | **Page** |
| | | Part B | 7.5.6.2.3 Characterization of Change in Diet and Nutrition | 7.5-47 |
| | | Part B | 7.5.7 Summary of Project Residual Effects | 7.5-49 |
| | The significance of residual effects will be determined, as outlined in Section 4.4.6. Significance criteria ratings will be supported, where possible, through reference to threshold criteria, management standards and objectives. Where management standards or threshold criteria do not exist, significance criteria will be defined and justifications for the criteria will be provided. | Part B | 7.5.5.2.4 Determination of Significance for Change in Community Health and Wellbeing | 7.5-42 |
| | | Part B | 7.5.5.3.4 Determination of Significance for Change in Diet and Nutrition | 7.5-44 |
| | | Part B | 7.5.6.2.4 Determination of Significance for Change in Diet and Nutrition | 7.5-48 |
| 7.5.5 Cumulative Effects Assessment | An assessment of the proposed Project's potential contributions to cumulative effects on community health and wellbeing will be provided following the procedures established in Section 4.5. | Part B | 7.5.8 Assessment of Cumulative Effects | 7.5-49 |
| 7.5.6 Conclusion | This section of the Application will include a conclusion regarding the potential residual Project effects and cumulative effects on community health and wellbeing and the significance of these effects. | Part B | 7.5.5.4 Summary | 7.5-45 |
| | | Part B | 7.5.6.3 Summary | 7.5-48 |
| | | Part B | 7.5.7 Summary of Project Residual Effects | 7.5-49 |
| | | Part B | 7.5.8.4 Summary of Cumulative Effects | 7.5-59 |
| | | Part B | 7.5.12 Conclusion | 7.5-66 |
| **7.6 Summary of Potential Social Effects** | | | | |
| 7.6 Summary of Potential Social Effects | The Application will provide a summary table of residual Project effects on the social VCs similar to the one used for residual environmental effects (Table 5.10-1). | Part B | 7.6 Summary of Assessment of Potential Social Effects | 7.6-1 |
| | | Part B | Table 7.6-1 Summary of Project Residual Effects on Infrastructure and Services | 7.6-1 |
| | | Part B | Table 7.6-2 Summary of Project Residual Effects on Visual Quality | 7.6-5 |
| | | Part B | Table 7.6-3 Summary of Project Residual Effects on Marine Transportation and Use | 7.6-7 |
| | | Part B | Table 7.6-4 Summary of Project Residual Effects on Community Health and Wellbeing | 7.6-11 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | **Volume** | **Section** | **Page** |
| | A summary of cumulative effects of the proposed Project on the social VCs will be provided in this section. | Part B | 7.6 Summary of Potential Social Effects | 7.6-1 |
| | | Part B | 7.6.1.2 Summary of Cumulative Social Effects on Infrastructure and Services | 7.6-3 |
| | | Part B | 7.6.2.2. Summary of Cumulative Social Effects on Visual Quality | 7.6-6 |
| | | Part B | 7.6.3.2 Summary of Cumulative Social Effects on Marine Transportation and Use | 7.6-9 |
| | | Part B | 7.6.4.2 Summary of Cumulative Social Effects on Community Health and Wellbeing | 7.6-11 |
| **8 Assessment of Potential Heritage Effects** | | | | |
| **8.1 Heritage Background** | | | | |
| 8.1 Heritage Background | This section of the Application will provide information on the archaeological and heritage background of the proposed Project site. It will include a high-level summary description of the ethnography, ethno-history and history of the area, as well as a discussion of archaeological site potential. This summary will be expanded on in Section 8.2.3. | Part B | 8.1 Heritage Background | 8-1 |
| **8.2 Archaeological and Heritage Resources** | | | | |
| 8.2.1 Introduction | The Application will introduce the archaeological and heritage assessment, describe the rationale for its selection as a VC, and identify linkages to other sections of the Application. | Part B | 8.2.1 Introduction | 8-1 |
| | | Part B | 8.2.2.1 Regulatory and Policy Setting | 8-2 |
| 8.2.2 Scope of Assessment | The archaeological and heritage resources assessment will focus on resources that are legally protected from alterations of any kind by the *Heritage Conservation Act* namely:<br>▪ historic sites, | Part B | 8.2.1 Introduction | 8-1 |
| | | Part B | 8.2.2.1 Regulatory and Policy Setting | 8-2 |
| | | Part B | 8.2.2.4 Selection of Effects | 8-3 |
| | | Part B | 8.2.2.7 Residual Effects Description Criteria | 8-6 |
| | | Part B | 8.2.3.2 Baseline Overview | 8-10 |
| | | Part B | 8.2.10 Summary of Mitigation Measures | 8-37 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | ▪ archaeological sites, and | Part B | 8.2.1 Introduction | 8-1 |
| | | Part B | 8.2.2.1 Regulatory and Policy Setting | 8-2 |
| | | Part B | 8.2.2.4 Selection of Effects | 8-3 |
| | | Part B | 8.2.2.6 Boundaries | 8-4 |
| | | Part B | 8.2.2.7 Residual Effects Description Criteria | 8-6 |
| | | Part B | 8.2.2.8 Significance Thresholds for Residual Effects | 8-8 |
| | | Part B | 8.2.4.1 Justification of Interaction Rankings | 8-26 |
| | | Part B | 8.2.5.1 Analytical Methods | 8-28 |
| | | Part B | 8.2.5.3 Alteration or Removal of Terrestrial Archaeological or Heritage Sites | 8-30 |
| | | Part B | 8.2.6 Summary of Project Residual Effects | 8-32 |
| | | Part B | 8.2.10 Summary of Mitigation Measures | 8-37 |
| | | Part B | 8.2.11 Conclusion | 8-38 |
| | ▪ CMTs. | Part B | 8.1 Heritage Background | 8-1 |
| | | Part B | 8.2.2.4 Selection of Effects | 8-3 |
| | | Part B | 8.2.2.5 Selection of Measurable Parameters | 8-4 |
| | | Part B | 8.2.2.6 Boundaries | 8-4 |
| | | Part B | 8.2.2.7 Residual Effects Description Criteria | 8-6 |
| | | Part B | 8.2.3.2 Baseline Overview | 8-10 |
| | | Part B | 8.2.4.1 Justification of Interaction Rankings | 8-26 |
| | | Part B | 8.2.5 Assessment of Residual Effects from the LNG Facility | 8-28 |
| | | Part B | 8.2.5.2 Assessment of Damage or Removal of CMTs | 8-29 |
| | | Part B | 8.2.6 Summary of Project Residual Effects | 8-32 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | Part B | 8.2.7.1 Summary of Cumulative Effects | 8-35 |
| | | Part B | 8.2.8 Prediction Confidence and Risk | 8-35 |
| | | Part B | 8.2.11 Conclusion | 8-38 |
| | The Application will include a description of legislation, guidelines, BMP, and guidance documents that are relevant to the protection and management of these archaeological resources. | Part B | 8.2.2.1 Regulatory and Policy Setting | 8-2 |
| | | Part B | 8.2.2.6 Boundaries | 8-4 |
| | It will also expand on the rationale for the spatial boundaries identified in Table 4.2-1 and Table 4.2-2. | Part B | 8.2.2.6 Boundaries | 8-4 |
| | | Part B | 8.2.2.7 Residual Effects Description Criteria | 8-6 |
| | The Application will describe how TK and TU information as obtained through consultation with Aboriginal Groups and other sources was used in the assessment. | Part B | 8.2.2.3 Traditional Knowledge and Traditional Use Incorporation | 8-3 |
| 8.2.3 Baseline Conditions | Provincial archaeological site records accessed through the Archaeology Branch's Remote Access to Archaeological Data online application | Part B | 8.2.3.1 Baseline Data Sources | 8-9 |
| | Previous local archaeological assessments | Part B | 8.2.3.2 Baseline Overview | 8-10 |
| | Detailed AIA field work, to be carried out in 2013 and 2014 at the proposed Project terminal site and in the immediately surrounding area as part of the environmental assessment activities, in accordance with the British Columbia Archaeological Impact Assessment Guidelines, and under a Heritage Inspection Permit (HIP 2013-0149) issued by the BC Archaeology Branch pursuant to Section 14 of the Heritage Conservation Act. | Part B | 8.2.3.2 Baseline Overview | 8-10 |
| | Consultation with knowledgeable individuals associated with the local museum and/or historical society, if available. | Part B | 8.2.10 Summary of Mitigation Measures | 8-37 |
| 8.2.4 Effects Assessment | The Application will describe the specific approach and methods used to determine the proposed Project effects on archaeological and heritage resources, including criteria used for characterizing Project effects and determining their significance. Interactions with potential to result in effects of concern, (see Table 4.4-1) will be carried forward into this analysis. | Part B | 8.2.4 Project Interactions | 8-25 |
| | | Part B | 8.2.4.1 Justification of Interaction Rankings | 8-26 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | The Application will present an assessment of potential effects of the proposed Project on archaeological and heritage resources identified in the AIA, during construction, operation, and decommissioning phases.<br>Table 8.2-1 provides a summary of the potential effects of the proposed Project on archaeological and heritage resources that may be assessed, depending on the results of the AIA, and the measurable parameters that will be used to quantify these effects. | Part B | 8.2.4 Project Interactions | 8-25 |
| | | Part B | 8.2.4.1 Justification of Interaction Rankings | 8-26 |
| | | Part B | 8.2.5 Assessment of Residual Effects from the LNG Facility | 8-28 |
| | | Part B | 8.2.5.1 Analytical Methods | 8-28 |
| | | Part B | 8.2.5.2 Assessment of Damage to or Removal of CMTs | 8-29 |
| | | Part B | 8.2.5.3 Alteration or Removal of Terrestrial Archaeological or Heritage Sites | 8-30 |
| | | Part B | 8.2.6 Summary of Project Residual Effects | 8-32 |
| | | Part B | Table 8.2-1 Potential Project Effects on Archaeological and Heritage Resources and Measurable Parameters | 8-4 |
| | Mitigation measures designed to reduce or avoid predicted effects will be described, and any relevant management plans will be referenced. | Part B | 8.2.4.1 Justification of Interaction Rankings | 8-26 |
| | | Part B | 8.2.5.1 Analytical Methods | 8-28 |
| | | Part B | 8.2.5.2 Assessment of Damage to or Removal of CMTs | 8-29 |
| | | Part B | 8.2.5.3 Alteration or Removal of Terrestrial Archaeological or Heritage Sites | 8-30 |
| | | Part B | 8.2.6 Summary Project Residual Effects | 8-32 |
| | | Part B | 8.2.7.1 Summary of Cumulative Effects | 8-35 |
| | | Part B | 8.2.8 Prediction Confidence and Risk | 8-35 |
| | | Part B | 8.2.9 Follow-up Program and Compliance Monitoring | 8-36 |
| | | Part B | 8.2.10 Summary of Mitigation Measures | 8-37 |
| | | Part B | 8.2.11 Conclusion | 8-38 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | The residual effects of the proposed Project will be characterized by the magnitude, geographic extent, duration, frequency, reversibility, and context of the potential effects, as outlined in Section 4.4.4. | Part B | 8.2.4.1 Justification of Interaction Rankings | 8-26 |
| | | Part B | 8.2.5.2 Assessment of Damage to or Removal of CMTs | 8-29 |
| | | Part B | 8.2.5.3 Alteration or Removal of Terrestrial Archaeological or Heritage Sites | 8-30 |
| | | Part B | 8.2.6 Summary of Project Residual Effects | 8-32 |
| | | Part B | 8.2.7.1 Summary of Cumulative Effects | 8-35 |
| | A summary of residual effects and an assessment of their significance, likelihood and a confidence prediction, based on Table 4.4-3 will be provided. | Part B | 8.2.5 Assessment of Residual Effects from the LNG Facility | 8-28 |
| | | Part B | 8.2.5.1 Analytical Methods | 8-28 |
| | | Part B | 8.2.5.2 Assessment of Damage to or Removal of CMTs | 8-29 |
| | | Part B | 8.2.5.3 Alteration or Removal of Terrestrial Archaeological or Heritage Sites | 8-30 |
| | | Part B | 8.2.6 Summary of Project Residual Effects | 8-32 |
| | | Part B | 8.2.8 Prediction Confidence and Risk | 8-35 |
| | The significance of residual effects will be determined, as outlined in Section 4.4.6. | Part B | 8.2.5 Assessment of Residual Effects from the LNG Facility | 8-28 |
| | | Part B | 8.2.5.1 Analytical Methods | 8-28 |
| | | Part B | 8.2.5.2 Assessment of Damage to or Removal of CMTs | 8-29 |
| | | Part B | 8.2.5.3 Alteration or Removal of Terrestrial Archaeological or Heritage Sites | 8-30 |
| | | Part B | 8.2.6 Summary of Project Residual Effects | 8-32 |
| 8.2.5 Cumulative Effects Assessment | An assessment of cumulative effects to archaeological and heritage resources will be provided following the procedures established in Section 4.5. | Part B | 8.2.7 Assessment of Cumulative Effects | 8-35 |
| | | Part B | 8.2.7.1 Summary of Cumulative Effects | 8-35 |
| | | Part B | 8.2.6 Summary of Project Residual Effects | 8-32 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 8.2.6 Conclusion | This section of the Application will include a brief summary of the predicted residual Project effects and cumulative effects on archaeological and heritage resources, and a conclusion on the significance of these effects. | Part B | 8.2.7.1 Summary of Cumulative Effects | 8-35 |
| | | Part B | 8.2.11 Conclusion | 8-38 |
| **8.3 Summary of Assessment of Potential Heritage Effects** | | | | |
| 8.3 Summary of Assessment of Potential Heritage Effects | The Application will provide a summary table of residual Project effects on the archaeological and heritage resources VC similar to the one used for residual environmental effects (Table 5.10 1). | Part B | 8.3 Summary of Assessment for Potential Heritage Effects | 8-39 |
| | | Part B | Table 8.3-1 Summary of Project Residual Effects on Archaeological and Heritage Resources | 8-40 |
| | A summary of cumulative effects of the proposed Project on archaeological and heritage resources will also be provided in this section. | Part B | 8.2.7.1 Summary of Cumulative Effects | 8-35 |
| | | Part B | 8.3.2 Summary of Cumulative Heritage Effects | 8-41 |
| **9 Assessment of Potential Health Effects** | | | | |
| **9.1 Health Background** | | | | |
| 9.1 Health Background | This section of the Application will include a description of the existing health environment in the proposed Project and surrounding areas, to provide a general understanding of the region surrounding the proposed Project. More details will be provided in the baseline section of each VC chapter. | Part B | 9.1 Health Background | 9-1 |
| **9.2 Human Health** | | | | |
| 9.2.1 Introduction | The Application will introduce the human health risk assessment (HHRA) and describe the rationale for the inclusion of human health as a VC. | Part B | 9.2.1 Introduction | 9-1 |
| | | Part B | 9.2.2.1 Regulatory and Policy Setting | 9-2 |
| | | Part B | 9.2.2.1.1 Air Quality | 9-3 |
| 9.2.2 Scope of Assessment | The human health assessment will focus on:<br>▪ Air contaminants from project air emissions (both carcinogenic and non-carcinogenic), and | Part B | 9.2.2.4 Selection of Effects | 9-5 |
| | | Part B | 9.2.2.1.2 Water Quality | 9-3 |
| | ▪ Chemicals from historic contamination of sediment, soil or groundwater (both carcinogenic and non-carcinogenic). | Part B | 9.2.2.1.3 Soil Quality | 9-3 |
| | | Part B | 9.2.2.1.4 Sediment Quality | 9-4 |
| | | Part B | 9.2.2.4 Selection of Effects | 9-5 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | The HHRA will focus on issues associated with sensitive human receptors (i.e., young, elderly, and people with pre-existing conditions or diseases) as a result of activities or emissions that occur during the construction, operation and decommissioning phases of the proposed Project. | Part B | 9.2.2.6.1 Spatial Boundaries | 9-6 |
| | | Part B | 9.2.2.6.2 Temporal Boundaries | 9-11 |
| | | Part B | 9.2.2.1.1 Air Quality | 9-3 |
| | The HHRA will evaluate potential effects arising from exposure to airborne contaminants from the facility and shipping traffic and will consider potential changes in the quality of country foods. Where possible, information for this assessment will be drawn from other VCs (e.g., air quality, surface water quality, vegetation). | Part B | 9.2.2.1.5 Food Quality | 9-4 |
| | | Part B | 9.2.2.5 Selection of Measurable Parameters | 9-5 |
| | | Part B | 9.2.2.1 Regulatory and Policy Setting | 9-2 |
| | The Application will include a description of legislation, guidelines, BMP, and guidance documents that are relevant to minimizing effects on human health. | Part B | 9.2.2.6.1 Spatial Boundaries | 9-6 |
| | It will also expand on the rationale for the spatial boundaries identified in Table 4.2-1 and Table 4.2-2. | Part B | 9.2.2.6.2 Temporal Boundaries | 9-11 |
| | | Part B | 9.2.2.3 Traditional Knowledge and Traditional Use Information | 9-5 |
| | The Application will describe how TK and TU information as obtained through consultation with Aboriginal Groups and other sources was used in the assessment. | Part B | 9.2.2.3 Traditional Knowledge and Traditional Use Incorporation | 9-5 |
| 9.2.3 Baseline Conditions | The baseline conditions for measurable parameters relevant to air and marine effects to human health will be described in the Application. | Part B | 9.2.3.1 Baseline Data Sources | 917 |
| | Baseline conditions related to air quality, marine water quality, and sediment quality will be presented. Information will be obtained from literature, existing data sources, and marine water and sediment quality, and air quality baseline reports. To minimize duplication of information, references will be made to relevant sections of the air quality and marine resources VCs where appropriate. As necessary, communications or interviews with representatives from the BC MOE and Ministry of Health will be carried out to fill data gaps. | Part B | 9.2.3.2 Baseline Overview | 9-17 |
| | | Part B | 9.2.3.2.1 Air Quality | 9-17 |
| | | Part B | 9.2.3.2.2 Marine Water Quality | 9-18 |
| | | Part B | 9.2.3.2.3 Sediment Quality | 9-18 |
| | | Part B | 9.2.3.2.4 Country Foods | 9-20 |
| | | Part B | 9.2.4 Project Interactions | 9-21 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 9.2.4 Effects Assessment | The Application will describe the specific approach and methods used to determine the proposed Project effects on human health from development and operation of the LNG terminal and shipping activities. This will include criteria used for characterizing Project effects and determining their significance. The HHRA will follow standard risk assessment guidance from Health Canada. Interactions with potential to result in effects of concern (see Table 4.4-1) will be carried forward into this analysis. | Part B | 9.2.4.1.1 Change in Human Health Risk from Degraded Drinking Water Quality | 9-23 |
| | | Part B | 9.2.4.1.2 Change in Human Health Risk from Ingestion of Contaminated Country Foods | 9-24 |
| | | Part B | 9.2.4.1.3 Change in Human Health Risk from Degraded Air Quality | 9-27 |
| | | Part B | 9.2.5 Assessment of Residual Effects from the LNG Facility | 9-27 |
| | The Application will present an assessment of potential adverse effects of the proposed Project on human health during construction, operation, and decommissioning phases. Table 9.2 1 provides a summary of the potential effects of the proposed Project on human health that will be assessed, and the measurable parameters that will be used to quantify these effects. | Part B | 9.2.6 Assessment of Residual Effects from Shipping | 9-57 |
| | | Part B | 9.2.5.2.2 Mitigation for Change in Human Health Risk from Degraded Air Quality | 9-30 |
| | Mitigation measures designed to reduce or avoid predicted effects will be described, and relevant management plans will be referenced. | Part B | 9.2.5.2.3 Characterization of Change in Human Health Risk from Degraded Air Quality | 9-30 |
| | The residual effects of the proposed Project will be characterized by the magnitude, geographic extent, duration, frequency, reversibility, and context of the potential effects, as outlined in Section 4.4.4 | Part B | 9.2.5.2.5 Determination of Significance for Change in Human Health Risk from Degraded Air Quality | 9-57 |
| | | Part B | 9.2.7 Summary of Project Residual Effects | 9-57 |
| | A summary of residual effects and an assessment of their significance, likelihood and a confidence prediction, based on Table 4.4-3 will be provided. The significance of residual effects will be determined, as outlined in Section 4.4.6. | Part B | 9.2.8 Assessment of Cumulative Effects | 9-60 |
| 9.2.5 Cumulative Effects Assessment | An assessment of the proposed Project's potential contributions to cumulative human health effects will be provided following the procedures established in Section 4.5. | Part B | 9.2.9 Prediction of Confidence and Risk | 9-68 |
| 9.2.6 Conclusion | This section of the Application will include a brief summary of the predicted residual Project effects and cumulative effects on human health, and a conclusion on the significance of these effects. | Part B | 9.2.11 Summary of Mitigation Measures | 9-71 |
| | | Part B | 9.2.12 Conclusion | 9-71 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| **9.3 Summary of Assessment of Potential Health Effects** | | | | |
| 9.3 Summary of Assessment of Potential Health Effects | The Application will provide a summary table of residual Project effects on human health similar to the one used for residual environmental effects (Table 5.10 1). | Part B | 9.3 Summary of Potential Health Effects | 9-71 |
| | | Part B | Table 9.3-1 Summary of Project Residual Effects on Human Health | 9-72 |
| | | Part B | 9.3.2 Summary of Cumulative Health Effects | 9-72 |
| | A summary of cumulative effects of the proposed Project on human health will be provided in this section. | Part B | 9.3.2 Summary of Cumulative Health Effects | 9-72 |
| **10 Accidents or Malfunctions** | | | | |
| 10 Accidents or Malfunctions | This section of the Application will assess the effects of potential accidents or malfunctions related to the proposed Project, including an explanation of how those events were identified, and potential consequences (including potential environmental effects). | Part B | 10.2.1 Potential Accidents and Malfunctions Scenarios | 10-5 |
| | | Part B | 10.2.2 Assessment Method | 10-6 |
| | | Part B | 10.3 Spills of Hazardous Materials (Facility-Related) | 10-9 |
| | | Part B | 10.4 Loss of Containment of LNG in the LNG Processing Area and Storage Site, or Loading Lines | 10-18 |
| | | Part B | 10.5 Emergency LNG Facility Shutdown | 10-26 |
| | | Part B | 10.6 Explosion and/or Fire | 10-30 |
| | | Part B | 10.7 Vessel Grounding or Collision | 10-39 |
| | The Application will assess the effects of potential accidents or malfunctions on all the VCs considered for inclusion in the Application as listed in Table 4.4 1 of the AIR. Spatial boundaries for the assessment of Accidents or Malfunctions scenarios encompass the total area over which all valued components (VCs) may be affected and will be defined in the Application for each VC. | Part B | 10.2.2 Assessment Method | 10-6 |
| | The specific accidents or malfunctions to be considered in the Application include:<br>▪ spills of hazardous materials (not including LNG) | Part B | 10.3 Spills of Hazardous Materials (Facility-Related) | 10-9 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | ▪ loss of containment of LNG in the plant process area or storage tanks | Part B | 10.4 Loss of Containment of LNG in the LNG Processing Area and Storage Site, or Loading Lines | 10-18 |
| | ▪ emergency LNG facility shutdown (includes emergency flaring) | Part B | 10.5 Emergency LNG Facility Shutdown | 10-26 |
| | ▪ explosion and/or fire | Part B | 10.6 Explosion and/or Fire | 10-30 |
| | ▪ marine vessel grounding | Part B | 10.7 Vessel Grounding or Collision | 10-39 |
| | ▪ marine vessel collisions (i.e., with the wharf and non-tug assisted vessel or a marine mammal). This will include a loss of cargo where applicable | Part B | 10.7 Vessel Grounding or Collision | 10-39 |
| | For each event, the Application will include:<br>▪ a description of the potential event, | Part B | 10.3.1 Scenario Description (Spills of Hazardous Materials (Facility-Related)) | 10-9 |
| | | Part B | 10.4.1 Scenario Description (Loss of Containment of LNG in the LNG Processing and Storage Site, or Loading Lines) | 10-18 |
| | | Part B | 10.5.1 Scenario Description (Emergency LNG Facility Shutdown) | 10-26 |
| | | Part B | 10.6.1 Scenario Description (Explosion and/or Fire) | 10-30 |
| | | Part B | 10.7.1 Scenario Description (Vessel Grounding or Collision) | 10-40 |
| | ▪ the methodology for assessing the potential risk of each event, | Part B | 10.2.2 Assessment Method | 10-6 |
| | ▪ definitions for each category of likelihood and consequence, | Part B | 10.2.2 Assessment Method | 10-6 |
| | ▪ the assessment of the probability of the event occurring , | Part B | 10.3.1 Scenario Description (Spills of Hazardous Materials (Facility-Related)) | 10-9 |
| | | Part B | 10.4.1 Scenario Description (Loss of Containment of LNG in the LNG Processing and Storage Site, or Loading Lines) | 10-18 |
| | | Part B | 10.5.1 Scenario Description (Emergency LNG Facility Shutdown) | 10-26 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | Part B | 10.6.1 Scenario Description (Explosion and/or Fire) | 10-30 |
| | | Part B | 10.7.1 Scenario Description (Vessel Grounding or Collision) | 10-40 |
| | ▪ the identification of proposed mitigation measures to reduce the likelihood of the event, | Part B | 10.1.1 Prevention of Accidents and Malfunctions | 10-2 |
| | | Part B | 10.3.2 Project Design Measures to Reduce Risk and Consequences (Spills of Hazardous Materials (Facility-Related)) | 10-10 |
| | | Part B | 10.4.2 Project Design Measures to Reduce Risk and Consequences (Loss of Containment of LNG in the LNG Processing and Storage Site, or Loading Lines) | 10-20 |
| | | Part B | 10.5.2 Project Design Measures to Reduce Risk and Consequences (Emergency LNG Facility Shutdown) | 10-26 |
| | | Part B | 10.6.2 Project Design Measures to Reduce Risk and Consequences (Explosion and/or Fire) | 10-31 |
| | | Part B | 10.7.2 LNG Carrier Design Measures to Reduce Rish and Consequences (Vessel Grounding or Collision) | 10-42 |
| | ▪ the assessment of effects and/or consequences that may result from such events, | Part B | 10.3.4 Potential Residual Effects (Spills of Hazardous Materials (Facility-Related)) | 10-12 |
| | | Part B | 10.4.4 Potential Residual Effects (Loss of Containment of LNG in the LNG Processing and Storage Site, or Loading Lines) | 10-21 |
| | | Part B | 10.5.4 Potential Residual Effects (Emergency LNG Facility Shutdown) | 10-27 |
| | | Part B | 10.6.4 Potential Residual Effects (Explosion and/or Fire) | 10-33 |
| | | Part B | 10.7.4 Potential Residual Effects (Vessel Grounding or Collision) | 10-46 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | ▪ the identification of emergency response measures to mitigate the effects/consequences, | Part B | 10.1.2 Emergency Response Planning | 10-4 |
| | | Part B | 10.3.3 Response Measures (Spills of Hazardous Materials (Facility-Related)) | 10-11 |
| | | Part B | 10.4.3 Response Measures (Loss of Containment of LNG in the LNG Processing and Storage Site, or Loading Lines) | 10-21 |
| | | Part B | 10.5.3 Response Measures (Emergency LNG Facility Shutdown) | 10-27 |
| | | Part B | 10.6.3 Response Measures (Explosion and/or Fire) | 10-33 |
| | | Part B | 10.7.3 Response Measures (Vessel Grounding or Collision) | 10-45 |
| | ▪ the conclusions on the potential risk of the accident or malfunction, including determination of significance as required in section 19 (1)(a) and (b) of CEAA 2012, and | Part B | 10.3.4 Potential Residual Effects (Spills of Hazardous Materials (Facility-Related)) | 10-12 |
| | | Part B | 10.4.4 Potential Residual Effects (Loss of Containment of LNG in the LNG Processing and Storage Site, or Loading Lines) | 10-21 |
| | | Part B | 10.5.4 Potential Residual Effects | 10-27 |
| | | Part B | 10.6.4 Potential Residual Effects | 10-33 |
| | | Part B | 10.7.4 Potential Residual Effects | 10-46 |
| | | Part B | 10.8 Cumulative Effects of Accidents or Malfunctions | 10-59 |
| | ▪ a cumulative effects assessment as required in section 19 (1)(a) of CEAA 2012 and consistent with CEAA's Operational Policy Statement titled "Assessing Cumulative Environmental Effects under the Canadian Environmental Assessment Act, 2012" (May 2013). | Part B | 10.8 Cumulative Effects of Accidents or Malfunctions | 10-59 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| **11 Effects of the Environment on the Project** | | | | |
| 11 Effects of the Environment on the Project | This section of the Application will consider the effects of the following natural events on the proposed Project:<br>▪ extreme weather (i.e., temperature, precipitation, flooding, wind and waves),<br>▪ seismic events and tsunamis,<br>▪ forest fires, and<br>▪ predicted climate change effects during the project lifecycle on sea-level rise, precipitation and temperatures. Where relevant and possible, the implications of such climate induced changes to the extreme weather events given above will also be assessed. | Part B | 11.3 Climate Change | 11-3 |
| | | | 11.4 Extreme Weather Events | 11-9 |
| | | | 11.5 Seismic Activity and Tsunamis | 11-15 |
| | | | 11.6 Forest Fires | 11-18 |
| | The Application will further identify:<br>▪ the methodology for assessing the potential risk of an event,<br>▪ the assessment of effects and/or consequences that may result from such hazard ,<br>▪ the identification of measures to mitigate the effects/consequences, and<br>▪ the conclusions on the potential risk of the effects of the environment to the proposed Project.<br>Where applicable, the probability of occurrence of natural hazards will be identified based on provincial and/or national codes and standards, or LNG Canada design factors. | Part B | 11.1 Spatial and Temporal Boundaries | 11-1 |
| | | | 11.2 Methods | 11-2 |
| | | | 11.3.1 Environmental Factors | 11-3 |
| | | | 11.3.2 Description of Effect Mechanism | 11-7 |
| | | | 11.3.3 Mitigation Measures | 11-7 |
| | | | 11.3.4 Potential Effects on the Project | 11-8 |
| | | | 11.4.1 Environmental Factors | 11-9 |
| | | | 11.4.2 Description of Effect Mechanism | 11-11 |
| | | | 11.4.3 Mitigation Measures | 11-12 |
| | | | 11.4.4 Potential Effects on the Project | 11-14 |
| | | | 11.5.1 Description of Effect Mechanism | 11-16 |
| | | | 11.5.2 Mitigation Measures | 11-16 |
| | | | 11.5.3 Potential Effects on the Project | 11-17 |
| | | | 11.6.1 Future Projections of Forest Fires | 11-18 |
| | | | 11.6.2 Description of Effect Mechanism | 11-19 |
| | | | 11.6.3 Mitigation Measures | 11-19 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | | 11.6.4 Potential Effects on the Project | 11-19 |
| | | | 11.7 Conclusion | 11-20 |
| **12 Summary of Proposed Environmental and Operational Management Plans** | | | | |
| 12 Summary of Proposed Environmental and Operational Management Plans | This section of the Application will provide a list and comprehensive description of the Environmental Management and Operational Plans for construction and operation of the Project. This will include the identification of any mitigation measures described in previous sections that will be included in the plans. | Part B | 12.1 Environmental Management Program | 12-1 |
| | | | 12.1.1 Construction and Operations Environmental Management Program | 12-2 |
| | | | 12.2 Decommissioning Environmental Management Program | 12-7 |
| **PART C – ABORIGINAL GROUPS INFORMATION REQUIREMENTS** | | | | |
| **13 Aboriginal Background** | | | | |
| **13.1 Background** | | | | |
| 13.1 Background | Provide available background information including a map that identifies Indian Reserves, Aboriginal communities and asserted or traditional territories, for Aboriginal Groups, and | Part C | 13.1.1.1 Haisla Nation Traditional Territory | 13-2 |
| | | Part C | Figure 13.1-1 Haisla Traditional Territory | 13-3 |
| | | Part C | 13.1.3.1 Gitga'at First Nation Traditional Territory | 13-16 |
| | | Part C | Figure 13.1-3: Gitga'at Traditional Territory | 13-17 |
| | | Part C | 13.1.4.1 Gitxaala Nation Traditional Territory | 13-22 |
| | | Part C | Figure 13.1-4: Gitxaala Traditional Territory | 13-23 |
| | | Part C | 13.1.5.1 Kitselas First Nation Traditional Territory | 13-29 |
| | | Part C | Figure 13.1-5: Kitselas Traditional Territory | 13-30 |
| | | Part C | 13.1.6.1. Ktisumkalum First Nation Traditional Territory | 13-35 |
| | | Part C | Figure 13.1-6: Kitsumkalum Traditional Territory | 13-36 |
| | | Part C | 13.1.7.1.1 Lax Kw'alaams First Nation Traditional Territory | 13-41 |
| | | Part C | Figure 13.1-7: Lax Kw'alaams Traditional Territory | 13-42 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | **Volume** | **Section** | **Page** |
| | | Part C | 13.1.8.1 Metlakatla First Nation Traditional Territory | 13-48 |
| | | Part C | Figure 13.1-8 Metlakatla Traditional Territory | 13-49 |
| 13.1 Background | Summarize relevant available information on ethnography, language, land use setting and planning, governance, economy and reserves. | Part C | 13.1.1 Haisla Nation | 13-2 |
| | | Part C | 13.1.2 Tsimshian Cultural Overview | 13-11 |
| | | Part C | 13.1.3 Gitga'at First Nation | 13-16 |
| | | Part C | 13.1.4 Gitxaala Nation | 13-22 |
| | | Part C | 13.1.5 Kitselas First Nation | 13-29 |
| | | Part C | 13.1.6 Kitsumkalum First Nation | 13-35 |
| | | Part C | 13.1.7 Lax Kw'alaams First Nation | 13-41 |
| | | Part C | 13.1.8 Metlakatla First Nation | 13-48 |
| | | Part C | 13.1.9 Métis Nation British Columbia | 13-54 |
| **13.2 Consultation Activities** | | | | |
| 13.2 Consultation Activities | This section of the Application will include:<br>▪ An overview of the approved Aboriginal Consultation Plan, prepared pursuant to paragraph 14.1.1 of the section 11 Order | Part C | 13.2.1 Approved Aboriginal Consultation Plan – Overview | 13-56 |
| 13.2 Consultation Activities | ▪ A summary of proposed changes to the Aboriginal Consultation Plan resulting from the Aboriginal Groups feedback, or experience from consultation to date | Part C | 13.2.1.1 Changes to the Aboriginal Consultation Plan | 13-58 |
| 13.2 Consultation Activities | ▪ Any relevant consultation activities completed prior to entering the assessment process | Part C | 13.2.2 Summary of LNG Canada's Consultation with Aboriginal Groups | 13-59 |
| | | Part C | 13.2.2.1 Haisla Nation | 13-59 |
| | | Part C | 13.2.2.2 Gitga'at First Nation | 13-63 |
| | | Part C | 13.2.2.3 Gitxaala Nation | 13-67 |
| | | Part C | 13.2.2.4 Kitselas First Nation | 13-71 |
| | | Part C | 13.2.2.5 Kitsumkalum First Nation | 13-74 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | Part C | 13.2.2.6 Lax Kw'alaams First Nation | 13-76 |
| | | Part C | 13.2.2.7 Metlakatla First Nation | 13-79 |
| | | Part C | 13.2.2.8 Métis Nation British Columbia | 13-83 |
| 13.2 Consultation Activities | ▪ Consultation activities conducted in accordance with the section 11 Order and Aboriginal Consultation Plan | Part C | 13.2.2 Summary of LNG Canada's Consultation with Aboriginal Groups | 13-59 |
| | | Part C | 13.2.2.1 Haisla Nation | 13-59 |
| | | Part C | 13.2.2.2 Gitga'at First Nation | 13-63 |
| | | Part C | 13.2.2.3 Gitxaala Nation | 13-67 |
| | | Part C | 13.2.2.4 Kitselas First Nation | 13-71 |
| | | Part C | 13.2.2.5 Kitsumkalum First Nation | 13-74 |
| | | Part C | 13.2.2.6 Lax Kw'alaams Band | 13-76 |
| | | Part C | 13.2.2.7 Metlakatla First Nation | 13-79 |
| | | Part C | 13.2.2.8 Métis Nation British Columbia | 13-83 |
| 13.2 Consultation Activities | ▪ A summary of the proposed approach for consulting with Aboriginal Groups during the review of the Application and for resolving outstanding issues | Part C | 13.2.3.1 Stage 3 Application Review Phase Consultation | 13-83 |
| | | Part C | 13.2.3.2 Stage 4 Ongoing Engagement | 13-84 |
| 13.2 Consultation Activities | ▪ A summary of key issues and concerns raised by Aboriginal Groups during the preparation of the AIR and Application, how these issues were addressed and the degree to which LNG Canada considers them to be addressed | Part C | 13.2.4 Key Issues and Concerns Raised by Aboriginal Groups during Stages 1 and 2 | 13-85 |
| | | Part C | Table 13.2-3 Overview of Key Comments and Concerns provided to LNG Canada by Haisla Nation | 13-85 |
| | | Part C | Table 13.2-4 Overview of Key Comments and Concerns provided to LNG Canada by Gitga'at First Nation | 13-91 |
| | | Part C | Table 13.2-5 Overview of Key Comments and Concerns provided to LNG Canada by Gitxaala Nation | 13-99 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | **Volume** | **Section** | **Page** |
| | | Part C | Table 13.2-6 Overview of Key Comments and Concerns provided to LNG Canada by Kitselas First Nation | 13-104 |
| | | Part C | Table 13.2-7 Overview of Key Comments and Concerns provided to LNG Canada by Kitsumkalum | 13-109 |
| | | Part C | Table 13.2-8 Overview of Key Comments and Concerns provided to LNG Canada by Lax Kw'alaams First Nation | 13-115 |
| | | Part C | Table 13.2-9 Overview of Key Comments and Concerns provided to LNG Canada by Metlakatla First Nation | 13-119 |
| **14 Aboriginal Interests** | | | | |
| 14 Aboriginal Interests | To the extent that this information is shared with the Proponent during consultations or is otherwise publically (sic) available, this section of the Application will:<br>▪ summarize non-confidential past, present and anticipated future uses of the proposed Project area including the frequency and timing of such uses, | Part C | 14.13.1.1 Past Use of Aboriginal Interests LSAs | 14-27 |
| | | Part C | 14.13.1.2 Current Use of LSA #1 | 14-28 |
| | | Part C | 14.13.1.3 Future Use of LSA #1 | 14-25 |
| | | Part C | 14.14.1.1 Past Use of LSA #2 | 14-51 |
| | | Part C | 14.14.1.2 Current Use of LSA #2 | 14-51 |
| | | Part C | 14.14.1.3 Future Use of LSA #2 | 14-57 |
| | | Part C | 14.15.1.1 Past Use of LSA #3 | 14-61 |
| | | Part C | 14.15.1.2 Current Use of LSA #3 | 14-61 |
| | | Part C | 14.15.1.3 Future Use of LSA #3 | 14-73 |
| 14 Aboriginal Interests | ▪ identify Aboriginal Interests that Aboriginal Groups are currently exercising in the vicinity of, or in relation to the area in which the proposed Project is located, including the marine access route, that may be adversely affected by the proposed Project, | Part C | 14.6 Selection of Effects | 14-8 |
| 14 Aboriginal Interests | ▪ describe how the current exercise of identified Aboriginal Interests by Aboriginal Groups may be adversely affected by the proposed Project. This would include a discussion of: | Part C | 14.11.2 LNG Facility-Related Interactions in LSA #1 | 14-22 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | Part C | 14.11.3 LNG Facility-Related Interactions in LSA #2 | 14-23 |
| | | Part C | 14.11.4 Shipping-Related Interactions in LSA #3 | 14-23 |
| | | Part C | 14.13.2 Project Effect Mechanisms for Harvesting-Related Interests in LSA #1 | 14-35 |
| | | Part C | 14.14.2 Project Effects Mechanisms | 14-58 |
| | | Part C | 14.15.2 Project Effects Mechanisms | 14-75 |
| | | Part C | 14.16.3 Project Effects Mechanisms | 14-87 |
| | | Part C | 14.17.3 Project Effects Mechanisms | 14-99 |
| | | Part C | 14.18.3 Project Effects Mechanisms for Use of Sacred and Culturally Important Sites and Landscape Features | 14-103 |
| | | Part C | 14.19.3 Project Effects Mechanisms | 14-109 |
| | | Part C | 14.20.3 Project Effects Mechanisms | 14-111 |
| | | Part C | 14.21.3 Project Effects Mechanisms | 14-114 |
| | | Part C | 14.22.3 Project Effects Mechanisms for Aboriginal Cultural Identity | 14-121 |
| | | Part C | 14.23.3 Project Effects Mechanisms for Aboriginal Cultural Identity | 14-126 |
| | | Part C | 14.24.3 Project Effects Mechanisms for Aboriginal Cultural Identity | 14-132 |
| | | Part C | 14.25.3 Project Effects Mechanisms for Aboriginal Spiritual Places | 14-138 |
| | | Part C | 14.26.2 Project Effects Mechanisms for Aboriginal Spiritual Places | 14-142 |
| | | Part C | 14.27.3 Project Effects Mechanisms for Aboriginal Spiritual Places | 14-147 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 14 Aboriginal Interests | • the baseline conditions of VCs assessed in Part B and associated with the exercise of Aboriginal Interests | Part C | 14.13.1 Baseline Information | 14-27 |
| | | Part C | 14.14.1 Baseline Information | 14-51 |
| | | Part C | 14.15.1 Baseline Information | 14-61 |
| | | Part C | 14.16.2 Baseline Information | 14-84 |
| | | Part C | 14.17.2 Baseline Information | 14-97 |
| | | Part C | 14.19.2 Baseline Information | 14-108 |
| | | Part C | 14.20.2 Baseline Information | 14-111 |
| | | Part C | 14.22.2 Baseline Information | 14-117 |
| | | Part C | 14.23.2 Baseline Information | 14-126 |
| | | Part C | 14.24.2 Baseline Information | 14-129 |
| | | Part C | 14.25.2 Baseline Information | 14-137 |
| | | Part C | 14.27.2 Baseline Information | 14-144 |
| 14 Aboriginal Interests | • any residual and cumulative effects related to the proposed Project on VCs assessed in Part B and associated with the exercise of Aboriginal Interests | Part C | 14.13.4 Characterization of Residual Effects on Haisla Nation Harvesting-Related Aboriginal Interests | 14-40 |
| | | Part C | 14.14.4 Characterization of Residual Effects on Harvesting-Related Aboriginal Interests | 14-59 |
| | | Part C | 14.15.4 Characterization of Residual Effects on Harvesting-Related Aboriginal Interests | 14-77 |
| | | Part C | 14.16.5 Characterization of Residual Effects on Use of Sacred and Culturally Important Sites and Landscape Features | 14-89 |
| | | Part C | 14.17.5 Characterization of Residual Effects on Use of Sacred and Culturally Important Sites and Landscape Features | 14-100 |
| | | Part C | 14.18.5 Characterization of Residual Effects on Use of Sacred and Culturally Important Sites and Landscape Features in LSA #3 | 14-105 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | **Volume** | **Section** | **Page** |
| | | Part C | 14.19.5 Characterization of Residual Effects on Aspects of Haisla Nation Traditional Governance Systems within LSA #1 | 14-109 |
| | | Part C | 14.20.5 Characterization of Residual Effects on Aspects of Aboriginal Governance in LSA #2 | 14-112 |
| | | Part C | 14.21.5 Characterization of Residual Effects within LSA #3. | 14-115 |
| | | Part C | 14.22.5 Characterization of Residual Effects on Aboriginal Cultural Identity in LSA #1 | 14-121 |
| | | Part C | 14.23.5 Characterization of Residual Effects on Aboriginal Cultural Identity | 14-127 |
| | | Part C | 14.24.5 Characterization of Residual Effects on Aboriginal Cultural Identity in LSA #3 | 14-133 |
| | | Part C | 14.25.5 Characterization of Residual Effects on Aboriginal Spiritual Places | 14-140 |
| | | Part C | 14.26.4 Characterization of Residual Effects on Aboriginal Spiritual Places | 14-143 |
| | | Part C | 14.27.5 Characterization of Residual Effects on Aboriginal Spiritual Places | 14-148 |
| | | **Cumulative Effects** | | |
| | | Part C | 14.30.1 Wildlife Resources Cumulative Effects | 14-159 |
| | | Part C | 14.30.3 Freshwater and Estuarine Fish and Fish Habitat Cumulative Effects | 14-159 |
| | | Part C | 14.30.4 Marine Resources Cumulative Effects | 14-159 |
| | | Part C | 14.30.5 Vegetation Resources Cumulative Effects | 14-160 |
| | | Part C | 14.30.6 Air Quality Cumulative Effects | 14-161 |
| | | Part C | 14.30.7 Visual Quality Cumulative Effects | 14-161 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | Part C | 14.30.8 Human Health Cumulative Effects | 14-162 |
| | | Part C | 14.30.9 Acoustics Cumulative Effects | 14-162 |
| 14 Aboriginal Interests | • the extent to which the proposed Project would affect Aboriginal Groups' access to and use of the area in which the proposed Project is located to exercise their Aboriginal Interests | Part C | 14.13.4 Characterization of Residual Effects on Haisla Nation Harvesting-Related Aboriginal Interests | 14-40 |
| | | Part C | 14.15.4 Characterization of Residual Effects on Harvesting-Related Aboriginal Interests | 14-77 |
| | | Part C | 14.16.5 Characterization of Residual Effects on Use of Sacred and Culturally Important sites and Landscape Features | 14-89 |
| | | Part C | 14.17.5 Characterization of Residual Effects on Use of Sacred and Culturally Important sites and Landscape Features | 14-100 |
| | | Part C | 14.18.5 Characterization of Residual Effects on Use of Sacred and Culturally Important sites and Landscape Features in LSA #3 | 14-105 |
| | • any special characteristics or unique features of the area in which the proposed Project is located and its surroundings that are associated with the exercise of Aboriginal Interests | Part C | Table 14.13-1: Haisla Nation Harvesting Activity in LSA #1 | 14-28 |
| | | Part C | Table 14.14-1: Haisla Nation Harvesting Activity in LSA #2 | 14-51 |
| | | Part C | Table 14.14-2: Gitga'at First Nation Harvesting in LSA #2 | 14-53 |
| | | Part C | Table 14.14-3: Kitselas First Nation Harvesting in LSA #2 | 14-54 |
| | | Part C | Table 14.14-4: Kitsumkalum First Nation Harvesting in LSA #2 | 14-55 |
| | | Part C | Table 14.14-5: Lax Kw'alaams First Nation Harvesting in LSA #2 | 14-56 |
| | | Part C | Table 14.14-6: Metlakatla First Nation Harvesting in LSA #2 | 14-57 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | **Volume** | **Section** | **Page** |
| | | Part C | Table 14.16-1: Identified Sacred and Culturally Important Sites, Landscape Features, Landforms, and Natural Features | 14-85 |
| | | Part C | Table 14.17-1: Identified Sacred and Culturally Important Sites, Landscape Features, Landforms, and Natural Features | 14-97 |
| | | Part C | Table 14.18-1: Identified Sacred and Culturally Important Sites, Landscape Features, Landforms, and Natural Features - Marine Access Route | 14-102 |
| 14 Aboriginal Interests | ▪ describe or summarize (if described elsewhere in the Application) measures proposed to avoid, mitigate, or otherwise manage potential adverse effects on identified Aboriginal Interests, | Part C | 14.13.3 Mitigation Measures | 14-37 |
| | | Part C | 14.14.3 Mitigation Measures | 14-58 |
| | | Part C | 14.15.3 Mitigation Measures | 14-76 |
| | | Part C | 14.16.4 Mitigation Measures | 14-87 |
| | | Part C | 14.17.4 Mitigation Measures | 14-99 |
| | | Part C | 14.18.4 Mitigation Measures | 14-103 |
| | | Part C | 14.19.4 Mitigation Measures | 14-109 |
| | | Part C | 14.20.4 Mitigation Measures | 14-112 |
| | | Part C | 14.21.4 Mitigation Measures | 14-115 |
| | | Part C | 14.22.4 Mitigation Measures | 14-121 |
| | | Part C | 14.23.4 Mitigation Measures | 14-126 |
| | | Part C | 14.24.4. Mitigation Measures | 14-132 |
| | | Part C | 14.25.4 Mitigation Measures | 14-138 |
| | | Part C | 14.26.3 Mitigation Measures | 14-142 |
| | | Part C | 14.27.4 Mitigation Measures | 14-147 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| 14 Aboriginal Interests | ▪ describe the views expressed by Aboriginal Groups during the consultation process regarding avoidance, mitigation, or other management measures proposed to address potential adverse effects on identified Aboriginal Interests, | Part C | 14.29 Views of Aboriginal Groups | 14-156 |
| | | Part C | 14.29.1 Expressed by Aboriginal Groups on Mitigation Measures | 14-156 |
| | | Part C | Table 14.29-1 Summary of Views of Aboriginal Groups on Mitigation Measures | 14-156 |
| 14 Aboriginal Interests | ▪ describe the residual effects and degree to which identified Aboriginal Interests are likely to be adversely affected, and | Part C | 14.13.4 Characterization of Residual Effects on Haisla Nation Harvesting-Related Aboriginal Interests | 14-40 |
| | | Part C | 14.13.5 Conclusions | 14-49 |
| | | Part C | 14.14.4 Characterization of Residual Effects on Harvesting-Related Aboriginal Interests | 14-59 |
| | | Part C | 14.14.5 Conclusions | 14-59 |
| | | Part C | 14.15.4 Characterization of Residual Effects on Harvesting-Related Aboriginal Interests | 14-77 |
| | | Part C | 14.15.5 Summary of Residual Effects on Harvesting-Related Aboriginal Interests | 14-80 |
| | | Part C | 14.16.5 Characterization of Residual Effects on Use of Sacred and Culturally Important Sites and Landscape Features | 14-89 |
| | | Part C | 14.16.6 Summary of Residual Effects on Use of Sacred and Culturally Important Sites and Landscape Features | 14-95 |
| | | Part C | 14.16.7 Residual Effects on Haisla Nation Use of Sacred and Culturally Important Sites and Landscape Features | 14-95 |
| | | Part C | 14.17.5 Characterization of Residual Effects on Use of Sacred and Culturally Important Sites and Landscape Features | 14-100 |
| | | Part C | 14.17.7 Residual Effects on Aboriginal Interests | 14-101 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | Part C | 14.18.5 Characterization of Residual Effects on Use of Sacred and Culturally Important Sites and Landscape Features in LSA #3 | 14-105 |
| | | Part C | 14.18.6 Summary of Residual Effect on the Use of Sacred and Culturally Important Sites and Landscape Features in LSA #3 | 14-106 |
| | | Part C | 14.19.5 Characterization of Residual Effects on Aspects of Haisla Nation Traditional Governance Systems within LSA #1. | 14-109 |
| | | Part C | 14.20.5 Characterization of Residual Effects on Aspects of Haisla Nation Traditional Governance Systems within LSA #2 | 14-112 |
| | | Part C | 14.20.8 Residual Effects on Aspects of Haisla Nation Traditional Governance in LSA #2 | 14-113 |
| | | Part C | 14.20.9 Residual Effects on Aspects of Traditional Governance for Non-Haisla Nation Aboriginal Groups in LSA #2 | 14-114 |
| | | Part C | 14.21.5 Characterization of Residual Effects within LSA #3. | 14-115 |
| | | Part C | 14.21.6 Summary of Residual Effects on Aspects of Aboriginal Governance within LSA #3 | 14-115 |
| | | Part C | 14.22.5 Characterization of Residual Effects on Aboriginal Cultural Identity in LSA #1 | 14-121 |
| | | Part C | 14.22.6 Summary of Residual Effects on Aboriginal Cultural Identity in LSA #1 | 14-124 |
| | | Part C | 14.23.5 Characterization of Residual Effects on Aboriginal Cultural Identity | 14-127 |
| | | Part C | 14.23.6 Summary of Residual Effects on Aboriginal Cultural Identity for all Aboriginal Groups | 14-128 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | Part C | 14.24.5 Characterization of Residual Effects on Aboriginal Cultural Identity in LSA #3 | 14-133 |
| | | Part C | 14.24.6 Summary of Shipping-Related Residual Effects on Aboriginal Cultural Identity | 14-136 |
| | | Part C | 14.25.5 Characterization of Residual Effects on Aboriginal Spiritual Places | 14-140 |
| | | Part C | 14.25.6 Summary of Residual Effects on Aboriginal Spiritual Places Identified by Haisla Nation in LSA #1 | 14-141 |
| | | Part C | 14.26.4 Characterization of Residual Effects on Aboriginal Spiritual Places | 14-143 |
| | | Part C | 14.27.5 Characterization of Residual Effects on Aboriginal Spiritual Places | 14-148 |
| | | Part C | 14.27.6 Summary of Residual Effects on Aboriginal Spiritual Places | 14-149 |
| | | Part C | 14.28 Summary of Project Residual Effects on Aboriginal Interests | 14-150 |
| 14 Aboriginal Interests | ▪ describe the views expressed by Aboriginal Groups during the consultation process regarding the residual effects and degree to which their exercise of Aboriginal Interests are likely to be adversely affected. | Part C | 14.29 Views of Aboriginal Groups | 14-156 |
| | | Part C | 14.29.2 Views Expressed by Aboriginal Groups on Residual Effects | 14-157 |
| | | Part C | Table 14.29-2 Views Expressed by Aboriginal Groups Regarding Residual Effects | 14-157 |
| 14 Aboriginal Interests | Where there is overlap between Aboriginal Interests and a VC, the information from other sections of the Application will be cross-referenced and summarized in the context of the specific Aboriginal Group's Aboriginal Interest. | Part C | Table 14.8-1 Spatial Boundaries | 14-17 |
| | | Part C | 14.5 Traditional Knowledge and Traditional Use Information | 14-3 |
| 14 Aboriginal Interests | LNG Canada will work with Aboriginal Groups to obtain information on traditional use (TU) and traditional knowledge (TK). If available at the time of writing, LNG Canada will use TU and TK information to inform its understanding of potential effects on Aboriginal Interests. | Part C | 14.5 Traditional Knowledge and Traditional Use Information | 14-3 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| **15 Statutory Requirements Under CEAA 2012 Section 5(1)(c)** | | | | |
| 15 Statutory Requirements under CEAA 2012 Section 5(1)(c) | Section 5(1)(c) of CEAA 2012 requires, with respect to Aboriginal Groups, an assessment of effects occurring in Canada of any change that may be caused to the environment on:<br>▪ health and socio-economic conditions, | Part C | 15.4 Aboriginal Health | 15-5 |
| | | Part C | 15.5 Aboriginal Socio-Economic Conditions | 15-12 |
| 15 Statutory Requirements under CEAA 2012 Section 5(1)(c) | ▪ physical and cultural heritage, | Part C | 15.6 Environmental Effects on Aboriginal Physical and Cultural Heritage | 15-24 |
| 15 Statutory Requirements under CEAA 2012 Section 5(1)(c) | ▪ the current use of lands and resources for traditional purposes, and | Part C | 15.7 Environmental Effects on the Current Use of Lands and Resources for Traditional Purposes | 15-32 |
| 15 Statutory Requirements under CEAA 2012 Section 5(1)(c) | ▪ any structure, site or thing that is of historical, archaeological, paleontological, or architectural significance. | Part C | 15.6 Environmental Effects on Aboriginal Physical and Cultural Heritage | 15-24 |
| 15 Statutory Requirements under CEAA 2012 Section 5(1)(c) | This section of the Application will:<br>▪ summarize how section 5(1)(c) effects were considered in the effects assessment in Part B, | Part C | 15.1 Introduction | 15-1 |
| | | Part C | 15.3 Identification of Potential Environmental Effects on Section 5(1)(c) Factors | 15-3 |
| 15 Statutory Requirements under CEAA 2012 Section 5(1)(c) | ▪ describe or summarize (if described elsewhere in the Application) any environmental effects on section 5(1)(c) factors, including cumulative effects, | Part C | 15.3 Identification of Potential Environmental Effects on Section 5(1)(c) Factors | 15-3 |
| | | Part C | 15.4.1 Potential Effects, Project Effect Mechanisms and Mitigation Measures (Aboriginal Health) | 15-5 |
| | | Part C | 15.4.2 Project Residual Effects and Cumulative Effects on Aboriginal Health | 15-9 |
| | | Part C | 15.5.1 Potential Effects, Project Effect Mechanisms and Mitigation Measures (Aboriginal Socio-Economic Conditions) | 15-12 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | **Volume** | **Section** | **Page** |
| | | Part C | 15.5.2 Project Residual Effects and Cumulative Effects on Aboriginal Socio-Economic Conditions | 15-18 |
| | | Part C | 15.6.1 Introduction | 15-24 |
| | | Part C | 15.6.2 Potential Effects, Project Effect Mechanisms and Mitigation Measures | 15-24 |
| | | Part C | 15.6.3 Residual Effects and Cumulative Effects on Aboriginal Physical and Cultural Heritage | 15-28 |
| | | Part C | 15.7.1 Potential Effects, Project Effect Mechanisms and Mitigation Measures | 15-32 |
| | | Part C | 15.7.3 Conclusions on Current Use of Lands and Resources for Traditional Purposes. | 15-39 |
| 15 Statutory Requirements under CEAA 2012 Section 5(1)(c) | ▪ describe or summarize (if described elsewhere in the Application) measures to avoid, mitigate, or otherwise manage potential environmental effects on section 5(1)(c) factors, | Part C | Table 15.4-1 Potential Effects, Effect Mechanisms and Mitigation Measures (Aboriginal Health) | 15-5 |
| | | Part C | Table 15.5-1 Potential Effects, Effect Mechanisms and Mitigation Measures (Aboriginal Socio-Economic Conditions) | 15-13 |
| | | Part C | Table 15.6-1 Potential Effects, Effect Mechanisms and Mitigation Measures (Aboriginal Physical and Cultural Heritage) | 15-25 |
| | | Part C | 15.7.1 Potential Effects, Project Effect Mechanisms and Mitigation Measures | 15-32 |
| 15 Statutory Requirements under CEAA 2012 Section 5(1)(c) | ▪ provide a statement articulating LNG Canada's views on whether potential effects on section 5(1)(c) factors have been adequately mitigated, and | Part C | 15.4.4 LNG Canada's Conclusion Regarding the Adequacy of Mitigation Measures (Aboriginal Health) | 15-12 |
| | | Part C | 15.5.4 LNG Canada's Conclusion Regarding the Adequacy of Mitigation Measures (Aboriginal Socio-Economic Conditions) | 15-23 |
| | | Part C | 15.6.5 LNG Canada's Conclusion Regarding the Adequacy of Mitigation Measures (Physical and Cultural Heritage) | 15-31 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | Part C | 15.7.4 LNG Canada's Conclusion Regarding the Adequacy of Mitigation Measures (Current Use of Lands and Resources for Traditional Purposes) | 15-39 |
| 15 Statutory Requirements under CEAA 2012 Section 5(1)(c) | ▪ report on views of Aboriginal Groups as provided to LNG Canada. | Part C | 15.9 Views of Aboriginal Groups | 15-40 |
| **16 Other Matters of Concern to Aboriginal Groups** | | | | |
| 16 Other Matters of Concern to Aboriginal Groups | This section the of Application will:<br>▪ identify and describe the potential matters of concern that are not addressed in Part B and/or section 14 or 15 of the Application, | Part C | 16.7 Effects of Project-Related Shipping Activities on Aboriginal Archaeological and Heritage Resources | 16-7 |
| | | Part C | 16.8 Effect of Project-Related Displacement of Aboriginal Harvesters | 16-10 |
| | | Part C | 16.9 Effects on Aboriginal People's Perception of Project-Induced Changes in Safety and Environmental Risk | 16-13 |
| | | Part C | 16.10 Availability of Workers, Volunteers, and Traditional Practitioners in Aboriginal Communities | 16-15 |
| 16 Other Matters of Concern to Aboriginal Groups | ▪ describe or summarize (if described elsewhere in the Application) any measures proposed to avoid, mitigate, or otherwise manage the potential adverse effects on those matters of concern, | Part C | 16.6.3 Mitigation Measures to Address Potential Effects (Availability of Emergency Services in Aboriginal Communities) | 16-4 |
| | | Part C | 16.7.3 Mitigation Measures to Address Potential Effects (Project-Related Shipping Activities on Aboriginal Archaeological and Heritage Resources) | 16-8 |
| | | Part C | 16.8.3 Mitigation Measures to Address Potential Effects (Project-Related Displacement of Harvesters) | 16-10 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | | Part C | 16.9.3 Mitigation Measures to Address Potential Effects (Aboriginal People's Perception of Project-Induced Changes in Safety and Environmental Risk) | 16-14 |
| | | Part C | 16.10.3 Mitigation Measures to Address Potential Effects (Availability of Workers, Volunteers, and Traditional Practitioners in Aboriginal Communities) | 16-16 |
| 16 Other Matters of Concern to Aboriginal Groups | ▪ characterize any residual effects on those matters, | Part C | 16.6.4 Characterization of Residual Effects (Availability of Emergency Services in Aboriginal Communities) | 16-6 |
| | | Part C | 16.7.4 Characterization of Residual Effects (Project-Related Shipping Activities on Aboriginal Archaeological and Heritage Resources) | 16-8 |
| | | Part C | 16.8.4 Characterization of Residual Effects (Project-Related Displacement of Harvesters) | 16-11 |
| | | Part C | 16.9.4 Characterization of Residual Effects (Aboriginal People's Perception of Project-Induced Changes in Safety and Environmental Risk) | 16-15 |
| | | Part C | 16.10.4 Characterization of Residual Effects (Availability of Workers, Volunteers, and Traditional Practitioners in Aboriginal Communities) | 16-16 |
| 16 Other Matters of Concern to Aboriginal Groups | ▪ summarize views expressed by each Aboriginal Group on the proposed mitigation measures where available, and | Part C | 16.11 Views of Aboriginal Groups | 16-19 |
| | | Part C | Table 16.11-1 Views of Aboriginal Groups on Proposed Mitigation Measures | 16-19 |
| 16 Other Matters of Concern to Aboriginal Groups | ▪ provide a conclusion from the perspective of LNG Canada on the adequacy of the proposed mitigation measures to address such potential matters of concern. | Part C | 16.6.5 Conclusion (Availability of Emergency Services in Aboriginal Communities) | 16-6 |
| | | Part C | 16.7.5 Conclusion (Project-Related Shipping Activities on Aboriginal Archaeological and Heritage Resources) | 16-9 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | **Volume** | **Section** | **Page** |
| | | Part C | 16.8.5 Conclusion (Project-Related Displacement of Harvesters) | 16-13 |
| | | Part C | 16.9.5 Conclusion (Aboriginal People's Perception of Project-Induced Changes in Safety and Environmental Risk) | 16-15 |
| | | Part C | 16.10.5 Conclusion (Availability of Workers, Volunteers, and Traditional Practitioners in Aboriginal Communities) | 16-18 |
| **17 Summary of Aboriginal Groups Information Requirements** | | | | |
| 17 Summary of Aboriginal Groups Information Requirements | This section of the Application will include:<br>▪ a table (in the format shown in Table 17-1) that summarizes the potential adverse effects of the proposed Project on Aboriginal Interests and the measures proposed to mitigate those effects. The table will be organized by Aboriginal Group, and | Part C | Table 17.1-1 Summary of Potential Effects of the Project on Aboriginal Interests and Mitigation | 17-3 |
| 17 Summary of Aboriginal Groups Information Requirements | ▪ an appendix that contains comments received from Aboriginal Groups regarding this part of the Application. | Part C | Table 17.1-2 Aboriginal Groups Comments on Part C of the Application | 17-115 |
| **PART D – PUBLIC CONSULTATION** | | | | |
| **18 Summary of Public Consultation** | | | | |
| 18 Summary of Public Consultation | This section of the Application will include:<br>▪ a list of local governments, residents, property owners, and other rights holders potentially impacted by the proposed Project, | Part D | 18.2 Audience | 18-3 |
| | | Part D | 18.2.1 Local and Regional Government | 18-3 |
| | | Part D | 18.2.1.1 District of Kitimat | 18-3 |
| | | Part D | 18.2.1.2 City of Terrace | 18-5 |
| | | Part D | 18.2.1.4 Skeena-Queen Charlotte Regional District | 18-5 |
| | | Part D | 18.2.2 Stakeholders | 18-5 |
| | | Part D | 18.2.3 General Public | 18-7 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | ▪ maps of the municipalities, private land, tenures/authorizations, and/or residents with respect to the proposed Project, | Part D | Figure 18.2-1 Land Ownership | 18-4 |
| | ▪ background information about each potentially affected municipality and stakeholder group, | Part D | 18.2 Audience | 18-3 |
| | | Part D | 18.2.1 Local and Regional Government | 18-3 |
| | | Part D | 18.2.2 Stakeholders | 18-5 |
| | ▪ an overview of the approved Public Consultation Plan prepared pursuant to paragraph 16.1 of the section 11 Order, including a summary of proposed changes to the Public Consultation Plan resulting from feedback from municipalities, stakeholders and/or individuals, or experience from consultation to date, | Part D | 18.3 Overview of Consultation Plan | 18-7 |
| | ◦ a summary of LNG Canada's consultation (to date) with the public including:<br>◦ any relevant consultation activities completed before entering the assessment process | Part D | 18.4 Summary of Consultation to Date | 18-9 |
| | | Part D | Table 18.4-1 Summary of Pre-Application Stakeholder and Public Consultation | 18-10 |
| | | Part D | 18.4.2 Community Liaison Officer | 18-23 |
| | ◦ consultation activities conducted in accordance with the section 11 Order and Public Consultation Plan | Part D | 18.4 Summary of Consultation to Date | 18-9 |
| | | Part D | Table 18.4-1 Summary of Pre-Application Stakeholder and Public Consultation | 18-10 |
| | ◦ a summary of the proposed approach for consulting with the public during the review of the Application and for resolving outstanding issue | Part D | 18.6 Proposed Consultation Plan for Application Review Stage | 18-41 |
| | ▪ a table (in the format shown in Table 18-1) that summarizes the issues and concerns related to the proposed Project that were raised by the public and the measures to avoid, reduce or mitigate those effects. | Part D | 18.5.2 Issue Response Table | 18-26 |
| | | Part D | Table 18.5-1 Issue Response Table | 18-27 |
| **PART E – CONCLUSIONS** | | | | |
| **19 Summary of Project Residual Effects** | | | | |
| 19 Summary of Project Residual Effects | This section of the Application will present a table, in the format of Table 19-1, that provides summary information for each environmental, economic, social, heritage or health effect on the quality or sustainability of a VC that cannot be avoided or mitigated through the re-design or relocation of the proposed Project, or through other Proponent mitigation measures. | Part E | Table 19.0-1: Summary of Project Residual Effects | 19-2 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| **20 Summary of Mitigation Measures** | | | | |
| 20 Summary of Mitigation Measures | This section of the Application will provide a summary, in the form of Table 20-1, of all mitigation measures to prevent or reduce adverse environmental, social, economic, health, and heritage effects. | Part E | Table 20.0-1: Mitigation Measures | 20-1 |
| **21 Summary of Follow-up Programs and Compliance Reporting** | | | | |
| 21 Summary of Follow-up Programs and Compliance Reporting | A follow-up program is designed to verify the accuracy of the effects assessment and to determine the effectiveness of the measures implemented to mitigate the adverse effects of the project. In this section, the Application will provide a summary description of the proposed follow-up programs in sufficient detail to reliably verify predicted effects (or absence of them), and to confirm both the assumptions and the effectiveness of mitigation. | Part E | 21.1 Roles and Responsibilities | 21-1 |
| | | Part E | 21.2 Follow-up Programs and Compliance Reporting | 21-2 |
| | | Part E | Table 21.2-1 Follow-up Program | 21-2 |
| | | Part E | Table 21.2-2 Compliance Monitoring and Reporting | 21-2 |
| | This section of the Application will provide a clear description of the reporting structure as identified within the EMPs, and monitoring plans. Reference will be made, where applicable, to proposed EAC conditions and monitoring required for all permits, authorizations and licenses once granted. | Part E | 21.1 Roles and Responsibilities | 21-1 |
| | | Part E | 21.2 Follow-up Programs and Compliance Reporting | 21-2 |
| | | Part E | Table 21.2-1 Follow-up Program | 21-2 |
| | | Part E | Table 21.2-2 Compliance Monitoring and Reporting | 21-2 |
| **22 Conclusion** | | | | |
| 22 Conclusion | This section of the Application will:<br>▪ provide a statement on the overall significance of the proposed Project's environmental, economic, social, heritage, and health effects, and its ability to mitigate them, | Part E | 22 Conclusion | 22-1 |
| | ▪ provide a statement on the significance of residual effects, or with respect to section 5(1)(c) considerations, a conclusion regarding the adequacy of proposed mitigation measures, | Part E | 22 Conclusion | 22-1 |
| | ▪ request an environmental assessment certificate from the Government of British Columbia and a decision under section 52 of CEAA 2012 from the Canadian Minister of the Environment, and | Part E | 22 Conclusion | 22-1 |

| AIR Section | Description of Requirements of Relevant Section and Subsection | Application Reference | | |
|---|---|---|---|---|
| | | Volume | Section | Page |
| | ▪ confirm the need to successfully complete subsequent permitting/authorization processes prior to proceeding with the proposed Project construction, operation, and decommissioning. | Part E | 22 Conclusion | 22-1 |
| **23 References** | | | | |
| 23 References | This section of the Application will list the references used in preparing the Application. | Part E | 23 References | 23-1 |
| **24 Appendices** | | | | |
| 24 Appendices | Information prepared by professionals and provided under their professional seal will be identified in the Application and the related sealed studies will be included in an Appendix. | Overview | Table 2 List of Standalone Technical Data Reports Related to the Application | cvi |
| | The Application will include an appendix that summarizes how all subsection 5(1), 5(2) and 19(1) requirements of CEAA 2012 have been considered as part of the assessment for the purposes of substitution. The summary will be in the table format shown (Table 24-1) and will include: | Part E | Table 24.0-1: Substitution Summary Table | 24-2 |
| | ▪ a description of how each environmental effect listed in section 5 of CEAA 2012 was considered in the Application, | Part E | Table 24.0-1: Substitution Summary Table | 24-2 |
| | ▪ an explanation of potential environmental effects, including cumulative effects, where relevant, | Part E | Table 24.0-1: Substitution Summary Table | 24-2 |
| | ▪ mitigation measures that are being proposed to reduce these effects, | Part E | Table 24.0-1: Substitution Summary Table | 24-2 |
| | ▪ significance of residual effects, or with respect to section 5(1)(c) considerations, a conclusion regarding the adequacy of proposed mitigation measures, | Part E | Table 24.0-1: Substitution Summary Table | 24-2 |
| | ▪ recommendations from the proponent on any follow-up program elements, | Part E | Table 24.0-1: Substitution Summary Table | 24-2 |
| | ▪ how the factors to be considered under section 19(1) of CEAA 2012 were taken into account as part of the assessment and the conclusions drawn for each factor, and | Part E | Table 24.0-1: Substitution Summary Table | 24-2 |
| | ▪ reference to the section in the Application where additional information requirements addressing sections 5 and 19(1) of CEAA 2012 can be found. | Part E | Table 24.0-1: Substitution Summary Table | 24-2 |

**Table 2: List of Standalone Technical Data Reports Related to the Application**

| Standalone Technical Data Report Name | Related Section of the Application |
|---|---|
| Acoustic Environment Technical Data Report | Section 5.4 |
| Air Quality Technical Data Report | Section 5.2 |
| Archaeology Impact Assessment | Section 8.2 |
| Socio-economic Baseline Report | Section 6.2, 7.2, 7.4, 7.5 |
| Emissions Assessment for Soils and Vegetation Technical Data Report | Section 5.5 |
| Freshwater and Estuarine Fish and Fish Habitat Technical Data Report | Section 5.7 |
| Greenhouse Gas Management Technical Data Report | Section 5.3 |
| Human Health Risk Assessment Technical Data Report | Section 9.2 |
| Marine Resources Technical Data Report | Section 5.8 |
| Surface Water Quality Technical Data Report | Section 5.9 |
| Vegetation Resources Technical Data Report | Section 5.5 |
| Visual Quality Technical Data Report | Section 7.3 |
| Wildlife Resources Technical Data Report | Section 5.6 |