

Tailored Impact Statement Guidelines – Federal Authority Comment Table

Response requested by: **December 23, 2021**

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Draft Joint Guidelines

| Section and PDF Page number | Issue (rationale and whether the issue is project-specific or general) | Suggested edit (show original text with suggested edits in track changes) | Type of edit (critical or recommended) |
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| Glossary (pdf p. 15) | General Definition of “Effects”: Health Canada notes that according to the determinants of health approach, health effects from a project are unlikely without first having effects on environmental, economic and/or social (cultural) conditions. In other words, it is by first assessing a project’s environmental, economic and/or social effects that health effects can then be assessed. | Suggested edits: Positive or negative consequences of changes to the environment or to health -social or economic conditions, and <u>any resultant health effects</u> that are likely to be caused by the carrying out of the project. This includes direct and incidental effects, as well as cumulative effects. | Recommended |
| Scope of the Assessment (pdf p. 21) 16. Marine Shipping (pdf p. 196) 17. Road and Rail Activities (pdf p. 201) | General The Agency and EAO are seeking input on the geographic extent of activities that are relevant to the assessment of the project, such as marine shipping and road and rail transportation. | Health Canada notes that from an air quality perspective, the Lower Fraser Valley airshed air zone in southwestern British Columbia (BC), which includes Metro Vancouver, is widely recognized as a sensitive airshed air zone due to its constrained topography, large and growing population, and potential for significant emissions from a wide range of air emissions sources. Therefore, to the extent that an expanded geographic scope related to the assessment of transportation may help to address concerns raised by participants of previous environmental assessments undertaken in the same geographic area, and also help to inform the Federal Review Panel and decision-makers of potential project effects, Health Canada would be supportive of an expanded geographic scope for this assessment (e.g., beyond the proponent’s lease boundary). | Recommended |

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| 1.2 Project Location (pdf p. 24) | Project-specific To address Health Canada's information requirements as indicated during the initial Project Description review phase. | Suggested edits and additions: [Excerpt] The following information must be included and, where appropriate, located on maps: <ul style="list-style-type: none"> description and locations of all potable drinking water sources (i.e. municipal or private); <u>the distance of key project components and to local and Indigenous communities and nations, including distances to these communities and nations; including residences, temporary/seasonal/traditional use sites (e.g., fishing, berry picking, ceremonial, recreational), and other uses such as the proposed new Tsawwassen First Nation marina, within the project area. Sensitive human receptor locations, such as schools, daycares, hospitals, retirement complexes or assisted care homes, places of worship, or other community specific sensitive receptor locations should also be included;</u> | Critical |
| 1.4 Gender-Based Analysis Plus (GBA+) (pdf p. 27) | Project-specific To further incorporate GBA+ in the impact statement. | Suggested addition: [Excerpt] To support GBA+, the information provided in the Impact Statement must: <ul style="list-style-type: none"> describe how Indigenous and community knowledge from affected populations, including community developed indicators and locally collected data, was used in establishing existing conditions and informing effects assessments <u>(including the cumulative effects assessment)</u>; describe how community members differ in access to resources, opportunities and services. As much as possible describe multiple intersections of identity factors in the analysis; describe the circumstances in which diverse subgroups could suffer more adverse effects or receive fewer benefits related to the project than others, and how they may respond differently to potential effects, <u>including from cumulative effects</u>; | Recommended |
| 1.6 Format and Accessibility (pdf p. 30) | General To enable fulsome review by expert reviewers. | Suggested addition: [Excerpt] The proponent should be prepared to provide: [...] <ul style="list-style-type: none"> documentation and results of analysis that allow for a clear understanding of analytical methods and for replication of results; <u>discussion of uncertainty associated with any monitoring, modelling, or estimates for all reported data, sample calculations and worked examples for predicted values, where feasible;</u> | Recommended |
| 2.1.1 Marine Components (pdf p. 32) | Project-specific To allow for a full understanding of potential project effects, including the short sea shipping marine component along its full route. | Health Canada recommends that the short sea shipping assessment also include some potential short-sea shipping routes (both in-bound and out-bound) <u>to the extent possible</u> , similar to what is <u>being</u> required for both the marine terminal and tug boat activity (refer to pdf page 31, footnote 2). | Critical |

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| 2.2 Project Activities (pdf p. 33) | General To allow consistency with bullet points 1 and 5 in this section. | Suggested addition: [Excerpt] The Impact Statement must: [...] <ul style="list-style-type: none"> • detail how input from diverse subgroups was used to identify potential components or activities of concern; • <u>detail how Indigenous knowledge was used to identify potential project components or activities of concern, particularly with respect to understanding potential impacts to Indigenous interests and health.</u> | Recommended |
| 8.4 Assessment Methodology - Existing Conditions (pdf p. 57) | General To be consistent with Health Canada's suggested edit for the Glossary definition of "Effects". Please note that these edits may need to be reflected in other sections of the document where they would be relevant. | Suggested edits: [Excerpt] The Impact Statement must: <ul style="list-style-type: none"> • describe the existing conditions for the environmental, health-social, cultural and economic conditions, <u>and any resultant health effects</u> directly and incidentally related to the project and the interrelations and interactions among them; | Recommended |
| 8.4 Assessment Methodology - Existing Conditions (pdf p. 57) | General Health Canada suggests replacing the word "estimate" in this bullet, with either "determine" or "establish"; unless a pre-industrial baseline is being referred to (which may have limited data available). | Suggested edit and addition: [Excerpt] The Impact Statement must: [...] <ul style="list-style-type: none"> • include data on existing conditions collected in a way that makes analyses, extrapolations and reliable predictions possible, and are suitable to: <ul style="list-style-type: none"> ○ estimate <u>determine</u> pre-project baseline conditions. | Recommended |
| 8.4 Assessment Methodology - Existing Conditions (pdf p. 58) | General Health Canada suggests replacing the words "where necessary" in this bullet, with either "to the extent possible" or "where feasible". Using "where necessary" is ambiguous and may mistakenly imply that it is not preferable for the proponent to provide disaggregated data. | Suggested edit and addition: [Excerpt] The Impact Statement must: [...] <ul style="list-style-type: none"> • describe how GBA+ was applied to examine differences in existing conditions among diverse subgroups and provide disaggregated data where necessary <u>to the extent possible</u>. | Critical |

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| 8.5 Assessment Methodology - Potential Effects (pdf p. 59) | General For completeness | Suggested addition: [Excerpt] The Impact Statement must: [...] <ul style="list-style-type: none"> describe the degree of uncertainty and conservatism related to the data and methods, <u>and provide discussion on the implications for the project specific conclusions;</u> | Critical |
| 8.5 Assessment Methodology - Potential Effects (pdf p. 60) | General As in the previous comment (section 8.4, pdf p. 58), Health Canada suggests replacing the words “where necessary” in this bullet, with either “to the extent possible” or “where feasible”. | Suggested edit and addition: [Excerpt] The Impact Statement must: [...] <ul style="list-style-type: none"> describe how GBA+ was applied to examine differences in effects among diverse subgroups and provide disaggregated data <u>where necessary to the extent possible;</u> and | Critical |
| 8.5 Assessment Methodology- Potential Effects (pdf p. 60) | General To clarify that potential effects without mitigation should be discussed. | Suggested addition: [Excerpt] Where offsetting measures are proposed to directly or indirectly address a potential effect, the Impact Statement must first describe any potential effects following the implementation of measures to avoid, minimize, and restore on-site. For transparency, the change to the VC prior to the implementation of offsetting <u>or mitigation</u> should be clearly identified, quantified and characterized in the Impact Statement to fully understand the consequences of the project being assessed. <u>Modelled project effects should be presented both before and after the application of mitigation measures (where possible).</u> The characterization is best undertaken in the context of describing the proposed suite of mitigation, the need for and scope of offset, and residual effect. | Critical |
| 8.7 Assessment Methodology - Characterization of Residual Effects (pdf pp. 63-64) | Project Specific Health Canada suggests that IAAC provide guidance as to where the proponent can find information on defining these criteria. In particular, it is unclear how the “importance” criteria is defined. An excerpt is provided in the next column for reference. | For Reference [Excerpt] <ul style="list-style-type: none"> for every adverse residual effect, use the following criteria in characterizing residual effects: <ul style="list-style-type: none"> magnitude; geographic extent; timing; duration; reversibility; frequency; affected populations; importance; risk and uncertainty; and [...] | Recommended |

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| <p>8.8 Assessment Methodology - Cumulative Effects Assessment (pdf p. 65)</p> | <p>General</p> <p>Health Canada recommends that non-threshold air pollutants (e.g., PM_{2.5}, NO₂) be carried forward into the cumulative effects assessment as residual effects, given that health effects can occur at any level of exposure to these air pollutants. This will ensure further consideration of these pollutants with regards to cumulative effects, and the development of mitigation measures and monitoring requirements.</p> | <p>Suggested addition: [Excerpt]</p> <p>The Impact Statement must:</p> <ul style="list-style-type: none"> • identify and provide a rationale for the selection of VCs that will be the focus of the cumulative effects assessment, including; <ul style="list-style-type: none"> ○ VCs identified as being of particular concern in the context of cumulative effects by participants, including Indigenous nations; ○ <u>VCS (e.g., air quality) for which any increase (e.g., in the concentration of a criteria air contaminant) represents an incremental risk to an exposed population - even if a predicted value is below a threshold (e.g., a Canadian Ambient Air Quality Standard);</u> | <p>Critical</p> |
| <p>9.4.3 Air Quality - Existing Conditions (pdf pp. 74-75)</p> | <p>General and project-specific</p> <p>To address Health Canada's information requirements with respect to potential air (and/or multi-media) health effects.</p> <p>For example, coal dust from nearby Westshore Terminals should be analyzed for its constituent contaminants (e.g., metals), such that baseline conditions could be used to predict future loadings of contaminants to the environment via dustfall. This would help to inform a more complete understanding of potential human health risk from exposures to contaminants from multiple environmental media (e.g., air, traditional foods).</p> <p>WHO Global Air Quality Guidelines are health-based guidelines that can be used to assess potential adverse effects when comparing them to baseline or modelled predicted concentrations. However, WHO Global Air Quality Guidelines are not meant to be used as regulatory requirements; rather, they are one of the assessment tools that can be used to assist the proponent in implementing measures to reduce potential health effects associated with the proposed project. Available at: https://apps.who.int/iris/handle/10665/345329</p> | <p>Suggested edits and additions: [Excerpt]</p> <p>The Impact Statement must: [...]</p> <ul style="list-style-type: none"> • provide baseline ambient air concentrations for contaminants, in particular near key receptors (e.g. communities, traditional land users <u>of the land and water</u>, wildlife) and quantify emission sources for the following: <ul style="list-style-type: none"> ○ total particulate matter; ○ particulate matter less than 2.5 microns (PM_{2.5}); ○ <u>diesel particulate matter (separate from PM 2.5);</u> ○ particulate matter less than 10 microns (PM₁₀); ○ carbon monoxide (CO); ○ ozone (O₃); ○ sulphur dioxide (SO₂) and sulphur oxides (SO_x); ○ nitrogen dioxide (NO₂) and nitrogen oxides (NO_x); ○ volatile organic compounds (VOCs), individual or an appropriate subset <u>(including 1,3-butadiene, benzene, formaldehyde, acetaldehyde and acrolein);</u> ○ polycyclic aromatic compounds, including polycyclic aromatic hydrocarbons (PAHs), alkylated PAHs, PAH transformation products, including nitro- and oxy-PAHs, and dibenzothiophenes (DBTs); and <u>relevant metals and other substances/chemicals bound to coal dust (e.g. PAHs and silica) that have the potential to cause local and/or systemic adverse health effects; and</u> ○ any other relevant air pollutants from mobile, stationary or fugitive sources, including contaminants produced by the combustion of diesel fuel; • compare ambient air quality results concentrations <u>with applicable regional, provincial, and federal standards, and international guidelines, objectives or standards, as may be applicable.</u> For air pollutants with <u>guidelines, objectives or standards</u>, the comparison must use the same averaging period and the statistical format associated with each numerical value; <ul style="list-style-type: none"> ○ Possible standards include but are not limited to: Canadian Ambient Air Quality Standards (CAAQS) <u>established by the Canadian Council of Ministers of the Environment (CCME) for PM_{2.5}, O₃, SO₂ and</u> | <p>Critical</p> |

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| | | <u>NO₂, National Ambient Air Quality Objectives (NAAQO), or and relevant provincial and international standards (i.e., World Health Organization Global Air Quality Guidelines), as may be applicable at the time of project construction or operations; The proponent must refer to the new CAAQS established by the Canadian Council of Ministers of the Environment (CCME) for PM_{2.5}, O₃, SO₂ and NO₂ for 2020 and 2025;</u> | |
| 9.4.4 Air Quality – Potential Effects (pdf p. 77) | Project-specific Health Canada is of the opinion that modelled air quality results for all project phases should be inclusive of the marine shipping and short-sea shipping routes, where feasible. | Suggested addition: [Excerpt] The Impact Statement must: [...] <ul style="list-style-type: none"> • use atmospheric dispersion modelling to predict the fate of emissions resulting from project-related sources, <u>including all marine and short sea shipping routes where feasible</u>, and provide appropriately scaled contour map(s) plotting the predicted emissions (see Appendix 6 - Additional guidance for biophysical components for guidance on dispersion modelling); | Critical |
| 9.4.4 Air Quality – Potential Effects (pdf p. 77) | General In the interest of transparency, the proponent should present the predicted concentrations of air contaminants before and after the implementation of mitigation measures when feasible. | Suggested addition: [Excerpt] The Impact Statement must: [...] <ul style="list-style-type: none"> • provide the rationale for the choice of air quality model, including the type and magnitude of emissions, the complexity of sources, terrain and meteorology, or for why modelling is not being used to predict fate of air emissions; • <u>where feasible, model air contaminant concentrations including the project's contribution before and after the application of proposed mitigations measures;</u> | Recommended |
| 9.4.4 Air Quality – Potential Effects (pdf p. 77) | General Health Canada would prefer to see an assessment of ozone based on precursor emissions (e.g., nitrogen oxides [NO _x] and volatile organic compounds [VOCs]) of the formation of ozone, taking into account the processes and activities specific to the region. | Suggested addition: [Excerpt] The Impact Statement must: [...] <ul style="list-style-type: none"> • provide an assessment of project emissions (<u>e.g., NO_x and VOCs</u>) and resulting air pollutant concentrations, <u>taking into account regional processes and activities</u> that can potentially contribute or add to existing ground-level ozone concentrations; | Critical |

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| <p>9.4.4 Air Quality – Potential Effects (pdf p. 77)</p> | <p>General</p> <p>The human health risk assessment should take into consideration the fact that some air contaminants are non-threshold.</p> | <p>Suggested addition: [Excerpt]</p> <p>The Impact Statement must: [...]</p> <ul style="list-style-type: none"> • assess effects to receiving environment through: <ul style="list-style-type: none"> ○ comparison with ambient standards, including the CAAQS. The assessment against CAAQS should be based on the principles of “keeping clean areas clean” and continuous improvement, and in the context of air sheds and air zones with the Air Quality Management System, <u>while also recognizing the fact that for several air contaminants, there is no population concentration threshold for human health effects;</u> | <p>Recommended</p> |
| <p>9.4.4 Air Quality – Potential Effects (pdf p. 78)</p> | <p>General</p> <p>The new World Health Organization (WHO) Global Air Quality Guidelines (AQGs) recommend new air quality levels to protect the health of populations, by reducing levels of key air pollutants, some of which also contribute to climate change.</p> | <p>Suggested addition: [Excerpt]</p> <p>The Impact Statement must:</p> <ul style="list-style-type: none"> • assess effects to receiving environment through: [...] ○ comparison to other appropriate existing guidelines, objectives or standards, where relevant. This includes <u>international (i.e., WHO),</u> regional and community-based air quality guidelines; and [...] | <p>Recommended</p> |
| <p>9.5.1 Atmospheric Noise – Relevant Statutes, Policies and Frameworks (pdf pp. 78-79)</p> | <p>General</p> <p>In addition to Health Canada's noise guidance, Health Canada recommends that the guidelines and recommendations of the World Health Organization (WHO 1999; 2009) regarding sleep disturbance be taken into consideration in the noise assessment.</p> <p>World Health Organization (WHO). 1999. <i>Guidelines for Community Noise</i>. Berglund, B., Lindvall, T. and Schwela, D.H (Eds.). Available online at: https://apps.who.int/iris/handle/10665/66217</p> <p>WHO. 2009. <i>Night Noise Guidelines for Europe</i>. Hurlley, C. (Ed). Available online at: www.euro.who.int/en/health-topics/environment-and-health/noise/publications/2009/night-noise-guidelines-for-europe</p> | <p>Suggested addition: [Excerpt]</p> <p>Federal and provincial statutes, policies, <u>guidelines</u> and frameworks that may be relevant to atmospheric noise include:</p> <ul style="list-style-type: none"> • municipal bylaws (as applicable); • <u>Health Canada Guidance for Evaluating Human Health Impacts in Environmental Assessment: Noise;</u> • <u>WHO Guidelines for Community Noise</u> • <u>WHO Night Noise Guidelines for Europe</u> • <u>BC Oil and Gas Commission British Columbia Noise Control Best Practices Guideline</u> (as applicable); and • additional sector or geographic specific statutes, policies and frameworks, as applicable, are to be determined in collaboration with relevant government authorities during the development of the Impact Statement. | <p>Recommended</p> |

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| <p>9.5.3 Atmospheric Noise – Existing Conditions (pdf p. 79)</p> | <p>General</p> <p>To allow for a full understanding of baseline <u>noise</u> conditions.</p> <p>To clarify the bullet point and provide examples of human sensitive receptor locations consistent with Section 1.2.</p> <p>Health Canada does not evaluate wildlife but it is unclear how to monitor noise at “wildlife”. IAAC should confirm this request with the appropriate departments or agencies.</p> | <p>Suggested edits and additions: [Excerpt]</p> <p>The Impact Statement must:</p> <ul style="list-style-type: none"> • <u>describe current provide measured or modelled baseline ambient</u> noise levels at <u>each</u> key receptor <u>points location</u> (e.g. closest or most affected receptors including communities, <u>temporary/seasonal/traditional land users of the land and water</u>, sensitive human receptors such as schools, childcare centres, places of worship, hospitals, and wildlife) <u>when conditions are favourable for sound propagation. Examples of sensitive human receptor locations includes schools, hospitals, retirement complexes or assisted care homes, or other community specific sensitive receptors.</u> where relevant this may include providing the results of a baseline ambient noise survey and permissible sound levels for each receptor; • <u>provide estimates for applicable noise metrics and rationale for their inclusion or exclusion. Examples include: day-night sound level (Ldn), daytime sound level (Ld), night-time sound level (Ln), equivalent continuous sound level (Leq), maximum A-weighted sound level (LAmax), C-weighted decibels (dBC), Z-weighted decibels (dBZ), percent highly annoyed (%HA), and percent highly sleep disturbed (%HSD);</u> • describe the locations and characteristics of sensitive <u>human</u> receptors, <u>and including wildlife</u> species at risk; • for studies on ambient noise where there are human receptors present, consider the following during baseline data collection: <ul style="list-style-type: none"> ○ natural sounds <u>(which should be removed from the determination of baseline noise conditions);</u> ○ <u>low frequency noise and vibration;</u> ○ <u>soundscapes (see standard ISO 12913-1:2014. Acoustics — Soundscape — Part 1: Definition and conceptual framework);</u> ○ expectations regarding quiet conditions in specific places <u>and/or</u> at specific times; ○ usual sleeping hours (the default assumption is 10 p.m. to 7 a.m.) <u>and existing level of sleep disturbance;</u> and ○ degree of baseline annoyance attributable to existing noise sources (e.g. vehicle traffic, aircraft, other industrial noise); • describe typical sound sources (natural and anthropogenic), their geographic extent and temporal variations; • <u>provide a comparison of existing nighttime baseline noise levels against WHO guidelines;</u> • justify the selection of and describe noise-sensitive receptors in the assessment area, including any foreseeable future receptors, and distances of receptors from the project; and • <u>specify whether community consultation with respect to noise has occurred, and whether any noise-related human health concerns have been expressed by potentially impacted receptors;</u> • <u>consider conducting a community noise survey to understand the current perception of noise in nearby communities; and</u> • describe available Indigenous or community knowledge related to current noise conditions. | <p>Critical</p> |
| <p>9.5.4 Atmospheric Noise – Potential Effects (pdf. p. 80)</p> | <p>General</p> <p>To allow for a full understanding of potential project effects.</p> | <p>Suggested edits and additions: [Excerpt]</p> <p>The Impact Statement must:</p> | <p>Recommended</p> |

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| | <p>To include cumulative effects in the Impact Statement requirements.</p> | <ul style="list-style-type: none"> describe potential effects to atmospheric noise, identify interactions between the project and these effects, and outline indicators that will be used to measure these effects; <u>identify the duration of construction activities and whether any will take place at night;</u> <u>predict describe changes in ambient vibration and noise (including low frequency noise) levels as a result of the project;</u> quantify noise levels at appropriate distances, from any project-related noise source, facility and/or activities, including at key receptor locations, and describe the frequency, duration and character of noise; <u>undertake a community survey to determine the percent highly sleep disturbed (%HSD) where baseline noise levels already exceed WHO guidelines for night-time noise, and project construction activities (greater than one year) and/or operation are predicted to impact the sleep of nearby receptors;</u> provide a comparison<u>comparison</u> between existing (baseline), project-sourced noise, and project plus baseline noise levels <u>and cumulative noise levels;</u> where there is public concern associated with an increase in noise levels during construction <u>or operations,</u> provide a vibration and noise impact assessment, including an overview of the concerns <u>(ideally identifying the general proximity of these receptors to the project-related activities);</u> identify and justify the approach to determine the extent to which sound effects resulting from the project are adverse; describe consultation with regulators, stakeholders, community groups, landowners and Indigenous nations about potential effects to the acoustic environment; and describe any positive changes. <p>The proponent should refer to Health Canada's <u>most recent</u> <i>Guidance for Evaluating Human Health Impacts in Environmental Assessment: Noise</i> to ensure that it provides the information and analysis considered necessary to assess the project's impacts on human health in relation to changes to the sound environment.</p> | |
| <p>9.5.5 Atmospheric Noise – Mitigation and Enhancement Measures (pdf p. 80)</p> | <p>General</p> <p>To minimize potential noise impacts to receptors in an already impacted area.</p> | <p>Suggested edit and additions: [Excerpt]</p> <p>The Impact Statement must:</p> <ul style="list-style-type: none"> describe measures to mitigate effects on atmospheric noise, including approaches to avoid, reduce, mitigate or otherwise address potential adverse effects and enhance positive effects; <u>and</u> <u>prioritize mitigation measures that can be applied to the noise source, where this is technically feasible. Then consider mitigation applied to the pathway, and lastly mitigation applied to receptors; and</u> provide a noise management plan <u>(including a complaint resolution plan),</u> including identification of the noise sources, common noise mitigation measures, the performance efficiency of the noise control devices, the best practices programs and the continuous improvement programs, and establish the need for follow-up monitoring for the purposes of validation of the model or due to any concern raised by participants. | <p>Critical</p> |

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| <p>9.7.3 Marine Water, Sediment, and Coastal Geomorphology – Existing Conditions (pdf p. 84)</p> | <p>General</p> <p>Health Canada suggests clarifying the term 'near-shore soils' (e.g., upland areas or intertidal sediments) and whether near shore soil contamination should be included with sediments.</p> <p>To be consistent with Health Canada's guidance concerning human health risk assessments for traditional (country) foods. Refer to Health Canada's (2010) <i>Federal Contaminated Site Risk Assessment in Canada: Supplemental Guidance on Human Health Risk Assessment for Country Foods (HHRA_{Foods})</i>. Available online at: https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/contaminated-sites/federal-contaminated-site-risk-assessment-canada-supplemental-guidance-human-health-risk-assessment-country-foods-hhra-foods-health-canada-2011.html</p> | <p>Suggested edit and addition: [Excerpt]</p> <p>The Impact Statement must: [...]</p> <ul style="list-style-type: none"> describe the physical, chemical, and potential toxicological nature of any known or suspected sediment or near shore soil contamination within the study area that could be re-suspended, released, re-used, disposed or otherwise disturbed as a result of the project; describe, where relevant, the locations of <u>marine foods (e.g., marine bivalve shellfish harvesting areas within the study areas</u>, and the potential for contamination of such waters <u>and sediments and marine foods</u>; <ul style="list-style-type: none"> <u>identify the maximum impacted area and area most likely to be frequented for the harvesting of an identified food species;</u> <u>co-locate sediment, water and marine food sampling locations for potential use in risk assessments and to inform future risk management considerations;</u> | <p>Recommended</p> |
| <p>9.9.3 Marine Fish and Fish Habitat – Existing Conditions (pdf p. 90)</p> | <p>General</p> <p>To be consistent with Health Canada's guidance concerning human health risk assessments for traditional (country) foods</p> | <p>Suggested edit and addition: [Excerpt]</p> <p>The Impact Statement must: [...]</p> <ul style="list-style-type: none"> provide baseline measurements of contaminants in fish <u>marine traditional foods, as measured in commonly consumed tissues (e.g., crab leg muscle and crab hepatopancreas);</u> | <p>Critical</p> |
| <p>9.9.4 Marine Fish and Fish Habitat – Potential Effects (pdf p. 92)</p> | <p>General</p> <p>For completeness.</p> | <p>Suggested edits and additions: [Excerpt]</p> <p>The Impact Statement must: [...]</p> <ul style="list-style-type: none"> describe direct effects from contaminants on <u>marine species fish</u> and also bioaccumulation of contaminants (e.g. PCBs, PBDEs, selenium, mercury, <u>cadmium, arsenic, lead, dioxins and furans</u>) with a focus on traditional foods harvested by Indigenous peoples. Effects should be predicted or modelled <u>for the construction and operations phases</u> using baseline measurements of contaminants in the complete food web (including water, invertebrates | <p>Critical</p> |

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| | | <p>and prey fish), and should be discussed by comparing predicted water, <u>sediment, fish and/or shellfish tissue</u> quality for all phases and at all key locations in the receiving environment to:</p> <ul style="list-style-type: none"> ○ applicable <u>waterenvironmental</u> quality guidelines; and/or ○ site-specific objectives of benchmarks; and/or ○ relevant toxicity test results (either site-specific or published); and/or ○ other applicable methods; | |
| 9.9.5 Marine Fish and Fish Habitat – Mitigation and Enhancement Measures (pdf p. 94) | <p>General</p> <p>For completeness.</p> | <p>Suggested addition: [Excerpt]</p> <p>The Impact Statement must describe the mitigation measures for the potential effects on fish and fish habitat, including: [...]</p> <ul style="list-style-type: none"> • measures to prevent the introduction and intrusion of invasive aquatic species during work in or near the aquatic environment; and • describe how environmental protection plans will address any applicable federal and provincial policies with respect to fish habitat; <u>and</u> • <u>monitoring and/or follow-up programs that may be required to verify the predictions of the assessment.</u> | Critical |
| 9.11.3 Marine Vegetation and Wetlands – Existing Conditions (pdf. p. 99) | <p>General</p> <p>For completeness.</p> | <p>Suggested addition: [Excerpt]</p> <p>The Impact Statement must: [...]</p> <ul style="list-style-type: none"> • describe the use of local vegetation for medicinal purposes, or as a source of traditional foods and whether its consumption has any Indigenous cultural importance; <u>All sites used in the study area (such as important harvesting sites) or historically important sites for the collection of traditional foods must be identified and mapped;</u> | Recommended |
| 9.11.4 Marine Vegetation and Wetlands – Potential Effects (pdf p. 101) | <p>General</p> <p>For completeness.</p> | <p>Suggested addition: [Excerpt]</p> <p>The Impact Statement must describe all the interactions between the project and vegetation and wetland environments, including: [...]</p> <ul style="list-style-type: none"> • potential effects from project emissions that may result in contamination and acidification of nearby land and waterbodies, including consideration of the sensitivity of vegetation communities, wetlands, and riparian and terrestrial environments to disturbance; • <u>effects on marine vegetation (e.g., contaminants) consumed by people, with a focus on traditional foods harvested by Indigenous peoples (this could be used to inform other sections of the Impact Statement);</u> • potential changes to wetland environments due to activities that may affect erosion, compaction, and productivity, contamination, bank slopes and suspension of sediment or due to any contaminants of concern potentially | Recommended |

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| | | associated with the project that may affect vegetation, sediment or water; | |
| 10.1.3 Social Conditions and Community Well-Being – Existing Conditions (pdf pp. 115-116) | General For completeness and elaboration of the recommended methodology. | <p>Suggested addition: [Excerpt]</p> <p>The Impact Statement must:</p> <ul style="list-style-type: none"> • <u>present qualitative and quantitative information as obtained through flexible input (e.g., input through oral history)</u> • be sufficiently detailed to provide a comprehensive understanding of the current state of each VC, including relevant trends; • identify the social area of influence of the project; • describe how Indigenous and community knowledge from relevant populations was used in establishing existing conditions, including input from diverse subgroups; • describe existing conditions using disaggregated data for diverse subgroups (e.g., woman, youth, two spirited people, elders and people with disabilities) <u>and to understand the differential impact of the project on women, children and other vulnerable groups, including the impact of the project from a cumulative effects perspective. Disaggregated data will also be important to understand the differential their different access to resources, opportunities and services within the community to support GBA+. If there is a data limitation for a specific population or community, the following approach should be undertaken: (i) collect primary baseline data; or (ii) rely on existing secondary data that may be available at either a regional, provincial or national level. Where gaps in baseline health data exist, these should be clearly and explicitly stated in the Impact Statement; and where gaps exist, these should be identified using a gender-based analysis to determine what groups are or are not specifically represented/under-represented in existing data [...]</u> | Recommended |
| 10.1.4 Social Conditions and Community Well-Being – Potential Effects (pdf p. 116) | General For completeness. Identifying effect pathways as part of the baseline information will ensure that appropriate baseline indicators are selected. | <p>Suggested addition: [Excerpt]</p> <p>The Impact Statement must:</p> <ul style="list-style-type: none"> • <u>consider community and Indigenous knowledge (e.g., outcomes that were developed by each community), and/or provide evidence that community-led or participatory processes were undertaken;</u> • describe potential effects to social conditions and community well-being, identify interactions between the project and these effects, and outline indicators that will be used to measure these effects; • <u>illustrate the interconnections among the factors that contribute positively or adversely to social/community well-being, and health factors related to mental and physical well-being, to identify potential interactions of effects (i.e., complete effect pathways going from project components and activities to health outcomes);</u> | Recommended |

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| <p>10.1.4 Social Conditions and Community Well-Being – Potential Effects (pdf p. 117)</p> | <p>General</p> <p>The collection and use of Indigenous knowledge should follow key principles, such as respect for privacy, confidentiality, and anonymity, and the principle of “do no harm” in the collection, reporting and protection of data. In particular, data collection in First Nation communities should be fully compliant with Ownership-Control-Access-Possession (OCAP®) principles, or equivalent if appropriate, and adhere to Nation-specific cultural protocols, when available.</p> | <p>Suggested addition: [Excerpt]</p> <p>The Impact Statement must: [...]</p> <ul style="list-style-type: none"> describe how Indigenous and community knowledge was <u>collected and used in assessing community well-being, while following key principles such as respect for privacy, confidentiality, and anonymity</u>; | <p>Recommended</p> |
| <p>11.3 Human Health – Existing Conditions (pdf p. 134)</p> | <p>Project-specific</p> <p>Site-specific consumption surveys are generally preferred over the use of surrogate consumption data. It should be noted that the First Nations Food, Nutrition and Environment Study did not specifically survey the Indigenous Nations located within the project area.</p> | <p>Suggested edits and additions: [Excerpt]</p> <p>To understand the community context and existing health profile, including for Indigenous nations, the Impact Statement must: [...]</p> <ul style="list-style-type: none"> describe the consumption of traditional foods as a health-related behaviour, <u>including what species and parts of species (e.g., tissues) are consumed and used, harvesting locations, relevant consumption information including consumption patterns (i.e., serving sizes, frequency of consumption, seasonality of consumption, etc.) and how the data were collected (e.g., site-specific consumption surveys, community-led assessments). If site-specific consumption data are not provided, provide an acceptable rationale why any surrogate consumption data provided is appropriate: quantities, frequency, harvesting locations and how the data were collected (e.g., site-specific consumption surveys, First Nations Food, Nutrition and Environment Study)</u>; <ul style="list-style-type: none"> traditional foods refer to all foods that do not come from commercial systems. It includes all food that is trapped, fished, hunted, harvested or grown for subsistence or medicinal purposes or has Indigenous cultural value; describe existing conditions for quality of traditional foods. Information can be pulled from relevant VCs such as vegetation and wetlands, fish and fish habitat and marine mammals; provide existing contaminant concentrations in <u>identified exposure media such as ambient air, drinking and recreational water, sediment</u>, and tissues of traditional foods consumed by Indigenous nations and local communities. The proponent should work with local Indigenous nations to collect tissue samples where appropriate; describe the level of food security and food sovereignty within local and Indigenous nations. Refer to the Public Health Agency of Canada’s website on food security and to the First Nations Food, Nutrition & Environment Study for more information; provide a summary of identified data and explain the selection of methods for statistical analysis of available data, including identifying uncertainties and limitations of proposed methods and available data. If surrogate data from reference sites are used rather than project site-specific measurements, demonstrate how the data are representative of site conditions; and | <p>Critical</p> |

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| | | <ul style="list-style-type: none"> describe available Indigenous or community knowledge related to human health. <p>Guidance for developing the appropriate existing information relevant to human health is identified in Appendix 5. The proponent should refer to the Health Canada guides <u>guidance</u> to ensure that best practices are followed in collecting existing information for assessment of the project's impacts on human health. The proponent must justify any omission or deviation from the recommended characterization approaches and methods for existing conditions, including the Health Canada guidelines <u>guidance</u>.</p> | |
| 11.4 Human Health - Potential Effects (pdf pp. 134-135) | General Health Canada provides the suggested edits to clarify what determinants of health are, and to be consistent with updated wording provided for other impact assessments. | <p>Suggested edits and additions: [Excerpt]</p> <p>A dedicated Health Impact Assessment (HIA) must be completed to <u>and should</u> show an understanding of the project's health <u>effects, along with their distribution across subgroups of the population with a special focus on vulnerable and disadvantaged people. HIA encompasses the biophysical determinants of health (i.e., environmental factors) and the social determinants of health (i.e., social, cultural, and economic factors). Taken together, all of these factors are referred to as the "determinants of health".</u> impacts, including on Indigenous peoples and will play a role in understanding the project's impacts on rights and culture. The proponent should refer to the Agency guidance on Analyzing Health, Social and Economic Effects under the <i>Impact Assessment Act</i> and to Guidance from Health Canada regarding Human Health Impacts and the best practices for the conduct of Health Impact Assessment in Appendix 5.</p> <p>The Impact Statement must:</p> <ul style="list-style-type: none"> describe potential effects to human health resulting from changes in <u>in</u> biophysical, social, (cultural and economic factors) <u>determinants of health</u>, identify interactions between the project and these effects, and outline indicators that will be used to measure these effects; <u>apply a Human Health Impact Assessment follow HIA methodologies, using the determinants of health</u> approach, <u>including consideration of determinants of health</u>; describe any potential project effects on the community health profile; describe how Indigenous and community knowledge was used in assessing human health effects; and apply GBA+ across all health effects and document how potential effects or changes to human health conditions could be different for diverse subgroups (e.g. women, youth, two-spirited people, elders and people with disabilities). | Recommended |
| 11.4.1 Human Health - Biophysical Determinants of Health (pdf p. 135) | General Health Canada does not assess health impacts from light levels or the availability of traditional foods or drinking water. We understand this information may have been requested by a different department. | <p>For reference [Excerpt]</p> <p>The Impact Statement must:</p> <ul style="list-style-type: none"> provide an assessment of the potential effects on human health in consideration of, but not limited to potential changes in: <ul style="list-style-type: none"> [...] light levels current and future availability and quality of traditional foods; and current and future availability and quality of water for drinking, recreational and cultural uses; | FYI |

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| 11.4.1 Human Health – Biophysical Determinants of Health (pdf p. 136) | General and project-specific Where chemicals may interact in an additive or other manner, these should be considered. | Suggested addition: [Excerpt] The Impact Statement must: [...] <ul style="list-style-type: none"> provide <u>an acceptable detailed justification rationale</u> for every contaminant of potential concern (COPC⁷) or exposure route that <u>would be is excluded and/or eliminated</u> from the assessment of the human health risks; <ul style="list-style-type: none"> <u>for simultaneous exposure to multiple COPCs, non-carcinogens found to have similar threshold effects on common target organs, hazard quotients (HQs) should be assumed to be additive and should be summed for those substances with a similar effect, target organ and mechanism of action.</u> <u>for non-threshold carcinogenic effects, the incremental lifetime cancer risks (ILCRs) due to exposure to multiple substances should be added if they elicit similar effects on the same target organ. Carcinogens acting on different target organs may be assessed individually;</u> | Recommended |
| 11.4.1 Human Health – Biophysical Determinants of Health (pdf p. 136) | Footnote 7 on page PDF 136 provides a definition for COPCs. The definition limits COPCs to chemicals where concentrations could be elevated due to project activities. This may exclude chemicals with potentially high concentrations under existing conditions. With respect to foods, Health Canada recommends that mercury, arsenic, cadmium and lead, always be assessed in an HHRA (i.e. considered as COPCs) regardless of the expected impact from the project. For some non-threshold contaminants, any increase in concentration, regardless of whether it exceeds a guideline, may result in a human health risk and these chemicals should also be evaluated. | Suggest deleting footnote or following edit: [Excerpt] ⁷COPC: Any chemical substance for which the concentration in an environmental medium is likely to be high due to the project's activities may first be considered as a COPC. However, if it is established that the sum of the modelled concentrations and the background concentrations is below the guidelines, standards or criteria based on health protection for the affected area, the statement of the problem stage of the risk assessment may conclude that it is unnecessary to treat this chemical substance as a COPC in a quantitative risk assessment. <u>COPC: A chemical in an exposure media (e.g., soil, sediment, water, air, country food) that may cause ecological or human health impacts. Factors considered in the identification of COPCs include concentration, toxicity, mobility, persistence, potential to bioaccumulate or biomagnify, standard practices and non-threshold effects. Selection of COPCs typically involves a screening process whereby measured contaminant concentrations are compared with reference criteria and background concentrations.</u> | Critical |

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| 11.4.1 Biophysical Determinants of Health (pdf p. 137) | General Health Canada suggests that the excerpted bullet may be better placed within Section 11.4.2: Social Determinants of Health (rather than Section 11.4.1: Biophysical Determinants of Health). | For reference [Excerpt] The Impact Statement must: [...] <ul style="list-style-type: none"> describe and quantify potential effects to mental and social well-being (e.g. stress, depression, anxiety, sense of safety); | Recommended |
| 11.4.2 Social Determinants of Health (pdf p. 138) | General For completeness. | Suggested additions: [Excerpt] The Impact Statement must: [...] <ul style="list-style-type: none"> describe how potential avoidance of land near project components by Indigenous peoples due to perceived changes in environmental quality and tranquillity was considered in assessing potential effects on the diet and health of Indigenous peoples; <ul style="list-style-type: none"> <u>consideration should be given to the built environment (e.g., walkability, access to active transport, accessibility and proximity of parks etc.), and how these changes may impact health behaviours (e.g., interaction with greenspace, active commuting, exposure to noise or air pollutants, etc.), particularly for different population groups, including Indigenous groups (disaggregated by sex, gender, and other factors as available);</u> | Recommended |
| 15.1 Accidents and Malfunctions - Risk Assessment (pdf p. 193) | General and project-specific Clarify in the Accidents and Malfunctions Section if the proponent is required to assess scenarios associated with ancillary activities such as road, rail and shipping. For example, it is unclear whether the excerpt provided in the adjacent column is specific to incidents at the terminal. | For reference [Excerpt] The Impact Statement must: [...] <ul style="list-style-type: none"> at a minimum, analyze the risks associated with the following specific incidents: <ul style="list-style-type: none"> container falling overboard; fire and explosion at the terminal and on marine vessels; minor and major accidental release of fuel, or loss of dangerous goods at permanent or temporary installations during the construction and operation phases, or during maintenance operations if necessary; collision, grounding, foundering and allision during the operation of marine vessels; and road incidents and train derailments at the intermodal railyard; | Critical |
| Appendix 1 (pdf pp.214 - 220) | Project-specific Table A1.1 and A1.2 The rationale for excluding a VC or element (e.g., terrestrial vegetation) is not clearly | N/A | Critical |

| | communicated. An acceptable rationale should be clearly communicated. This is supported by the requirements of the draft joint guidelines Human Health Section 11.4.1 Biophysical Determinants of Health. | | | | | | | | | | | | | | | | | |
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| Appendix 1 (pdf p. 218) | <p>Project-specific</p> <p>The subcomponent listed under the human health valued component (VC) are specific to the biophysical determinants of health. The Human Health Section of the draft joint conditions “must describe the current state of physical, mental and social well-being and incorporate a determinants of health approach to move beyond biophysical health considerations” (pdf p.132).</p> <p>In addition, the assessment should provide rationale for the inclusion/exclusion of parameters.</p> <p>Health Canada suggests the marine shellfish tissue assessment could be included as part of the Human Health Risk Assessment subcomponent.</p> <p>Health Canada notes the proponent should provide a rationale for limiting the types of foods assessed to shellfish. A tissue assessment based on traditional knowledge and information on harvesting practices by local populations would increase confidence in the assessment.</p> | <p>Suggested edits and additions: [Excerpt]</p> <table border="1"> <thead> <tr> <th>Valued Components</th> <th>Subcomponents</th> <th>Topics to be Captured by the Assessment</th> </tr> </thead> <tbody> <tr> <td>Human Health</td> <td>Emissions Human Health Risk Assessment</td> <td><u>COPCs in identified exposure media (e.g., air, soil, water, sediment and country foods) and associated health risks</u> <u>Marine shellfish tissue assessment (quality and quantity)</u> <u>Noise</u> <u>Soil quality</u> <u>Quality and quantity of traditional foods</u></td> </tr> <tr> <td></td> <td>Noise and Vibration Human Health Risk Assessment</td> <td><u>Air quality</u> <u>noise</u><u>Percent highly annoyed (%HA)</u> <u>Low frequency noise impacts</u> <u>Blasting noise</u> <u>Percent highly sleep disturbed (%HSD)</u> <u>Type and frequency of notable nighttime noise events</u></td> </tr> <tr> <td></td> <td>Marine shellfish tissue assessment and human health risk assessment</td> <td><u>Quality and quantity of traditional foods</u><u>marine shellfish</u></td> </tr> <tr> <td></td> <td><u>Health Impact Assessment</u></td> <td><u>Relevant determinants of health</u></td> </tr> </tbody> </table> | Valued Components | Subcomponents | Topics to be Captured by the Assessment | Human Health | Emissions Human Health Risk Assessment | <u>COPCs in identified exposure media (e.g., air, soil, water, sediment and country foods) and associated health risks</u> <u>Marine shellfish tissue assessment (quality and quantity)</u> <u>Noise</u> <u>Soil quality</u> <u>Quality and quantity of traditional foods</u> | | Noise and Vibration Human Health Risk Assessment | <u>Air quality</u> <u>noise</u> <u>Percent highly annoyed (%HA)</u> <u>Low frequency noise impacts</u> <u>Blasting noise</u> <u>Percent highly sleep disturbed (%HSD)</u> <u>Type and frequency of notable nighttime noise events</u> | | Marine shellfish tissue assessment and human health risk assessment | <u>Quality and quantity of traditional foods</u> <u>marine shellfish</u> | | <u>Health Impact Assessment</u> | <u>Relevant determinants of health</u> | Critical |
| Valued Components | Subcomponents | Topics to be Captured by the Assessment | | | | | | | | | | | | | | | | |
| Human Health | Emissions Human Health Risk Assessment | <u>COPCs in identified exposure media (e.g., air, soil, water, sediment and country foods) and associated health risks</u> <u>Marine shellfish tissue assessment (quality and quantity)</u> <u>Noise</u> <u>Soil quality</u> <u>Quality and quantity of traditional foods</u> | | | | | | | | | | | | | | | | |
| | Noise and Vibration Human Health Risk Assessment | <u>Air quality</u> <u>noise</u> <u>Percent highly annoyed (%HA)</u> <u>Low frequency noise impacts</u> <u>Blasting noise</u> <u>Percent highly sleep disturbed (%HSD)</u> <u>Type and frequency of notable nighttime noise events</u> | | | | | | | | | | | | | | | | |
| | Marine shellfish tissue assessment and human health risk assessment | <u>Quality and quantity of traditional foods</u> <u>marine shellfish</u> | | | | | | | | | | | | | | | | |
| | <u>Health Impact Assessment</u> | <u>Relevant determinants of health</u> | | | | | | | | | | | | | | | | |
| Appendix 1 (pdf p. 219) | <p>Project-specific</p> <p>Table A1.2</p> <p>For some valued components, the “topics to be captured by the assessment” are specific (e.g., Air Quality lists chemicals of potential concern [COPCs]). Health Canada notes that all chemicals identified and/or investigated at a</p> | N/A | Critical | | | | | | | | | | | | | | | |

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| | <p>site should be summarized, and the basis for any decision to include or exclude a chemical as a COPC should be clearly documented. This is supported by the requirements of Human Health Section 11.4.1 Biophysical Determinants of Health.</p> | | |
| Appendix 1 (pdf p. 219) | <p>General and project-specific</p> <p>Topics to be Captured under the Atmospheric Noise Element should be consistent with examples identified in the joint guidelines Section 9.5.3 Atmospheric Noise. The assessment should determine what parameters need to be considered and provide rationale for their inclusion/exclusion.</p> | <p>Suggested additions: [Excerpt from Table A1.2 – Atmospheric Noise Element]</p> <p>Topics to be Captured by the Assessment</p> <ul style="list-style-type: none"> Increase in environmental noise levels. <u>Examples of parameters include including daytime, nighttime, low frequency, and percent highly annoyed daytime sound level (Ld), night-time sound level (Ln), day-night sound level (Ldn), equivalent continuous sound level (Leq) (measured based on time duration), maximum A-weighted sound level (LAmax), percent highly annoyed (%HA), and percent highly sleep disturbed (%HSD), and C-weighted decibels (dBC), Z-weighted (dBZ).</u> | Critical |
| Appendix 1 (pdf p. 221) | <p>Project-specific</p> <p>The rationale including air quality as an element, and not as a valued component, is that it is assessed via the human health pathway. However, there are aspects of air quality (e.g., greenhouse gases) that are not assessed via the human health pathway. Health Canada suggests the Agency consult with ECCC on whether air quality is appropriately labelled as an element.</p> | N/A | Recommended |
| Appendix 1 (pdf p. 223) | <p>Project-specific</p> <p>Ideally, for the Air Quality element, the project's contribution to regional formation of secondary pollutants will be modelled and included in the assessment. If not, the Proponent should provide a qualitative assessment and a discussion of the likely directional impact of the project, based on precursor emissions and the regional air quality conditions.</p> | <p>Suggested edits and additions: [Excerpt from Table A1.4 – Air Quality Element]</p> <p>Topics to be Captured by the Assessment [...]</p> <ul style="list-style-type: none"> Other air pollutants, including diesel particulate matter, and black carbon <u>and ground-level ozone.</u> | Critical |

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| <p>Appendix 1 (pdf p. 235)</p> <p>Updated Assessment Boundaries Proposed by GCT (pdf p. 13)</p> | <p>General</p> <p>Health Canada notes that a local assessment area (LAA) and regional assessment area (RAA) have been defined for human health based on biophysical determinants. However, it should be noted that human health will also be added on the basis of the social determinants of health which may have larger LAA(s) and RAA(s). In addition, the boundaries for the LSA and RSA (from a human health perspective) should take into consideration the location and specific characteristics of the various receptors. Please clarify what factors are considered in determining the boundaries of the human health LSA and RSA.</p> | <p>N/A</p> | <p>Recommended</p> |
| <p>Appendix 5 (pdf p. 240)</p> | <p>General and project-specific</p> <p>Health Canada has provided an updated list of guidance documents as suggested edits.</p> | <p>Suggested edits and additions: [Excerpt]</p> <p><i>Guidance for Evaluating Human Health Impacts in Environmental Assessments: Air Quality.</i> Available at https://www.canada.ca/en/health-canada/services/publications/healthy-living/guidance-evaluating-human-health-impacts-air-quality.html. https://publications.gc.ca/site/eng/9.802343/publication.html. Health Canada 2016.</p> <p><i>Guidance for Evaluating Human Health Impacts in Environmental Assessments: Country Foods.</i> Available at http://www.canada.ca/en/health-canada/services/publications/healthy-living/guidance-evaluating-humanhealth-impacts-country-foods.html https://publications.gc.ca/site/eng/9.855584/publication.html. Health Canada. 20187.</p> <p><i>Guidance for Evaluating Human Health Impacts in Environmental Assessments: Noise.</i> Available at http://www.canada.ca/en/health-canada/services/publications/healthy-living/guidance-evaluating-humanhealth-impacts-noise.html. https://publications.gc.ca/site/eng/9.832514/publication.html Health Canada. 2017.</p> <p><i>Guidance for Evaluating Human Health Impacts in Environmental Assessments: Drinking and Recreational Water Quality.</i> Available at http://www.canada.ca/en/health-canada/services/publications/healthy-living/guidance-evaluating-humanhealth-impacts-water-quality.html. https://publications.gc.ca/site/eng/9.832511/publication.html Health Canada. 20176.</p> <p><i>Guidance for Evaluating Human Health Impacts in Environmental Assessment: Human Health Risk Assessment.</i> Available at https://publications.gc.ca/site/eng/9.870475/publication.html. Health Canada 2019.</p> <p>Health Canada's Risk Assessment Guidance Parts I through VII available at https://www.canada.ca/en/health-canada/services/environmental-workplace-health/contaminatedsites/guidance-documents.html. Health Canada. 2017.</p> | <p>Critical</p> |

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| | | <p>Federal Contaminated Site Risk Assessment in Canada: Supplemental Guidance on Human Health Risk Assessment for Country Foods (HHRA_{FOODS}). Available at: https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/contaminated-sites/federal-contaminated-site-risk-assessment-canada-supplemental-guidance-human-health-risk-assessment-country-foods-hhra-foods-health-canada-2011.html</p> <p>Federal Contaminated Site Risk Assessment in Canada. Part V : Guidance on Human Health Detailed Quantitative Risk Assessment for Chemicals (DQRA_{CHEM}). Available at https://publications.gc.ca/site/eng/9.694270/publication.html. Health Canada 2010.</p> <p>Federal Contaminated Site Risk Assessment in Canada: Toxicological Reference Values (TRVs) Version 3.0. Available at: https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/contaminated-sites/federal-contaminated-site-risk-assessment-canada-part-health-canada-toxicological-reference-values-trvs-chemical-specific-factors-version-2-0.html. Health Canada 2021.</p> | |
| Appendix 6 (pdf pp. 244 - 245) | Project-specific Health Canada notes it may reduce confusion if the terms “ecological” and “human” were used to describe sensitive receptors. | Suggested additions: [Excerpt] The following guidance is supplemental to the requirements in section 8.3 - Assessment Boundaries. The study area boundaries must encompass the spatial boundaries of the project, including any associated project components or activities, and the anticipated boundaries of the project effects. Considerations in assigning appropriate study areas or boundaries would include, but not be limited to: [...] <ul style="list-style-type: none"> • location of <u>ecological</u> sensitive receptors, including species, soil types or areas with historical loading or poor buffering; • [...] • areas within the range of vision, light and sound and the locations and characteristics of the most sensitive <u>ecological and/or human</u> receptors; | Recommended |