Generic Requirements for the Preparation of an Impact Statement

DEEP GEOLOGICAL REPOSITORY (DGR) FOR CANADA'S USED NUCLEAR FUEL PROJECT

APRIL 10, 2025

Introduction

To prepare their Impact Statement, proponents must follow the requirements outlined in the project-specific Tailored Impact Statement Guidelines (the Integrated Guidelines) issued by the Impact Assessment Agency of Canada (IAAC).

In addition, the project-specific Guidelines will require proponents to follow the Generic Requirements outlined in this document, unless otherwise indicated. The Generic Requirements can be found on IAAC's website at Generic requirements for Impact Statements - Canada.ca.

If Indigenous communities or organizations, the public, government departments or agencies, or other participating stakeholders have comments on the generic requirements listed in this document, they are encouraged to submit those during the comment period on the project-specific Tailored Impact Statement Guidelines. Any resulting changes would be made to the project-specific Tailored Impact Statement Guidelines, and not to the generic requirements below.

The proponent must adhere to the requirements of both the generic requirements and the project-specific requirements. In the case of any confusion or potentially conflicting requirements, the proponent must apply the more detailed requirement, which would likely be found in the project-specific Tailored Impact Statement Guidelines.

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1.1 List of abbreviations and acronyms

Abbreviation/Acronym	Definition
Declaration	United Nations Declaration on the Rights of Indigenous Peoples
GBA Plus	Gender Based Analysis Plus
Guidelines	Tailored Impact Statement Guidelines
IAAC	Impact Assessment Agency of Canada
IEPP	Indigenous Engagement and Partnership Plan
LSA	Local Study Area
PA	Project Area
RSA	Regional Study Area
SARA	*Species at Risk Act*
VC	Valued component

2. Assessment Methodology

The Assessment methodology below outlines the steps that must be applied to the assessment of each Valued Component (VC) identified in the project-specific Integrated Guidelines unless the project-specific Guidelines indicate otherwise.

Additional VC-specific requirements are outlined in the Guidelines. The assessment should be based on likely effect pathways, with the depth of analysis and details provided commensurate with the anticipated level of risk, or uncertainty related to the risk – in application of the precautionary principle – that specific project components or activities pose to the VC. The analysis should also consider that, within a VC, different species, elements, or diverse population groups may be affected differently by the project and may require different mitigation measures.

The proponent is encouraged to take an ecosystem-based approach that considers how the project may affect the structure and functioning of biotic and abiotic factors within the ecosystem using scientific evidence, Indigenous Knowledge and community knowledge. A focus on the levels of biological organization that encompass the essential processes, functions and interactions among organisms, including humans, and their environment, as well as their resilience, facilitates a more complete understanding of a project's effects.

The proponent is encouraged to consult with IAAC during the development of their Impact Statement, including the planning of baseline studies and to leverage existing information, including those listed in the standard and project-specific *Technical considerations and references for the preparation of an Impact Statement*, the requirements of other jurisdictions related to the VCs and the means (e.g. regulatory frameworks) of other jurisdictions to address effects on VCs.

2.1 Spatial and temporal boundaries

2.1.1 Spatial boundaries

The proponent should generally establish three spatial boundaries of study areas to assess the effects on each VC:

- Project Area (PA): defined as the project footprint including all temporary and permanent areas associated with the project, and alternatives considered;
- Local Study Area (LSA): defined as the area beyond the project footprint where project effects may extend; and
- Regional Study Area (RSA): defined as the larger area around the LSA (delineated by ecological, social, economic or other appropriate boundaries), including the region where cumulative effects may occur and may extend beyond Canada's jurisdiction.

The Impact Statement must:

- describe the spatial boundaries for each VC and provide a rationale for each boundary, considering:
    - scale and spatial extent of effects from the project,
    - the physical location of potential receptors, including any relevant movement pattern,
    - interactions between VCs,
    - Indigenous Knowledge and community knowledge,
    - current or traditional land and resource use by Indigenous groups,
    - Indigenous Peoples and their rights, including treaty lands, traditional territories and areas or sites used for cultural and spiritual practices,
    - scientific evidence,
    - geographic extent of effects of past, existing and reasonably foreseeable projects and physical activities, and
    - information received from Indigenous groups;
- show the spatial boundaries on maps to clearly illustrate the predicted geographic extent of changes to the environment as visual tools to support engagement and consultation with the public and Indigenous groups (i.e. zone of influence maps with defined boundaries); and
- identify where spatial boundaries may extend to areas that are (i) on federal lands, (ii) in a province other than the one where the project is being carried out, or (iii) outside Canada.

2.1.2 Temporal boundaries

The proponent should generally establish a project temporal boundary that includes all phases of the project and long-term temporal boundaries that includes the timescale at which cumulative effects may occur and that may extend beyond the lifecycle of the project.

The Impact Statement must:

- describe the temporal boundaries for each VC and provide a rationale for each boundary, considering:
    - schedule of phases of the project,
    - past conditions and historical context,
    - Indigenous Knowledge and community knowledge,
    - impacts on Indigenous Peoples and their rights, including current or traditional land and resource use, treaty lands, traditional territories and areas or sites used for cultural and spiritual practices,
    - relevant physical, technical, ecological, social, health, economic and cultural considerations from an ecosystem approach,

- timing of past, existing and reasonably foreseeable projects and activities and their effects,
- that boundaries will generally be larger for cumulative effects, and
- information received from Indigenous groups.

2.2 Baseline conditions

Baseline conditions are the existing conditions prior to the project, including how historical, past or existing projects and activities have already affected the conditions, and must be established in a manner and at a level of detail relevant to predict the effects of the project on each VC.

For baseline conditions of each VC, the Impact Statement must:

- describe the baseline conditions and interactions among VCs in a way that makes reliable analyses, extrapolations and predictions possible and include an estimate of pre-project baseline conditions;
- describe changes in the baseline conditions that are likely to occur in the future, if the project were not carried out, including future changes due to climate change;
- describe data sources and data collection methods, including the use of existing or historical information and any sampling, survey and research protocols, modelling methods, software used, any assumptions and any statistical estimates of predicted value and variance;
- show that the data sources used are representative of conditions within the established spatial and temporal boundaries and account for natural variability, especially if surrogate data from representative sites are used rather than specific measurements at the project site;
- where Gender Based Analysis Plus (GBA Plus) is applied, show that disaggregated data by relevant various population groups (e.g. gender, age, location) have been used, as possible;
- indicate where baseline data gaps exist and any steps taken to address these;
- describe how Indigenous Knowledge, community knowledge and scientific evidence were considered in determining baseline conditions;
- where the VC includes a species at risk that is listed under Schedule 1 of the *Species at Risk Act* (SARA) that is likely to be affected by the project:
    - provide the common and scientific name of the species, its status on Schedule 1 of SARA, and availability of a recovery strategy, action plan or management plan,
    - provide information and/or mapping at an appropriate scale for species presence and critical areas such as residences, movement corridors, areas of highest concentration, identified or proposed critical habitat and/or recovery habitat. If applicable, differentiate between federal and non-federal lands,
    - identify critical periods (e.g. denning, rutting, spawning, calving, breeding, roosting), and
    - describe applicable threats and conservation goals outlined in the recovery strategy.

2.3 Effects assessment

The assessment of effects must be based on a comparison of baseline conditions with and, where baseline conditions are anticipated to change over time, without the project.

For the effect assessment of each VC, the Impact Statement must:

- describe effects based on the likely effect pathways from the project components and activities to the VC, including effects of malfunctions or accidents, as well as interactions among effects on VCs and impacts on Indigenous Peoples and their rights. As applicable, the description of the effects should be based on a conceptual model for the project using figures and/or tables and, depending on the VC and relevant contextual factors, can be either qualitative or quantitative;
- describe the analytical methods to assess effects, including clearly stated assumptions for predictions and how each assumption has been tested;
- describe the likelihood of effects occurring, using methods that are statistically and scientifically defensible;
- for quantitative predictions based on models, describe model assumptions, parameters, margins of errors, as well as model calibration, validation and model performance metrics used;
- if a general rather than detailed description of effects is provided, provide a rationale (e.g. application of standard or proven mitigation measures). The proponent should confirm the rationale with IAAC before submitting the Impact Statement;
- where the VC includes a species at risk that is listed under Schedule 1 of SARA, describe likely effects to the species (e.g. number of individuals killed, harmed, harassed) and its critical habitat (e.g. number of residences destroyed, permanently altered, disrupted) based on likely effect pathways and information in applicable recover strategies, action plans and management plans. Provide a rationale where effects are not likely or where they will be addressed through other means. The proponent is also encouraged to include additional species that the Committee on the Status of Endangered Wildlife in Canada has recommended for listing as special concern, threatened, or endangered;
- for predictions that may be affected by climate change, describe how climate change scenarios, including changes in climate extremes, affect the predictions;
- describe the perspectives, concerns and tolerance levels of Indigenous groups and other participants;
- describe where and how Indigenous Knowledge and community knowledge were considered and incorporated; and
- describe where and how GBA Plus was applied to assess differences in effects among diverse population groups.

2.4 Mitigation measures

The Impact Statement must identify mitigation measures that are technically and economically feasible and that would eliminate, reduce, control or offset adverse effects within federal jurisdiction, as well as direct or incidental adverse effects (collectively referred to as adverse federal effects). The proponent is encouraged to follow the mitigation hierarchy in order of priority by exhausting feasible mitigation measure options at each level before moving to the next – prioritizing to eliminate, then to reduce, control and, as a last resort, offset adverse federal effects – and to focus on mitigation measures required to avoid significant adverse federal effects or to achieve the predicted extent of significance. The Impact Statement must also explain how the impacts of the project on the exercise of Indigenous rights are addressed, including through the identified mitigation measures and through any additional measures. In addition, the proponent is encouraged to include any commitments to enhance or increase positive effects of the project.

The Impact Statement must:

- for each likely effect pathway to an adverse federal effect on each VC, including effect pathways from malfunctions or accidents and interactions between effects, describe the proposed mitigation measure(s) required to mitigate significant adverse federal effect resulting from the effect pathway, including as applicable:
    - mitigation measures that are part of the project design and that are required to achieve the predicted effects,
    - mitigation measures that are proven or to be applied as part of standard practice,
    - mitigation that will contribute to the management of adverse federal effects through federal, provincial, regional or municipal legislative or regulatory frameworks (such as regulations, approvals, programs and complementary measures). Where available, provide copies of correspondence from Indigenous, provincial or territorial authorities containing their comments on mitigation,
    - standard mitigation measures for projects undergoing impact assessments where these are made available to the proponent by IAAC, or
    - new or innovative mitigation measures;
- describe how the mitigation measures may also address adverse impacts on Indigenous rights and, if necessary, describe any additional measures to address adverse impacts on Indigenous rights;
- document collaboration with, and perspectives from, Indigenous groups on mitigation measures, as well as any additional measures to address impacts on Indigenous rights and any enhancements of benefits for Indigenous Peoples, including:
    - how the proponent has addressed the suggestions and recommendations from impacted Indigenous groups,
    - how Indigenous Knowledge was considered, and
    - how the timing of Indigenous activities on the land was considered (e.g. schedule of project activities);

- describe any differentiated mitigation measures, or additional measures, for each Indigenous group;
- describe whether and how GBA Plus resulted in differentiated mitigation measures, or additional measures, for diverse population groups so that adverse effects do not fall disproportionately on Indigenous groups or vulnerable population groups. The proponent is encouraged to develop mitigation measures in collaboration with impacted Indigenous groups and communities, including diverse and vulnerable population groups;
- where applicable, describe any environmental protection plan(s) or environmental management systems for the project through which the proponent will implement the specific mitigation measures or additional measures;
- if no mitigation measure is proposed for a likely effect pathway to an adverse federal effect on a VC, provide an explanation, including any reasons why mitigation is not possible;
- with the permission of agreement signatories, note if any impacts on Indigenous Peoples and their rights are addressed through an impact benefit agreement with an Indigenous group; and
- provide a table listing all mitigation measures essential to ensure the project will not result in significant adverse federal effects, or to reduce their extent of significance (to low or moderate significance), and any additional measures to address impacts on Indigenous rights and, for each measure:
    - identify the VC(s) and effect pathway(s), or the impact, that the measure addresses,
    - identify the measure as a specific commitment that clearly describes how the proponent intends to implement it. Measures are to be specific (including when and where it applies), achievable, measurable (identify quantifiers or thresholds) and verifiable, and described in a manner that avoids ambiguity in intent, interpretation and implementation,
    - provide available evidence of the effectiveness of the measure, including quantifying to what extent it would eliminate, reduce, control or offset significant adverse federal effect(s). The proponent is also encouraged to share the evidence available with Indigenous groups. Uncertainty on effectiveness must be considered in the follow-up program and effects, should the measures not be effective or malfunction, must be incorporated into the residual effects assessment,
    - where applicable, describe any environmental protection plan(s), environmental management system(s), permit(s) or mean(s) of another jurisdiction through which it would be implemented, and
    - for mitigation measures or commitments to avoid or lessen effects to species at risk listed under Schedule 1 of SARA that are likely to be affected by the project, describe how the mitigation measure is consistent with applicable recovery strategies, action plans, and management plans.

2.5 Residual effects assessment

After considering the technically and economically feasible mitigation measures, the Impact Statement must assess the likely residual adverse federal effects as well as impacts on Indigenous Peoples and their

rights based on the likely effect pathways from project components and activities to the relevant VC, including effect pathways resulting from potential malfunctions or accidents and interactions between effects. For adverse federal effects, a conclusion on residual effects must be provided for each VC.

2.6 Cumulative effects assessment

The Impact Statement must assess the project's likely cumulative adverse federal effects as well as impacts on Indigenous Peoples and their rights. The proponent is encouraged to make use of the Government of Canada Open Science and Data Platform, Open Government Portal and Government of Canada Publications as tools to access science, data, publications and information about development activities to better understand cumulative effects.

For adverse federal effects on VCs and impacts on Indigenous Peoples and their rights, the Impact Statement must:

- identify the VCs where residual effects are likely, even if of low magnitude, including as informed by engagement with Indigenous groups and by uncertainty regarding the effectiveness of mitigation measures;
- identify the other past, existing and reasonably foreseeable projects or activities with potential effects on the VCs that could interact with the residual effects of the project;
- where adverse residual effects on the VCs are likely to occur and to interact with other projects or activities, describe the cumulative effects on the VC, including:
    - the effects of past, existing and reasonably foreseeable projects and activities in combination with the residual effects of the project, taking into account how the effects may interact (additive, synergistic, compensatory, and masking effects),
    - a comparison of possible future scenarios with and without the project, reflecting the total cumulative effects and not just the project's contribution, and
    - consideration of any additional mitigation measures specific to cumulative effects on the VC;
- provide a rationale for any excluded VC;
- where measures to mitigate cumulative effects are beyond the control of the proponent, identify any parties that have authority to mitigate the effects and summarize any commitments or complementary measures by the other parties regarding their implementation and any associated communication plan;
- consider the ability of Indigenous Peoples to exercise their rights and culture, including where the project's incremental impacts are minor, as well as the views and preferences of each Indigenous group in carrying out and presenting the assessment. Where provided with information and in collaboration with Indigenous groups, the proponent must document the lived and told experience of the effects in relation to the ability of Indigenous Peoples to exercise their rights and culture through time; and
- provide a conclusion on the description of cumulative adverse federal effects for each relevant VC.

2.7 Extent to which likely adverse federal effects are significant

For likely residual and cumulative adverse federal effects on VCs, the Impact Statement must:

- describe the effect, using criteria most appropriate for the effect, including, as appropriate:
    - magnitude,
    - geographic extent,
    - timing,
    - duration,
    - frequency,
    - reversibility,
    - social and ecological contexts, and
    - uncertainty;
- indicate whether the effect is likely to be, to some extent, significant and, if so, the extent of significance (i.e. low, moderate or high significance) by characterizing the extent of significance on a scale of not significant; low, moderate or high significance;
- provide a rationale for the methodology and choice of quantitative or qualitative criteria used to determine the extent to which the effect is significant. Criteria and relevant benchmarks should be defined and applied with Indigenous groups; and
- identify and explain relevant sources of information that were used to characterize the extent to which the effect is significant, including the sensitivity and importance of affected VCs, the existence of standards or guidelines, disproportionate effects for diverse population groups as per the GBA Plus, and how the perspectives, concerns and tolerance levels of Indigenous groups and participants were considered.

2.8 Follow-up program

A follow-up program is a program for verifying the accuracy of the impact assessment and determining the effectiveness of the mitigation measures. Monitoring is a key part of a follow-up program, which entails collecting the information necessary to verify the accuracy of the predictions related to adverse federal effects and determine the effectiveness of the mitigation measures to decide whether new or modified actions are required to protect VCs.

For adverse federal effects on VCs, the Impact Statement must:

- identify VCs that would be included in the follow-up program, including a rationale for their selection considering the extent to which the likely residual and cumulative effects are significant, including associated uncertainty, and a description of how Indigenous Knowledge, community

knowledge and input from relevant authorities and other interested parties have informed the selection;

- where the VC includes a species at risk that is listed under Schedule 1 of SARA and that is likely to be affected by the project, describe how the follow-up program is consistent with applicable recovery strategies, action plans, and management plans;
- describe potential opportunities, including funding opportunities, for the involvement of Indigenous groups identified in the Indigenous Engagement and Partnership Plan (IEPP) in the development and implementation of the follow-up program and its associated monitoring activities; and
- provide a table that describes, for each VC included in the follow-up program:
    - the impact predictions and/or mitigation measures that would be evaluated through the follow-up program,
    - the actions the proponent proposes to take if monitoring results show that the impact predictions are not accurate and/or the mitigation measures are not effective,
    - preliminary information (e.g. conceptual or presented as options) on:
        - the proposed monitoring methodology, including a description of how Indigenous Knowledge, community knowledge and input from relevant authorities and other interested parties have informed the choice of the proposed methodology, and
        - the party responsible for the implementation of the monitoring program and the system of accountability,
    - if applicable, whether and how disproportionate effects identified in the GBA Plus would be addressed.

If the proponent considers that existing or anticipated monitoring activities required through other regulatory instruments would provide the data necessary to achieve the objectives of the follow-up program for a particular VC, the Impact Statement must include a justification for the use of data from these other monitoring activities.

The proponent should consider the use of adaptive management to address uncertainties associated with impact predictions or the effectiveness of mitigation measures. Adaptive management does not eliminate the need to provide sufficient information to assess effects to VCs and identify mitigation measures.

2.9 Uncertainty and bias

Where uncertainty or bias may meaningfully impact conclusions[Footnote 3], the Impact Statement, in reporting its assessment and conclusion on each VC, must:

- describe the major sources of uncertainty, such as uncertainty arising from:
    - limitations on data accuracy, precision, completeness and reliability,
    - environmental variability, including spatiotemporal variability,

    - extrapolations from other contexts (e.g. baseline conditions are extrapolated from other locations, time periods, populations or communities),
    - extrapolations from proxy measures or indicators to VCs themselves, and
    - model limitations arising from incomplete or imperfect knowledge of the structure or function of the system being modelled;
- describe the major sources of bias in the design, execution or interpretation of studies or analysis, such as arising from:
    - selection bias resulting in non-representative sample populations,
    - confounding bias arising from inadequate control of factors that may influence project effects,
    - measurement bias associated with the methods used to establish baseline conditions,
    - detection bias in monitoring or surveillance data,
    - outcome reporting bias or publication bias when relying on external studies or scientific publications, and
    - observer, confirmation, performance, or interpretation bias by those conducting or interpreting studies;
- provide a quantitative [lower bound, upper bound] (where possible) or qualitative estimate of the magnitude of uncertainty, and/or of the direction and magnitude of bias, and describe how it impacts the conclusions for each VC. If no estimate was possible, provide a rationale;
- describe approaches that were used or could be used to reduce sources of uncertainty or bias (e.g. additional data collection or research), as well as any legislative or regulatory framework that will manage uncertainty or bias (e.g. adaptive management imposed by a provincial regulation); and
- describe how the precautionary principle was applied and any precautionary approaches that have been used in the effects assessment or in the development of mitigation measures.

3. General information

The Impact Statement must provide information on the proponent including:

- name(s) of the proponent(s) and, where applicable, of the legal entity(ies) that would develop, manage and operate the project;
- contact information for proponent representatives for the project (e.g. name, address, phone, email);
- a description of corporate structure, including roles and responsibilities of key personnel;
- mechanism used to ensure that corporate policies will be implemented and respected for the project;

- information on the individuals who prepared the sections within the Impact Statement;
- that qualified individuals have prepared the information or studies, as demonstrated by formal education, training or certification, experience, or credibility or standing as knowledge holders. Where possible, the proponent should use experts who are members of a professional body or recognized association, or holders of Indigenous Knowledge; and
- that the Impact Statement was prepared and delivered with scientific integrity, including by following existing standards and best practices for the responsible conduct of scientific research as well as by declaring and managing any real or perceived conflict of interest for individuals involved in preparing the Impact Statement.

The Impact Statement must identify the regulatory framework relevant to the project, including:

- any federal decision that would permit the carrying out (in whole or in part) of the project or associated activities, including any financial support that federal authorities are, or may be, providing to the project;
- legislative or regulatory requirements – including requirements related to Indigenous consultations and public engagement – that are applicable to the project at the federal, provincial, regional and municipal levels or from any body, including a co-management body, established under a land claim agreement referred to in section 35 of the *Constitution Act, 1982*, or from an Indigenous governing body that has powers, duties or functions in relation to the environmental effects of a project;
- government policies, resource management plans, planning or study initiatives relevant to the project and/or the impact assessment and their implications, including relevant regional studies, regional assessments and strategic assessments;
- any treaty, self-government, land claims or other agreements between federal or provincial governments and Indigenous groups that are pertinent to the project and/or the impact assessment;
- any relevant land use plans, land zoning, or community plans;
- information on land lease agreement or land tenure, when applicable; and
- municipal, regional, provincial and/or national objectives, standards or guidelines, by-laws or ordinances that have been used by the proponent to assist in the assessment of effects, on VCs.

In terms of format and accessibility, the Impact Statement must:

- summarize the documents that served as key references and are not otherwise publicly accessible, and, where possible, append them to the Impact Statement; and
- include all information in a machine-readable, accessible format. Where information is provided as a map in the Impact Statement, the proponent must provide corresponding electronic geospatial data file(s). IAAC will make the geospatial data files available to the public under the terms of the Open Government Licence – Canada. Geospatial data files must follow IAAC's Guidance on submitting geospatial data. In addition, the proponent should be prepared to provide data, including surveys, analyses, methods, modelling, and results in well-documented data files, including geoenabled format where available, at the request of IAAC [or the review panel] to support the impact assessment.

4. Description of change to the project that may be caused by the environment

The Impact Statement must:

- describe how environmental conditions, including natural disturbance regimes (e.g. fire, floods, droughts, pests) and natural hazards (e.g. severe or extreme weather conditions), could adversely affect the project. This would include credible external events for which the resulting effects on VCs could be major without careful management, considering different probability patterns (e.g. 5-year flood versus 100-year flood) and range of potential future climate scenarios;
- describe known and relevant trends in meteorological events, weather patterns or physical changes in the environment that are expected to result from climate change over the life of the project; describe the climate data, projections and related information used to identify expected trends due to climate change. Incorporate this information into baselines, as relevant, as well into the assessment of effects to VCs where they could be contributing or complicating factors for malfunctions or accidents (e.g. increased risk of forest fires);
- identify any areas of potential wind or water erosion;
- as applicable, describe the effects seismic events would have on facilities and specify the soil movement parameters that will be used with the probability of occurrence (e.g. 2% in 50 years) and the best practice codes and guides that are or will be used in the seismic effects analysis (e.g. National Building Code of Canada 2015, CAN/CSA-Z662 standard); and
- provide details of planning, design and construction strategies intended to minimize adverse effects of the environment on the project. Include a description of the project's climate resilience and how the impacts of climate change have been integrated into the project design and planning throughout the life of the project.

5. Description of potential malfunctions or accidents that may occur in connection to the project

Major effects could be caused by the failure of certain works resulting from malfunctions (i.e. works do not operate as intended) or from accidents (i.e. human error), including in cases where events resulting from effects of the environment on the project are a contributing or complicating factor (e.g. flooding, earthquake, forest fire). Malfunctions or accidents that may occur in connection with the project must be described (even if unlikely to occur) and, where relevant, their effects on each VC must be assessed. For projects that include marine shipping or navigation, the proponent is encouraged to undertake a Navigation Safety Assessment Program (NSAP) review collaboratively with Transport Canada's Marine Safety and Security Directorate, and include it in the Impact Statement.

The Impact Statement must:

- identify potential malfunctions or accidents, at each project phase, and explain how they were identified (e.g. information sources, recognized risk assessment methodology, professional expertise, similar project, participants' input) and their likelihood, considering the design and lifespan of project components, complicating factors such as weather or external events, and the potential for vandalism, sabotage or other malicious acts;
- describe for each identified malfunction or accident, including worst-case scenarios and lower-consequence scenarios:
    - the potential consequences focusing on adverse federal effects and their effect pathways. The proponent must incorporate these effects into the effect assessment for each VC and for impacts on Indigenous Peoples and their rights, as relevant,
    - the failure mode(s),
    - the quantity, mechanism, rate, form and characteristic of contaminants, emissions and other materials released or discharged into the environment,
    - influence of local and regional terrain, topography and weather conditions (e.g. difficult access for interventions),
    - as applicable, modelling for any contaminants spilled or released indirectly into water or air,
    - locations of sensitive receptors (e.g. humans, fish and fish habitat),
    - timing related to sensitive receptors (e.g. migration and nesting periods of migratory birds, spawning periods for fish, hunting season), and
    - impact on critical infrastructure (e.g. ability and capacity of drinking water treatment plants or facilities to treat water sources affected by accidental releases from the project);
- provide environmental sensitivity mapping that identifies site-specific conditions and sensitive receptors adjacent to project activities, including shores, streams and wetlands frequented by fish and/or migratory birds, and likely routes to them. Shoreline classification surveys and mapping must be conducted along major waterways where large spills are possible. For projects with a risk of an oil spill in the marine environment, the proponent is encouraged to refer to Environment and Climate Change Canada's characterization criteria in the Field Guide for Intervention in the Event of an Oil Spill on Marine Shorelines;
- describe safeguards to avoid and prevent malfunctions or accidents, including project design choices and operational considerations such as engineering, safety and risk reduction standards; and
- describe the emergency response to the identified malfunctions or accidents including:
    - existing emergency preparedness, response systems, arrangements and/or coordination with the responsible response organizations,
    - the role of the proponent in the response,

- response strategies and any integration of response operations into an incident management system (for example, the Response Command System, Incident Command System),
- emergency response training and exercise programs, including participation of impacted Indigenous groups, and
- emergency communication plans that would provide emergency instructions to surrounding communities, including Indigenous groups.

6. Description of engagement with Indigenous groups

The proponent must engage with Indigenous Peoples early and throughout the impact assessment process to understand potential impacts of the project on Indigenous Peoples and their rights and to incorporate Indigenous Knowledge. Engagement must be carried out in good faith in a manner that is attentive to the concerns of Indigenous Peoples, committed to producing mutually beneficial outcomes and recognizing the wide diversity of Indigenous Peoples. The project should be designed to minimize adverse effects and to maximize positive impacts on Indigenous Peoples and their rights.

The engagement efforts should be consistent with the Government of Canada's commitment to implement the United Nations Declaration on the Rights of Indigenous Peoples (the Declaration) as a comprehensive international human rights instrument and Canada's roadmap for reconciliation. The Declaration emphasizes the importance of recognizing and upholding the rights of Indigenous Peoples and ensuring that there is effective and meaningful participation of Indigenous groups in decisions that affect them, their communities and territories. The Declaration also emphasizes the need to work together in partnership and respect, as articulated through the principle of free, prior and informed consent. This principle reflects working together in good faith on decisions that impact Indigenous Peoples, with the intention to achieve consensus.

Engagement should also be consistent with jurisprudence and best practices in respect of implementing the common law duty to consult. The IEPP identifies Indigenous groups that the Crown will consult with to understand the concerns and potential impacts of the project on their exercise of potential or established Aboriginal or Treaty rights and, where appropriate, make accommodations. The degree of engagement with each community will vary and in general, will be proportionate to the evidence provided by Indigenous groups regarding potential pathways of impact from the project on Aboriginal or Treaty rights. Engagement is also conducted for other purposes, including as an opportunity to learn about and further explore Indigenous groups' interests in a project, or to understand other potential project effects not directly related to the exercise of Aboriginal or Treaty rights.

Engagement with Indigenous groups must involve ongoing information sharing and collaboration between the proponent and Indigenous groups to contribute to the development and validation of conclusions and assessment findings related to potential impacts and effect pathways to Indigenous Peoples and impacts on the rights of Indigenous Peoples. The results of any engagement with each Indigenous group must be presented in the Impact Statement, and, as best as possible, convey the perspective of the Indigenous groups being engaged. The record of engagement and inclusion of Indigenous Knowledge in the Impact Statement should demonstrate that the proponent sought to build consensus and obtained the agreement from specific Indigenous groups regarding information specifically pertaining to those Indigenous groups that is presented in the Impact Statement.

The proponent must:

- engage with Indigenous groups identified in the IEPP. The proponent's level of engagement with each Indigenous group may differ depending on the severity of impacts on the Indigenous group and their rights. Determination of the proponent's level of engagement and the corresponding opportunities offered to each impacted Indigenous group as part of the impact assessment process should be determined through discussion with Indigenous groups;

Share information

- share project information with Indigenous groups early, frequently, and transparently. Information should be shared in formats requested by the groups to ensure it is accessible and understandable; if groups decline participation or do not respond, continue sharing information unless requested otherwise;

Collaborate

- collaborate with Indigenous groups in completing the Impact Statement;
- engage with Indigenous groups to understand and discuss perspectives and seek agreement on the nature of impacts on Indigenous Peoples and their rights;
- seek input from Indigenous groups on criteria and benchmarks for describing those impacts;
- engage with Indigenous groups to identify appropriate ways to address or mitigate those impacts;
- foster meaningful dialogue with the full participation of diverse population groups (e.g. Elders, women, youth, gender diverse and two-spirit peoples) to ensure that GBA Plus is integrated into the assessment process and to identify strategies that mitigate adverse impacts and expand benefits to diverse populations groups;

Report

- present the results of engagement with each Indigenous group in the Impact Statement, and appropriately convey their perspective;

Validate

- ensure Indigenous groups have the opportunity to review and comment on information, and that their comments are incorporated, before submitting the Impact Statement; and

Support

- support the participation of Indigenous groups in the preparation of the Impact Statement. This support could include funding for studies conducted by impacted Indigenous groups.

IAAC notes that not all Indigenous groups may be willing to collaborate with the proponent, therefore the proponent must demonstrate that they have made best efforts at collaboration, and provide IAAC with an explanation regarding circumstances where collaboration was not possible. The proponent should continue to share information and analyses with the Indigenous groups, to use publicly available sources of information to support the assessment, and to document their efforts in that respect.

6.1 Indigenous knowledge considerations

Indigenous Knowledge is holistic and should be brought together on equitable footing with scientific or technical information. Indigenous Knowledge should be collected and conveyed in a culturally appropriate manner that follows Indigenous methodology and captures the context in which it was provided, and informs all aspects of the impact assessment. Indigenous Peoples have ownership of their Indigenous Knowledge.

Proponents must align with IAAC's guidance documents Indigenous Knowledge under the *Impact Assessment Act*: Procedures for Working with Indigenous Communities and Frequently asked questions on Indigenous Knowledge in federal impact assessments. Indigenous Knowledge should be incorporated throughout the Impact Statement, including in group-specific sections and wherever Indigenous Knowledge has informed the assessment of VCs. Where Indigenous Knowledge is provided, the Impact Statement must:

- reflect that community-specific engagement protocols and procedures around Indigenous Knowledge in assessment processes are understood, respected and implemented;
- indicate where Indigenous Knowledge has been incorporated and how it was considered. Information should be specific to the individual Indigenous group(s) involved in the assessment and describe contextual information about the members within an Indigenous group (e.g. women, men, two-spirit peoples, Elders and youth); and
- indicate where Indigenous Knowledge that was provided was not included in the assessment and provide a rationale. Where findings differ between Indigenous Knowledge and scientific or technical studies, the proponent should clearly present how both were considered in the Impact Statement.

Indigenous Knowledge provided in confidence must be protected in alignment with IAAC's guidance on Protecting Confidential Indigenous Knowledge under the *Impact Assessment Act*.

6.2 Record of engagement

The Impact Statement must provide a record of engagement that describes the proponent's efforts to seek the views of each impacted Indigenous group, including:

Who was engaged

- the list of Indigenous groups with whom the proponent engaged or attempted to engage, with a description of engagement activities and efforts with each group, including dates, means and results;
- the list of Indigenous groups who wished to be engaged but were not engaged, with reasons for the omission;
- details of efforts to engage diverse population groups in culturally appropriate ways to support the collection of information needed for the GBA Plus;

How Indigenous groups were engaged

- the perspectives of each Indigenous group about how they wish to be engaged and how those perspectives informed engagement;
- a description of how information was communicated with each group based on preferred methods for receiving information and any solutions implemented for people and locations where technological resources are limited or language barriers exist (e.g. translation of documents or summaries in Indigenous languages);
- a description of how the capacity needs of Indigenous groups were considered and timelines adequately communicated to ensure Indigenous groups had the ability to gain understanding of, and contribute to, information in the Impact Statement;
- a description of the proponent's progress in seeking free, prior, and informed consent from Indigenous groups, as identified by the Indigenous groups themselves, where Indigenous groups have agreed to include this information in the Impact Statement;
- a description of how Indigenous groups were provided an opportunity to evaluate the project's adverse impacts on their members, communities, activities and rights, as identified by them;

Validation

- a description of how Indigenous groups reviewed draft sections of the Impact Statement, how the proponent sought to build consensus about the information contained in the Impact Statement, and how any disagreements were addressed;

Policies and protocols

- any agreements pertaining to engagement;
- the proponent's Indigenous engagement policies related to the collection of Indigenous Knowledge and traditional land use information;
- where applicable, a copy of each group-specific engagement plan developed collaboratively by the Indigenous group and the proponent, or a rationale for using a single plan;
- the list of consultation or engagement protocols adopted by each Indigenous group, with written copies, if available;

Studies and expertise

- where applicable, a description of Indigenous-led studies or assessments provided to the proponent and a summary of their scope, objectives and timelines; and
- any proponent plans and commitments to continue to work with, and seek the knowledge and expertise of, Indigenous Peoples throughout the lifecycle of the project, should the project proceed.

6.3 Analysis and response to questions, comments and issues raised

The proponent is encouraged to work with Indigenous groups who demonstrate an interest in drafting sections of the Impact Statement that concern them. Where applicable, sections of the Impact Statement

prepared by Indigenous groups must be clearly identified. Where the proponent's conclusions are different from those of Indigenous groups, it must be clearly documented with a rationale.

The proponent must:

- detail the main questions, comments and issues raised by each Indigenous group during engagement activities, and describe the proponent's responses, including how matters have been addressed in the Impact Statement or will be addressed in the future;
- indicate where and how Indigenous Peoples' knowledge, perspectives and values were considered and contributed to decisions regarding the project or its assessment, including:
    - construction, operation, decommissioning, closure, and reclamation,
    - the assessment of alternatives to the project and alternative means of carrying it out,
    - setting spatial and temporal boundaries, selecting VCs, and collecting baseline information,
    - identification of mitigation measures, additional measures or enhancements of project benefits,
    - identification of activities for follow-up and monitoring, if the project proceeds, and
    - characterization of the extent of significance of adverse federal effects (not significant; low, moderate or high significance);
- consider and incorporate spiritual practices, cultural beliefs, laws and norms in the assessment, including whether the project would be inconsistent with Indigenous laws and norms; and
- describe the type of information received from Indigenous groups (e.g. Indigenous Knowledge, data).

7. Description of public participation

The proponent must engage with the public (e.g. local communities, stakeholders). Engagement activities should be inclusive and ensure that interested members of the public have an opportunity to share their views, with a particular attention to individuals and communities affected by the project, and consideration for the official language needs of the people being engaged.

7.1 Summary of public engagement activities

The Impact Statement must:

- describe the proponent's public engagement activities regarding the project, including:
    - efforts made to distribute project information and materials,
    - where and how consultations were held,

- the persons, organizations and diverse population groups consulted, and
- efforts made to collect and incorporate community knowledge and to engage diverse population groups in support of the GBA Plus.

7.2 Analysis and response to questions, comments and issues raised

The Impact Statement must:

- provide a summary of key issues which were raised through engagement with the public, including related to the adverse federal effects of the project and disproportionate effects for diverse population groups, and how they were incorporated into the Impact Statement;
- describe how questions and comments raised by the public influenced the design of the project;
- describe the alternative means, mitigation measures or the follow-up program identified to address public concerns;
- identify public concerns that have not been addressed and the reasons why they have not been; and
- provide details and commitments regarding how the public will be kept involved should the project proceed, such as public involvement in the follow-up program, including monitoring.

8. Impact Statement summary

As part of the submission of its Impact Statement, the proponent must prepare and submit a stand-alone plain language summary of the Impact Statement in both English and French. The summary must contain sufficient details for the reader to understand the project and its adverse federal effects and impacts on Indigenous Peoples and their rights. The summary provides an opportunity for the proponent to demonstrate through a plain-language narrative how it addressed issues raised, notably by Indigenous groups and the public. The summary must include maps illustrating the project location, key project components, and zone of influence of the project on its environment. The proponent is also encouraged to include visual tools to illustrate the predicted geographic extent of changes to the environment (e.g. zone of influence maps with defined boundaries) as well as relevant tables, including mitigation measures and the follow-up program.

The Impact Statement Summary must describe:

- residual and cumulative adverse federal effects, and the mitigation measures to address them;
- impacts on Indigenous Peoples and their rights, and the mitigation measures or any additional measures to address them;
- where applicable, proposed enhancements to increase positive effects from the project;

- whether the residual and cumulative adverse federal effects caused by the carrying out of the project are likely to be, to some extent, significant and, if so, the extent to which they are significant;
- if applicable, the extent to which the effects that are likely to be caused by the project contribute to Canada's ability to meet its environmental obligations and its commitments in respect of climate change;
- if applicable, the extent to which the effects that are likely to be caused by the project contribute to sustainability; and
- the follow-up program.