TEMPLATE

Draft EA Guidelines
(Scope of Project and Assessment)

Environmental Assessment of a Project Proposal

Prepared by the Canadian Nuclear Safety Commission

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Preamble

Attached is a template for use in the development of environmental assessment (EA) guidelines for projects for which the CNSC is a Responsible Authority under the *Canadian Environmental Assessment Act*. The template is designed to promote consistency, efficiency, quality and predictability in the environmental assessment processes conducted by the CNSC. The EA Guidelines provide direction to the proponent about the EA information requirements for the relevant project. The highlighted areas of the template will vary with each environmental assessment, but the body of the Guidelines, indicating the type of information and methodology required, will remain the same. The template will remain a "work in progress", to respond to amendments to environmental assessment legislation and to changes in internal procedures. CNSC staff is committed to reviewing the document on a routine basis to reflect improving standards and practices in the environmental assessment community.

It is expected that this template would be used for complex screenings, and for comprehensive studies; however, for screenings of small projects with known low environmental impacts, staff expects to develop a simplified template.

In drafting the template, CNSC staff relied on past experience. CNSC staff also reviewed Guidelines issued by the National Energy Board, and will continue to seek out "Best Practices" examples from other EA practitioners.

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1.0 PURPOSE

The purpose of this document is to provide guidance on the scope of the environmental assessment (EA) to be conducted of (proponent)'s proposal for (proposed project) at (location). (Describe proposal in more detail). (The proponent) has submitted a project description of the proposal to the Canadian Nuclear Safety Commission (CNSC).

A federal environmental assessment of the proposed project is required under the provisions of the *Canadian Environmental Assessment Act* (CEAA). Under the CEAA, the scope of the project and the scope of the factors included in the assessment are to be determined by the Responsible Authority that, in this case, is the Canadian Nuclear Safety Commission (CNSC).

The EA Guidelines describe the basis for the conduct of the EA, and focus the assessment on relevant issues and concerns. The document also provides specific direction to the proponent, (proponent), on how to document the technical environmental assessment study which will be delegated to them by the CNSC staff pursuant to subsection 17(1) of the CEAA. The document indicates the necessary information to be submitted by the proponent to the CNSC to facilitate the development of the EA Screening Report. In addition, the EA Guidelines provide a means of communicating the CNSC's environmental assessment process to stakeholders.

2.0 BACKGROUND

On (date), (the proponent) wrote CNSC, seeking approvals to (describe project that requires CNSC authorization) (cite proponent letter as reference 1). (The proponent) submitted a project description on (date) (cite letter of submission as reference 2).

(Licensing action required) (The proposed project) and the undertakings related to the physical work, if approved, would be authorized by (a new licence, an amendment of an existing licence [cite existing licence]), pursuant to (cite section, subsection of the *Nuclear Safety and Control Act* (NSCA)). (Approvals subject to conditions of the licence, and the addition of several new conditions, would also be required).

The environmental assessment to be completed under CEAA will provide part of the information that the CNSC will use in considering (the proponent)'s application for (licensing action). The application will also be subjected to a thorough evaluation under the provisions of the NSCA and its regulations. This evaluation will include a detailed safety review and a licensing process that affords the public the opportunity to provide input to the Commission prior to the making of any licensing decision on the proposed (project).

3.0 APPLICATION OF THE CANADIAN ENVIRONMENTAL ASSESSMENT ACT

CNSC staff has determined, pursuant to section 5(1)(d) of the CEAA, that a federal EA is required before the CNSC can authorize [name of the proponent] to proceed [project]. The CNSC is a RA under the CEAA for the purposes of the assessment.

Authorization of this proposal requires the [issuance of a new licence or amendment of an existing licence] from the CNSC under section [24(2)/37(2)] of the *Nuclear Safety and Control Act* (NSCA). The [issuance/amendment] of the licence for the [name of project] is a trigger for the *CEAA* under the *CEAA Law List Regulations*.

There are no other CEAA "triggers", such as funding, being a proponent or disposing of an interest in land to support the proposed project, that involve the CNSC.

The proposed licensing action would authorize activities relating to the [physical work/proposed activity not relating to a physical work] namely the [undertaking in relation to a physical work/Inclusion List physical activity], thus there is a "project" for the purposes of the CEAA. Neither section 7 of the CEAA nor Schedule 1 of the *Exclusion List Regulations* of the CEAA identifies any exclusion from an EA for such a project.

The project is not of the type identified in the *Comprehensive Study Regulations* of the CEAA. At this time, CNSC staff is not aware of any environmental effects or public concerns associated with this project that would warrant a need to have it referred to a mediator and a review panel pursuant to section 25 of the CEAA. Thus, section 18(1) of the CEAA requires the CNSC to conduct a screening EA of the project and to prepare a Screening Report before making the proposed licencing decision pursuant to the NSCA.

4.0 IDENTIFICATION OF OTHER FEDERAL AND PROVINCIAL EXPERT DEPARTMENTS

The CNSC is (the only/one of xxx) Responsible Authority(ies) under the CEAA identified for this screening.

Through application of the CEAA *Federal Coordination Regulations*, (list of all federal departments which have identified themselves as FAs) have been identified as Federal Authorities for the purpose of providing expert assistance to CNSC staff during the environmental assessment.

CNSC staff has confirmed with the (province)(provincial ministry responsible for environmental assessment) that there (are/are not) provincial environmental assessment requirements under the (Province, and its relevant EA legislation) that are applicable to the proposal. (If the province will be conducting an EA, explain the steps in harmonizing the federal process with the relevant provincial process).

5.0 DELEGATION OF ASSESSMENT STUDIES TO (PROPONENT)

The CNSC, based on authority given it in subsection 17(1) of the CEAA, will delegate to (the proponent) the conduct of technical support studies for the environmental assessment, the development and implementation of a public consultation program, and the preparation of an EA study report (EASR).

(The proponent) will submit its EASR and technical support studies to the CNSC. CNSC staff will distribute the EASR and supporting documentation to Federal Authorities, and the appropriate provincial authorities, for review and comment. Based on comments received, CNSC staff may request the proponent to revise its EASR. When the EASR is considered satisfactory, CNSC staff will use information and analysis in the accepted EASR to prepare an EA Screening Report. The draft EA Screening Report will be made available for review and comment by the public and by Federal Authorities. CNSC staff will consider comments received, make appropriate revisions and submit a revised EA Screening Report to the Commission for consideration and decision. The public will also have an opportunity to comment and make interventions before the Commission on the final EA Screening Report.

(The above procedures would be altered if there were more than one Responsible Authority for a proposed project, or if the province were also conducting an environmental assessment. Under amendments to the *Canadian Environmental Assessment Act*, due to come into effect at the end of October, the activities of the Responsible Authorities and Federal Authorities would be coordinated by a Federal Environmental Assessment Coordinator, and the EA guidelines would contain an explanation of the coordinated process).

6.0 PUBLIC REGISTRY

The CNSC has established a public registry for the assessment as required by section 55 of the CEAA. This includes identification of the assessment in the *Federal Environmental Assessment Index* (FEAI), which can be accessed on the Internet Web site of the Canadian Environmental Assessment Agency (www.ceaa.gc.ca). The FEAI number for this project is (xxxxx).
(Following the coming into effect in October of the amendments to the *Canadian Environmental Assessment Act*, the FEAI and the Public Registry listings for a particular EA will be combined on the CEAA web site in the Canadian Environmental Assessment Registry (CEAR).

The CEAR will include the following documentation:

- Description of the project;
- Notices of commencement and termination;
- EA Decisions;
- Notices requesting public input; and
- Information of class screenings).

Interested parties will be able to obtain copies of these documents by accessing the CEAR website, and downloading the files. Interested parties may obtain copies of specific documents on the list from the Document Contact at the CNSC (see section 12.0).

7.0 SCOPE OF THE PROJECT

In establishing the scope of a project for a screening environmental assessment under the CEAA, the physical works (e.g., water treatment facilities, dam structures, mine shafts, production lines, reactors, etc.) that are involved in the proposal and any specific undertaking that will be carried out in relation to those physical works must be determined. The physical works involved in this project are (e.g. consolidation mounds; storage arrangements for feed material and final products; blending circuits for fuel product; milling or scrap recovery circuits; warehouse/packaging facilities; ventilation systems; etc). The undertakings in relation to the physical works are (e.g. site preparation; all systems and activities required for the construction and operation of the facilities.) While decommissioning is not part of the project, a preliminary decommissioning plan for the facilities will be included in the assessment.

Associated operations and activities that are within the scope of the project include:

The following lists are not all-inclusive, but offer some examples relevant to classes of projects.

Processing facilities:

- Site preparation/construction for new building
- Preparation of the building to receive new equipment
- If renovating an existing building:
    - Removal of redundant equipment
    - Routing/rerouting of plant services, such as steam and water pipes
    - Construction of separating walls between blending and other operations
- Installation of blending circuits (drum elevator, drum and pail dumping stations, hoppers, air blenders, packaging stations and baghouses)
- Installation of wet, dry scrap recovery circuits
- Installation of separate heating, ventilation and air conditioning systems
- Construction of receiving and storage, weighing and de-lidding facilities for feed material
- Construction of warehousing, packaging and shipping facilities for product
    - Packaging of containers for storage and transportation of product
- Construction of storage, packaging areas for scrap
- Operation and maintenance of the blending and scrap recovery facilities
    - Radiation, security and criticality monitoring, inspection and maintenance
- Facilities and systems (excepting prescribed information) for maintaining security of the site

Uranium Mines, Mills

- Site excavation and preparation, including preparations for ponds and stockpiles
- Construction of shaft
- Construction of ground freezing system, and jet bore mining system
- Construction of ore handling, transport and water recycle systems
- Construction of operating ventilation system, electrical and control systems, and utilities and ancillaries such as compressed air, propane and fuel storage
- Construction of waste water treatment systems and waste rock management systems
- Construction of surface support facilities, such as water supply, waste disposal and camp
- Construction and operation of tailings disposal facilities
- Operation and maintenance of the mine/mill and associated facilities
- Facilities and systems (excepting prescribed information) for maintaining security of the site

Reactor Re-starts

- All operations and activities necessary to refuel; to allow units to be brought to service (operational status); and to continue the generation of power over their planned operational life
- On-site physical systems and buildings, land and infrastructure, including the nuclear steam supply system; the turbine generator system; the electric power systems; the nuclear safety systems; ancillary systems; and all on-site maintenance and materials and waste handling activities associated with the specific licence being applied for
- Facilities and systems (excepting prescribed information) for maintaining security of the site

Waste Management Facilities

- Site clearing, excavation, grading and compacting
- Construction of foundation and inactive drainage system
- Site service hook-ups
- Modification or construction, operation and maintenance of the physical works
- Handling and transport of wastes
- Installation of perimeter fence and security system
- Facilities and systems (excepting prescribed information) for maintaining security of the site

Decommissioning/remediation of Contaminated Sites

- Site preparation
- Removal and disposal of contaminated material/soil/buildings
- Physical works including consolidation mounds, water/effluent treatment facilities, dam structures, fences and any other facilities, constructions, equipment, systems and services associated with the decommissioning/remediation activities
- Remediation activities, including demolition of structures, re-grading and contouring of impacted areas
- Post-remediation site monitoring and site maintenance
- Facilities and systems (excepting prescribed information) for maintaining security of the site

The purpose of the proposed project, as described in the Project Description (reference 2), is to (give details about the purpose of the project - to respond to what need? Why in this location? Why now?, etc).

8.0 FACTORS TO BE CONSIDERED IN THE SCREENING

The scope of the screening environmental assessment under the CEAA must include all the factors identified in paragraphs 16(1) (*a*) to (*d*) of the CEAA and, as provided for under paragraph 16(1) (*e*), any other matter that the CNSC requires to be considered.

Paragraphs 16(1) *(a)* to (*d*) require that the following factors be included:

- the environmental effects (see section 14.0 – Glossary of Terms) of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;

- the significance of the effects identified above;

- comments from the public that are received in accordance with the CEAA and its regulations; and

- measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project.

With the discretion allowed for in paragraph 16(1) (*e*) of the CEAA, the CNSC will also require consideration of:

(The RA can require consideration of any factors that it feels relevant to the environmental assessment; examples are:

- the purpose of the project; the need for the project and the benefits of the project;
- consideration of traditional and local knowledge, where relevant;

- incremental environmental effects of continued operation following completion of refurbishment activities; and,
- the need for, and requirements of, a follow-up program in respect of the project.

Additional or more specific factors or issues to address in the EA may be identified following consultation with the expert Federal Authorities and other stakeholders during the conduct of the EA.

9.0 ASSESSMENT METHODOLOGY

9.1 Structure of the Screening Report

CNSC staff will prepare the Screening Report under the following section headings, and recommends that the proponent's Study Report use a similar structure.

Screening Report Section Headings:

1) Introduction
2) Application of the CEAA
3) Scope of the Project
4) Scope of the Assessment
5) Project Description
6) Spatial and Temporal Boundaries of the Assessment
7) Description of the Existing Environment
8) Assessment and Mitigation of Environmental Effects
   - description of assessment methodology
   - effects of (phase of project; e.g. site preparation, construction)
   - effects of normal operations, malfunctions and accidents, and natural hazards
9) Cumulative Environmental Effects
10) Significance of Residual Effects
11) Stakeholder Consultation
12) Follow-up Program
13) Conclusions and Recommendations for Decision
14) References

The recommended structure serves as a framework for explaining how the assessment factors required by Section 16(1) of the *CEAA* are to be considered systematically in the screening environmental assessment study report. In the Study Report, information about the project and the existing environment is necessary to permit such a systematic consideration; the results of the Study Report consideration will be documented in the subsequent Screening Report to be prepared by CNSC staff.

The parts of the assessment that are to be delegated to (the proponent), in accordance with subsection 17(1) of the CEAA, are to be documented in the form of a technical EA Study Report (EASR) in a manner consistent with this structure. The (proponent's) EASR will be attached to the Screening Report as a support document.

9.2 Specific Information Requirements

9.2.1 Project Description (Section 5.0 of the Screening Report)

The EASR should include a clear and comprehensive statement of the purpose of the project. The description of the purpose should include an explanation of the need (for the new products, for the new facilities, for the change in operation, etc.) for the project.

An adequate description of the project is necessary to permit a reasonable consideration in the screening of the environmental effects of the project. The project description will be a thorough description of the operational, physical, chemical, hydrological and radiological characteristics of the (facility, product, operation) being proposed. (For a facility, it will include a proposed schedule for the construction/modification, operation and on-going maintenance of the facility.) (For an operation, it will include a description of the activities involved in the operation. The following text provides an example: in the blending of the new product; in the warehousing of the feed material and the finished product; in the packaging and transport of the product. It will also include the description of the additional infrastructure required for these activities to occur). Furthermore, the project description will include a detailed description of (the proponent), including its ownership, organization, structure and technical capabilities.

The description of the project will refer to, and elaborate on, the items identified in the project scope, supported with appropriate maps and diagrams.

The main objective of the project description is to identify and characterize those specific components and activities that have the potential to interact with, and thus result in a likely change or disruption to, the surrounding environment, during construction, during normal operations, during malfunctions and accidents.

Construction and Normal Operations

The following information should be provided in summary form; where applicable, reference may be made to more detailed information:

(The following list is an example of required information that might be included in this section:

- the location of the facility on the licensed site;
- site preparation within the building, demolition and construction activities;
- the basic configuration, layout, shape, size, design and operation of the facility components, containers and supporting infrastructure;
- a description of the warehousing and packaging operations including a description of the transport route for the finished product
- the inventories of nuclear substances and other hazardous materials to be stored at the facility, including locations and storage methods, and criticality control plans;
- the sources, types and quantities of radioactive, hazardous and non-hazardous waste predicted to be generated by the project;
- the on-site processes for the collection, handling, transport, storage and disposal of radioactive, hazardous and non-hazardous wastes to be generated by the project;
- the predicted sources, quantities and points of release from the project of emissions and effluents containing nuclear substances and hazardous materials;
- the predicted doses to workers involved with the associated operations and activities that are within the scope of this project;
- the sources and characteristics of any fire hazards;
- the sources and characteristics of any noise, odour, dust and other likely nuisance effects from the project;
- the sources and characteristics of any potential risks (including radiological risks) to workers, the public or the environment from the project;

- key operational procedures relevant to protection of workers, the public and the environment relating to the project, including criticality control program;
- the key components of the facility, including the product storage containers, relevant to environmental performance and safety during the siting and construction activities, and during the subsequent operations;
- the key components of the facility and its physical security systems (excluding prescribed information) that are relevant to management of malfunctions and accidents that may occur during the siting and construction activities, and during the subsequent operations; and
- a description of the relevant organizational and management structure, and staff qualification requirements with emphasis on safety and environmental management programs.

Malfunctions and Accidents

This section should include:

- an identification and discussion of any past abnormal operations, accidents and spills to the extent that they are relevant to the current assessment;

- a description of specific malfunction and accident events, including criticality events, that have a reasonable probability of occurring during the life of the project, including an explanation of how these events were identified for the purpose of this environmental assessment;

- a description of the source, quantity, mechanism, rate, form and characteristics of contaminants and other materials (physical, chemical and radiological) likely to be released to the surrounding environment during the postulated malfunction, accident and criticality events; and,

- a description of any contingency, clean-up or restoration work in the surrounding environment that would be required during, or immediately following, the postulated malfunction, accident and criticality events.

Preliminary Decommissioning Plan

A preliminary decommissioning plan for the facility will be included in the assessment. The preliminary plan will document the preferred decommissioning strategy, including a justification of why this is the preferred strategy. It will also include end-state objectives; the major decontamination, disassembly and remediation steps; the approximate quantities and types of waste generated; and an overview of the principal hazards and protection strategies envisioned for decommissioning.

(Or: If the project is part of an existing facility, the preliminary decommissioning plan for that facility should be revised accordingly to address the impact of the project).

9.2.2 *Spatial and Temporal Boundaries of the Assessment (Section 6 of the Screening Report)*

The consideration of the environmental effects in the screening needs to be conceptually bounded in both time and space. This is more commonly known as defining the *study areas* and *time frames*, or spatial and temporal boundaries, of the screening assessment.

The geographic study areas for this screening must encompass the areas of the environment that can reasonably be expected to be affected by the project, or which may be relevant to the assessment of cumulative environmental effects. Study areas will encompass all relevant components of the environment including the people; non-human biota; land; water; air and other aspects of the natural and human environment. Study boundaries will be defined taking into account ecological, technical and social/political considerations.

The following geographic study areas are suggested:

- *Site Study Area*: The Site Study Area includes the (example: facility site and the area encompassed by the routes to transport the new product).

- *Local Study Area*: The Local Study Area is defined as that area existing outside the site study area boundary, where there is a reasonable potential for immediate impacts due to either ongoing normal activities, or to possible abnormal operating conditions. (Example: It includes the facilities, buildings and infrastructure at the licensed site, including the licensed exclusion zone for the site on land and within Lake Ontario. The outer boundaries of the Local Study Area encompass an area that includes lands within the City in which it is located; and the portion of Lake Ontario abutting, and used by, the community for such activities as recreation, water supply and waste water discharge). The boundaries may change as appropriate following a preliminary assessment of the spatial extent of potential impact.

- *Regional Study Area:* The Regional Study Area is defined as the area within which there is the potential for cumulative and socio-economic effects. (Example: It includes the lands, communities and portions of Lake Ontario around the facility) that may be relevant to the assessment of any wider-spread effects of the project.

The temporal boundaries for this assessment must establish over what period of time the project-specific and cumulative effects are to be considered. (Example for a construction and operation proposal: The initial time frame for the assessment will be the duration of the project; that is, the planned duration of the construction and operation phases, and of decommissioning based on a preliminary decommissioning plan).

Both the study areas and time frames will remain flexible during the assessment to allow the full extent of a likely environmental effect to be considered in the screening. For instance, should the results of modelling demonstrate that there is dispersion of a contaminant that is likely to cause an environmental effect beyond the boundaries identified above, it will be taken into account in the assessment.

9.2.3 *Description of the Existing Environment (Section 7 of the Screening Report)*

A description of the existing environment is needed to determine the likely interactions between the project and the surrounding environment and, conversely, between the environment and the project. Both the biophysical environment and the socio-economic (human, cultural) environment are to be considered.

Present physical security systems must be included in the description (excluding prescribed information).

An initial screening of likely project-environment interactions will be used in identifying the relevant components of the environment that need to be described. In general, the environmental components that are typically described in the various study areas include, but are not necessarily limited to:

- meteorology and climate;
- air quality;
- noise;
- physiography and topography;
- soil quality;
- geology;
- seismic activity;
- hydrogeology;
- groundwater quality (physical and chemical);
- surface hydrology;
- surface water quality (physical and chemical)
- aquatic ecology; and
- terrestrial ecology.

The description of the human components of the above environment should include, but should not necessarily be limited to:

- population (including relevant demographic characteristics);
- economic base;
- community infrastructure and services;
- renewable and non-renewable resource use;
- existing and planned land use;
- health;
- heritage, cultural and archaeological sites;
- recreation areas; and
- use of lands and resources for traditional purposes by aboriginal persons.

Valued Ecosystem Components (VECs) in the existing environment will be identified and used as specific assessment end-points. VECs are environmental attributes or components identified as having a legal, scientific, cultural, economic or aesthetic value. VECs should be identified following consultations with the public, First Nations, federal and provincial government departments and other relevant stakeholders. The VECs proposed in the EA methodology for this project will be reviewed and accepted by CNSC staff in the early phases of the EA study.

The required level of detail in the description of the existing environment will be less where the potential interactions between the project and various components of the environment are weak, or remote in time and/or space.

Relevant existing information, including traditional knowledge, may be used to describe the environment. Where that information is significantly lacking, additional research and field studies may be required to complete the screening assessment. CNSC staff will review any work done by the proponent to fill identified gaps in information as progress is being made.

9.2.4 *Assessment and Mitigation of Environmental Effects (Section 8 of the Screening Report)*

The consideration of environmental effects in the screening should be done in a systematic and traceable manner. The assessment methodology will be summarized. The results of the assessment process should be clearly documented using summary matrices and tabular summaries where appropriate.

Assessment of Effects Caused by the Project

The assessment will be conducted in a manner consistent with the following general method:

1) ***Identify the potential interactions between the project activities and the existing environment during construction and normal operations, and during identified relevant malfunctions and accidents.***

   Specific attention will be given to interactions between the project and the identified VECs. In this step, the standard design and operational aspects from the project description that prevent or significantly reduce the likelihood of interactions occurring with the environment should be reviewed. Opportunities for additional impact mitigation measures are addressed in step 3 below.

2) ***Describe the resulting changes that likely would occur to the components of the environment and VECs as a result of the identified interactions with the project.***

   Each environmental change must be described in terms of whether it is direct or indirect, and positive or adverse.

   Identified changes in socio-economic conditions and various aspects of culture, health, heritage, archaeology and traditional land and resource use may be limited to those that are likely to result from the predicted changes that the project is likely to cause to the environment. The consideration of public views, including any perceived changes attributed to the project, should be recognized and addressed in the assessment methodology.

For each identified effect, the predicted magnitude, duration, frequency, timing, probability of occurrence, ecological and social context, geographic extent, and the degree of reversibility, should be considered in determining if it is a likely adverse effect.

Quantitative as well as qualitative methods may be used to identify and describe the likely adverse environmental effects. Professional expertise and judgment may be used in interpreting the results of the analyses. The basis of predictions and interpretation of results, as well as the importance of remaining uncertainties, will be clearly documented in the EA study report.

3) ***Identify and describe mitigation measures that may be applied to each likely adverse effect (or sequence of effects), and that are technically and economically feasible.***

Mitigation strategies should reflect avoidance, precautionary and preventive principles; that is, emphasis should be placed on tempering or preventing the cause or source of an effect, or sequence of effects, before addressing how to reverse or compensate for an effect once it occurs.

Where the prevention of effects cannot be assured, or the effectiveness of preventive mitigation measures is uncertain, further mitigation measures in the form of contingency responses, including emergency response plans, will be described.

Where cost/benefit analyses are used to determine economic feasibility of mitigation measures, the details of those analyses will be included or referenced.

4) ***Describe the significance of the environmental effects that likely will occur as a result of the project, having taken into account the implementation of the proposed mitigation measures.***

The criteria for judging and describing the significance of the residual (post-mitigation) effects will include: magnitude, duration, frequency, timing, probability of occurrence, ecological and social context, geographic extent, and degree of reversibility. Specific assessment criteria proposed in the EA methodology for this project will be submitted to CNSC staff in the early phases of the EA study for review and acceptance. Existing regulatory and industry standards and guidelines are relevant as points of reference for judging significance. However, professional expertise and judgement should also be applied in judging the significance of any effect. All applicable federal and provincial laws must be respected.

The analysis must be documented in a manner that readily enables conclusions on the significance of the environmental effects to be drawn. The CNSC, as the responsible authority for the EA project, must document in the screening report a conclusion, taking into account the mitigation measures, as to whether the project is likely to cause significant adverse environmental effects.

Assessment of Effects of the Environment on the Project

The assessment must also take into account how the environment could adversely affect the project; for example, from severe weather or seismic events. The assessment must also take into account any potential effects of climate change on the project, including an assessment of whether the project might be sensitive to changes in climate conditions during its life span.

This part of the assessment will be conducted in a step-wise fashion, similar to that described for the foregoing assessment of the project effects. The possible important interactions between the natural hazards and the project will be first identified, followed by an assessment of the effects of those interactions, the available additional mitigation measures, and the significance of any remaining likely adverse environmental effects.

9.2.5 *Assessment of Cumulative Effects (Section 9 of the Screening Report)*

The effects of the project must be considered together with those of other projects and activities that have been, or will be carried out, and for which the effects are expected to *overlap* with those of the project (i.e., overlap in same geographic area and time). These are referred to as *cumulative environmental effects.*

An identification of the specific projects and activities considered in the cumulative effects will be included in the screening report (Example:must include the existing processing activities already on the facility site). In general, the cumulative effects assessment will consider the combined effects of the project with the neighbouring or regional industries and other developments.

The information available to assess the environmental effects from other projects can be expected to be more conceptual and less detailed as those effects become more remote in distance and time to the project, or where information about another project or activity is not available. The consideration of cumulative environmental effects may therefore be at a more general level of detail than that considered in the assessment of the direct project-environment interactions.

Where potentially significant adverse cumulative effects are identified, additional mitigation measures may be necessary.

9.2.6 *Assessment of the Effects on the Capacity of Renewable and Non-renewable Resources (Section 10 of the Screening Report)*

The potential interactions between the project and the environment will be identified and assessed in order to determine the likelihood of interactions between the project and resource sustainability.

9.2.7 *Significance of the Residual Effects (Section 11 of the Screening Report)*

The preceding steps in the screening will consider the significance of the environmental effects of the project on the environment; of the natural hazards on the project; of project malfunctions and accidents; and of other projects and activities that could cause cumulative effects.

The screening will consider all of these effects in coming to a final conclusion as to whether the project, taking into account the mitigation measures, will likely cause significant adverse environmental effects. The CNSC, as the responsible authority, will document this conclusion in the screening report.

9.2.8 Stakeholder Consultation (Section 12 of the Screening Report)

The assessment will include notification of, and consultation with, the potentially affected stakeholders (Example of a specific group of particular importance to a review: including the local public and the municipal government of city in which the facility is located). Various media will be used to inform and engage individuals, interest groups, local governments and other stakeholders in the assessment. (The proponent) will be expected to hold appropriate public consultation meetings. The (proponent's) stakeholder consultation program will be monitored by the CNSC staff throughout the environmental assessment process.

Throughout the environmental assessment process, various stakeholders, including the following, will be consulted:

- federal government
- provincial government
- local government
- established committees
- general public
- First Nations and aboriginal communities
- neighbouring residents
- local businesses
- non-government organizations and interest groups

The screening report will contain a summary review of the comments received during this environmental assessment process. The screening report will indicate how issues identified have been considered in the completion of the assessment, or where relevant, how they may be addressed in any subsequent licensing and compliance process.

The CNSC will also establish a public consultation process in the review and decision-making process for the screening report. This will include opportunities for the public to review and comment to CNSC staff on the draft screening report, as well as to comment and make interventions before the Commission on the final screening report.

9.2.9 Follow-up Program (Section 13 of the Screening Report)

A preliminary design and implementation plan for a follow-up program will be included in the screening report.

The purpose of the follow-up program is to assist in determining if the environmental and cumulative effects of the project are as predicted in the screening report. It is also to confirm whether the impact mitigation measures are effective, and to determine if any new mitigation strategies may be required. The design of the program will be appropriate to the scale of the project and the issues addressed in the EA.

If a licence is issued [or amended] to [the proponent] under the NSCA, the CNSC licensing and compliance program will be used as the mechanism for ensuring the final design and implementation of any follow-up program and the reporting of program results. The follow-up program would be based on the regulatory principles of compliance, adaptive management, reporting and analysis.

10.0 ENVIRONMENTAL ASSESSMENT PROCESS

The following points indicate the key steps likely to be followed by CNSC staff during the environmental assessment process. (Note that some steps may vary with the coming into force of the amendments to the *Canadian Environmental Assessment Act*, in October, 2003. e.g. the process of coordinating federal and provincial involvement, and the establishment of the Public Registry.):

- Determination of the application of CEAA to the project, including application of the Federal Coordination Regulation; establishment of Public Registry ; and stakeholder notification

- Preparation of working draft of EA Guidelines; distribution of draft EA Guidelines to proponent and federal and provincial authorities, and to the public; receipt of comments from federal and provincial authorities, and the public

- CNSC staff review and disposition of comments received; revision of Draft EA Guidelines for submission to the Commission of CNSC at one-day hearing; Commission of CNSC approval of EA Guidelines

- CNSC staff issuance of EA Guidelines and delegation of public consultation, technical studies to the proponent

- Receipt of EA study report from proponent

- Distribution of draft EA study report to review team (CNSC staff, federal authorities); revision by proponent, as appropriate, of EA study report; CNSC staff preparation of draft screening report

- Public review and comment on draft screening report; CNSC staff review and dispositioning of public comments; CNSC completion of screening report;

- CNSC staff preparation of screening report CMD for Commission consideration; public notification of Commission Hearing

- CMD presentation of screening report to Commission Hearing (One-day hearing)
- Commission Record of Decision on Screening Report
- Commission Licensing Hearing

11.0 CONCLUSIONS AND RECOMMENDATIONS FOR DECISION

The screening report will present a conclusion by CNSC as to whether the project is likely to cause significant adverse environmental effects, taking into account the appropriate mitigation measures. CNSC staff will make recommendations to the Commission on taking decisions on the environmental assessment and project-related public concerns, consistent with section 20 of the CEAA. The Commission will make its decision on the Screening Report. If the Commission concludes that the project is not likely to cause significant adverse environmental effects, taking into account the appropriate mitigation measures, it may proceed with licensing hearings and decisions on the (proponent)'s application for a licence (amendment) to (excavate, construct, operate, decommission, abandon).

12.0 CONTACTS FOR THE ASSESSMENT

Anyone wishing to obtain additional information or provide comments on any aspect of the environmental assessment being conducted on the proposed (project, activity) at (location) may do so through the following CNSC staff contacts:

(EA Specialist) Environmental Assessment Specialist Processing Facilities and Technical Support Division Canadian Nuclear Safety Commission 280 Slater Street, P.O. Box 1046 Ottawa, Ontario K1P 5S9 Phone: 1-800-668-5284 Fax: (613) 995-5086 Internet: ceaainfo@cnsc-ccsn.gc.ca	(Licensing Officer) Licensing Officer Canadian Nuclear Safety Commission 280 Slater Street P.O. Box 1046 Ottawa, Ontario K1P 5S9 Phone: 1-800-668-5284 Fax: (613) 995-5086 Internet: ceaainfo@cnsc-ccsn.gc.ca

13.0 REFERENCES *(Section 14 of the Screening report)*

1. Letter of intent, requesting authorization, from proponent to Director of Licensing Division, CNSC, date, BITS #.

2. Letter from proponent to Director of Licensing Division, CNSC, accompanied by Project Proposal, date, BITS #.

14.0 GLOSSARY OF TERMS

1. "environmental effect" means, in respect of a project,

(*a*) any change that the project may cause in the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as those terms are defined in subsection 2(1) of the *Species at Risk Act*,

(*b*) any effect of any change referred to in paragraph (*a*) on

(i) health and socio-economic conditions,

(ii) physical and cultural heritage,

(iii) the current use of lands and resources for traditional purposes by aboriginal persons, or

(iv) any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, or

(*c*) any change to the project that may be caused by the environment, whether any such change or effect occurs within or outside Canada.

2. Decommissioning means those actions taken, in the interest of health, safety, security and protection of the environment, to retire a licensed activity/facility permanently from service and render it to a predetermined end-state condition.