



Ministry of Environment
South Coast Region

MEMORANDUM

To: Adrienne Butler,
Project Assessment Officer,
Environmental Assessment Office

October 19, 2012
File: 44100-25/LMR21-
03/Narrows Inlet

From: Liz Freyman, Environmental Assessment Biologist

Re: Narrows Inlet Hydro Project EA Application

Introduction

The following review comments and recommendations comprise the seven areas under Environmental Protection Division (EPD) jurisdiction, namely **air quality, water quality, liquid waste, solid waste, integrated pest management, emergency preparedness & response** and **hazardous wastes**.

Air Quality

The following comments pertain to the Sections concerning air quality and emissions in the Application for an Environmental Assessment and the associated reports. While the emissions from this project do not have a high likelihood of impacting on regional or local air quality (assuming the proposed emission mitigation commitments are adhered to by the proponent), there does appear to be several omissions and inconsistencies between Sections of the Application that require clarification and greater detail in order to provide the necessary rationale and support for the assessment approach and resulting conclusions. My comments are as follows:

Volume 1 Environmental Effects Assessment

Part F Assessment of Project Effects on Atmospheric Environment

Section 9 Assessment of Project Effects on Air Quality

Sub-Section 9.1.1 Analytical Methods for Air Quality provides details on project emission sources used in the assessment. Appropriate methodologies are used for the identified sources. However, based on review of other areas of the Assessment document, there appears to be some potential emission sources excluded from the assessment as follows:

- Concrete batch plant Volume 1 Section 2 Project Description & Scope, sub-Section 2.4.1.6 Hydroelectric Facilities Including Site Preparation indicates that a mobile concrete batch plant will be used during the construction phase. It is not clear if this emission source is included in the construction emission estimates (e.g. sub-Section 9.1.1.1 Construction Equipment appears to focus on fuel use of off-road equipment and Tables 9-1 to 9-10 do not explicitly identify the batch plant). A discussion of the

proposed concrete batch plant should be included with reference to compliance with the BC *Code of Practice for the Concrete and Concrete products Industry* available at http://www.env.gov.bc.ca/epd/industrial/regs/codes/concrete/pdf/concrete_code.pdf and Guidance document

<http://www.bcrmc.ca/media/Guide%20to%20the%20Code%20of%20Practice%202010.pdf>

- **Incinerator** Volume 1 Section 2 Project Description & Scope, sub-Section 2.4.1.3 Establishing Camps/Laydown/Storage Areas indicates that an on-site incinerator may be considered for disposal of ‘domestic garbage’. The Construction Environmental Management Plan (see comments below) also indicates that incineration may be an option. Incineration is also mentioned in Volume 1 Part P Environmental Management Program, sub-Section 22.2.5 Solid Waste Management Plan. If incineration is planned as a waste management option, emissions (especially persistent, bioaccumulative toxic emissions such as dioxins and furans) should be included in the emissions estimates and assessment of impacts on air quality. A discussion of the incinerator type, operational information, location, etc should be included to demonstrate a commitment to minimizing emissions through use of ‘best available technology’ and ‘best management practices’.
- **Open Burning** Sub-Section 9.1.3 Effect Mechanism and Linkages for Air Quality acknowledges the impact that open burning of vegetative debris may have on air quality and sub-Section 9.1.4 Mitigation Measures and Project Design for Air Quality indicates that burning of debris will be avoided through grinding/mulching “... as detailed in the Air Quality Protection and Dust Control Requirements CEMP...”. The same sub-Section also states “...slash piles will be managed following the Debris Management Plan...”. However, both these management plans include burning as an option so it is unclear how adherence to these plans will ‘avoid’ burning as indicated in sub-Section 9.1.4 (perhaps ‘minimize’ burning would be a more accurate statement?). If burning is to occur then a rationale for exclusion of this source should be provided. It should also be noted that open burning of land clearing debris is regulated under the BC Open Burning Smoke Control Regulation (see comments on Debris Management Plan below).

The exclusion of these (potential) emission sources may not significantly affect the overall emissions estimates and the resulting conclusions drawn regarding impacts on air quality (sub-Section 9.1.6 Determination of Significance for Air Quality). However, the relatively low emission estimates are the primary basis for the lack of quantitative assessment of impacts on air quality (i.e. no dispersion modelling conducted). Therefore, for completeness and certainty, the proponent should provide a rationale for the exclusion of the concrete batch plant from the emissions estimates, as well as clarification on the use of incineration for camp waste and open burning of vegetative debris with a rationale for exclusion of these emissions, if appropriate.

Additional comments on supporting reports:

Atmospheric Environment Baseline Assessment (RWDI, March 2011)

Section 3 Air Quality

Sub-Section 3.1 Ambient Air Quality

- It should be noted that in recent years there has been a movement away from the ‘3-tiered’ approach to focussing on the most stringent AAQO value.
- Table 3.1, the PM_{2.5} 24-hour BCAAQO is based on the annual 98th percentile value

Construction Environmental Management Plan - Draft 1.2 (Robert & Froese, February 2012)

Section 4 Environmental Objectives, Specifications and Protection Criteria

Sub-Section 4.4.9 Air Quality Protection and Dust Control Requirements

- Under ‘Project Environmental Objective’ reference should be made to compliance with provincial standards, as well as national.
- Under ‘Environmental Protection Criteria’, reference should be made to BC Ambient Air Quality Objectives
- Under ‘Governing Provincial and Federal Acts’, suggest identifying applicable regulations, codes of practice, guidelines, etc to ensure required compliance is understood by the Proponent and contractors
- Under ‘Recommended Specifications and Best Management Practices: Exhaust and Emissions from Combustion Sources’, Air Quality and Dust Control Plan:
 - 2nd sub-bullet provincial authorization to burn construction waste is unlikely to be granted
 - 3rd sub-bullet suggest clarification on the relationship of low sulphur fuel use and GHG reduction
 - 5th sub-bullet suggest that the Project have a documented anti-idling policy/plan
 - 9th & 11th sub-bullets although the statements are speculative (i.e. “if”), for clarification and certainty, is incineration being contemplated ?

Proposed Right-of-Way Debris Management Plan (Blackwell & Assoc., June 2011)

The Plan indicates that burning of woody debris from land clearing may be considered as a management option (Section 3 Procedures, bullet 10; sub-Section 3.1 Contractor Guidelines, bullet 10; sub-Section 4.1 DMZ Low; sub-Section 4.2.3 Pile and Burning) but there is no discussion of smoke management strategies or required adherence to the BC *Open Burning Smoke Control Regulation* available at http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/34_145_93. The OBSCR is not identified in Section 6 Resources.

Water Quality Assessment

Baseline Monitoring Comments and Recommendations

- In general, water quality baseline monitoring includes chemical analyses for: specific conductivity, alkalinity, total suspended solids, ammonia, nitrite, nitrate, orthophosphate, and total phosphate concentrations.
- In most cases, surface water quality results (streams and lakes) were only averages calculated from four single sampling events over multiple years (2007 to 2011) and from a single location. This frequency is not adequate to adequately establish baseline water quality in all seasonal conditions. The sampling size is not really large enough to accurately characterize water quality, especially for smaller systems, seasons, and precipitation events. Ensure sampling frequency must effectively characterize baseline surface water quality, take into account seasonal variability and establish an acceptable baseline that can support future trend assessments.
- Ensure surface water quality data is also compared to the BC Working Criteria for Water Quality: http://www.env.gov.bc.ca/wat/wq/wq_guidelines.html
- Ensure water quality sampling is designed such that guidelines are subsequently used to interpret the data for assessment during normal and worst-case conditions. This means a

minimum of five samples are collected in a period of thirty days; during high flows and again at low flows to establish proper baseline conditions.

- Ensure full total metal scans are conducted on all surface water quality monitoring sites instead of selective analyses to characterize background conditions. The full suite of metals analysis will be required to characterize baseline conditions prior to an incident, for example, in the event of a spill or metal leaching. In most cases only aluminum, arsenic, and copper were analysed at lake sites. Metals must be of the total fraction portion since BC ambient water quality guidelines for metals (except aluminum) are expressed as totals. Ensure metals analyses for ambient samples utilize ICP-MS analytical methods to obtain the lowest possible metals detection method. Ensure water hardness is obtained to interpret metal results, as metal toxicity can vary significantly with hardness.
- Most total aluminum concentrations exceeded the guideline for dissolved aluminum at the given pH. Ensure the dissolved form of aluminum is captured in water quality sampling since total aluminum is typically higher than the dissolved fraction. The dissolved fraction is required for proper interpretation of aluminum.
- Ensure that analytical laboratory detection limits for all parameters, specifically nutrients and metals are low enough to compare to ambient criteria. For example, orthophosphate and nitrate minimum detection limits should be lower than those presented in this report.
- Baseline macroinvertebrate data for SS, Chickwat, and Ramona Creeks was done in 2010 and 2011. Ensure benthic invertebrate sampling continues in subsequent years at a high enough frequency to reduce the high variance of the drift estimates. The purpose of macroinvertebrate data is to provide another performance measure of stream health that requires clear, measurable endpoints that can be interpreted and used to assess future potential impacts. Interpretation of the data is also required (i.e. compare changes in invertebrate drift pre and post diversion using a BACI model). Some endpoints to use include, but are not limited to, *macroinvertebrate densities*, *community structure*, and *biomass* in the subject streams. Ensure the likely impacts to these communities via increased total suspended solids, is assessed by using existing correlations in scientific literature. Ensure actions and measures to avoid such impacts to macroinvertebrates are listed.
- Ensure baseline periphyton conditions are monitored (they were not included in the report). Nutrient levels will be altered with the introduction of sediments (land clearing around creeks) and from blasting residue during the construction phase. This change will cause impacts to the natural periphyton community; therefore, baseline conditions need to be characterized. Some researchers have stated that such a change in periphyton community structure can impact on higher trophic levels, resulting in lower nutrient value for benthic invertebrates, which in turn, would provide less nutritional value to fish that feed on them. These impacts from periphyton to higher trophic levels were not noted in the report and need to be considered.
- Chlorophyll a will be monitored when the project is operational; however, baseline levels were never established. Ensure baseline chlorophyll a is collected before and during construction and operation at all surface water sampling locations. Background

chlorophyll a levels are expected to change as nutrient levels will be altered with the introduction of sediments (land clearing around creeks) and from blasting residue during the construction phase.

- Appropriate assessment of the aquatic ecosystem is based on a weight of evidence approach that includes not only water chemistry, but also biological community structure and health. Ensure the biological community structure and health is monitored (see above regarding periphyton, benthic, and chlorophyll a sampling) through all phases of the project (baseline, construction, and operational).

Impacts & Future Monitoring

- The MoE stresses that particular care is required for all parameters of concern, specifically pH, dissolved oxygen, temperature, sediments, and nutrients. These parameters are sensitive to forest cover changes and impacts are anticipated to occur. The primary focus should be on preventing the impacts from occurring, rather than trying to mitigate them.
- Ensure, pH, dissolved oxygen, temperature, and turbidity is continuously monitored, especially during critical periods, such as the construction phase. Continuous monitoring of the noted parameters is recommended to further characterize the baseline conditions and to identify the extent of possible exceedances especially during high risk times such as heavy rainfall and rain on snow events. This data will be utilized to trigger mitigative action if environmental impacts are occurring. If monitoring isn't continuous during the construction phase, the monitoring will need to be time sensitive, adaptive and timed to coincide with high risk construction activities and precipitation events. Furthermore, higher frequency monitoring may be required during these high risk construction activities. Continuous monitoring may be reduced to grab and field sampling after high impact critical periods are completed.
- Sediments: impacts due to increased loadings during construction phase. The report lists numerous ways to mitigate the impact from suspended sediments; however, the reality is these measures may not adequately reduce the amount of suspended sediment entering these systems. Ensure these measures are top priority and must not be risk managed if there are project delays. Again, efforts need to focus on prevention, as well as mitigation. Ensure plans incorporate avoidance of soil/sediment loss during high intensity fall and winter storms. For example, all construction on sloped areas need to be complete and adequately reseeded well before fall precipitation is expected to occur and minimize needless clearing and grading. Ensure activities are stopped immediately if continuous monitoring of turbidity shows provincial criteria guidelines are exceeded.
- Nitrogen: probable impacts from elevated nitrate, nitrite, and ammonia levels from blasting residue during construction phase. I recommend the monitoring plan considers conducting regular visual observations of surface water drainages near the area to document whether excessive algal growths and subsequent die-off is occurring. Impacts from nitrogen toxicity aren't anticipated; however, other associated impacts, such as low dissolved oxygen due to excessive bacterial decomposition, were down-played throughout the report, even though significant localized impacts can occur.
- Metals: probable impacts from acid rock drainage, metal leaching, and blast residue. Metals can be highly toxic to aquatic life at low levels. Ensure full total metal scans are

conducted on all surface water sites during all seasonal conditions. Metal concentrations measured during construction and operation should be compared to baseline levels and to BC ambient guidelines for exceedances.

- A lot of potential impacts to periphyton and macroinvertebrate were not included in the report. These potential impacts need to be assessed and linked to cumulative impacts to ensure that key ecosystem functions are addressed. For example, will there be anticipated food web impacts (e.g. switch from diatoms to green filamentous) or hydrological changes that increase stream flow flashiness?

Cumulative Effects

- Water quality parameters are interrelated and changes in one parameter can affect others. There is potential for long term dissolved oxygen cumulative impacts due to changes in temperature due to water diversions. Resulting portions of the creeks/rivers may exceed instantaneous guidelines. This potential should not be discounted, and should be addressed in more detail to ensure significant impacts do not occur (magnitude rating should be upgraded from low to moderate Table 17-1).
- The MoE disagrees that the suspended sediments residual effect will be will be low magnitude, frequency, and duration during the construction phase especially on slopes with some gradient (magnitude should be upgraded from low to moderate Table 17-1). The magnitude and duration will likely be more significant than noted, for example during storm events.
- The potential cumulative impacts exerted through periphyton and macroinvertebrate were not included in the report. These potential cumulative impacts should also be assessed and linked to cumulative water quality and fish impacts. Ensure that key ecosystem functions are addressed, for example are these mainly nurseries for anadromous populations, that feed on preferred prey species? Are they seeing similar population health metrics for them, or equivalent values for their prey species (as compare to baseline?

Municipal Sanitary Waste Management

The Narrows Inlet CEMP documents indicate that for sanitary wastes numerous portable latrines will be provided throughout the work area, and for the duration of the project. EPD's concern is that how will other liquid domestic wastes from other sources (showers, kitchen, wash basins, laundry washers) be managed if the workers are housed at the sites? The documents do not mention if the workers will be housed at the construction site or transported in and out every day, which due to the remoteness of the sites would seem unproductive and inconvenient. Please specify a liquid waste management plan for handling sanitary liquid wastes from construction and operational crews.

Solid Waste Management

Construction Waste Management (Section 4.4.16) states that; The Contractor is "expected" to develop a Waste Management Plan that details procedures for material storage, handling and waste management for construction all waste materials, including:.."

Expected is very vague and under certain circumstances may not happen. A more confirmatory term should be used to demonstrate their assurance, i.e. The Contractor will develop a Waste Management Plan.

Integrated Pest Management Plan and Debris Management

Environmental Effects Assessment, Table 26-1

Commitment #1

- The Invasive and Noxious Vegetation Mitigation and Monitoring plan will need pesticides to effectively deal with the many noxious weeds.

Proposed Right-of-Way Debris Management Plan

- The DMP must provide more details on how it plans to “...minimize the likelihood of forest health incidences or invasive alien plant species impacts due to clearing...”
- The best management practices for IPM must provide more detail. The DMP must demonstrate how best management practices will minimize the high probability of introduction and spreading of invasive and noxious weeds and shoots through ROW construction machinery.
- The timing of Douglas Fir harvest and log removal needs to be carefully considered as improper handling of fallen logs can trigger beetle populations that could kill adjacent timber. The proponent needs to elaborate on full range of IPM techniques including trap logs, aggregation and anti-aggregation pheromones should the delayed removal of Douglas-fir bark beetle infested logs threaten adjacent timber.
- Reference to Ambrosia beetles is not relevant to ROW debris management as this pest is an issue for lumber and log quality only not environmental health.
- We question the statement (p.2) where herbicide treatment is not an option for pest management on the ROW. The proponent needs to elaborate on IPM preventative techniques such as use of sanitation of machinery that could carry noxious/ invasive plant cuttings or seeds, selective pesticide application to treat noxious/ invasive plants that do get transferred or spread during debris removal, use of spot treatment versus broadcast applications to deal with vegetation problems that arise, etc.

Accidents and Malfunctions, Emergency Preparedness, and Spill and Spill Response Management

The following are comments pertaining to sections of the proposed Narrows Inlet IPP project that deal with Accidents and Malfunctions, Emergency Preparedness, and Spill and Spill Response Management are noted below:

Table 20-1:

- For *Hazardous Materials Leaks and Spills*, all of the potential accidents/malfunctions listed are ranked as “Low” for Probability of Trigger and Probability or Frequency of

Occurrence (as are nearly every other potential accident/malfunction in the table). It is recognized that these rankings are based on industry statistics, current design standards and BMPs; however, to suggest that these probabilities are all “Low” (i.e., <1%) is unrealistic and misleading. Based on our experience in the environmental emergency response field, spills that result from accidents and malfunctions and have an impact on the receiving environment (e.g., terrestrial, freshwater, marine, atmosphere) are a reality in the construction and operation of large-scale projects. This certainty does not negate the value and effectiveness of employing appropriate planning and mitigation measures, but to suggest the probability of such incidents occurring is less than 1% is highly questionable.

- Measures to address all of the potential accidents/malfunctions identified for *Hazardous Materials Leaks and Spills* should be included in the Emergency Preparedness and Response Procedures section of the Construction Environmental Management Plan (CEMP). Although such potential accidents/malfunctions are dealt with in other sections of the CEMP (i.e., Contaminated Waste Management Plan, Hazardous Material and Waste Management), the titles of these sections would indicate they are limited to management of the resultant waste from a spill. Identifying clear response actions to be taken during a spill event are necessary under the CEMP, and the section that is intuitively most appropriate would be Emergency Preparedness and Response Procedures.

Section 20.3.1:

- Although alluded to in other sections of the project proposal, it must be clearly identified that the applicable Material Safety Data Sheets (MSDS) for all dangerous goods stored on-site are easily accessible to staff in a known location.

Section 20.3.3:

- Unlike *Section 20.3.1*, which deals with failure of erosion control systems and measures, there is no specific discussion of the potential effects on “Industrial and Domestic Water Use” for downstream stakeholders who may be impacted by a hazardous materials leak or spill. This is a noticeable oversight that should be properly addressed.

Section 22.2.3:

- The Proponent puts the onus on contractor(s) to prepare various elements of the Emergency Spill Response Plan. Has there been any consideration afforded to who will prepare similar plans for the Operational and Decommissioning phases of the proposed project?

Table 26-1:

- Items No. 5 and 16 stipulate agency notification for environmental incidents to occur within 72 hours. Be advised that the Spill Reporting Regulation, under the *Environmental Management Act*, requires that any incident that generates a discharge greater than the reportable levels (identified in the regulation Schedule) must be reported to the Provincial Emergency Program immediately. Further, please note that failure of erosion control measures with subsequent introduction of sediment to the receiving environment would

fall under Item 24 of the Spill Reporting Regulation Schedule. Similarly, sewage releases from sanitary systems or releases of chlorinated water also fall under Item 24. As such, these types of incidents require immediate reporting if an exceedance of the reporting threshold results.

General:

- There appears to be some inconsistency (or at the very least, confusion) in the naming of individual plans, procedures and/or sections of the CEMP specific to Emergency Preparedness and Spill Response. The plans and sections identified include, but may not be limited to:

Accidents, Malfunctions and Emergency Response Plan;

Concrete Batch Plant Management Plan;

Contaminated Waste Management Plan;

Emergency Preparedness and Response Procedures;

Emergency Spill Response Plan;

Fuel Storage and Handling Management Plan;

Hazardous Materials and Waste Management Plan;

Hazardous Materials and Waste Management and Spill Plan;

Spill and Spill Response Management Section;

Spill Contingency and Emergency Response Plan; and,

Waste Management Plan.

It would be helpful ensure consistency within the overall proposal when discussing specific plans, procedures and sections, as well as to include a flowchart or tree identifying under which portion of the CEMP these documents are located.

- In addition to the emergency preparedness, spill prevention and response actions identified in the CEMP (and associated plans), the following measures should be included at a minimum:

Identification of a Unified Command structure, under the Incident Command System, that follows a central oversight, coordination and communications procedure ensuring spills are managed across all aspects of construction and operational activities;

Measures to ensure contact has been made with neighbouring properties and stakeholders that may be potentially impacted by incidental spills;

Up-to-date and easily accessible contact information for agencies, municipalities and emergency response contractors/service providers;

A procedure to immediately report spills in accordance with the Spill Reporting Regulation under the *Environmental Management Act*, with follow-up incident reports detailing the cause and remedial measures taken to prevent a reoccurrence;

Inclusion of an overall detailed site plan showing, but not limited to, sensitive receptors, site and storm drainage works, and sanitary systems;

Identification of any environmentally sensitive uses (including commercial uses) in the Project Area and affected watershed that could be impacted by a spill (e.g., wildlife and aquatic life habitat, water intakes, First Nation interests);

Identification of local and regional hazardous waste management facilities authorized to receive expected waste-types from a spill for small to large incidents; and,

A process for monitoring sediment control measures and implementation of procedures to immediately report failures of works.

- It is important to note that wastes from a spill that are captured under the Hazardous Waste Regulation will need to be managed (e.g., stored, transported and disposed) within the requirements of that regulation and the *Environmental Management Act*, and other regulations that may apply (e.g., Contaminated Sites Regulation).

Hazardous Materials and Waste Management

The EPD reviewed Narrow Inlet IPP's portions of the *Environmental Management Program* (v.1, Part P) and *Construction Environmental Management Plan* (CEMP, Introduction, p. 1-3; p. 1-7; p.173-181) and have the following comments:

1. Section 4.4.18 Hazardous Materials and Waste Management on the CEMP seems to be re-typed from section 22.2.9 Hazardous Materials and Waste Management (v.1, Part P, original application). These two sections **appear to be copies of each other**; therefore, the CEMP which should provide additional details **does not contain information in addition to that provided in the original application**.
2. The **information provided in sections 4.4.18 and 22.2.9 is insufficient to assess compliance with regulatory requirements**. The authors make reference to some of the applicable regulations (e.g. BC Environmental Management Act and BC Waste Management Act, CEMP, p. 173), but not others including the BC Hazardous Waste Regulation (HWR) and the Code of Practice for the Concrete and Concrete Products Industry. Excerpts of the HWR are mentioned (110% containment, CEMP, p. 174), but many other requirements are not. **The information provided in this document is insufficient to assess whether the Project's plans will ensure compliance with the**

Hazardous Waste Regulation, the Petroleum Storage Regulation, the Concrete Code of Practice or other regulatory requirements which may apply.

It is important that the authors understand that the Ministry expects all of our clients to maintain full and complete compliance with all applicable regulations, codes of practice and acts at all times. The responsible parties must ensure that their work maintains compliance with all regulatory requirements at all times. (For example, references to various requirements as “expected to be...” must be replaced with “will be”, as per applicable regulations (p. 174, CEMP).

3. The following **statements such as the two listed below are problematic:**

- a. “the purpose of this CEMP is to identify the environmental values and risks associated with the Project, and to establish the environmental protection standards and mechanisms that will govern the construction and maintenance activities associated with the Project” (page 2, CEMP).

Usually, **environmental values and risks** are established during a formal risk assessment process. The documentation provided in the CEMP is insufficient and inappropriate to identify either environmental values or the risks that the Project may pose to those.

Environmental **protection standards** are either established in regulation or developed following a formal risk assessment process. Again, unless the risk assessment documents are presented and analyzed elsewhere, the CEMP cannot and does not meet its stated purpose.

The sentence cited above refers to **construction and maintenance** activities, but the CEMP appears to only cover the construction phase.

- b. “compliance with the Environmental Protection Criteria as **determined *in situ* by an Independent Environmental Monitor...**”

Environmental Protection Criteria are usually defined either in legislation or during a site-specific risk/impact assessment process. This document does not contain sufficient information to assess/define environmental protection criteria.

4. The following are comments based on the Narrows Inlet Construction Management Environmental Plan (CEMP) Section 5

- This section clearly states that it is the Contractor(s) responsibility to prepare Environmental Protection Plans (EPPs). It further notes “the Contractor(s) is legally responsible for the mitigation of all environmental impacts related to....” (p 196). It appears that the CEMP is a document detailing agreements between the Owner of the Project and their contractors. While it is not within the scope of this review to address any contracts between two parties, I would like to note that the Ministry of Environment expects the proponent to maintain full and complete compliance with all applicable regulations at all times. These regulations include,

but are not limited to the Environmental Management Act and all of the applicable regulations and codes of practice therein. It remains the responsibility of the proponent to ensure that the Project is in constant compliance.

- The Environmental Management Act and its associated regulations and codes of practice set out specific requirements for establishing and operating works, for obtaining approvals and/or permits and for registering, documenting, tracking, recording, monitoring and reporting requirements. Again, the Ministry expects the Owner to fully comply with all applicable environmental regulations and codes of practice listed in legislation at all times.
- In addition of the two points mentioned above, please note that the information provided in Section 5 of the CEMP is, at best incomplete.
- For instance, the first bullet on page 198 referring to “A complete record of contaminated materials handling forms...” is unclear and incomplete. I assume it refers to requirements under the Hazardous Waste Regulation, the Contaminated Sites Regulation and the Spill Reporting regulations, but as the paragraph is written, it is difficult to follow (e.g. temporary storage is also no longer recognized in the regulations).
- The document assumes response times on the part of the Ministry. This action is probably something that the Ministry would be in a better position to address.
- It is unclear what the report’s authors are referring to when they mention “in the absence of having received formal acceptance of Plans submitted to the Owner the Contractor(s) will be held to the highest environmental protection standards until said acceptance is provided”. There are a number of possible interpretations of this statement, but note that the proponent must remain in full compliance with applicable legislation.

5. In addition to point 3, above, **miscellaneous references** throughout the document seem to need clarification. For example:

- a. Contaminated Waste Management Plan “*is expected to be developed*”, but it is not included in this request for review (v1, part P, p22.15).
- b. “effective practical containment... to prevent significant environmental impacts” (v1, part P, p22.19). Provincial regulations speak to containment and environmental impacts. The reference above to ‘effective and practical’ as well as to ‘significant’ seems confusing and inappropriate.
- c. “unauthorized impacts to VCs are avoided and/or effectively mitigated” (CEMP, p1) I would just ask for clarification. Do they intend to have ‘unauthorized impacts’, and simply mitigate them?