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Spill Contingency Plan

KIA-NWB-1

Review Comment Number	KIA-NWB-1
Subject/Topic	Hazardous materials Safety Data Sheets removed
References	<ul style="list-style-type: none"> • Agnico Eagle, Hope Bay Spill Contingency Plan (June 2022) • Section 1.2 • Appendix 1: Hazardous Materials and Product Specific Emergency Response Plans • Appendix 4: Responses to Comments on Previous Plan Versions
Summary	Agnico Eagle has removed the hazardous materials Safety Data Sheets (SDSs) from the Spill Contingency Plan (SCP), despite a previous review comment from ECCC requesting that they be added (review comments were compiled by the Proponent and presented in Appendix 4 of the SCP). The KIA also notes the importance of SDSs as a requirement of the Workplace Hazardous Materials Information System (WHMIS).
Detailed Review Comment	Appendix 1 of the Agnico Eagle's June 2022 Spill Contingency Plan (SCP) includes Product Specific Spill Response Plans for various hazardous materials used at the Project site, including poisonous and toxic substances (sodium cyanide, ammonium nitrate) and explosive materials (Jet-A fuel, diesel fuel, acetylene, hydrochloric acid). In previous versions of the SCP, Safety Data Sheets (SDSs) from the product manufacturer or supplier were included. During ECCC's review of the 2021 Hope Bay SCP, they requested that SDSs be included in the Plan (Appendix 4, p. 50, comment # 4. (2)). The Proponent (presumably Agnico Eagle at this point) responded that Appendix 1 has been updated to include SDS. The March 2022 version of the SCP that was submitted as part of the 2021 NIRB and NWB Annual Reports did have SDSs available, which fulfilled the ECCC request and WHMIS requirements. However, these SDSs have been removed from the June 2022 version of the SCP without an explanation from Agnico Eagle.



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	The Proponent acknowledges in Table 1.1 that the WHMIS, under the federal Hazardous Products Act, is relevant to the Hope Bay SCP. The four main components of the WHMIS are 1) hazard identification and product classification, 2) labelling, 3) safety data sheets, and 4) worker education and training. The components within the product-specific spill response plans in Appendix 1 are useful but not a substitute for having up to date SDSs on hand and readily available to all workers in case of a spill, as well as available for review such that third parties can understand the risks and storage requirements of each hazardous material. Agnico Eagle must keep the Project in compliance with WHMIS and other relevant legislation and guidance to ensure the safety of humans and the environment.
Recommendation/Request	The KIA requests/recommends the following: <ul style="list-style-type: none"> • Please re-insert up to date SDSs into Appendix 1 of the SCP. • Please explain how Agnico Eagle would demonstrate compliance with WHMIS if the SDSs are not provided.
Importance	High

KIA-NWB-2

Review Comment Number	KIA-NWB-2
Subject/Topic	Outstanding review comments on previous Spill Contingency Plan
References	Agnico Eagle, Hope Bay Spill Contingency Plan (June 2022) Agnico Eagle, Hope Bay Spill Contingency Plan (March 2022)
Summary	Agnico Eagle submitted a June 2022 updated Spill Contingency Plan for review. However, technical comments submitted by the KIA for the March 2022 version still need to be addressed.
Detailed Review Comment	Likely due to the short turnaround time between Plan revisions, Agnico Eagle's June 2022 update of the Hope Bay Spill Contingency Plan has not taken into consideration any review comments they may have received from the March 2022 SCP as part of the 2021 NIRB and NWB Annual Report reviews.



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	<p>Therefore, in addition to review comment KIA-TC-01 in this submission, the KIA reminds Agnico Eagle about the NIRB and NWB review comments submitted in July 2022 related to the SCP and expects that these comments will be addressed in the next iteration of the Hope Bay SCP, or through a Proponent Response document(s). These technical comments have not been repeated for this current submission but still apply for the June 2022 SCP.</p> <p>2021 NIRB Annual Report Review</p> <ul style="list-style-type: none"> • KIA-NIRB-06: Invasive and rare plant monitoring and reporting • KIA-NIRB-16: Wildlife protection during spill response • KIA-NIRB-17: Environmental resource maps and spill response prioritization <p>2021 NWB Annual Report Review</p> <ul style="list-style-type: none"> • KIA-NWB-03: Ongoing issues with environmental resource maps • KIA-NWB-11: Mitigation measures on oiled shoreline vegetation and nests/eggs • KIA-NWB-12: Mitigation measures on shoreline substrates or aquatic vegetation • KIA-NWB-13: Environmental impact of diesel fuel on terrestrial wildlife and vegetation
Recommendation/Request	<p>The KIA requests/recommends the following:</p> <ul style="list-style-type: none"> • Please address review comments made on the March 2022 version of the Hope Bay Spill Contingency Plan, submitted by the KIA as part of the 2021 NIRB and NWB Annual Report reviews.
Importance	High

KIA-NWB-3

Review Comment Number	KIA-NWB-3
Subject/Topic	Stopping flow of a spill
References	Figure 1 & Section 2.2
Summary	Guidance for stopping a spill is incomplete.



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	More detailed instructions are needed for a First Responder to stop the flow of a spill.
Detailed Review Comment	Figure 1 (pg. v) and Section 2.2 (pg. 9) state: <i>"2. Stop flow of spill if safe to do so: (a) Put on appropriate PPE; (b) Approach spill site from upwind; and (c) Trace the source of material."</i> The text does not include the step of stopping the spill nor does it state how this should be accomplished.
Recommendation/Request	The list should include a point "(d) Stop flow of spill" and provide examples of how to stop common types of spills (or provide references to where this information can be found).
Importance	Moderate

KIA-NWB-4

Review Comment Number	KIA-NWB-4
Subject/Topic	Communication with external parties (incl. KIA)
References	Sections 2.3.8 and 2.3.15
Summary	Conditions for communication with external agencies (incl. KIA) are ambiguous. The KIA requests that they be specified as a party that will be informed in the event of a spill emergency.
Detailed Review Comment	Section 2.3.8 (pg. 12) states: <i>"In the event of a spill emergency...The Communications Delegate will inform all appropriate agencies, which may include the Kitikmeot Inuit Association"</i> Section 2.3.15 (pg. 17) states: <i>"Response to spills below ice of substances which sink...Agnico Eagle will assess each individual situation and may consult a remediation specialist for advice in addition to discussions with the KIA, CIRNAC, DFO, and ECCC, where appropriate unless there is additional information or clarification"</i>



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	In both cases it is stated that communication with KIA will occur if “appropriate”, but it is not clear what condition(s) would need to be met for this to occur. Additionally, in section 2.3.15, the phrase <i>“unless there is additional information or clarification”</i> is ambiguous.
Recommendation/Request	The phrasing in sections 2.3.8 and 2.3.15 should be improved so that it is clear exactly when (i.e., under what conditions) the KIA would be informed of a spill emergency and/or included in discussions about spills below ice of substances that sink.
Importance	Low

KIA-NWB-5

Review Comment Number	KIA-NWB-5
Subject/Topic	Containing spills of soluble substances on open water
References	Section 2.3.10 and Appendix 1 – pg.16
Summary	<p>It should be made clear that only certain techniques will be effective in limiting the spread of dissolved substances.</p> <p>To effectively contain a spill of a soluble substance (one that dissolves in water) specific containment techniques must be employed but are not explicitly described in the plan.</p>
Detailed Review Comment	<p>Section 2.3.10 (pg. 15) states: <i>“In the event of a spill on water, the spread of the spilled material will be limited to the extent possible. The following steps will be taken to contain and clean-up a spill on water:</i></p> <ul style="list-style-type: none"> • <i>Identify the direction and speed of the flow path of the product based on weather conditions and drainage patterns:</i> <ul style="list-style-type: none"> – <i>Monitor the spread of the material using a drone or from a helicopter, if possible, to identify the area of spread.</i>



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	<ul style="list-style-type: none"> • <i>Use appropriate absorbent pads, socks and similar materials to recover spilled product:</i> <ul style="list-style-type: none"> – <i>Granular sorbent materials are NOT to be used for spill response on water.</i> • <i>Hydrophobic absorbent booms will be deployed to contain large spills and to facilitate recovery:</i> <ul style="list-style-type: none"> – <i>Absorbent booms will be drawn slowly in to encircle the spilled product and absorb it.</i> – <i>High winds, waves and other factors may limit the effectiveness of these materials.</i> • <i>Skimmers will be deployed in open-water areas to remove product from the water surface and boards, or plywood may be used in streams or culverts to reduce the flow of spilled product on the surface and limit the area of the spill on the water;</i> • <i>Use of sub-surface barriers to contain spilled product that may sink;</i> • <i>Pump contaminated water into tanks or storage bladders if possible:</i> <ul style="list-style-type: none"> – <i>A vacuum truck may be used to recover spilled product.”</i> <p>It is not clear what strategies will be used to limit the spread of highly soluble contaminants (i.e., chemicals that dissolve immediately in water). This should be made clear as was done in section 2.3.16.</p> <p>In Appendix 1 – pg. 16 it is stated that:</p> <p>“• <i>For spills to water:</i></p> <ul style="list-style-type: none"> – <i>Hydrochloric acid is soluble in water.</i> – <i>Do not attempt to contain or remove spills (high explosion potential).</i> – <i>Use booms to prevent spread of spill.”</i> <p>Given that hydrochloric acid is soluble, it will dissolve throughout the water column – surface (floating) booms will not be effective unless they include vertical subsurface curtains that extend to the lakebed or at</p>
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	least to a significant fraction of the total water column depth.
Recommendation/Request	In section 2.3.10 it should be made explicit that only certain techniques will be effective to limit the spread of soluble contaminants in open water (as is done for under-ice spills of “substances that dissolve” - in Section 2.3.16). Likewise, for hydrochloric acid (Appendix 1) the containment strategy (surface booms) would not likely be effective due to the substance’s solubility – effective strategies should be included.
Importance	Moderate

KIA-NWB-6

Review Comment Number	KIA-NWB-6
Subject/Topic	Internal Reporting of Environmental Incidents – incident consequence levels
References	Section 3.2
Summary	The meaning of the Environmental Incident consequence scale requires clarification. The internal reporting and communication of a spill depends on the assigned consequence score – however, the meaning of the consequence score is not described in the plan.
Detailed Review Comment	<p>Section 3.2 (pg. 22) states: <i>“All Environmental Incidents are documented in Agnico’s Incident Management Database System (Intalex). All incidents that have a that have a [sic] consequence ≥ 3 are communicated to the Environmental Corporate representative within 24 hours. If the incident has a consequence of level 5, the investigation lead will be the VP of Environment, otherwise the investigation lead is the Environmental Superintendent.”</i></p> <p>It is not clear what the consequence values represent, how they are determined, or what the scale is (1 to 5?).</p>



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Recommendation/Request	Please clearly state how the Environmental Incident consequence scores are determined.
Importance	Low

KIA-NWB-7

Review Comment Number	KIA-NWB-7
Subject/Topic	Monitoring of spilled substances that sink
References	Section 3.4
Summary	<p>The sediments (lakebed) should be sampled for spilled substances that sink (substances denser than water will not generally be found within the water column).</p> <p>In order to accurately quantify it, the spilled substance must be sampled from where it accumulates in the environment.</p>
Detailed Review Comment	<p>Section 3.4 (pg. 24) states: <i>“Monitoring will be triggered in the event of spills to water of substances that dissolve or sink or where substance recovery is unlikely. Samples will be collected to characterize 1) the material discharged (if not of known characteristics), 2) the water at the location of entry into the waterbody as soon after the discharge as possible, and 3) water at a ‘reference’ location, preferably within the same waterbody but outside of the area of potential impact and collected at approximately the same time as the sample collected at the point of entry.”</i></p> <p>For clarity, it should be made explicit that, once collected, the samples will be analyzed and how/where (e.g., “Samples will be collected and analyzed by a commercial laboratory to characterize...”).</p> <p>In the case of substances that sink, these are unlikely to be found in the water; the sediments should be sampled to quantify the amount of these substances spilled to the environment.</p>
Recommendation/Request	Please state explicitly where/how (e.g., “Samples will be collected and analyzed by a commercial laboratory to



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	characterize...").samples will be analyzed once collected. Sediment sampling is necessary to quantify substances that sink out of the water column.
Importance	Moderate

KIA-NWB-8

Review Comment Number	KIA-NWB-8
Subject/Topic	Final clean-up, restoration/mitigation, and continuing monitoring of spilled substances
References	Section 3.4
Summary	<p>The conditions necessary for (1) consultation with the KIA about final clean-up, restoration/mitigation, and on-going monitoring, and (2) for continuing monitoring are not clearly defined.</p> <p>The KIA requests that they be consulted/informed regarding final cleanup, restoration/mitigation, and continuing/on-going monitoring for areas that will not be further amended at project closure.</p>
Detailed Review Comment	<p>Section 3.4 (pg. 24) states: <i>"The final required clean-up, restoration (or mitigation) and on-going monitoring will be conducted as needed, and where appropriate in consultation with, and satisfaction of, the CIRNAC Inspector and the KIA ... If required, continuing and progressive sample collection/analysis will be conducted and reported upon until the completion of all prescribed remedial activities."</i></p> <p>It is not clear what would constitute "appropriate" conditions for consultation with the KIA or what the requirements are for continued monitoring. We note that consultation for final clean-up approaches is of lower concern for locations that will be further remediated during project closure.</p>
Recommendation/Request	Please clarify what would constitute "appropriate" conditions for consultation with the KIA and when continued monitoring would be required – this could be done by providing examples.



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Importance	Low
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KIA-NWB-9

Review Comment Number	KIA-NWB-9
Subject/Topic	Continuous monitoring of TSS vs. turbidity in Roberts Bay Discharge System effluent
References	Section A5
Summary	<p>The text states that TSS is being measured by inline instrumentation in the RBDS effluent – however, TSS cannot be measured continuously in this way.</p> <p>Inline instrumentation is (presumably) measuring turbidity while the plan states that it is measuring TSS (effluent standards are based on TSS).</p>
Detailed Review Comment	<p>Section A5 (pg. A-11) states: <i>“Inline instrumentation has been installed to measure TSS in each effluent stream prior to being combined. TSS is also measured after the effluent streams have been combined to determine compliance with the authorized limits for TSS outlined in Schedule 4 of the MDMER”.</i></p> <p>Measurement of total suspended solids (TSS) is a gravimetric analysis done in the laboratory. Presumably the inline instrumentation is actually measuring turbidity (an optical surrogate for TSS)?</p>
Recommendation/Request	Please clarify that the inline instrumentation is actually measuring turbidity and that this parameter is being used as a proxy for total suspended solids (TSS). If turbidity is being used as a proxy, please provide the correlation used to link those measurements to TSS for regulatory purposes.
Importance	Moderate

KIA-NWB-10

Review Comment Number	KIA-NWB-10
Subject/Topic	Text regarding containment of Jet-A.
References	Appendix 1 – pg. 9



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Summary	<p>The text regarding the containment of Jet-A should be modified for greater clarity.</p> <p>Higher clarify in the plan regarding when it is safe to attempt to contain a spill of Jet-A will be beneficial for worker safety and for environmental health.</p>
Detailed Review Comment	<p>Appendix 1 - pg. 9 states:</p> <p><i>“– Do not attempt to contain or remove spills (high explosion potential due to quick evaporation). – If Flash Point exceeds the Ambient Temperature by 10°C or more, use containment booms and remove from the surface by skimming. – If Flash Point does not exceed the Ambient Temperature by 10°C or is less than the Ambient Temperature, use booms as a barrier to protect shorelines and allow the material to evaporate.”</i></p> <p>Point 1 is not consistent with point 2 (i.e., “do not attempt to contain” vs. “use containment booms”). Furthermore, given that the flash point is known to be 38°C (Appendix 1 – pg. 7), it would be simpler and clearer to phrase points 2 and 3 as:</p> <ul style="list-style-type: none"> - If ambient temperature is < 28°C use containment booms... - If ambient temperature is >= 28°C use booms as a barrier...
Recommendation/Request	<p>Please clarify that a first responder should not attempt to contain or remove spills of Jet-A only if the ambient temperature is >=28°C. Please clarify the ambient temperature thresholds for Jet-A by stating them as absolute values (<28°C, >=28°C).</p>
Importance	Moderate