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Richard Dwyer

Manager of Licensing  
Nunavut Water Board  
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Gjoa Haven, Nunavut  
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September 16<sup>th</sup>, 2022

**Re: Review of Back River Project Landfill and Waste Management Plan.**

Dear Richard Dwyer, the KIA had reviewed Sabina's Back River Project Landfill Management Plan. We have a couple of comments to provide on this plan which are provided by our biologist consultant below.

Thank you

John Roesch, P.Eng.

Senior Hope Bay Project Officer  
Kitikmeot Inuit Association, Department of Lands and Environment

Cc Wynter Kuliktana, Acting Director, KIA, Department of Lands and Environment



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## Back River Project Landfill and Waste Management Plan

KIA-NWB-1

<b>Review Comment Number</b>	KIA-NWB-1
<b>Subject/Topic</b>	Lists of items may cause improper disposal of items into the landfill site.
<b>References</b>	<p>Sabina, Back River Project, Landfill and Waste Management Plan, August 2022.</p> <ul style="list-style-type: none"> <li>Sections 7.1.3, 7.3.4, 7.3.5</li> </ul>
<b>Summary</b>	<p>Sabina lists items that are suitable for open burn waste, for placement in the landfill site, or which are not suitable for placement in the landfill. There are some apparent contradictions, or potential sources of confusion among these lists, largely because some sections use umbrella terms while other sections do not. If these lists are difficult for reviewers to understand, they will likely lead to confusion and errors among staff.</p>
<b>Detailed Review Comment</b>	<p>In Section 7.1.3, page 7-2, Sabina lists cardboard and paper as items suitable for open burn waste. However, section 7.3.4 also lists these items as suitable for placement in the landfill. In other documents, these were also listed as suitable for incineration. Please provide the KIA with an explanation of the decision making that would lead to these items being disposed of in each of these three ways.</p> <p>Similarly, wood (not treated) is listed as an item that would undergo open burning in Section 7.1.3, and “wood” is again listed as an item that is suitable for disposal in the landfill in Section 7.3.4. Untreated wood can also be incinerated. Please provide information on how Sabina will decide on how to dispose of “wood” given there are three different methods that could be used. Should “wood” in Section 7.3.4 include only treated wood that cannot be burned, or is “wood” listed more generally here to provide an additional bulk area where extra wood can be disposed of beyond burn limits and incinerator capacity?</p> <p>In Section 7.3.4, page 7-6, Sabina lists major electrical appliances, small appliances with batteries removed, household batteries, and wire as acceptable items for</p>



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	<p>placement in the landfill. However, in Section 7.3.5, “electronics” and “batteries” are listed as items that are unacceptable for placement in the landfill. As these unacceptable items listed in Section 7.3.5 are also arguably listed as suitable for placement in the landfill, more detail about the kind of electronics and batteries that are NOT acceptable in the landfill are needed in Section 7.3.5 to avoid potential confusion.</p> <p>Finally, Section 7.3.4. lists plastic as a type of material that is suitable for placement in the landfill, while Section 7.3.5 lists expanded polystyrene (a type of plastic) as a material unsuitable for landfill. Clarification could be added by adding a caveat within Section 7.3.4.</p>
<b>Recommendation/Request</b>	<p>The KIA requests the following:</p> <ul style="list-style-type: none"> <li>• Please explain how Sabina will decide on how to dispose of cardboard, paper, and untreated wood, each of which appear to have 3 different disposal methods.</li> <li>• Please clarify the confusing issue of multiple electronics and electronic components being listed in both Sections 7.3.4 and 7.3.5 (items that can be placed in the landfill and items that cannot).</li> <li>• In Section 7.3.5, please clarify which kinds of batteries should not be disposed of in the landfill (is it every battery except household alkaline and carbon zinc batteries? If so, this should be added in clarifying brackets after batteries in Section 7.3.5).</li> <li>• In Section 7.3.4 where plastic is listed, please add “except polystyrene” in brackets as a caveat for clarity.</li> </ul>
<b>Importance</b>	High

KIA-NWB-2

<b>Review Comment Number</b>	KIA-NWB-2
<b>Subject/Topic</b>	Monitoring and management of Landfill for Structural and Chemical Stability.
<b>References</b>	Sabina, Back River Project, Landfill and Waste Management Plan, August 2022



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	<ul style="list-style-type: none"> <li>Section 8.0, page 8-9</li> </ul>
<b>Summary</b>	<p>Many important details are left out of the standalone Landfill and Waste Management Plan. The addition of important information, which would not add much length at all, would enable better technical reviews and an easier understanding of the plans, particularly when cross-referenced plans are hard to find at times, are delayed, or do not link monitoring activities and parameters to specific infrastructure in a way that would be useful here (i.e., linking them to the landfill).</p>
<b>Detailed Review Comment</b>	<p>The KIA notes that the Landfill and Waste Management Plan cross references the Environmental Management and Protection Plan and the Waste Rock Management Plan for details on Monitoring. In the review of the current Landfill and Waste Management Plan, some standalone information would be helpful for ease of reference and for distilling relevance, particularly where not much additional length is not added to the document in adding those details.</p> <p>In the current plan, no specific monitoring locations, parameters of relevance, frequencies, or triggers and actions for tracking the stability of the landfill are provided on page 8-9. Instead, Sabina just states that related waste management plans include additional monitoring activities such as “collection of samples and analysis of runoff quality....” It is important that each management plan point to the monitoring/sampling locations, parameters, triggers, and actions that will de-risk the component(s) being discussed in the plan. In this case, it would be helpful to know:</p> <ul style="list-style-type: none"> <li>The locations, media, and parameters (chemical compounds and visual indicators) to be monitored in relation to components discussed in this plan: e.g., the landfill</li> <li>The frequency of testing</li> <li>The length of time over which these parameters and media will be monitored</li> <li>Unacceptable measurements that would trigger adaptive management and what some of those adaptive management measures could include.</li> </ul>
<b>Recommendation/Request</b>	<p>The KIA requests the following:</p>



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	<ul style="list-style-type: none"> <li>• Please provide more information in the stand-alone management plans that relate information within the Environmental Management and Protection Plans and Waste Rock Management Plans to the specific mine components and waste materials discussed in this and other plans.</li> <li>• Please provide information listed above (testing locations, media, substances to be tested, frequency of testing, length of monitoring, triggers and adaptive management options) for monitoring of the landfill.</li> <li>• Please provide information listed above (testing locations, visual indicators, frequency, length of monitoring, triggers, and adaptive management options) for visual monitoring of the landfill for physical/structural stability.</li> </ul>
<b>Importance</b>	Moderate