| Issue | Recommendation | HBML Action |
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| **AANDC** | | |
| **Issue 1: Closure cost estimate**<br>Appendix B of the submitted plan provides a $4,346,000.00 closure cost estimate for the former Windy Camp and Patch Lake Facility. This amount is supported by a series of tables that outline the direct costs associated with activities necessary for the closure and reclamation of outstanding land and water liabilities. | Although the submitted closure cost estimate appears to be complete and has been approved by the professional engineers who prepared the final closure plan, HBML should provide the following information: | N/A |
| | 1. Identification of the model used to calculate the cost estimate (the recognized methodology for calculating reclamation costs for purposes of financial security assessment is the RECLAIM or other similar, appropriate models); | Our consultant, SRK, used their own spreadsheet to calculate reclamation costs. It closely resembles the RECLAIM model. A memo comparing SRK's model to the RECLAIM model was submitted to the NWB with the closure estimate calculations on Jan. 14, 2013. |
| | 2. Confirm that the estimate is based on the principle of having the necessary reclamation work implemented by a third-party; | The estimate is based on having the reclamation work implemented by a third party. |
| | 3. Identify the individuals who prepared this cost estimate and their qualifications; and, | The estimate was prepared by Tom Sharp (Ph. D, P. Eng), and reviewed by Maritz Rykaart (Ph. D, P. Eng), both with SRK Consulting. |
| | 4. A revised copy of the cost estimate signed and sealed by a professional engineer. | The closure estimate has been signed and stamped by SRK. Copies of the closure estimate calculations were provided to the NWB Jan. 14, 2013. |
| **Issue 2: Land use criteria for the remediation of petroleum hydrocarbon and metal contaminated soils**<br>Section 3.1.8 of the submitted plan and section 3.5 of its supporting Phase 3 Environmental Site Assessment state that PHC and metal contaminated soils will be remediated to the "industrial land use" criteria as specified in the Government of Nunavut's Environmental Guideline for | HBML should explain why they intend to apply the industrial land use criteria from the Government of Nunavut's Environmental Guideline for Contaminated Site Remediation and Canadian Soil Quality Guidelines for the remediation of contaminated soils. Accordingly, any soils used for reclamation purposes (e.g., sand recovered from the fuel storage facility | The remediation criteria used in previously approved closure plans for Windy and Patch sites was industrial. The site is considered an industrial site because, as defined in the GN's Guideline for Contaminated Site Remediation, the site is "Land on which the primary activity is the production, manufacture, construction or storage of goods. Public access is restricted and children are not permitted continuous access or occupancy." At this time, the area |

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| Contaminated Site Remediation and the Canadian Soil Quality Guidelines. Section 3.2 of the supporting Phase 3 Environmental Site Assessment states that the project area is currently classified as industrial and that this land use will be applicable until the final closure of exploration and mining activities, after which the land use will revert to wildland. | berms) must satisfy the remediation criteria once approved by the Board. | could be reopened for exploration or mining so it is still considered as industrial land. |
| **Issue 3: Methods of remediating hydrocarbon and metal contaminated soils**<br>Section 3.2.5 of the submitted plan states that the two methods of remediating hydrocarbon and metal contaminated soils are in-situ bioremediation and off-site disposal to an approved facility. Furthermore, this section makes reference to maintaining, "the option to encapsulate impacted soils in place is preserved should it be demonstrated that hydrocarbon risk is minimal and/or other remediation methods are ineffective or inappropriate for a given area." The submitted plan provides little information on what in-situ bioremediation techniques will be applied and the criteria for off-site disposal. | AANDC recommends that HBML describe their planned in-situ bioremediation method (e.g., aeration methods, application of nutrients, etc.) and the criteria that will be followed to determine whether in-situ bioremediation or excavation will be applied. Furthermore, prior to encapsulating any contaminated soils in place HBML should submit a written proposal to the NWB and obtain their written approval. | Please refer to Appendices A1 and A2 of the Closure Plan (Windy Camp Phase 3 Environmental Site Assessment and Patch Lake Facility Phase 3 Environmental Site Assessment) for details on remediation methods that will be used. Specifically, see sections 6 and 7 of the reports. |
| **Issue 4: Using wood waste for reclamation purposes**<br>Section 3.1.4 of the submitted plan states that chipped wood waste may be used for reclamation purposes. According to section 3.1.2, this wood waste will be non-hazardous demolition waste originating from demolished | AANDC recommends that HBML clarify what types of wood wastes can be considered hazardous and non-hazardous. As a minimum, wood treated with pentachlorophenol, inorganic preservatives, lead paint, or PCB-amended paint should be classified as hazardous wastes. | In terms of deciding whether wood waste is considered hazardous or non-hazardous waste, HBML will follow the GN *Guideline for the Burning and Incineration of Solid Waste* and the *Environmental Guideline for Industrial Waste Discharges* (particularly Schedules III and IV). Wood that meets the criteria for |

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| structures. | | burning and landfilling will be considered for use in reclamation. Any wood waste that meets the criteria outlined in the *Guideline for the General Management of Hazardous Waste in Nunavut* will be considered hazardous waste and will be remove from site for disposal at a facility that accepts hazardous waste. |
| **Issue 5: Revegetation and minimizing sedimentation of receiving water bodies**<br>As stated in sections 3.1.9 and 3.2.6 of the submitted plan, "once all surface infrastructure has been removed and cleared of all debris, the site will be regraded to prevent ponding and reduce erosion potential." Furthermore, "reclaimed areas where there is sufficient soil substrate to support vegetation will be managed to promote revegetation." | When carrying out their post-closure monitoring program HBML should ensure that all reclaimed areas being revegetated do not pose risks to the quality of receiving water bodies through by means of erosion. Mitigation measures should be implemented when erosion attributed to past project activities or revegetation efforts is observed. | Noted. |
| **EC** | | |
| **Issue: Section 3.1.8**<br>Remediation of Hydrocarbon Contaminated Soils (page 7) states: "*The option to encapsulate impacted soils in place is also preserved should it be demonstrated that hydrocarbon risk is minimal and/or other remediation methods are ineffective or inappropriate for a given area."* | Given that the full potential impacts of climate change on permafrost are not fully understood, EC notes that this option should be approached with caution. | Noted. |
| **KIA** | | |
| **Issue 1: Chemicals of Potential Concern (COPC) focus on Petroleum Hydrocarbons (PHC) and do not adequately address other chemical sources and metals.**<br>(see comments for details) | HBML should develop a Comprehensive Conceptual Model (CSM) document clearly summarizing all COPC considered for the sites and the final disposition of these COPC through all conducted studies. | Please refer to Appendices A1 and A2 of the Closure Plan for the main COPCs analyzed during the Phase 3 Environmental Site Assessment, namely petroleum hydrocarbon fractions F2, F3, and F4. More detail about the |

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| | | COPCs considered for the sites can be found in the Phase 2 Environmental Site Assessment for Windy and Patch sites, available upon request. |
| **Issue 2: Remediation criteria may be inadequate for long term use by humans and wildlife**<br>(see comments for details) | HBML should use wild land criteria for the setting of remediation targets for these sites, the area impacted, the volume of soil to be remediated and method of remediation. | The remediation criteria used in previously approved closure plans for Windy and Patch sites was industrial. The sites are considered industrial sites because, as defined in the GN's Guideline for Contaminated Site Remediation, the sites are "Land on which the primary activity is the production, manufacture, construction or storage of goods. Public access is restricted and children are not permitted continuous access or occupancy." At this time, the area could be reopened for exploration or mining so it is still considered as industrial land.<br><br>Details of potential remediation methods to be used can be found in Appendices A1 and A2 of the Closure Plan, specifically sections 6 and 7. |
| **Issue 3: Closure approaches are vague and non-specific** | | N/A |
| **Issue 3a: Closure Goals, objectives and measures are non-specific**<br>(see comments for details) | HBML should retain the originally stated overall objective **(goal)** for closure and reclamation in conjunction with wild land use criteria. Remediation and re-vegetation objectives aligned with the closure goal should be established for detoxification of soil, protection against erosion, maintenance of natural hydrology, wildlife habitat, and ecological functions. | The stated objective was updated to make the closure plan more achievable and to make the targets more measurable. The goal stated in the Closure Plan is adequate. |
| **Issue 3b: Remedial methodology in closure** | HBML should include KIA in the determination | Please refer to Appendices A1 and A2 of the |

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| **approach is vague**<br>(see comments for details) | of the application of MNA to areas where there is difficulty in applying either excavation or enhanced in situ bioremediation. HBML should provide further justification of the application of MNA to sites if it is not fully supported by bio-treatability studies. | Closure Plan for details, specifically sections 6 and 7. |
| **Issue 3c: The Planning of closure activities, scheduling, and time lines for execution are vague**<br>(see comments for details) | Project management with a project schedule and established milestones & dates should be developed for the closure of Windy Lake and Patch Lake based on the identified activities listed. This should be done with clearly stated remediation goals and objectives using the most effective remediation approach for achieving results for wild land criteria. | The type of schedule described in this comment is one to be developed for HBML use only. Closure planning is dependent on available budgets, manpower, and a closure decision being made by Newmont. At this time, HBML must prioritize compliance with all permits and licences over reclamation. That being said, it is HBML's goal to progressively close Windy and Patch Lake facilities as time permits. |
| **Issue 3d: Post Closure Monitoring in inadequate**<br>(see comments for details) | All areas where the tundra has been disturbed should be included in the monitoring program for permafrost degradation/reinstatement. Details of permafrost monitoring should clearly indicate if it is limited to visual inspections or includes instrumentation. | Areas with these issues have been included for reclamation and will be monitored. Long term monitoring plans will be included in the post-closure plan based on the potential predicted residual effects following completion of closure. |
| **Issue 3e: Backfilled depressions may be used by denning and burrowing animals**<br>(see comments for details) | HBML should monitor and document the use of backfilled depressions using decommissioned berm material by burrowing and denning mammals as part of on-going follow-up. | As noted above, HBML will monitor areas that have been reclaimed. |
| **Issue 3f: Costing of Closure activities and their execution is vague**<br>(see comments for details) | Remediation activities and tasks should be identified in a consistent manner for remediation based on wild land criteria. Remediation costs should be determined based on meeting wild land criteria and associated volumes of soil taking into account both petroleum hydrocarbons and other | As noted in previous comments, the sites are considered industrial sites because, as defined in the GN's Guideline for Contaminated Site Remediation, the sites are "Land on which the primary activity is the production, manufacture, construction or storage of goods. Public access is restricted and children |

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| | COPC.<br>Proper engineering economic evaluation should be used based on remediation costs to determine the most economical remediation approach. | are not permitted continuous access or occupancy." At this time, the area could be reopened for exploration or mining so it is still considered as industrial land. |
| **Issue 4: No feedback has been provided to KIA from NIRB process on previous recommendations on the 2011 version of the closure plans.**<br>(see comments for details) | NIRB provide feedback on which recommendations are to be implemented and which will not be implemented with rational by HBML.<br>HBML review previous recommendations along with recommendations made in this response and provide KIA with feedback on which recommendations will be implemented or addressed. | This comment does not appear to be applicable to HBML. |