AANDC Issue	Observations and Information Requests	HBML Action
Issue SWQ1: Surface Water Quality Requested changes to allowable wastewater discharges may change loading in Receiving environments.	**Observation:** Requested amendment to Section G Item 3: Treated wastewater will be discharged to a location north of the camp pad rather than to the Tailings Impoundment Area (TIA). The discharge location and the projected loading rates are not described, nor is comparable information on the receiving water (Doris Creek?). Comparisons of flows and loads of wastewater parameters to background loads in the creek may be important in assessing potential impacts to the creek and Doris Lake.	N/A
	Information Request: 1. Additional information related to the nature, extent and character of the receiving environment in relation to loading factors (i.e., fish bearing waterbodies/watercourse) would be helpful in completing the technical review.	As per the water licence clause Part G Item 3c "The Licensee shall operate the Sewage Treatment Plant in accordance with the following: During site construction, treated effluent from the Sewage Treatment Plant shall be discharged approximately 400 metres north of the camp pad;" HBML has been discharging treated effluent (that has undergone primary and secondary treatment) to a location approved by the inspector since construction of the project began in 2007. Please refer to the Waste Water Management Plan for details on the discharge location: ftp://nunavutwaterboard.org/1%20PRUC/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-DOH0713%20HBML/1%20APPLICATION/2012%20Amend%20Renew/121023%202AM-DOH0713%20NWB%20Hope%20Bay%202012%20Wastewater%20Treatment%20Management%20Plan%20R3-IMLE.pdf. Effluent is discharged to a diffuser onto an outcrop to minimize permafrost degradation and erosion over 1 km from Glenn Lake, the closest water body. Glenn Lake is in a different drainage than Doris Lake. From results obtained at monitoring station ST-9 on the shore of Glenn Lake (a station intended to monitor whether any discharged treated effluent reaches the lake), there is no evidence that treated effluent discharged at ST-8 reaches the lake.

Issue SWM1: Site Water Management (Surface Water) The existing (as built) drainage features are not identified and how these features will be incorporated into future plans (if any) is not described.	**Observation:** In examining the Interim Water Management Plan a plan or description of existing drainage features (ditches etc.) could not be found. The plan that has been provided does not clearly identify or describe the key features such as the Tail Lake or Doris Lake. While the planned design was reviewed and approved, knowledge of the constructed as-built design would be beneficial, particularly in the context of care and maintenance versus operations. Although these features may be identified in other documents they should also be included as part of the Interim Water Management Plan to provide a proper context for the project.	N/A
	Information Requests: 1. Complete plan for existing site features as constructed including drainage features and receiving water courses.	The IWMP is currently being revised to include all constructed site features and will be submitted to the NWB once complete.
	2. Identification of how these existing features are to be incorporated into future plans.	HBML updates management plans as required to reflect new construction and changes in operating procedures.
Issue SWM2 A review of the Interim Water Management Plan does not indicate there is a management plan for an extreme event even though an extreme observed event is noted in other correspondence. A management	**Observation:** Most water management plans for mine projects include contingencies for extreme events, especially in cases where Acid Rock Drainage (ARD) is of concern. For example Quebec requires sufficient storage to contain the 1:2000 year event in cases where the ponds contain ARD.	N/A
	Information Request: 1. Additional information is required regarding how an extreme event will be managed, and whether or not that analysis has been completed.	Appropriate design criteria for the IWMP were based on Best Management Practices (BMPs) for stormwater control in mining and other guideline documents, such as the Canadian Dam Safety Association Guidelines (CDA 2007), which include consideration of extreme events and associated consequences in the event of exceedance of the design event. To that end it was deemed appropriate to adopt the design criteria as stated which conservatively includes a 1:20 wet year base flow and a runoff coefficient of 1 plus a 1:25 year, 24-hour duration storm event.

plan for extreme events would assist in addressing effects from climate change.		The IWMP was designed to be in use for a limited time period, until tailings deposition started after which the original water management plan for the project would have been implemented. Given this timeframe, and the fact that the ponds do not contain ARD, the reduced design criteria were considered appropriate. Once the final water management plan gets implemented, the design flood (i.e. 24-hour duration storm event) will be increased to a 1:100 year event as opposed to a 1:25 year event and the only change required to do that would be increased pumping capacity.
Issue TE1: Terrestrial Environment Clarification of commitment to ensure that best available mitigation and management revegetation practices are implemented in the Revised Closure and Reclamation Plan (RCRP) and that the plan will comply with the requirements of the *Nunavut Wildlife Act* and the *Nunavut Scientists Act* for	**Observation:** (…) the Proponent made a commitment "*Arctic environment re-vegetation research will be looked at through the life of the mine and at closure to ensure that best available mitigation and management revegetation practices are implemented during mine closure."* However, this commitment seems to be counter what was proposed by the Proponent in Section 8.2.2 Post-Closure Revegetation Considerations (Page 102, PCRP) (…) In Section 4 Post-Closure Monitoring and Maintenance (Page 17, RCRP), the Proponent adds another commitment "*The site should be inspected by an Arctic vegetation specialist to confirm suitability of the re-vegetation efforts".* This commitment seems to require more information that that available about revegetation in the project area to perform an adequate inspection. The best available mitigation and management revegetation practices seems not been adequately addressed for the species-rich project area (i.e., current projects in similar areas are proactively doing more than just natural revegetation, no location map of areas subject to natural re-vegetation, no table of areas subject to natural revegetation, no description of native vegetation test plot trials, no list of key species during natural revegetation, no description of	N/A

any research to be undertaken.	progressive revegetation activities, no strategy to avoid weeds during natural revegetation, no active revegetation methods, no key indicators to measure success during the natural revegetation, etc.)	
	Information Request: 1. AANDC requests the Proponent clarify its commitment to ensure that best available mitigation and management revegetation practices are implemented in the RCRP and/or that appropriate research is undertaken to support revegetation of the site at a later date.	Please refer only to the revegetation practices described in the SRK 2012 Closure Plan to avoid confusion. When it comes to revegetation, HBML will use the best available or proven technologies. HBML would like to note that the AMEC 2005 Closure Plan, already approved by the NWB, is not part of the current review. It was included as an appendix to the SRK 2012 Closure Plan for reference purposes only.
Issue CR1: Closure and Reclamation Relationship of existing AMEC 2005 closure plan and new SRK 2012 closure plan in the permit.	**Observation:** (…) It is not clear if the SRK 2012 closure plan is intended to replace or augment the AMEC 2005 closure plan. Is the Proponent intending to keep the AMEC 2005 closure plan as part of the water licence in case the project is built in the future?	N/A
	Information Requests: 1. Does the SRK 2012 closure plan replace the AMEC 2005 closure plan?	Yes, the SRK 2012 Closure Plan is meant to be used to close the site as it exists today. The AMEC 2005 Closure Plan described closure of the site as envisioned by Miramar in 2005 prior to the start of construction.
	2. Does the AMEC 2005 closure plan continue to apply to the site if it were constructed in the future, or would a new closure plan need to be developed and submitted to regulators in the case of the project going forward in the future.	The AMEC 2005 Closure Plan will not apply to the site if construction of the project continues at a future date. Should Doris be taken out of care and maintenance and should construction of the Doris North Mine proceed, the SRK 2012 Closure Plan would be updated to reflect any further site construction.
	3. When will a a decision be made to implement the SRK 2012 closure plan vs the implementation of the interim reclamation plan presented in the AMEC 2005 closure plan.	The SRK 2012 Closure Plan will replace the AMEC 2005 Closure Plan when the NWB approves it. At this time, Newmont does not have a plan to implement closure of the site.
Issue CR2: The current Closure plan support	**Observation:** Section 2.2 Facility Closure Strategies (page 8) states that *"all material used for reclamation will be source from existing stockpiles. Stockpiled run of quarry and crushed rock are from Quarry #2. A detailed*	N/A

information on PAG, non-PAG materials and reclamation materials quantity balance appears incomplete.	*geochemical characterization of Quarry #2 was previously performed (SRK 2007).”* The SRK 2007 document reference details are provided in the reference section of the SRK 2012 closure plan. Existing geochemical characterization information would assist in understanding Potentially Acid Generating (PAG) risk for long term closure. Additionally, it would be helpful to review any existing reclamation soil balances to understand if there is a surplus or deficit of reclamation materials existing on site.	
	Information Requests: 1. Provide a copy of the SRK 2007 report and any other background information available on PAG, non-PAG material on site.	The report entitled *Geochemical Characterization of Quarry Materials, Doris North Project, Hope Bay, Nunavut, Canada (Revised March 2007)* is available on the NWB ftp site: ftp://nunavutwaterboard.org/1%20PRUC/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-DOH0713%20HBML/1%20APPLICATION/2007%20Revised%20Application/070501%202AM-DOH----%20S7%20Geochemical%20Characterization%20of%20Quarry%20Materials.pdf. Other information can be found in the annual waste rock and quarry monitoring reports posted on the NWB ftp site: ftp://nunavutwaterboard.org/1%20PRUC/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-DOH0713%20HBML/3%20TECH/9%20MONITORING%20%28J%29%28K%29/120329%202AM-DOH0713%202011%20Waste%20Rock%20and%20Quarry%20Monitoring%20Report-IMLE.pdf, and ftp://nunavutwaterboard.org/1%20PRUC/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-DOH0713%20HBML/3%20TECH/4%20WASTE%20DISP%20%28G%29/110411%202AM-DOH0713%202010%20WR%20and%20QuarryMonitoringReport-IMLE.pdf.
	2. Provide information such as existing stockpile	There is no PAG material stockpiled at the project site in Quarry 2

	quantities of PAG and non-PAG material currently available that would be used to implement the actions described in the SRK 2012 closure plan.	or in the waste rock or ore stockpiles. All stockpiled material in Quarry 2 is non-PAG. This run of quarry material will be available for reclamation. According to the SRK 2012 Closure Plan, waste rock will be used to backfill 15 m of the decline to seal it. Some inert diabase waste rock may be used as a cap to the waste rock pile, but otherwise no other waste rock will be used in reclamation.
Issue HWM1: Hazardous Waste Management Current inventory of hazardous materials stored onsite is not outlined in the documents provided.	**Observation:** It is understood that the Hazardous Waste Facility is registered as a Hazardous Waste Storage Facility. As indicated in the Nunavut Guideline for the General Management of of Hazardous Wastes, storage is considered as a temporary measure and is not acceptable for the long-term management of hazardous waste. According to the Proponent's Hazardous Waste Management Plan, a record will be maintained of the type and amount of waste in storage.	N/A
	Information Request: 1. The proponent is requested to provide an inventory of all hazardous materials stored including; types of materials, quantities, information on the type of storage container, location of stored waste (inside/outside), description of the container labels as well as the expected offsite shipping date.	HBML maintains a record of all hazardous waste stored on site, as per section 4.5 of the Hazardous Waste Management Plan (ftp://nunavutwaterboard.org/1%20PRUC/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-DOH0713%20HBML/3%20TECH/4%20WASTE%20DISP%20%28G%29/120321%202AM-DOH0713%20Hope%20Bay%20MAR12%20Hazardous%20Waste%20Management%20Plan%20R1.1-IMLE.pdf updated for care and maintenance in March 2012), when such waste are actually on site. Currently, no hazardous waste is stored on site because all of it was removed prior to site closing for the winter. HBML is registered as a hazardous waste storage facility because at times it is necessary to hold hazardous waste on site for more than 90 days because some wastes can only be shipped yearly via barge (see section 4.3 of Hazardous Waste Management Plan for more details).
Issue HWM2: Confirmation of	**Observation:** During Care and Maintenance there is the potential that spills could go un-noticed for extended	N/A

Hazardous Waste Storage Area Design is required.	periods of time. As required by Part D, Item 2 of the water licence, the proponent shall ensure that any chemicals, fuels or wastes do not enter any water body.	
	Information Request: 1. The Nunavut Guideline for the General Management of Hazardous Waste indicates that storage facilities are to be inspected at least once every week. Since during Care and Maintenance, the site will not be inspected on a weekly basis, the proponent is requested to provide specific information on how the storage area has been constructed to prevent the release of hazardous materials to the environment. Provide details on methods of spill containment, underlying materials, surface grading, capacity of containment sumps, as well as specific details on the types of spill kits/emergency response equipment that are available onsite. The Spill Contingency Plan and Emergency Response Plan will need to be updated to reflect the change to care and maintenance.	As explained above, there is currently no hazardous waste stored at the project site. As a result, it is not necessary to perform weekly inspections of the hazardous waste storage facility. When hazardous waste is stored on site it is managed as per the Hazardous Waste Management Plan. The Spill Contingency Plan and the Emergency Response Plan have been updated for care and maintenance and submitted to NWB: ftp://nunavutwaterboard.org/1%20PRUC/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-DOH0713%20HBML/1%20APPLICATION/2012%20Amend%20Renew/
Issue HWM3: Confirm methods utilized to secure Hazardous Waste Storage Area and Fuel Storage Compounds.	**Observation:** During Care and Maintenance the site will be left for considerable lengths of time. Due to the changes in on-site personnel, these facilities will not be maintained and operated in the same manner as they were originally designed.	N/A
	Information Request: 1. During Care and Maintenance, the site will not be inspected on weekly basis and it is understood that the Site will be abandoned for considerable length of time. Provide information on the methods that have been utilized to help secure the site from vandalism and tampering.	The site has been closed keeping in mind the potential for tampering and vandalism. All hazardous waste has been removed from site. As per the fire code, all berms have been engineered to hold 110% of the volume of the largest tank in each berm. As an extra precaution, HBML has distributed the fuel throughout the tanks at site such that if any leaks were to occur, from one or multiple tanks in any given berm, the leaked fuel would remain within the containment berm, as shown in the attached fuel volume spreadsheet. Furthermore, winter site inspections will be

		conducted on a monthly basis once Coronation Gulf has frozen over making the site accessible to snow mobile travel from the communities. The first inspection is scheduled for the third week of December, with subsequent inspections every month thereafter until April. These inspections will look for vandalism and tampering of the site, as per the attached inspection checklist, and address any issues that arise.