

Review Comment Table

Board:	SLWB
Review Item:	Great Bear Lake Remediation Project - Water Licence Renewal and Land Use Permit Extension (S15L8-001 & S09D-001)
File(s):	S09D-001 S15L8-001
Proponent:	AANDC-CARD
Document(s):	Notification to Affected Parties - WL Renewal and LUP Extension (1MB) S09D-001 - LUP Extension Request Letter (1MB) S15L8-001 - Water Licence Renewal Application (1MB) WL Renewal Application - Appendix A - Design Drawings (37MB) WL Renewal Application - Appendix B - Maps (2MB) WL Renewal Application - Appendix C - Summary of Contractor Submission Requirements (20KB) WL Renewal Application - Appendix D - Summary of Proposed Remediation Activities (31KB) WL Renewal Application - Appendix E - Engagement Plan and Record (1MB) WL Renewal Application - Appendix F - Development of Hydrocarbon Cleanup Criteria (1MB) WL Renewal Application - Appendix G - Water Quality Monitoring Program (2MB) WL Renewal Application - Appendix H - Transportation Route (2MB) WL Renewal Application - Appendix I - Proposed Mitigation Measures (27KB) WL Renewal Application - Appendix J - Draft Specifications (151KB) WL Renewal Application - Appendix L - Spill Contingency Plan (421KB) Jan 19 2012 Meeting Minutes - Clarification of WL Terms and Conditions (88KB) Preliminary Screening - July 13, 2010 (1MB)
Item For Review Distributed On:	May 27 at 17:18 Distribution List
Reviewer Comments Due By:	June 17, 2015
Proponent Responses Due By:	June 24, 2015

<p>Item Description:</p>	<p>Water Licence S09L8-001 and Land Use Permit S09D-001 issued by the SLWB to AANDC-CARD on July 26, 2010 for the Great Bear Lake (GBL) Remediation Project will expire July 25, 2015. AANDC-CARD has submitted a request to extend the Land Use Permit for 2 years and an application to renew the Water Licence for 7 years.</p> <p>The GBL Project encompasses remediation activities at the abandoned sites: Silver Bear Mines (Terra, Northrim, Norex, Graham Vein and Smallwood), El Bonanza Mine and Bonanza Mine, Contact Lake Mine, and Sawmill Bay, in 3 phases. The Remedial Action Plan Reports were submitted as part of the original LUP application package and are available on the Online Registry. The work under Phase I was completed in 2010 and 2011 and Progress Reports were submitted to the Board and are also available on the Online Registry.</p> <p>Funding for Phases II and III is currently under review. AANDC-CARD plans to use the extension to continue risk management activities in 2015/16, refine the implementation schedule for Phase II and III, and prepare for renewal of the Land Use Permit in 2017. Prior to commencement of Phase II and III, a site specific Waste Management Plan and updated Spill Contingency Plan will be submitted to the Board for approval.</p> <p>AANDC-CARD has requested that the Board consider the Water Licence renewal application exempt from a preliminary screening pursuant to Part 1(2) of Schedule 1 of the Exemption List Regulations of the Mackenzie Valley Resource Management Act as there have been no modifications to the scope of work since the July 13, 2010 Preliminary Screening was complete by the Board at the time the previous licence was issued.</p> <p>AANDC-CARD has also requested that the Board consider amendments to the Terms and Conditions of the Water Licence as outlined in the Meeting Minutes of January 19, 2012.</p>
<p>General Reviewer Information:</p>	<p>The Board encourages reviewers to submit questions and/or recommendation in writing to our office through the online review system no later than Wednesday June 17, 2015. If you are unsure of how to do this please contact Sabrina Sturman at the Sahtu Land and Water Board office. Should you need additional time, please contact us prior to the above noted date.</p>

Contact Information:	Karen Caesar Paul Dixon 867-598-2413 ext. 22 Sabrina Sturman 867-598-2413
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Comment Summary

AANDC: Tim Morton				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	Contact Information	<p>Comment (Submitted after Due Date) There is dated contact information in the spill contingency plan and other documents. These contacts should be updated to reflect the changes that occurred after devolution. The site Inspector is no longer in Norman Wells and is currently located in Yellowknife (867) 669-2442.</p> <p>Recommendation Update the contact information for all documents.</p>	<p>June 24: AANDC/CARD will update the Spill Contingency Plan and will communicate to the contractor the updated contact information for the AANDC Site Inspector now located in Yellowknife (867) 669-2442</p>	
Deline Land Corporation: Gina Dolphus				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	Request for Public Hearing	<p>Comment (doc) This is a huge file dating back to radium exploration in the east end of Great Bear Lake. While our contacts for remediation and reclamation have been very active till 2012, all activities in the field are under review till funding is approved by the federal government for phase II and III of the</p>	<p>June 24: (doc) As per AANDC/CARD Engagement Plan, CARD is going to Deline on June 24, 2015 to update Leadership on the GBL water license renewal application, the land use permit extension, as well as a project update on Port Radium. The sites</p>	<p>July 8: (doc) Board staff request CARD provide an updated Engagement log that includes the meeting that occurred in Deline on June 24, 2015. Please include an overview of concerns raised, highlighting any that remain</p>

		<p>project. Deline First Nation and Deline Land Corporation are looking forward to renewed interest in this project. We have a number of parties that have interest in these processes, starting with the most affected, the community of Deline, then the Tlicho communities of Gameti and Whati. As you are well aware history tells us about the land claims processes and how they are bound by these agreements. There are issues that we are presently facing with our land claims that shadow the environmental protection processes and needs some attention, although this matters rests with the three parties Deline, Tlicho and Federal Governments, never the lest it is part of the overall project.</p> <p>Recommendation In the interest of all parties, bringing forward information and bringing together the people will foster a better framework to put in place for these regulatory processes, which falls to a Water Licence Public Hearing in Deline. There is real need to bring forward this file to the public at this time since field work almost none existent and what phase II and III work means and when?</p>	<p>included in the scope of the water license and land use permit include the Silver Bear Properties, which is a collection of former silver, copper and bismuth mines located in teh Camsell River area. Terra, Northrim, Norex, Graham Vein, and Smallwood make up the Silver Bear Properties. The Contact Lake Mine is a former silver and uranium mine located on Contact Lake. The El Bonanza and Bonanza sites are former silver mines located on the Dowdell Peninsula on the eastern end of Great Bear Lake. The Sawmill Bay site was originally developed to support timber requirements for the Port Radium mine and is located on the northern part of the Leith Peninsula on the eastern end of Great Bear lake. The Sawmill Bay site is a relatively small site compared to the Silver Bear Mines but has historical significance as part of the uranium ore transportation route from Port Radium. The Great Bear Lake remediation project is a complex, large scale project that currently includes multiple sites described above. The scope of the project means it will take at least five years</p>	<p>unresolved with anticipated followup,</p>
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			to complete and it would exceed the current Federal Contaminated Sites Action Plan (FCSAP) funding years. To prevent jeopardizing the project, AANDC is looking into options for secured funding for the entire project. AANDC/CARD is committed to keeping the Deline Land Corporation, the Deline First Nation and the Sahtu Land and Water Board up to date as new developments arise.	
Environment Canada: Melissa Pinto				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	General File	Comment (doc) EC Cover Letter Recommendation		
2	General File	Comment (doc) Table 1 Recommendation		
3	Sewage	Comment EC notes that the Water Licence (WL) renewal application indicates waterless toilets will be used and that the effluent will be incinerated. Recommendation EC recommends that toilet wastes not be incinerated; however, if AANDC-CARD (the Proponent) decides to pursue incineration of toilet wastes, the appropriate incinerator will need to be used. The Proponent should provide proof that the incinerator is designed for incinerating sewage and should provide stack testing results	June 24: AANDC/CARD is proposing that Part D, sub-part 8 to 11 be amended to support the use of pit latrines or waterless toilets (e.g. Incinolet or Pacto type units would be preferred option for sewage waste when in close proximity to surface water) for short duration satellite camps when project operations are anticipated to be at or below twenty individuals per site. These materials will be collected and managed in	

		demonstrating that the incinerator can achieve the Canada Wide Standards for Dioxins and Furans.	accordance with manufacturer's specifications and regulatory requirements. The Contractor(s) retained for the remediation work will be responsible for the design of the project specific Waste Management Plan, including sewage disposal, that will comply with federal, and territorial laws, codes and regulations before submission to the Board for approval prior to the commencement of site activities.	
4	EC Emergency Contact	<p>Comment EC notes that the contact emergency contact information for EC located in Appendix 2 of the Spill Contingency Plan is incorrect.</p> <p>Recommendation In the case of a spill or emergency, the Northwest Territories 24 Hour Emergency Spill Line should be contacted first, who will then involve EC Emergencies. For information relating to the environmental enforcement and reporting requirements under the Canadian Environmental Protection Act, 1999 and the Fisheries Act please contact the EC Environmental Enforcement 24 Hour Duty Officer at 780-499-2432. EC also has a National Environmental Emergencies Centre (NEEC) whose primary role is to provide technical and scientific environmental advice and assistance to the lead agency, in the event</p>	<p>June 24: AANDC/CARD will update the Spill Contingency Plan and communicate to the contractor of the updated emergency contact for the Northwest Territories 24 Hour Emergency Spill Line to (867) 920-8130 and included the National Environmental Emergencies Centre (NEEC) (849) 997-2800 for any technical and scientific assistance.</p>	

		<p>of an environmental emergency. A lead agency is described as the governmental authority that regulates or has authority over the activity from which the emergency originated. EC helps to identify the environmental protection priorities and provide advice on ways to reduce the pollution's impact on the environment. This advice can include weather forecasts, location of wildlife and sensitive ecosystems, and expertise on spill counter-measure and remediation options. NEEC can be contacted at 849-997-2800.</p>		
5	Migratory Birds	<p>Comment EC is responsible for implementing the Migratory Birds Convention Act, which provides for the protection of migratory birds through the Migratory Birds Regulations, and to develop and implement policies and regulations to ensure the protection of migratory birds, their eggs and their nests. Paragraph 6(a) of the Migratory Bird Regulations states that no one shall disturb or destroy the nests or eggs of migratory birds. Migratory birds, the nests of migratory birds and/or their eggs can be inadvertently harmed or disturbed as a result of many activities including but not limited to clearing trees and other vegetation, draining or flooding land, or using fishing gear. The inadvertent harming, killing, disturbance or</p>	<p>June 24: The contractor will be informed to inspect the ground and trees for active nesting sites before performing any activities in the area. If an active nesting site is encountered, appropriate mitigation measures will be put in place to minimize any disturbance.</p>	

		<p>destruction of migratory birds, nests and eggs is known as incidental take. Incidental take, in addition to harming individual birds, nests or eggs, can have long-term consequences for migratory bird populations in Canada, especially through the cumulative effects of many different incidents.</p> <p>Recommendation If active nests are encountered during project activities, the nesting area should be avoided until nesting is complete (i.e., the young have naturally left the vicinity of the nest). For further information on how to protect migratory birds and their nests and eggs when planning or carrying out project activities, consult EC's Incidental Take web page and the fact sheet "Planning Ahead to Reduce the Risk of Detrimental Effects to Migratory Birds, and their Nests and Eggs" at: www.ec.gc.ca/paom-itmb/.</p>		
6	Migratory Birds	<p>Comment EC notes that there will be field camps set up during project activities.</p> <p>Recommendation EC recommends that food, domestic wastes, and petroleum-based chemicals (e.g., greases, gasoline, glycol-based antifreeze) be made inaccessible to wildlife at all times. Such items can attract predators of migratory birds such as foxes, ravens, gulls, and bears. Although these animals may</p>	<p>June 24: The Contractor(s) retained for the remediation work will be responsible for the design of a specific Waste Management Plan, which will be submitted to the Board for approval prior to the commencement of site activities. Mitigation measures to prevent wildlife from accessing food, domestic wastes, and</p>	

		initially be attracted to the novel food sources, they often will also eat eggs and young birds in the area. These predators can have significant negative effects on the local bird populations.	petroleum-based chemicals will be included in the plan.	
7	Migratory Birds	Comment Section 5.1 of the Migratory Birds Convention Act prohibits persons from depositing substances harmful to migratory birds in waters or areas frequented by migratory birds or in a place from which the substance may enter such waters or such an area. Recommendation Comment is for Proponent's information.		
8	Species at Risk	Comment The following comments are pursuant to the Species at Risk Act (SARA). SARA is directed towards preventing wildlife species from becoming extinct or lost from the wild, helping in the recovery of species that are at risk as a result of human activities, and promoting stewardship. The killing, harming or harassing of listed species; the damage and destruction of their residences; and the destruction of critical habitat is prohibited under SARA. The prohibitions apply to all Threatened, Endangered and Extirpated species listed on Schedule 1 of SARA on federal lands and to Migratory Birds (as defined under the Migratory Birds Convention Act) and aquatic species (as defined under the	June 24: The species in Table 1 of COSEWIC, Species at Risk and NWT Species at Risk registries will be reviewed for status reports prior to any project activities. If any Species at Risk are encountered at the sites, appropriate mitigation and monitoring plan will be developed in consultation with the appropriate regulatory authorities.	

	<p>Fisheries Act) everywhere they are found. Subsection 79(2) of SARA, states that during an assessment of a project, the adverse effects of the project on listed wildlife species and their critical habitat must be identified, that measures are taken to avoid or lessen those effects, and that the effects need to be monitored. This subsection applies to all species listed on Schedule 1 of SARA. However, as a matter of best practice, EC suggests that similar consideration be given to species on other Schedules of SARA and under consideration for listing on SARA, including those designated as "at risk" by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). The attached Table 1 lists species that may be encountered in the project area that have been designated as at risk by COSEWIC as well as their current listing on Schedules 1, 2 and 3 of SARA (and designation if different from that of COSEWIC). This list may not include all species identified as at risk by the Territorial Government. It does not include aquatic species, which are under the responsibility of Fisheries and Oceans Canada. Project impacts could include species disturbance and attraction to operations</p> <p>Recommendation For any Species at Risk that could be encountered</p>		
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		<p>or affected by the project, the Proponent should note any potential adverse effects of the project to the species, its habitat, and/or its residence. All direct, indirect, and cumulative effects should be considered. Refer to species status reports and other information on the Species at Risk registry at www.sararegistry.gc.ca for information on specific species as well as the booklet "Species at Risk in the Northwest Territories" (2014 Edition) available at http://www.nwt-species-at-risk.ca/sites/default/files/pdf/SpeciesatRiskintheNWT_English.pdf. As new species may have been assessed by COSEWIC or added to Schedule 1 of SARA since the booklet was last published, proponents should always check the Species at Risk registry to obtain the most current information.</p> <p>¶ If Species at Risk are encountered or affected, the primary mitigation measure should be avoidance. The Proponent should avoid contact with or disturbance to each species, its habitat and/or its residence. ¶</p> <p>Monitoring should be undertaken by the Proponent to determine the effectiveness of mitigation and/or identify where further mitigation is required. As a minimum, this monitoring should include recording the locations and dates of any observations of Species at Risk,</p>		
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		<p>behaviour or actions taken by the animals when project activities were encountered, and any actions taken by the Proponent to avoid contact or disturbance to the species, its habitat, and/or its residence. This information should be submitted to the appropriate regulators and organizations with management responsibility for that species, as requested. The Territorial Government should be consulted to identify other appropriate mitigation and/or monitoring measures to minimize project effects to species under their management responsibility. Mitigation and monitoring measures must be taken in a way that is consistent with applicable species at risk recovery strategies and action/management plans.</p>		
9	Species at Risk	<p>Comment Eskimo Curlew is designated as Endangered and listed on Schedule 1 of the Species at Risk Act. The project falls within the historical range of Eskimo Curlew, however, there have been no confirmed sightings of Eskimo Curlew since 1963, and no unconfirmed sightings on the breeding grounds since 1992. The National Recovery Team for this species has determined that recovery is not feasible at this time. It is EC's view that, in light of its current status, there is no need for further action with respect to Eskimo Curlew.</p>	<p>June 24: AANDC/CARD will inform Environment Canada of any sightings of the Eskimo Curlew at the site and develop an appropriate mitigation and monitoring plan if required.</p>	

		Recommendation EC recommends that an appropriate mitigation and monitoring plan be developed with the Proponent if it is established that this species does occur in the area.		
GNWT - Environment and Natural Resources: Central Email GNWT				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	General File	Comment (doc) ENR Letter - No Comments or Recommendations at this time. Recommendation		
SLWB: Sabrina Sturman				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	Application, Section 10, Predicted environmental impacts of Undertaking and proposed mitigation, pg. 37	Comment The application indicates that "Monitoring will be used to determine whether the remedial strategies implemented have been successful and allow us to make modifications to ensure that the environment is being protected. A proposed Water Quality Monitoring Plan is attached and can be found in Appendix G". Appendix G includes a proposed Long-Term Monitoring Program and State of the Environment Program (both post remediation) as well as Construction Monitoring Program but has not been updated since the 2009 submission and does not include details specific to Sawmill Bay. The Construction Monitoring proposes Baseline (annual, tracking overall quality	June 24: During the 2009-2015 period, pre-remediation water quality monitoring was performed at Contact Lake, El Bonanza, and Silver Bear Sites (Terra, Norex, Smallwood, Northrim). Other related studies performed during this period included: Influence of bacteria on the stability, speciation and mobility of arsenic in sediments at Terra Mine (2010/11); site specific target levels for arsenic in the Terra Mine wetland (2014); Mass balance and flux estimates for arsenic loading to Ho Hum Lake and Camsell River from the Terra Mine (2015). The monitoring requirements for Sawmill Bay are	July 8: Board staff acknowledge the clarity provided in the Proponent Response as Annual Reports submitted under Water Licence S09L8-001 indicate that the SNP (effluent testing) was implemented but did not report additional water quality monitoring that was conducted. It is noted that construction phase water quality monitoring is not reported in the Phase I Completion Reports (2010 & 2011). The Water and Effluent Quality Management Policy (MVLWB, 2011) applies to all

		<p>of the receiving environment for all sites, e.g. inactive) and Activity (monthly) monitoring at various sites that was not implemented during Phase I activities.</p> <p>Recommendation Please confirm Construction Monitoring was performed during the 2009-2015 period and how results informed planning for future activities. Does CARD plan to update the proposed Water Quality Monitoring Program? Please confirm the timeline for conducting revision and provide recommendation of sites for inclusion into the Surveillance Network Program.</p>	<p>described in the Remedial Action Plan, submitted to the SLWB in 2010. In 2015/16, AANDC/CARD will undertake follow-up monitoring at the Terra Mine Site and a desktop review of all water quality monitoring studies from Great Bear Lake Sites dating back to 2002 and the GBL Water Quality Monitoring Program submitted as Appendix G. Upon completion of the review, AANDC/CARD will submit a revised Water Quality Monitoring Program which will include a schedule for pre-remediation monitoring, updated monitoring requirements for Sawmill Bay and will identify sites for inclusion into the Surveillance Network Program. The revised plan will be submitted to the Board upon completion</p>	<p>new and renewal water licences and indicates that Boards may require submission of Monitoring Plans to provide information needed to determine if protection measures are successfully meeting their project objectives. Current water licences for projects with similar activities and scope have requirements to develop Construction and Post Construction Water Quality Monitoring Programs (surface and groundwater) for inclusion into the Surveillance Network Program.</p>
2	<p>Application, Section 13, Proposed time schedule, pg. 45</p>	<p>Comment The application indicates that "At this time, CARD is unable to provide tentative schedules for the future phases of the remediation program, as they are subject to Treasury Board funding approvals. An update will be provided to the Board once this is more certainty in the project schedule". The Guideline for the Closure and Reclamation of Advanced Mineral Exploration and Mine</p>	<p>June 24: AANDC/CARD will inform the Board of any changes to the proposed Implementation Schedule and will include details of remediation progress in future Annual Reports.</p>	

		<p>Sites in the NWT (MVLWB 2013) outlines details that should be included in an Annual Closure and Reclamation Plan Progress Report which include discussion on whether the closure and reclamation planning and implementation remains on schedule and summary of any new scheduling setbacks. These details have not been included in past Annual Reports. The progress reports keep all parties informed about closure progress and allow the Board to confirm that the proponent has remained on schedule.</p> <p>Recommendation Please keep the Board informed of changes to the proposed Implementation Schedule and confirm that future Annual Reports will include details of Remediation progress compared to the Implementation Schedule.</p>		
3	Meeting Minutes, pg. 3	<p>Comment CARD requests Part B, sub-part 3 (turn around for submittal of laboratory results to the Board and WL Inspector) be amended to include additional time. Justification for the amendment is not included in the renewal application.</p> <p>Recommendation Please provide clarification of extension of time requested with rationale.</p>	<p>June 24: AANDC/CARD is requesting that the proposed condition in Part B, sub-part 2 (turn around for submittal of laboratory results to Board and WL Inspector) be amended to allow for a 7 day review period from 48 hours previously. To allow AANDC/CARD to complete a comprehensive review prior to submitting laboratory results to the Board and WL Inspector. AANDC/CARD</p>	

			acknowledges laboratory results are required by the Board and WL Inspector prior to discharge of treated water.	
4	Meeting Minutes, pg. 3	<p>Comment CARD requests Part D, sub-part 11-13 (conditions applying to treatment and disposal of sewage effluent) be amended to support incineration of black water and pit latrines for short duration satellite camps</p> <p>Recommendation Please clarify what amendment to terms and conditions is requested.</p>	<p>June 24: AANDC/CARD is proposing that Part D, sub-part 8 to 11 be amended to support the use of pit latrines or waterless toilets (e.g. Incinolet or Pacto type units would be the preferred option for sewage waste when in close proximity to surface water) for short duration satellite camps when project operations are anticipated to be at or below twenty individuals per site. These materials will be collected and managed in accordance with manufacturer's specifications and regulatory requirements.</p>	
5	Meeting Minutes, pg. 3	<p>Comment CARD requests Part D, sub-part 14 (process water effluent) be amended to remove Toxicity Testing from the Licence. Justification for the request is not provided in the renewal application.</p> <p>Recommendation Please provide rationale for the removal of Toxicity Testing.</p>	<p>June 24: AANDC/CARD is requesting the removal of toxicity testing as it is not an industry standard and it has not been included in other Water Licences issued by other regional boards for AANDC/CARD regulated sites with similar activities and scope. Furthermore, results from the toxicity tests in the 2011 Annual Report for the Great Bear Lake Sites Remediation Phase 1 -</p>	

			Water Licence S09L8-001 was submitted to the SLWB, indicated low toxicity (EC50(15) => 100%; LC50(96)=<50% at SNP Station S09L8-001(3)). Toxicity testing appears inconsistent with the direction from other Boards and will add unwarranted cost and time to the project.	
6	Conformity with the Sahtu Land Use Plan	<p>Comment It is the responsibility of the Proponent to demonstrate how they meet the requirements of the approved Sahtu Land Use Plan and that the proposed project contains sufficient detail to perform this check. The Board cannot issue a permit without conformity to the Land Use Plan as per Section 61 (1) of the MVRMA.</p> <p>Recommendation Please provide information of how the project meets the requirements of the Sahtu Land Use Plan.</p>	<p>June 24: AANDC/CARD has included a supporting document which describes how the proposed project meets the conformity requirements in the Sahtu Land Use Plan.</p>	