

Comments - Aboriginal Affairs and Northern Development Canada

<u>TOPIC</u>	<u>COMMENT</u>	<u>RECOMMENDATION</u>	<u>CONSULTANT / COMMUNITY RESPONSE</u>
Water Licence Renewal Water Licence & SNP sampling	<p>The new solid waste disposal facility is currently being constructed for a scheduled opening in the fall of 2013.</p> <p>Samples were not routinely collected during operation of the previous facility. For this reason, it is not possible to characterize the water quality of the runoff from the old solid waste facility and identify potential effects to the surrounding environment.</p> <p>Best practices strongly recommend the community conduct a sampling and monitoring program at the new Solid Waste Disposal Facility. The program should be designed to enable the community to identify whether wastes that they are producing that are negatively impacting their environment - as well as to facilitate future closure and reclamation efforts.</p>	AANDC recommends best practice towards routine sampling that must be conducted at the new facility as part of the community water Licence.	Noted
Water Licence Renewal Water Licence & SNP sampling	<p>The old solid waste facility needs to continue to be monitored because there remains leachate and contamination risks due to the presence of waste buried onsite. The Surveillance Network Program (SNP) for the current solid waste disposal facility should be kept in order to maintain consistency of data.</p>	There should be continued monitoring of the SNP Surveillance Station 0555-4 at the old solid waste facility post closure and reclamation to ensure the site is stable and doesn't pose further risks to the environment.	Noted, the surface monitoring proposed will use the SNP 0555-4 until Fall of 2016 as stated in the C&R Plan.
Closure and Reclamation Plan Runoff yearly sampling	<p>Section 3.9, Monitoring and maintenance summary, specifies that surface runoff for the site will be sampled annually during periods of flow and analyzed for metals.</p> <p>A location (or area - to insure sufficient flow is present) should be identified with a sign to insure each sample is collected at the same location each year.</p> <p>Results that are obtained should be submitted every year as part of the community annual report.</p>	AANDC recommends that the same location be used for the yearly runoff sampling event. The location should be submitted to the Board once known.	Noted, the surface monitoring proposed will use the SNP 0555-4. Signs will be maintained as necessary.

<p>Closure and Reclamation Plan Natural attenuation containment</p>	<p>Section 1.2 specifies that dominant soils for the Norman Range Eco region, in which Déline is located, are turbid and organic cryosols as well as Eutric Brunisols. Permafrost is extensive and discontinuous with low medium ice content characterized by sparse ice wedges.</p> <p>The current facility is characterized as a natural attenuation landfill, and is therefore not lined and relies on permafrost below for containment. Depending upon the permeability of the underlying soils, a potential for groundwater contamination exists. If the underlying soils do not provide a sufficient barrier to groundwater movement, groundwater should be monitored for impacts.</p>	<p>AANDC recommends that whether the underlying soils will provide a sufficient barrier to infiltration and groundwater contamination be further assessed. Pending results from this evaluation, implementation of a groundwater monitoring program may be required.</p>	<p>The site has been active for 30+ years. Water discharges from the soil downgrade of the site, this water will be monitored. From the information we have collected, there is nothing to suggest that the design will not function as intended.</p> <p>If AANDC has information that supports their concern please provide us this information for review.</p>
<p>Closure and Reclamation Plan Liner for future closure and reclamation</p>	<p>The O&M Plan identifies that household hazardous wastes are to be accepted at the new facility, and may include waste oil, small propane tanks and cylinders, paint containers, tires, batteries and used pellets and treated lumber.</p> <p>The plan specifies that hazardous waste management and segregation could be improved to insure risks to human health and the environment are minimized (section 2.1). The community has had non-compliance issue in the past surrounding use of the hazardous waste area for permanent storage of hydrocarbon and other miscellaneous wastes.</p> <p>While the O&M plan for the new facility does not specify secondary containment underneath household hazardous waste storage area, providing secondary containment would be an important feature in reducing risk to human health and the environment, facilitating closure and reclamation efforts in the future.</p>	<p>AANDC recommends that secondary containment for the hazardous waste storage area be provided at the new solid waste disposal facility.</p>	<p>The Plan submitted is not a Operation & Maintenance Plan for the new solid waste site nor for the existing site; it is a Closure & Reclamation Plan.</p> <p>This C&R Plan stated that household hazardous waste was accepted at the existing site that is to be closed. The Community has complied with applicable guidelines and has removed hazardous materials stored at the existing site.</p> <p>The new solid waste facility is in its final stages of construction; it is not reasonable to now request secondary containment. Furthermore, the solid waste facility underwent its own Water Licence Amendment Application in 2008 by Dillon Consulting and received approval for its construction and operation. There were no concerns or recommendations at that time for secondary containment.</p>

<p>Closure and Reclamation Plan Past spills history</p>	<p>Prior to closing the solid waste disposal facility or capping of any materials, the facility will be inspected by a qualified professional for evidence of spills and contamination.</p> <p>The landfill was established in the 70's - 80's, and traces from past spills may no longer be apparent on surface. A review of the spills database and interviews with knowledgeable people in the community should form part of this review.</p>	<p>AANDC recommends that a review of historic spill information be included in closure and reclamation plan and/or process.</p>	<p>We have reviewed the GNWT Spill Database and have found not records of spills at the solid waste site.</p>
<p>Closure and Reclamation Plan Post-closure monitoring and inspection program</p>	<p>Section 3.9 on Monitoring and maintenance summary states that once seeding and re-vegetation of the area has been completed (anticipated for spring 2014), a checklist will be used to regularly identify and record site conditions.</p> <p>The checklist will be a useful tool to help the community with closure and reclamation monitoring of the old landfill.</p>	<p>The plan should include the frequency at which inspections will be conducted and where this information will be recorded. Inspection results should be summarized and provided with the community annual report.</p>	<p>Frequency is specified in the Plan.</p> <p>Inspections will occur monthly during the summer season with one inspection completed as an annual inspection as per the checklist until Fall 2016.</p> <p>The Community will record the checklists and include the information with the Annual Report.</p>
<p>Closure and Reclamation Plan Access to closed/restored facility</p>	<p>The implementation schedule, Section 3.4, plans for removal of any non-land fillable wastes, bulk metal wastes, hazardous wastes and contaminated soils to have occurred in Feb 26 to March 1st, 2013.</p> <p>During closure and restoration, public and staff will be made aware of potential health and safety risks associated with hazardous and municipal solid wastes. After the facility is restored, public access to the facility may be restricted to minimize potential hazards.</p> <p>Criteria for determining the level of community access were not provided.</p>	<p>AANDC recommends that criteria to be used to determine the level of community access post-closure be provided in the closure and reclamation plan.</p>	<p>The criteria will follow that of GNWT - ENR's Environmental Guideline for Contaminated Site Remediation for an Industrial Land Use.</p>

Comments - Environment Canada

TOPIC	COMMENT	RECOMMENDATION	CONSULTANT / COMMUNITY RESPONSE
Requirements of the Fisheries Act	<i>See EC's submission letter</i>	<i>See EC's submission letter</i>	Noted
Section 3.1	<i>See EC's submission letter</i>	<i>See EC's submission letter</i>	<p>The criteria will follow that of GNWT - ENR's Environmental Guideline for Contaminated Site Remediation for an Industrial Land Use.</p> <p>Work will be summarized in the Annual Report to the Board as will all sampling results.</p>
Cover Design	<i>See EC's submission letter</i>	<i>See EC's submission letter</i>	<p>The cover design follows that of GNWT Guidelines for closure of solid waste facilities. We have found no information to suggest that these guidelines and designed coverage do not apply.</p> <p>If EC has information to support their concern please provide it to us for review.</p>
Decommissioned Cells & Honeybag Pit	<i>See EC's submission letter</i>	<i>See EC's submission letter</i>	<p>Previously decommissioned pits (historical sites) are not part of this Closure and Reclamation Plan.</p> <p>The Plan will be updated to include the tasks shown in the sketch of Appendix A for the honeybag pit.</p>

<p>Leachate</p>	<p><i>See EC's submission letter</i></p>	<p><i>See EC's submission letter</i></p>	<p>The existing solid waste site was designed and operated with the intent to cover the waste at final closure and is a routine practice found across the Northern Territories normally acceptable to regulatory bodies. The operation of this facility followed that of the GNWT Guidelines for the Planning, Design, Operations and Maintenance of Modified Waste Sites developed in conjunction with a stakeholder committee comprised of all regulatory agencies.</p> <p>Further studies on the permafrost condition will not be completed due to their extensive site work and therefore expensive nature. Further, the assessment of the development, stability and degradation of permafrost is a research project more suited to Geological Survey of Canada or a similar organization. The Community does not have the resources available to carry out such detailed investigations. If EC has information to support their concern, please provide it to us for review.</p> <p>As was stated in the C&R Plan, monitoring of surface waters will be completed and reported to the Board.</p>
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Comments - MACA and ENR

<u>TOPIC</u>	<u>COMMENT</u>	<u>RECOMMENDATION</u>	<u>CONSULTANT / COMMUNITY RESPONSE</u>
Professional Seal	See MACA / ENR Letter	See MACA / ENR Letter	Noted - Final will be stamped.
Cover Design	See MACA / ENR Letter	See MACA / ENR Letter	<p>The cover design follows that of GNWT Guidelines for closure of solid waste facilities. We have found no information to suggest that these guidelines and designed coverage do not apply.</p> <p>If ENR / MACA has information to support their concern please provide it to us for review.</p>
Leachate	See MACA / ENR Letter	See MACA / ENR Letter	The bibliography can be updated if required.
Inspection Area Issues	See MACA / ENR Letter	See MACA / ENR Letter	A checklist is provided with the Plan that describes tasks associated with this concern.
On-going Surface Sampling	See MACA / ENR Letter	See MACA / ENR Letter	Surface water monitoring will follow the Boards requirement.
Environmental Site Assessment	See MACA / ENR Letter	See MACA / ENR Letter	We agree that this is a contaminated site and will remain such in perpetuity. It will be designated as such on Community Land Use Plans. As identified in the Plan, we will follow the GNWT Guidelines for future land use.
Post Closure Monitoring	See MACA / ENR Letter	See MACA / ENR Letter	The Plan follows the GNWT Guidelines and has a sunset monitoring date of Fall 2016. If the Board requires monitoring beyond the said date, please advise.
Climate Change Implications	See MACA / ENR Letter	See MACA / ENR Letter	Climate change implications were discussed as potentials but NOT certainties. We do not know if or how permafrost will degrade should climate change affect it. The strategy proposed in the Plan for surface water monitoring should address the concern.
Not Sufficient C&R Plan	See MACA / ENR Letter	See MACA / ENR Letter	We believe that the C&R Plan outlines the key aspects to properly close the Déline Landfill and continue to request approval to close the site.