



**Aboriginal Affairs and  
Northern Development Canada**

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File S12L3-006

April 5, 2013

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**Re: Deline Municipal Water Licence S12L3-006 – Closure and Reclamation Plan**

Aboriginal Affairs and Northern Development Canada – Water Resources Division and North Mackenzie District (AANDC) has reviewed the Charter Community of Deline Closure and Reclamation Plan for the Solid Waste Facility. AANDC provides the attached comments in the Comment Table format.

Thank you for providing AANDC with the opportunity to comment on the above application. If you have any questions or concerns, please feel free to contact Jeanne Arsenault at 867-669-2658 or [Jeanne.Arsenault@aadnc.gc.ca](mailto:Jeanne.Arsenault@aadnc.gc.ca), or Jan Davies at 867-777-8909 or [Jan.Davies@aadnc-aadnc.gc.ca](mailto:Jan.Davies@aadnc-aadnc.gc.ca).

Regards,

Jan Davies  
Water Resource Officer  
North Mackenzie District  
Aboriginal Affairs and Northern Development Canada

Enclosure: Comment Table on Charter Community of Deline Closure and Reclamation Plan

**GENERAL INSTRUCTIONS FOR EXCEL TEMPLATE:**

1. Do not leave blank rows above or between comments.
2. Do not modify the instructions or the column headings (i.e. the top three rows).
3. **Each comment must have an associated recommendation.**
4. All formatting will be lost when this file is uploaded to the Online Comment Table.
5. If necessary, adjust the cell width and height in order to view all text.
6. Cutting and pasting comments from WORD documents cannot include hard returns (spaces between paragraphs).
7. If you would like to create paragraphs within a single cell, please use a proper carriage return (ALT & ENTER).

**App #: S12L3-006**

**Review of: Charter Community of Deline - SWDF Closure and Reclamation Plan**

**Reviewing Agency: Aboriginal Affairs and Northern Development Canada**

**Date: April 5th, 2013**

<b><u>TOPIC</u></b> <i>Be as specific as you think is appropriate; for example a section or page of the document, a recommendation #, general comment, etc.</i>	<b><u>COMMENT</u></b> <i>Comments should contain all the information needed for the proponent and the Board to understand the rationale for the accompanying recommendation.</i>	<b><u>RECOMMENDATION</u></b> <i>Recommendations can be for the proponent or for the Board. Recommendations should be as specific as possible, relating the issues raised in the "comment" column to an action that you believe is necessary.</i>
<b>Water Licence Renewal</b> Water licence & SNP sampling	The new solid waste disposal facility is currently being constructed for a scheduled opening in the fall of 2013.  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.  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.	AANDC recommends best practice towards routine sampling that must be conducted at the new facility as part of the community water licence.
<b>Water Licence Renewal</b> Water licence & SNP sampling	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.	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.

<p><b>Closure and Reclamation Plan</b> Runoff yearly sampling</p>	<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>	<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.</p>
<p><b>Closure and Reclamation Plan</b> Natural attenuation containment</p>	<p>Section 1.2 specifies that dominant soils for the Norman Range Ecoregion, 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><b>Closure and Reclamation Plan</b> Liner for future closure and reclamation</p>	<p>The O&amp;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 issues in the past surrounding use of the hazardous waste area for permanent storage of hydrocarbon and other miscellaneous wastes.</p> <p>While the O&amp;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><b>Closure and Reclamation Plan</b> 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><b>Closure and Reclamation Plan</b> 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><b>Closure and Reclamation Plan</b> Access to closed/restored facility</p>	<p>The implementation schedule, Section 3.4, plans for removal of any non-landfillable 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>