



Sahtu Land and Water Board

Staff Report

Division: Land and Water Program	Report No.: 2
Date Prepared: April 17, 2018	File No.: S17X-004 & S17L8-003
Meeting Date: April 19, 2018	
Subject: Operation and Maintenance Manual for the Norman Wells Airport Property Landfarm (Version 1.0) and revised Spill Contingency Plan and Waste Management Plan (Version 2.0) submitted by Transport Canada for Board approval.	

1. Purpose/Report Summary

The purpose of this Report is to present to the Sahtu Land and Water Board for consideration:

- Revised Spill Contingency Plan – Version 2.0;
- Revised Waste Management Plan – Version 2.0;
- Landfarm Operation and Maintenance Manual – Version 1.0; and
- Summary of stakeholder review comments and Proponent responses.

2. Background

- December 5, 2017** – Type A Land Use Permit S17X-004 was issued to Transport Canada, Prairie and Northern Region – Environmental Services, Contaminated Sites (TC) for installation (drilling) of three (3) groundwater monitoring wells around an existing Hydrocarbon Soil Contaminated Soil Treatment Facility (Landfarm) within municipal boundaries at the Norman Wells Airport. Type B Water Licence S17L8-003 was also issued and associated with the operation, maintenance, closure and reclamation of the Landfarm.
- February 5, 2018** - the Sahtu Land & Water Board (SLWB or Board) received an [Revised Spill Contingency Plan](#) (Version 2.0), [Revised Waste Management Plan](#) (Version 2.0), and [Landfarm Operation and Maintenance Manual](#) (Version 1.0).
- February 6, 2018** - Review packages were sent out electronically to members of the Norman Wells District Distribution List using the [Online Review System](#) with a request for comments by **March 6, 2018**;
- March 6, 2018** – Reviewer comments received and deadline;
- March 13, 2018** - Proponent response deadline and received; and
- April 19, 2018** - Presentation to the Board for decision.

3. Discussion

3.1 Project Overview

As previously described in [Staff Report 1](#) (Application Review), in 2003 Transport Canada commissioned construction of a Land Treatment Unit (Hydrocarbon Contaminated Soil Treatment Facility or Landfarm) as part of a remediation project associated with divestment of the Norman Wells Airport property to the Government of the Northwest Territories. The supporting documentation submitted with the November 14, 2017 water licence application provided information related to the construction and maintenance of the Landfarm with limited details on the progress of treatment of the hydrocarbon contaminated soil. The Landfarm will be undergoing decommissioning once the soil quality meets the applicable criteria. Treated soils will be deposited at the site and re-graded.

The Board approved Version 1.0 of the Spill Contingency Plan and Waste Management Plan at the time of issuance (December 5, 2017); as the basic requirements of the related Guidelines were met, however required revisions to these plans to consider the scope of activities related to the operation and maintenance of the Landfarm. Version 1.0 of the Plans had provided information that reflected the scope of the project for the installation of groundwater monitoring wells; which was to commence immediately following issuance. As per Permit S17X-004, Part C, Condition 4, the Inspector (and Board) received [notification of the commencement of work](#) on January 11, 2018 and activities were complete January 15 to 16, 2018 then all equipment was removed from the site.

Licence S17L8-003, Part E (Conditions applying to Waste and Water management) Condition 6, required submission of an Operations and Maintenance Manual for the Landfarm within 60 days of issuance.

3.2 Process Requirements

TC submitted a [revised Spill Contingency Plan](#) (Version 2.0) in accordance with Part H (Conditions Applying to Spill Contingency Planning) Condition 2 of License [S17L8-003](#) which states:

Within 60 days of issuance, the Licensee shall submit to the Board for approval, a revised Spill Contingency Plan that is in accordance with Board direction and commitments made during the review process for the Water Licence application.

TC submitted a [revised Waste Management Plan](#) (Version 2.0) in accordance with Part E (Conditions Applying to Water and Waste Management) Condition 4 of Licence S17L8-003 which states:

Within 60 days of issuance, the Licensee shall submit to the Board, for approval, a revised Waste Management Plan. that is in accordance with the Board's Guidelines for Developing a Waste Management Plan and commitments made during the review process for the Water Licence application.

The Introduction section of these plans include a summary of revisions, in accordance with Part B, condition 4 of the Licence. The Plans had been considered Version 1.2 when submitted however in consideration of the scope of changes are now considered Version 2.0.

TC submitted an [Operation and Maintenance Manual](#) for the Land Treatment Unit (Version 1.0) in accordance with Part E, Condition 6 of the Licence which states:

Within 60 days of issuance of this Licence, the Licensee shall submit to the Board for approval, an Operations and Maintenance Manual. The Licensee shall act in accordance with the Manual, once approved. The Manual shall be in accordance with the Federal Contaminated Sites Action Plan, Federal

Guidelines for Landfarming Petroleum Hydrocarbon Contaminated Soils and include, but not be limited to, the following:

- a) Project description;
- b) Facility design;
- c) Facility Personnel and Training;
- d) Soil management procedures including the dimensions of soil piles (windrows);
- e) Soil removal procedures;
- f) Surface and groundwater monitoring;
- g) Leachate management and monitoring;
- h) Soil sampling and analysis plan;
- i) Effluent discharge procedures; and
- j) Inspection and maintenance schedule including response to major storm or catastrophic events.

Of the 31 organizations to which the plan was distributed, seventeen (17) are represented within the Sahtu Settlement Area. Review comments were received from:

- Environment and Climate Change Canada (ECCC);
- GNWT – Department of Environment and Natural Resources (ENR); and
- Sahtu Renewable Resources Board (SRRB).

Review comments generally focused on the Operation and Maintenance Manual, recommending additional clarification be provided.

4.0 Comments

Board staff reviewed the **Spill Contingency Plan** (Version 2.0) with consideration of the basic requirements of Aboriginal Affairs and Northern Development Canada's *Guidelines for Spill Contingency Planning* (April 2007) and have the opinion the Plan conforms with Board direction of December 5, 2017 as includes the following:

1. Updated Project Description (Section 4) that outlines the scope of work related to the Landfarm which includes soil treatment (aeration) and decommissioning of the facility as well as anticipated groundwater, surface water and soil sampling to support determining when treatment criteria are achieved;
2. Updated Site Description (Section 5) which includes details of the Landfarm design and current conditions;
3. Updated List of Hazardous Materials On Site (Section 5.1) which includes:
 - a. Addition of fertilizer which may be temporarily on-site and the MSDS is provided in Appendix E.
 - b. Addition of wastewater which may accumulate within the bermed area and would be pumped out into vacuum truck or storage tanks in event it can no longer be contained within the bermed area during a storm event or freshet.
 - i. References the O&M Plan for details on spill response for wastewater within the bermed area.
4. Updated Potential Spill Sizes and Sources for Hazardous Materials On site (Section 6.2) with worst-case scenario; and
5. Inclusion of MSDS for diesel fuel (Appendix E) previously not included.

Board staff reviewed the **Waste Management Plan** (Version 2.0) with consideration of the basic requirements of MVLWB *Guidelines for Developing a Waste Management Plan* (2011) and reviewer comments requesting the following information:

- Anticipated water volume and quality of discharge from the facility and proposed EQC for the facility;
- Information related to discharge location including location, grade, soil characteristics; and
- Proposed timing and anticipated duration of discharge.

The Plan includes an Introduction with all required elements detailed in the Guidelines (i.e. details about the Company including environmental policies and site location; purpose and scope of the Plan as well as environmental, social and regulatory goals and objectives; project description and map; physical site description. The identification and management of all waste types is detailed in a table outlining waste stream; description including volume to be produced; handling method and disposal method.

Some of the additional information requested by reviewers and required in the section of the Guidelines for Landfarm has been included in the Land Treatment Unit Operation and Maintenance Manual also submitted for review and approval.

Board staff reviewed the **Land Treatment Unit Operation and Maintenance Manual** (version 1.0) in relation to the requirements outlined in Part E, condition 6 of the WL, described above as well as section 3.4.1 of the *MVLWB Guidelines for Developing a Waste Management Plan (2011)* which details information requirements specific to an on-site landfarm. The manual includes details about the landfarm volume balance and sizing; details of leachate management; monitoring of soil chemistry and groundwater chemistry; effluent discharge procedures; soil removal procedures; inspections and maintenance; and health and safety considerations. Chapters of the Manual include all of the items required in Part E, condition 6.

5. Other Agency Comments

The application was distributed to members of the Tulita District Distribution List; which includes 31 review organizations, requesting a reply by March 6, 2018. Three (3) organizations responded and recommendations provided by the Reviewers are attached and include:

- Environment and Climate Change Canada (ECCC):
 - ECCC reviewed the Plans and does not have any comments at this time.
- Government of Northwest Territories – Environment and Natural Resources:
 - ENR requested that Transport Canada describe why the current volume material in the facility exceeds its design and if so, what are the implications for the soil remediation process if the facility is over its design capacity and if there are any changes to the operation and maintenance of the facility if the volume of material is over its design capacity. TC responded that It is unclear how the volume of soil exceeded the design volume for the facility, but there are no implications to operations.
 - ENR requested that Transport Canada outline the total amount of contingency volume (i.e. holding tanks) that exists on site should water storage be required. (600 m³)
 - ENR requested that Transport Canada clarify the frequency of inspections that occur at the facility during the operating season (e.g. daily or weekly).
- Sahtu Renewable Resources Board (SRRB):
 - SRRB had no comments on the Spill Contingency Plan, the Waste Management Plan or the Landfarm Operation and Maintenance Plan.

Board staff consider the Proponent Response adequate.

6. Conclusion

The revised Spill Contingency Plan (SCP) and Waste Management Plan (WMP) submitted by BluMetric Environmental on behalf on Transport Canada are based on previous versions with changes that reflect the scope of activities for operation, maintenance, and decommissioning of the Landfarm. Version 1.2 of the SCP had been approved by the Board at the time the Permit was issued as it had been re-submitted during the regulatory review process to address stakeholder recommendations for revision. The Land Treatment Unit Operation and Maintenance Manual (version 1.0) has been submitted by BluMetric Environmental on behalf of Transport Canada. The Manual contains all relevant information and requirements for Landfarm Operation and there were no significant reviewer comments recommending further revisions to the manual.

7. Recommendation

Board staff recommend that the Board:

1. Proceed with the regulatory process and approve the Spill Contingency Plan, Version 2.0, Waste Management Plan, Version 2.0, and the Landfarm Operation and Maintenance Plan, Version 1.0.

9. Attachments

- 9.1 Review Comment Table
- 9.2 Draft Approval Letter

Respectfully submitted,



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