

Memorandum

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| To | Dele Morakinyo (AANDC) | Page 1 |
| CC | Matthew McElwaine (PWGSC), Janice Lee (PWGSC) | |
| Subject | Nunavut Water Board Water License Requested Modifications | |
| From | Caitlin Moore | |
| Date | February 24, 2014 | Project Number 60300481 |

This memo is presented in response to a request from AANDC for additional information regarding the proposed treatment of Type B soil during the remediation of the CAM-A DEW Line Site.

Soil Treatment

Soil excavated from identified Type B contaminated soil areas at the CAM-A site will be placed in the treatment areas in windrows approximately 2 m in height. The soil will then be treated by aeration using an Allu Bucket attachment on an excavator. The Allu Bucket uses rotating drums to increase exposure to allow for enhanced volatilization of the hydrocarbon contaminated soils. Previous experience has shown that up to 900 cubic meters of granular soils can be run through the Allu bucket in a 12 hour shift. The total design volume of Type B Hydrocarbon contaminated soils at CAM-A is 450 cubic meters.

Treatment of Type B contaminated soils through soil aeration using an Allu Bucket has proved successful in single-season time frames at other DEW Line Sites including BAR-D, Johnson Point, PIN-B and PIN-D).

Soil Treatment Facility

The proposed location of the soil treatment facility is in an area of previously disturbed land south of the Station Area. The treatment facility area will be graded to provide a level surface and berms, approximately 0.5 m high, will be constructed on all sides of the treatment facility. The area within the berms will be slightly sloped and a trench will be excavated on the downgradient side to collect any contact water that may be produced. The base of the treatment facility will be compacted to reduce permeability. Should the native ground in the area of the treatment facility not reach satisfactory compaction, finer-grained material may be supplied from an on-site borrow area, placed and compacted. Additionally, the Contractor has available on-site a liner for the base of the treatment area if compaction cannot be achieved by the supply of additional material.

It is anticipated that minimal contact water will be produced as the average annual rainfall in the region is low. Historic precipitation for the Cambridge Bay area indicates that the average monthly precipitation ranges from 9.1 mm to 24.5 mm for June, July, August and September.

Prior to construction of the soil treatment facility, baseline soil samples will be collected from the footprint on a 6 m x 6 m grid at a depth of approximately 0.1 m – 0.3 m below the ground surface. The soil samples will be submitted for analysis of petroleum hydrocarbons.

Following completion of soil treatment, confirmatory samples will be collected from the treatment area. The samples will be collected at the same depths and on the same grid as the baseline samples. The samples will be submitted for analysis of petroleum hydrocarbons and the results will be compared to the baseline values to determine if the treatment facility impacted the existing ground.

Please contact me or Barry Fedorak should you require additional information.

Sincerely,
AECOM Canada Ltd.



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