Indigenous and Northern Affairs Canada
Affaires autochtones et du Nord Canada

Nunavut Regional Office
P.O. Box 2200
Iqaluit, NU, X0A 0H0

April 18, 2017

Licencing Department
Nunavut Water Board (NWB),
P.O. Box 119,
Gjoa Haven, NU X0B 1J0

Attention: Ms. Robin Ikkutisluk

RE: CAM-C (1BR-MTH----) - Indigenous and Northern Affairs Canada (INAC)'s Replies to Review Comments on Water Licence Application

The department of Indigenous and Northern Affairs Canada, Contaminated Sites Program (INAC CSP) acknowledges the receipts of review comments on our current Application to NWB for Type B Water Licence for the remediation of CAM-C Matheson Point site from (i) INAC Water Resources Division (INAC WRD); and (ii) Environment and Climate Change Canada (ECCC).

The details required by INAC WRD and ECCC are usually those details we provide to NWB after the issuance of the Water Licence and prior to mobilization of the contractor to site; they are the mandatory submittals (which include specific guides, plans and manuals) that our contractor must provide prior to starting remedial works at site. These plans are currently under preparation by the contractor and will all be submitted and approved by NWB before our contractor mobilizes to site.

In the meantime and to ensure NWB's processing of the licence in a timely fashion, INAC CSP has provided the responses to the questions and concerns of INAC WRD and ECCC in the next few pages of this letter.

Should you require further details, please do not hesitate to contact the Project Manager at Dele.Morakinyo@aandc-aadnc.gc.ca or by telephone at (819) 934-9224

Sincerely,

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Canada

Responses to Review Comments from INAC WRD

(REF: IQALUIT-#1138862; DATED: March 28, 2017)

1. **Camp greywater discharge pit – Location to ensure no permafrost degradation**

INAC CSP agrees with the reviewer, INAC WRD, that the discharge pit/sump for the camp greywater should be located at a location that ensures no permafrost degradation. Our contractor will site the pit at a location of bedrock area or at an area of rock outcrop. The discharge pit will be used for the first one or two weeks of the start of the project when the sewage lagoon is being constructed and for the final one of two weeks of the project when the sewage lagoon is being decommissioned. During these two (2) periods, camp greywater will be directed to the discharge pit. For the remaining periods, during the project, the camp's greywater will be directed to the sewage lagoon that also receives the camp's sewage/black water. Two sewage lagoons will be constructed and only one will be used at a time. Weeks before camp shutdown, the water in the lagoon(s) will be treated and upon reception of compliant chemical analyses results, the lagoon will be discharged on the land, according to the usual requirements (min. of 31 m from waterbodies, etc.).

Wastewater generated from site activities (drum washing or other) will be stored in tanks and treated before being discharged on the land, once compliant results are obtained.

The project's contractor will prepare the "Wastewater Treatment Facility Design, Operation and Maintenance Plan" which will contain full details on the handling of the camp greywater, camp sewage and wastewater generated from site activities. A copy of the plan will be submitted to NWB, prior to mobilization to the site.

2. **Waste Water and Sewage Effluent Monitoring** - NWB approved operations and management plan required prior to mobilization to site.

This recommendation by INAC WRD is fully in line with INAC CSP's mode of operation. Permits and licences are applied for prior to the completion of the tendering process to allow the Board sufficient time to consult and process the files. Therefore, information provided during submission are standard details that are as close enough as possible for the site in question. These details are made more specific to the project when the project contractor comes on board. The contractor for this project is now on board and has given his initial plan for treating grey water, sewage and other wastewater as stated while responding to grey water handling above. The contractor will not be using a packaged treatment system but will adopt sewage lagoon treatment approach

The project's contractor will prepare the "Wastewater Treatment Facility Design, Operation and Maintenance Plan" which will contain full details on the handling of the

camp greywater, camp sewage and wastewater generated from site activities. A copy of the plan will be submitted to NWB, prior to mobilization to the site.

3. **Landfarm Operations and Management Plan -** NWB approved operations and maintenance plan for the landfarm treatment facility

Similar to the Wastewater facility, our contractor is expected to submit an Operation and Management Plan for the landfarm facility at CAM-C for approval by NWB prior to mobilizing to the site.

INAC CSP's project contractor for CAM-C is preparing "A Type B PHC Contaminated Soil Treatment Plan" for the CAM-C site. The plan will lay out the guides for operation and maintenance of the landfarm treatment facility at the site is to be submitted by the contractor ninety days prior to remediation work.

4. Fuel and Hazardous Material Spill Contingency Plan Update required

At the time of application for water licence, INAC CSP provides NWB with a Preliminary Fuel and Hazardous materials spill contingency plan. The update to the plan, with more information specific to the site, fuels to be used and the site operations etc., is provided to NWB for approval prior to commencing activities at the site.

To this end, INAC CSP, working with the project contractor, will develop the updated Fuel and Hazardous Material Spill Contingency Plan and submit it to NWB for approval prior to going to site to start work. INAC CSP will include the INAC Manager of Field Operations in the contacts as suggested by INAC WRD.

5. Post-Closure Monitoring Plan

As INAC WRD rightly observed, the Remedial Action Plan's executive summary states, "Post-construction monitoring will be required for the low or medium risk Waste Disposal Areas left in place on site, as per the Abandoned Military Sites Remediation Protocol. *The specific monitoring program will be confirmed once remedial activities have been completed*."

Post-closure monitoring (PCM) may not be required for this site. If it PCM will be required, we may not know the exact of the PCM until after remedial activities have been completed as rightly stated by the RAP. This is so because INAC CSP is adopting a walkaway solution whereby no facility (e.g. landfill) is left behind. We are not building any new landfill. All wastes are removed from the site and taken to the south. The legacy landfills met at the site are of 2 types – Class A (high risk potential) which will be dug up and sent to south and the Class C (low risk potential) which is stable and is not a source of recontamination according to INAC's AMSRP. There is no medium potential risk (class B) which could have been a source of risk at the site.

The interpretation of the sentence being quoted from RAP by INAC WRD is "at the end of all remedial activities, the need for Post-Closure Monitoring Plan, will be evaluated and a specific monitoring (if required) will be suggested", The resident engineer and the team that performs the completion inspection will suggest this specific monitoring (if required) and details will be

communicated to NWB then. This is different from the Long-term Monitoring program that is set from the beginning for sites where INAC leaves behind new constructed landfill(s).

6. Abandonment and Reclamation Plan

INAC CSP requires the project contractor to develop and provide this decommissioning plan for the structures he built in the course of conducting the remediation works. The Abandonment and Reclamation Plan will provide details of how the contractor plans to decommission the camp, the water facilities, the sewage facilities, and other facilities he built in the course of implementing the remediation plan of the site.

This plan will be submitted to NWB prior to going to site.

7. Requested Five Year Licence Term

INAC CSP agrees, totally, with INAC WRD that NWB should grant a five (5) term for the water licence just in case the specific monitoring described above is required. Towards the expiry of these five years, we will be able to advise NWB if we require further extension.

Responses to Comments from ECCC

(REF: ECCC File: 6600 000 040 / 003; DATED: March 28, 2017)

1. Wastewater and Sewage Effluent Monitoring

Please refer to INAC CSP's responses to INAC WRD's questions 1 and 2. The Wastewater Design, Operations & Management Plan (Wastewater O & M Plan) by INAC CSP will provide further specifics of wastewater treatment, including locations of lagoons, discharge location/pit, and pathway of discharge. It will also provide details of discharge locations that will ensure that the treated camp wastewater is disposed of such that it does not enter waters, unless it is demonstrated to be non-deleterious.

The Wastewater O & M Plan will be submitted and approved by NWB prior to mobilization to the site.

2. Discharge to the tundra - the location of tundra discharge(s) and mitigation measures to prevent erosion and sedimentation for these locations

First and foremost, please refer to INAC CSP's responses to INAC WRD's questions 1, 2, and 3 on the handling of greywater, sewage and wastewater from all other sources (contact water from the landfill and contaminated soil excavations, new landfill operation, and contaminated soil treatment areas). The handling of these wastewater types will be managed according to the Wastewater O & M Plan, and the Type B PHC Contaminated Soil Treatment Plan. In these plans, NWB will be advised of the discharge locations that the contractor have selected.

Furthermore, the project contractor will provide an "Erosion, Sediment and Drainage Control Plan" 45 days prior to start of remediation activities. This plan will be submitted to NWB for approval. Relevant erosion and sedimentation mitigation/prevention measures specifically planned for the site will be presented in the plan and will be applied on-site.