KEL

December 21, 2022

Manager of Licensing
Nunavut Water Board
PO Box 119
Gjoa Haven, NU X0B 1J0

Re: Cambridge Bay Soil and Water Treatment Facility Renewal

Kitikmeot Environmental Ltd. (KEL) is pleased to submit the attached General Water License Application Renewal and supporting technical information for the Cambridge Bay Soil and Water Treatment Facility, currently located adjacent to the Hamlet of Cambridge Bay, Nunavut. This facility operates to accept soil and water/snow impacted with petroleum hydrocarbons from commercial, industrial and residential spill sites and remediation projects in the Cambridge Bay area.

The Facility is comprised of an engineered cell, that is lined and bermed, located on land provided by the Hamlet of Cambridge Bay, adjacent to their sewage lagoon. The facility is comprised of one bermed and lined area for soils contaminated with petroleum hydrocarbons, a lined water and snow retention/storage area and a lined and bermed hazardous waste storage area. Impacted soil is hauled to the facility from locations of petroleum hydrocarbon leaks and spills. The soil is segregated to avoid co-mingling, and aeration of the soil occurs by manually moving the piles using an excavator. If required, the addition of moisture or chemical amendments are made to increase the degradation of organics. The soil is sampled and analyzed at an approved laboratory to ensure it meets reuse criteria, and it is then transported offsite and used as cover material at the Cambridge Bay landfill.

Impacted water and snow is delivered to the site and placed in a separate cell, that is lined and bermed. As required, the water is treated through a package treatment plant to remove sediments and any organics. The treated water is sampled and analyzed at an approved laboratory to ensure that it meets the discharge requirements set forth by the Government of Nunavut and the Nunavut Water Board.

Water contaminated with petroleum hydrocarbons is collected, treated and discharged once it meets criteria. No other water use occurs onsite, and no water is returned to a source.

Maximum water cell storage at the facility is approximately 170m^3 and at most, 30m^3 of water is treated in any given day based on available storage space for treated water. Discharge of water does not exceed 30m^3 in any 24 hour period and discharge is completed at an agreed upon location and care is taken to ensure that no undue erosion of sediments occurs.

A portion of the engineered cell adjacent to the soil receiving area is designated for the temporary safe storage of hazardous waste items (ie. Waste oils, lubricants) that are awaiting re-containerization and/or shipment to approved facilities.

Waste generated at the facility includes spent filter media from the water treatment plant, which is containerized and shipped for disposal. In the event that soil and water is deemed to be untreatable, they are packaged and shipped for disposal at an approved facility. These quantities are expected to be negligible.

Providing a location for the treatment of impacted soil and water has a positive impact on the community and the environment. Soil and groundwater at the location of the facility was monitored prior to construction, continues to be monitored during operation and will occur upon closure to ensure that no adverse impacts occur from the operation of the facility.

KEL is proposing to renew operations the facility for an additional five years.

Please do not hesitate to contact KEL if you have any questions.

Sincerely,

Katie

Katie Oliver
General Manager, Environmental Consulting
780.452.7779
regulatory@kblenv.com

Inuktitut Translation of Summary

ᕿᑎᕐᒥᐅᑦ ᐊᕙᑎᓕᕆᔨᒃᑯᖏᑦ (KEL) ᐊᓕᐊᓇᐃᒍᓯᒃᑐᑦ ᑐᓂᓯᔭᕆᐊᒃᓴᖅ ᐃᓚᓕᐅᑎᓯᒪᔪᒥᑦ ᐃᒪᕐᒧᑦ ᓚᐃᓴᓐᓯᒥᑦ ᓄᓪᓚᖑᕆᐊᖅᓯᓂᕐᒧᑦ ᐃᑲᔪᖅᑐᐃᓂᕐᒧᓪᓗ ᐱᓕᕆᔾᔪᑎᓄᑦ ᑐᓴᐅᒪᔭᒃᓴᓂᑦ ᐃᖃᓗᒃᑑᑦᑎᐊᒥᑦ ᐃᔾᔪᑦ ᐃᒪᕐᒧᓪᓗ ᓴᓗᒻᒪᖅᓴᐃᕝᕕᖕᒧᑦ, ᒦᓐᓇᐅᔪᖅ ᐃᓂᖃᖅᑐᖅ ᖃᓂᒋᔭᖓᓂᑦ Hᐋᓪᓚᑦᑯᑦ ᐃᖃᓗᒃᑑᑦᑎᐊᒥᑦ, ᓄᓇᕗᒻᒥᑦ. ᑖᓐᓇ ᐱᓕᕆᕝᕕᒃ ᐊᐅᓚᑦᑎᕚᖅ ᐊᖏᕈᒪᓪᓗᑎᒃ ᐃᔾᔪᕐᒥᒃ ᐃᒪᕐᒧᓪᓗ/ᖃᒧᑕᐅᔭᕐᒥᒃ ᐊᒃᑐᖅᑕᐅᓯᒪᔪᓂᒃ ᐅᖅᓱᐊᓗᒃᓴᓂᒃ ᑰᓇᐅᔭᓕᐅᕋᓱᒡᕕᖕᓂ, ᓴᓇᕝᕙᐊᓗᖕᓂ ᐊᒻᒪ ᓄᓇᓕᖕᓂ ᑯᕕᔪᓄᑦ ᐃᓂᓄᑦ ᐊᒻᒪ ᐋᖅᑭᐊᖅᑕᐅᔾᔪᑎᓄᑦ ᐱᓕᕆᐊᓄᑦ ᐃᖃᓗᒃᑑᑦᑎᐊᑉ ᖃᓂᒌᔭᓂ.

ᑖᓐᓇ ᐃᓂᒋᔭᐅᔪᖅ ᐅᑯᓂᖓ ᐃᓚᖃᖅᐳᖅ, ᓴᓇᔭᐅᓯᒪᔪᒥᒃ ᐃᓂᒥᒃ, ᑖᓐᓇᓗ ᐃᓗᑦᑐᖅᑎᓯᒪᓪᓗᓂ ᐊᕙᓗᓕᖅᑕᐅᓯᒪᓪᓗᓂᓗ, ᐃᓂᖃᖅᓱᓂ ᓄᓇᒥ ᐱᑎᑕᐅᓯᒪᓪᓗᓂ Hᐋᓪᓚᒋᔭᐅᔪᒥᑦ ᐃᖃᓗᒃᑑᑦᑎᐊᒥ, ᑕᒪᓐᓇᓗ ᓴᓂᑦᑎᐊᖓᓃᓪᓱᓂ ᑮᓇᓗᖃᕐᕕᒋᔭᖓᑕ. ᑖᓐᓇ ᐃᓂᒋᔭᐅᔪᖅ ᐃᓚᖃᖅᐳᖅ ᐊᑕᐅᓯᕐᒥᒃ ᐊᕙᓗᓕᖅᓯᒪᔪᒥᒃ ᐊᕙᓗᓕᖅᓯᒪᔪᒥᒡᓗ ᐃᓂᒥᒃ ᐃᔾᔪᕐᒧᑦ ᓱᕈᖅᓯᒪᔪᓄᑦ ᐅᖅᓱᐊᓗᒃᓴᒧᑦ ᐅᖅᓱᐊᓗᒃᓴᒧᑦ, ᐃᒪᖃᖅᑎᑕᐅᔪᒧᑦ ᐊᐳᑎᖃᕐᓂᕐᒧᓪᓗ ᐸᐸᑦᑎᓂᕐᒧᑦ/ᑐᖅᑯᖅᓯᓯᒪᕝᕕᖕᒥᒃ ᐊᒻᒪᓗ ᑐᑭᓕᐊᖅᑐᒥᒃ ᐊᕙᓗᓕᖅᓯᒪᔪᒥᒡᓗ ᕿᐊᖅᕵᕐᓇᖅᑐᓄᑦ ᐊᑐᒐᒃᓴᐅᔪᓐᓃᖅᑐᓄᑦ ᑐᖅᑯᖅᓯᓯᒪᕝᕕᖕᒧᑦ. ᐊᒃᑐᖅᑕᐅᓯᒪᔪᖅ ᐃᔾᔪᖅ ᐊᓪᔭᖅᑕᐅᕙᒃᐳᖅ ᐃᓂᒋᔭᐅᔪᒧᑦ ᐅᖅᓱᐅᓗᖕᒥᒃ ᐅᖅᓱᐊᓗᖕᒧᑦ ᑯᑐᒃᑐᖃᕐᓂᖓᓄᑦ ᑯᕕᔪᓄᓪᓗ. ᐃᔾᔪᖅ ᐊᕝᕙᒃᓯᒪᑎᑕᐅᕗᖅ ᐱᑕᐃᓕᓪᓗᓂ ᒪᔪᕐᓂᕐᒥᒃ, ᐊᒻᒪ ᐃᔾᔪᖅ ᐃᔾᔪᖅ ᐃᖏᕐᕋᑎᓪᓗᒍ ᐊᓪᓚᒃᑯᑦ ᐊᐅᓚᑎᓪᓗᒍ ᑑᒐᕕᖏᑦ ᐳᐊᕐᓇᔭᕈᑎᒧᑦ ᐊᑐᕐᓗᑎᒃ. ᐱᔭᓇᐊᖅᐸᑦ, ᕿᐅᒃᑲᓚᒃᑳᓂᕐᓗᓂ ᐅᕙᓘᓅᑦ ᐃᓚᐅᕈᑎᒃᓴᓄᑦ ᐋᖅᑭᐊᕈᑎᑦ ᐋᖅᑭᒃᑕᐅᔾᔨᑦ ᓄᖑᐸᓪᓕᐊᕐᑯᓗᕆᑦ ᐆᒪᔪᑦ. ᐃᔾᔪᖅ ᖃᐅᔨᓴᖅᑕᐅᓪᓗᓂ ᖃᐅᔨᓴᖅᑕᐅᓪᓗᓂᓗ ᐊᖏᖅᑕᐅᓯᒪᔪᒥᑦ ᖃᐅᔨᓴᕐᕕᖕᒥᑦ ᐊᑐᒃᑳᓂᕋᓗᐊᓇᐊᒃᓴᖏᓐᓂᑦ, ᐊᐅᓪᓚᖅᑎᑕᐅᓪᓗᓂᓗ ᓂᐅᕝᕕᐅᔫᓐᖅᓱᓂ ᐊᑐᖅᑕᐅᓪᓗᓂᓗ ᐃᖃᓗᒃᑑᑦᑎᐊᑉ ᐊᒃᑕᕐᕕᐊᓂᑦ.

ᐊᒃᑐᖅᑕᐅᓯᒪᔪᖅ ᐃᒪᖅ ᐊᐳᑎᓗ ᐊᓪᔭᖅᑕᐅᓪᓗᓂ ᐃᓂᖓᓄᑦ ᐃᓕᔭᐅᓪᓗᓂᓗ ᐊᓯᐊᓄᑦ ᐃᔭᕈᕙᐅᔭᕐᒧᑦ, ᑐᑭᓕᐊᖓᓪᓗᓂ ᐊᕙᓗᓕᖅᑕᐅᓪᓗᓂᓗ. ᑕᐃᒪᐃᑦᑕᕆᐊᖃᕐᓂᖓᓄᑦ, ᐃᒪᖅ ᓴᓗᒻᒪᖅᓴᖅᑕᐅᕙᒃᐳᖅ ᐹᖅᓯᒪᔪᑎᒍᑦ ᓴᓗᒻᒪᖅᓴᐃᕝᕕᒃᑯᑦ ᐂᔭᐃᔪᓪᓗᓂ ᑭᓂᖅᑐᓂᒃ ᖃᓄᐃᓐᓇᕐᓗ ᐱᕈᖅᑐᓂᒃ. ᐃᒪᑦᑎᐊᕙᒃ ᖃᐅᔨᓴᖅᑕᐅᓲᖑᕗᖅ ᖃᐅᔨᓴᖅᑕᐅᓪᓗᓂᓗ ᐊᖏᖅᑕᐅᓯᒪᔪᒥᑦ ᖃᐅᔨᓴᕐᕕᖕᒥ ᖃᐅᔨᒪᔭᐅᕐᑯᓪᓗᒍ ᓈᒻᒪᒃᓗᐊᕐᒪᖔᑦ ᑯᕕᔪᓄᑦ ᐱᔭᐅᒋᐊᓕᖕᓄᑦ ᐋᖅᑭᒃᑕᐅᓯᒪᔪᓄᑦ ᓄᓇᕗᑦ ᒐᕙᒪᒃᑯᖓᓄᑦ ᐊᒻᒪ ᓄᓇᕗᒻᒥ ᐃᒪᓕᕆᔨᒃᑯᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ.

ᐃᒪᖅ ᓱᕈᖅᓯᒪᔪᖅ ᐅᖅᓱᐊᓗᖕᒧᑦ ᐅᖅᓱᐊᓗᒃᓴᓂᑦ ᓄᐊᑦᑎᕙᒃᐳᑦ, ᓴᓗᒻᒪᖅᓴᖅᑕᐅᓗᑎᒃ ᑯᕕᔭᐅᕙᒃᓗᑎᓪᓗ ᒪᓕᑐᐊᕈᑎᒃ. ᐊᓯᖏᓐᓂᒃ ᐃᒪᕐᒥᒃ ᐊᑐᖅᑐᖃᑦᑕᙱᑦᑐᖅ ᐅᔭᕋᖕᓂᐊᕐᕕᖕᒥ, ᐊᒻᒪ ᐃᒪᕐᒥᒃ ᐅᑎᖅᑎᑦᑎᔪᖃᙱᕐᓂ.

ᐊᖏᓛᖅ ᐃᒥᖅᑕᕐᕕᒃ 170m3-ᓗᐊᒥᒃ ᐊᖏᓂᓕᒃ ᐊᒻᒪᓗ ᑕᒪᐃᓐᓂᑲᓴᒃ, 30m3-ᓂᒃ ᐃᒪᕐᒥᒃ ᓴᓗᒻᒪᖅᓴᖅᑕᐅᖃᑦᑕᖅᑐᖅ ᖃᖓᑐᐃᓐᓇᒃᑯᑦ ᑐᙵᕕᖃᖅᓱᓂ ᒪᓂᒪᔪᒥᒃ ᐃᒪᕐᒥᒃ ᓴᓗᒻᒪᖅᓴᖅᓯᒪᔪᒥᒃ. ᐃᒪᖅ ᑯᕕᑎᑕᐅᒃᐸᑦ ᖄᖏᐅᑎᕙᙳᑦᑐᖅ 30m3 ᐃᑲᕐᕋᓄᑦ 24–ᓄᑦ ᐊᒻᒪ ᑯᕕᑎᑕᐅᔪᖅ ᐱᐊᓂᒃᑕᐅᓗᓂ ᐊᖏᕈᑕᐅᓯᒪᔪᒥᒃ ᓇᓃᓐᓂᖏᓐᓂᒃ ᑲᒪᒋᔭᐅᓲᖑᕗᕐᓗ ᖃᐅᔨᒪᔭᐅᕐᑯᓪᓗᒍ ᓄᖑᐸᓪᓕᐊᙵᕆᒃᑲᓗᐊᕐᒪᖔᑦ ᑭᓂᖅᓯᓂᖅ.

ᐃᓚᖕ ᓴᓇᔭᐅᓯᒪᔪᖅ ᑮᓇᓗᖅᑲᕐᕕᒃ ᖃᓂᒋᔭᖕ ᐃᔾᔪᐅᑉ ᐱᖃᑦᑕᖅᑐᖅ ᐃᓂᒥᒃ ᑐᕌᖓᔪᖅ ᐊᑦᑕᕐᓇᙱᑦᑐᒃᑯᑦ ᑐᖅᑯᖅᓯᓯᒪᓂᕐᒧᑦ ᐅᓗᕆᐊᓇᖅᑐᓄᑦ ᐊᒃᑕᑯᓄᑦ (ᓱᒌᕐᓗ. ᐊᑐᖅᓯᒪᔪᑦ ᐅᖅᓱᖅᑎᑭᑏᑦ, ᐅᖅᓱᖅᑎᑭᑏᑦ) ᐅᑕᖅᑭᔪᑦ ᐆᖅᑕᐅᒃᑲᓂᓛᖅᑐᓂᑦ ᐊᒻᒪᓗ/ᐅᕙᓘᓅᑦ ᐊᐅᓪᓚᖅᑎᑕᐅᓂᐊᖅᑐᑦ ᐊᖏᖅᑕᐅᓯᒪᔪᓄᑦ ᐱᓕᕆᕝᕕᐅᔪᓄᑦ.

ᐊᒃᑕᑯᓕᐅᖅᑐᑦ ᐃᓪᓗᕐᔪᐊᒥᑦ ᐃᓚᖃᖅᑐᑦ ᓱᕈᔾᔭᐃᒃᑯᑎᒥᑦ ᐃᒪᖕᒧᑦ ᓴᓗᒻᒪᕐᓴᐅᑎᒥᑦ, ᐆᖅᓯᒪᔪᖅ ᐊᐅᓪᓚᖅᑎᑕᐅᓪᓗᓂᓗ ᐃᒋᑕᐅᓂᐊᕐᓗᓂ. ᐃᔾᔪᖅ ᐃᒪᕐᓗ ᐱᐅᙱᓐᓂᕋᖅᑕᐅᒃᐸᑦ, ᐆᖅᑲᖅᑕᐅᔫᑦ ᐊᐅᓪᓚᖅᑎᑕᐅᓗᑎᓪᓗ ᐃᒋᑕᐅᓂᐊᕐᓗᑎᒃ ᐊᖏᖅᑕᐅᓯᒪᔪᒥᑦ ᐃᓪᓗᕐᔪᐊᒥᑦ. ᑖᒃᑯᐊ ᐅᓄᕐᓂᙱᑦ ᓂᕆᐅᒋᔭᐅᕚᑦ ᓱᕐᑯᑎᒋᔭᐅᔾᔭᕋᓱᒋᔭᐅᙱᕐᓗᑎᒃ.

ᐃᓂᓕᐅᕐᓗᒍ ᐱᓕᕆᐊᖃᕐᓂᐊᕐᓗᓂ ᐊᒃᑐᖅᑕᐅᓯᒪᔪᓂᒃ ᐃᔾᔪᕐᒥᒃ ᐃᒪᕐᒥᒡᓗ ᐱᐅᔪᒥᒃ ᐊᒃᑐᖅᓯᓯᒪᕗᖅ ᓄᓇᓕᖕᒥᐅᓄᑦ ᐊᕙᑎᒧᓪᓗ. ᐃᔾᔪᖅ ᐊᒻᒪ ᓄᓇᐅᑉ ᐃᑭᐊᖓᓂ ᐃᒪᖅ ᐃᓂᒋᔭᐅᔪᒥᑦ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᑐᖅ ᓴᓇᔭᐅᓚᐅᖅᑎᓐᓇᒍ, ᖃᐅᔨᓴᖅᑕᐅᖏᓐᓇᕐᓂᐊᖅᑐᖅ ᐊᐅᓚᑎᓪᓗᒍ ᐊᒻᒪ ᒪᑐᓯᒪᓕᖅᑎᓪᓗᒍ ᓇᓗᓇᐃᕐᑯᓪᓗᒍᑦ ᐊᒃᑐᐃᓂᕐᓗᒃᑐᖃᙱᒃᑲᓗᐊᕐᒪᖔᑦ ᐊᐅᓚᑕᐅᑎᓪᓗᒍ ᐃᒡᓗᕐᔪᐊᖅ.

ᕿᑎᕐᒥᐅᑦ ᐃᓕᓐᓂᐊᕐᓂᓕᕆᓂᕐᒧᑦ ᑐᑭᒧᐊᒃᑎᑦᑎᔨᖓᑦ ᑐᒃᓯᕋᖅᐳᑦ ᓄᑖᙳᕆᐊᖅᑎᑦᑎᔪᒪᓪᓗᑎᒃ ᐊᐅᓚᔾᔪᑎᖏᓐᓂᒃ ᐃᒡᓗᕐᔪᐊᑉ ᐊᕐᕖᒍᓄᑦ ᑕᓪᓕᒪᒃᑲᓐᓂᕐᓄᑦ.