

December 20, 2012

0222880805-LTR-V0012-00

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

Dear Ms. Beaulieu

Subject NWB Water Licence No. 1BR-KRK1112 - Request for Renewal

Tetra Tech WEI Inc. (Tetra Tech) has been retained by the Government of Nunavut Department of Community & Government Services (GN-CGS) to ensure that petroleum hydrocarbon impacted soil landfarm facility located in the Hamlet of Kugaaruk, Nunavut, is being operated in compliance with the conditions of the existing Nunavut Water Board (NWB) water licence, no. 1BR-KRK1112. Tetra Tech (named Wardrop Engineering Inc. at the time) was previously involved in the design of the landfarm and the application for a NWB water licence at the Kugaaruk landfarm facility for GN-CGS. Tetra Tech requests that the NWB renews the existing water licence, which will expire on December 31, 2012, for two years.

BACKGROUND

Noted in the original application, dated May 25, 2005, the Kugaaruk landfarm facility was constructed prior to the issuance of a water licence. The impacted soil from a tank site remediation project in Kugaaruk was placed in the cell in July 2007, after the issuance of the NWB water licence no. 8BR-KRK0609. No additional soil has been placed in the treatment cell by GN-CGS since that time; however, unauthorized dumping of soil, debris, and greases by an unknown party has occurred on multiple events.

Composite samples of the soil in treatment cell were collected by Tetra Tech staff in 2007, 2009, 2010, and 2011. The upper soil layer was tilled and water from the runoff water retention cell was discharged by the GN-CGS contractor in 2009, 2010, and 2011. Tetra Tech installed groundwater monitoring wells on the down-gradient side adjacent to the landfarm facility in 2009 and on the up-gradient side adjacent to the landfarm in 2010. In 2010 Tetra Tech designed a splash pad, for the effluent to be directed to during discharge of the runoff water retention cell, which was constructed adjacent to and west of the landfarm by the GN-CGS contractor. Due to budget restrictions the landfarm operations in 2012 were limited to the discharge of the runoff water retention cell and pre and post discharge sampling conducted by the GN-CGS contractor.

Tetra Tech

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The following list includes plans, reports and correspondence submitted to date by Tetra Tech to CN-CGS, and other relevant parties for the operation of the Kugaaruk landfarm facility in compliance with NWB water licences no. 8BR-KRK0609, no. 1BR-KRK-0609, and no. 1BR-KRK1112:

- Letter from D. Ediger and L. Stone, Wardrop, to P. Beaulieu, NWB, Subject: NWB Water Licence No. 8BR-KRK0609 – Request for Renewal, dated September 15, 2009;
- Project Summary Soil Treatment Landfarm in the Hamlet of Kugaaruk Nunavut Water Board Licence No. 8BR-KRK0609;
- Completed Water Licence Schedule III Application form signed by D. Ediger, Wardrop, dated November 18, 2009;
- Translated Project Summary;
- Letter from K. So, GN-CGS, to P. Beaulieu, NWB, Re: NWB Licence No. 8BR-KRK0609, dated December 9, 2009;
- Letter from D. Ediger and L. Stone, Wardrop, to P. Beaulieu, NWB, Subject: NWB Water Licence No. 8BR-KRK0609 – Submission of Reports, dated February 25, 2010;
- Report entitled “Soil Remediation Landfarm Hamlet of Kugaaruk Annual Report 2006-2008” Document No. 0222880805-REP-V0004-00, prepared by Wardrop for GN-CGS, dated February 2010;
- Report entitled “Soil Sampling – Former Tank Farm Site, Kugaaruk, Nunavut” Document No. 0222880804-REP-V0001-00, prepared by Wardrop for GN-CGS, dated July 2007;
- Report entitled “Former Tank Farm Site Remediation, Kugaaruk, Nunavut” Document No. 0222880801-REP-V0001-01, prepared by Wardrop for GN-CGS, dated August 2008;
- Report entitled “Interim Abandonment and Reclamation Plan Kugaaruk Soil Landfarm” Document No. 0222880805-REP-V0001-00, prepared by Wardrop for GN-CGS, dated February 2010;
- Report entitled “Operations and Maintenance Manual Kugaaruk Landfarm Facility NWB Licence No. 8BR-KRK0609” Document No. 0222880805-OPM-V0001-00, prepared by Wardrop for GN-CGS, dated February 2010;
- Report entitled “Quality Assurance and Quality Control Plan for the Kugaaruk Landfarm Facility NWB Licence No. 8BR-KRK0609” Document No. 0222880805-PQP-V0001-00, prepared by Wardrop for GN-CGS, dated February 2010;
- Report entitled “Kugaaruk Landfarm Spill Contingency Plan” Document No. 0222880805-REP-V0005-00, prepared by Wardrop for GN-CGS, dated February 2010;
- Drawing signed and stamped by S. Sebastian, P.Eng., entitled “Landfarm Water Handling Facilities, Kugaaruk Nunavut, Overall Site Plan” Drawings No. 022880805-SKT-V0002-00, prepared by Wardrop for GN-CGS, dated 10/02/01;
- Revised drawing stamped by S. Sebastian, P.Eng., entitled “Landfarm Water Handling Facilities, Kugaaruk Nunavut, Overall Site Plan” Drawings No. 022880805-SKT-V0002-01, prepared by Wardrop for GN-CGS, dated 10/02/01;
- Email from D. Ediger, Wardrop, to P. Beaulieu, NWB, Subject: Licence 8BR-KRK0609 Kugaaruk Landfarm - Splash Pad Drawing Revision, dated May 10, 2010;

- Report entitled "Kugaaruk Landfarm – 2010 Annual Report" Document No. 0222880805-Rep-V0007-00, prepared by Wardrop for GN-CGS, dated March 2011;
- Report entitled "Quality Assurance and Quality Control Plan for the Kugaaruk Landfarm Facility NWB Licence No. IBR-KRK1112" Document No. 0222880805-PQP-V0002-00, prepared by Wardrop for GN-CGS, dated April 2011;
- Letter from D. Ediger and L. Stone, Wardrop, to P. Beaulieu, NWB, Subject: Licence IBR-KRK1112 – Operations and Maintenance Manual, dated April 15, 2011;
- Report entitled "Operations and Maintenance Manual, Kugaaruk Landfarm Facility NWB Licence No. IBR-KRK1112" Document No. 0222880805-OPM-V0002-00, prepared by Wardrop for GN-CGS, dated April 2011;
- Report entitled "Kugaaruk Landfarm Facility – 2011 Annual Report" Document No. 0222880805-REP-V0008-01, prepared by Tetra Tech for GN-CGS, dated September 2012; and
- Letter from C. Longobardi, Tetra Tech, to A. Keim, AANDC, and P. Beaulieu, NWB, Subject: Notice of Modification to QA/QC Manual for Kugaaruk Landfarm Facility (NWB Licence No. IBR-KRK1112), dated September 10, 2012.
- Letter from C. Longobardi, Tetra Tech, to A. Keim, AANDC, and P. Beaulieu, NWB, Subject: RE: Notice of Modification to QA/QC Manual for Kugaaruk Landfarm Facility (NWB Licence No. IBR-KRK1112), dated December 11, 2012.
- Letter from C. Longobardi, Tetra Tech, to A. Keim, AANDC, and P. Beaulieu, NWB, Subject: Notice of discharge at Kugaaruk Landfarm Facility (NWB Licence No. IBR-KRK1112), dated December 11, 2012.

REQUEST FOR LICENCE RENEWAL

Three compliance issues are related to the conditions of the exiting NWB water licence, no. IBR-KRK1112, and are as follows:

1. Notice was not given prior to the planned discharge of the runoff water retention cell as described in Part D, item 3 of the existing licence.
2. Signage has not been posted as described in Part B, item 6 of the existing licence.
3. Revisions to the plan entitled "Interim Abandonment and Reclamation Plan, Kugaaruk Landfarm" dated February 2010, have not been submitted as described in Part I, item 1 of the existing licence.

Due to budget restrictions the landfarm operations in 2012 were limited to the discharge of the runoff water retention cell and pre and post discharge sampling conducted by the GN-CGS contractor. Notice was not given prior to the planned discharge of the runoff water retention cell as described in Part D, item 3 of the existing licence because there was a concern that weather conditions could result in the inability to discharge the water contained in the cell prior to winter freeze-up. Tetra Tech reviewed the pre discharge sampling analytical results and did not identify the presence of any of the contaminants of concern related to the Kugaaruk landfarm facility, and the GN-CGS contractor was directed to

proceed with the discharge of the runoff water retention cell. The post discharge sampling analytical results did also did not identify the presence of any of the contaminants of concern related to the Kugaaruk landfarm facility. Mr. Andrew Keim, a Nunavut Region Water Resources Officer with Aboriginal Affairs & Northern Development Canada, was notified of this discharge in an email, Subject: Notice of discharge at Kugaaruk Landfarm Facility (NWB Licence No. 1BR-KRK1112), dated December 11, 2012.

Since operations are expected to continue at the Kugaaruk landfarm facility, in the coming spring signage will be posted around the facility as described in Part D, item 3 of the existing license, in order to alert deter potential trespassers and discourage unauthorized dumping.

Revisions have been made to the plan entitled "Interim Abandonment and Reclamation Plan, Kugaaruk Landfarm" dated February 2010, and are presented in the plan entitled "Interim Abandonment and Reclamation Plan, Kugaaruk Landfarm Facility" dated December 2012, along with the documentation supporting the completed NWB form, Application for Water License Renewal.

Also, revisions have been made to the report entitled "Kugaaruk Landfarm Facility – 2011 Annual Report" dated September 2012. A letter from Tetra Tech to GN-CGS, dated December 19, 2012, explains that a guideline was incorrectly presented in the first submission of the report, and the correction is presented in the report entitled "Kugaaruk Landfarm Facility – 2011 Annual Report" dated December 2012. The revised report dated December 2012, and the letter dated December 19, 2012, are included with this request for renewal.

On behalf of the GN-CGS, Tetra Tech requests that the NWB renew the existing water licence for an additional two years. The following list details the documentation which has been included with this letter to support the request for license renewal:

- Completed NWB Application for Water License Renewal form;
- Report entitled "Operations and Maintenance Manual, Kugaaruk Landfarm Facility NWB Licence No. 1BR-KRK1112" Document No. 0222880805-OPM-V0002-00, prepared by Wardrop for GN-CGS, dated April 2011;
- Letter from C. Longobardi, Tetra Tech, to S. Rostant, GN-CGS, Subject: Revision to Report Entitled "Kugaaruk Landfarm Facility - 2011 Annual Report", dated December 19, 2012.
- Report entitled "Kugaaruk Landfarm Facility – 2011 Annual Report" Document No. 0222880805-REP-V0008-02, prepared by Tetra Tech for GN-CGS, dated December 2012; and
- Report entitled "Interim Abandonment and Reclamation Plan – Kugaaruk Landfarm Facility" Document No. 0222880805-REP-V0001-01, prepared by Tetra Tech for GN-CGS, dated December 2012.

If additional information is required as this request is being considered, please contact me by telephone at (204) 954-6870, by email at ciro.longobardi@tetrattech.com, or mail at the address shown in the letterhead.

Sincerely

TETRA TECH WEI INC.



Ciro Longobardi, E.I.T.
Environmental Consultant

CL/gs

Copy Mr. Shah Alam, Regional Municipal Engineer, GN-CGS
Mr. Stuart Rostant, Kitikmeot Region Project Officer, GN-CGS
Licensing Administrator, NWB

Attachments "Application for Water License Renewal"
"Letter of Authorization"
"Operations and Maintenance Manual, Kugaaruk Landfarm Facility NWB
Licence No. 1BR-KRK1112"
"Revision to Report Entitled "Kugaaruk Landfarm Facility - 2011 Annual
Report""
"Kugaaruk Landfarm Facility – 2011 Annual Report"
"Interim Abandonment and Reclamation Plan, Kugaaruk Landfarm Facility"

Reviewed by

TETRA TECH WEI INC.



Michel Grégoire, P.Eng.
Senior Environmental Engineer