INUVIALUIT SIVUNNIUQPAIT IMAKKUN

INUVIALUIT WATER BOARD

July 13, 2017

David A. Brown
Staff Environmental Engineer
Shell Canada Energy
150 N. Dairy Ashford Road
Houston, Texas 77079

Dear Mr. Brown:

Re: N7L1-1834 - Shell Canada Energy, Camp Farewell – 2016 Remediation Program Report

The Inuvialuit Water Board (IWB) acknowledges receipt of the 2016 annual report submitted by IEG on behalf of Shell Canada Energy. The IWB has completed an initial review of the annual report and as per water licence N7L1-1834 Terms and Conditions, the following additional information and revisions are required:

1. Cover page – replace "Camp Farewell 2016 Remediation Program Report" with "Camp Farewell Remediation Program, Annual Report 2016";
2. Part B, Item 1a) the monthly and annual quantities in cubic metres of fresh water obtained from all sources;
3. Part B, Item 1b) the monthly and annual quantities in cubic metres of each and all waste discharged;
4. Part B, Item 1c) the location and direction of flow of all waste discharged to the water or the land;
5. Part B, Item 1d) a summary of the monthly and annual quantities of waste stored on site and transported off site;
6. Part B, Item 1e) the results of sampling carried out under the "Surveillance Network Program";
7. Part B, Item 1f) a summary of any modifications carried out on the Water Supply Facilities and Sewage Treatment Facilities, including all associated structures;
8. Part B, Item 1h) details on the restoration of any Sumps;
9. Part B, Item 1i) abandonment and restoration works:
    - Page i, executive summary, bullet 1: include seven excavation zone numbers (e.g. zone 2, 3.....);
    - Page i, executive summary, bullet 2: include a statement to clarify re-treatment of excavation zones backfilled fully or partially with untreated soil;
    - Page i, executive summary, bullet 3": include zone numbers of fully backfilled two excavations with treated soil and fully or partially backfilled excavations with untreated soil;
    - Page i, executive summary, bullet 5: include zone number of the area that requires additional excavation;

- Page iv, List of Figures, Figure 3: as indicated ".....and Windrow Location" windrow locations are not depicted in Figure 3;
- Page 10, section 7.2, paragraph 1: clarity is required on the date presented as ".... between July 19 and August 18, 2017.";
- Page 10, section 7.2, paragraph 1: Appendix VII, as stated, is not attached, also cross check the list of appendices presented in page iv;
- Page 5 of 6, Table 2, location windrow 12 and 13, column 4: requires clarity on sample date - indicates 2019;
- Page 9, section 6, paragraph 2: referred to the GNWT, *"Environmental Guideline for Affected Site Remediation, November 2003"*, clarify if the referenced guideline is GNWT *"Environmental Guideline for Contaminated Site Remediation, November 2003"*;
- Pages 1 of 6 to 5 of 6, Tables 1 and 2: F1 guideline for "GNWT 2003 Residential/Parkland" is given as 130 mg/kg. However, F1 guideline for Residential/Parkland, Coarse-grained Soil is given as 30 mg/kg in GNWT *"Environmental Guideline for Contaminated Site Remediation, November 2003"*, clarify these discrepancies;
- Pages 1 of 6 to 5 of 6, Tables 1 and 2, Column 5: provide unit of OVA (field screening) results;
- Provide groundwater monitoring and sampling results of each of the seven piezometers (P06-1 to P06-7) to understand the effectiveness of remediation activities and groundwater quality trend. Some of the groundwater quality results reported in the 2015 annual report demonstrated the water quality results were exceeded for metal and naphthalene.
- Provide a map, table and figures (e.g. site map) illustrating the area and amount of soil and water remediated to date and areas to be remediated. A map, and table displaying results of confirmatory results would provide a better understanding of the status of the remediation program.
- Provide information for which of the boreholes intercepted the polyurethane foam layer and an assessment of the spatial extent, as well as the condition of the foam layer.
- Include a map depicting the spatial extent of the polyurethane foam and the location of the groundwater monitoring piezometers which are monitoring the contaminants resulting from biodegradation of the polyurethane foam,
- Provide a description of locations where contaminated soil exists below the polyurethane layer, include areas that may be below where the foam liner is non-existent including assessments required to determine if soil/groundwater contamination exists.
- An outline of any proposed work anticipated for the next year (Note: if some of the activities, as requested above, were not conducted during the 2016 reporting year; include, under this heading, the works to be conducted for the next year).

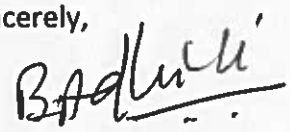
10. Part B, Item 1j) a summary of any studies requested by the Board that relate to waste disposal, water use, or reclamation, and a brief description of any future studies planned;

11. Part B, Item 1k) notation of updates and/or revisions to the approved Spill Contingency Plan, Waste Disposal Facilities Operations and Maintenance Plan, and Sewage Treatment Plan;
12. Part B, Item 1m) any other details on water use or waste disposal requested by the Board within forty-five (45) days before the annual report is due; and
13. Provide a description of any challenges and setbacks experienced in the remediation and/or decommissioning of the site.

Please submit two (2) hard copies and two (2) electronic copies of the revised "Camp Farewell Remediation Program, Annual Report 2016" including a tabular summary indicating page numbers and sections where the above additional information is incorporated.

Submitted documentation, including all related IWB correspondence, will be placed on the IWB Public Register. Should you have questions or concerns, please contact me at (867) 678-8610 or adhikarib@inuvwb.ca or Mardy Semmler, Executive Director, at (867) 678-8609 or semmlerm@inuvwb.ca.

Sincerely,



Bijaya Adhikari, PhD
Science and Regulatory Coordinator

cc: Lloyd Gruben, Water Resources Officer - ENR Inuvik