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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

File: NWB5RES0308

Briefing Notes – RESOLUTION ISLAND DEW LINE SITE: NWB5RES0308

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Information contained in blue text indicates points where questions or follow up is needed.

Water licence issued August 29, 2003.

Documents considered briefing note:

1. Resolution Island Monitoring Program – Department of Indian and Northern Affairs, December 31, 2003.
 - New Landfills- Three new landfills for non-hazardous waste on site (East Camp NH Landfill; West Camp NH Landfill; and Beach NH Landfill)
 - o These landfills will be inspected visually for stability only.
 - Tier II Landfill
 - o Monitored visually; water monitored from 3 downgradient wells and 1 upgradient well; soil monitored from 4 locations adjacent to monitoring wells.
 - o Water and soil tested for As, CD, Cr, Co, Cu, Pb, Ni, Zn, PCBs, TPH, pH, conductivity, and temperature.
 - o Three thermistor strings will be installed in landfill in 2005. Landfill designed to permanently freeze in the waste within 3 to 4 years.
 - Old Dumps- Airstrip and Maintenance dumps
 - o Monitored for stability, water and soil
 - o Airstrip dump- 3 down-gradient wells and 1 up-gradient well
 - o Maintenance dump- 2 down-gradient wells and 1 up-gradient well monitored for cobalt (Co) only.
 - Interceptor Barriers- S1/S4 Valley Barrier and S1/S4 Beach Barrier
 - o Inspected and tested for soil samples
 - o Silt collected by barriers will be excavated and filters replaced at monitoring visit.
 - Monitoring Schedule- Baseline study will begin in 2006 and monitoring plan will commence on a yearly basis (in mid-August) from 2006 for 5 years until 2011. A full review of monitoring data will take place in 2011. Monitoring will decrease in frequency after 2011 if supported by previous years monitoring data. [Will monitoring data be submitted to the NWB on a year basis? Check licence.](#)
2. Resolution Island Monitoring Program Review – Environment Canada, November 21, 2005.
 - The following points were raised by EC:
 - o Parameters to be monitored should be provided
 - o Location of all monitoring points verified against as-built drawings
 - o Remediation of Tier II Landfill will occur if analytical results show a “significant increase” in contamination. Details of what “significant increase” means was requested.
 - o Assurance that equipment is available to mobilize if remediation/earthworks is required.
 - o Plan should clearly state that silt collected by barriers is to be shipped off site and not placed in landfills (for landfills are closed)
 - o Requests that 2011 monitoring data review be circulated for comment.
3. Scientific Investigations and Research – Resolution Island 2004 – Indian and Northern Affairs prepared by Queen's University ASU, May 2, 2005.

- Scientific Investigation reports (parts 1 to 12) provided as a supporting document to the 2004 annual report submitted in February 2005. [2004 Annual report not provided to reviewer.](#)
4. 2005 Annual Report for NWB5RES0308 – Indian and Northern Affairs, February 3, 2006.
- **Fresh Water usage**- licence limits fresh water use to no more than 600 m³/month. 2005 use for June, July, August, and September was 125, 565, 565, and 110, respectively. Fresh water use in compliance with licence. Water was mainly used for sanitary and kitchen use and for fire drills.
 - **Sewage water**- a total of 1110 m³ of sewage generated over June to September 2005. Sewage pumped into a sewage lagoon. [Is lagoon monitored/managed? Has design of lagoon been reviewed?](#)
 - **Waste Discharge**- Solid waste produced during on-site activities (kitchen operations, packaging of materials and supplies) incinerated. Waste generated assuming a 2.5 kg/day/person production rate from June to September 2005 was 9.8 M.T. [Unclear what M.T. stands for- is it million tonnes or mega tonnes? How is incinerator ash managed?](#)
 - **Construction activities for 2005** construction season summarized in INAC January 2006 report by Qikiqtaaluk Corporation and Qikiqtaaluk Environmental Inc. – Summary of Technical Activities -2005- Resolution Island. [Report was to be appended to 2005 Annual Report- not provided to reviewer. Need to obtain report.](#)
 - **Surveillance Network Program**- SNP results presented in Table 1 of 2005 Annual Report and in the document entitled *Resolution Island 2005- Scientific Investigations* prepared by Queen's University Analytical Services Unit. [The latter report was to be appended to 2005 Annual Report- not provided to reviewer. Need to obtain report. QA/QC program was to be appended to 2005 Annual Report- not provided to reviewer. Need to obtain report.](#)
 - **Environmental Monitoring Program**- 2005 details provided in *Resolution Island 2005- Scientific Investigations* prepared by Queen's University ASU. Long term post construction monitoring program to be implemented in 2006. [Need to obtain report.- I think Parts 13 to 18 have been provided to reviewer- other parts required.](#)
 - **Anticipated Work**- a summary of activities was provided.
 - **Studies Requested**- no studies were requested by the Board.
 - **Unauthorized Discharges**- no unauthorized discharges of liquid or solid waste in 2005.
 - **Communications Exercises**- site workers instructed on camp rules and safety requirements. Drills completed for fire emergency and spill prevention. Fire safety and spill contingency plans implemented.
 - **Operations and Maintenance Plan**- no revisions from that submitted in 1998 project Specifications and Environmental Protection Plan.
 - **Contingency Plan Revisions**- Contingency plans initially presented in Specifications and Environmental Protection Plan submitted with permit application. Spill Contingency plan submitted in 1998 and revised in 1999 and resubmitted, and again in 2001 revised and resubmitted.
 - **Trenches and Sumps**- none in 2005.
 - **Clean Up Procedures**- the following 2005 remedial activities were:
 - o Excavation of PCB soil from S1/S4 beach and Valley
 - o Screening and containerization of CEPA soil from S1/S4 beach and valley behind building
 - o Gravel production at Radio Hill and Airstrip borrow pits; completed Tier II landfill construction: protective bottom sand layer; landfilling of contaminated soil; installation of final membrane layers and closure of landfill: three layers of different grades clean fill.
 - o Heavy hydrocarbon soils excavated at Barrel Cache and POL tank area and containerized.
 - o Covered S4 slab building with clean soil; landfilling of non-hazardous waste; incineration of waste POL products; decontamination of fuel contaminated with water; POL tanks dismantled; renovation of training centre; shred drums and debris at beach non-hazardous landfill. [Where is incineration of waste POL products completed? How is ash managed?](#)
 - o Shipment of 339 containers (1,812 M.T.) of PCB contaminated soil to Bennett disposal facility in Quebec.

- **Public Consultation**- held with local organization or residents of Kimmirut, Pangnirtung and Iqaluit in March 2005. Presentations provided.
 - **Concerns Addressed**- not applicable for 2005.
 - **Other Details**- none requested by Board
 - **Inuktitut Executive Summary**- provided.
5. 1BR-RES – Resolution Island DEW Line Clean Up 2005 Annual Report – Indian and Northern Affairs, July 21, 2006.
- States that “report met all requirements set out under Part B, General Conditions, of Nunavut Water Licence NWB5RES0308.

Additional Comments/Questions:

- Need to check licence for SNP locations. Are there more than one? When will these be determined?
- Need to check licence for compliance. Need to obtain licence.
- Have or when will as-builts and construction records been provided for earthworks on site which include several landfills and sewage lagoon, barriers, etc?
- Have previously submitted reports been approved?
- Has there been any correspondence from NWB to Licensee in response to Annual Report status?