Iqaluit, the 27th of March 2001

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RE: NWB Permit No. NWB5RES9803 - Annual Report

LDS CONSULTANTS
experts-conseils

anyone copy in LA pls

On behalf of Qikiqtaaluk Corporation (QC), please find three copies of the annual report prepared to fulfil the General Conditions of the object mentioned above. Other documents that support the annual report are also provided. These are:

- "Summary of 2000 Activities - Resolution Island Project" prepared by QC/LDS.
- "Scientific Investigations - Resolution Island 2000" prepared by Queen's University's ASU.

The annual report is now being translated in Inuktitut. The translation will be provided at a later date by Qikiqtaaluk Corporation.

Should you have any questions regarding the submitted documents, please contact me.

Sincerely,

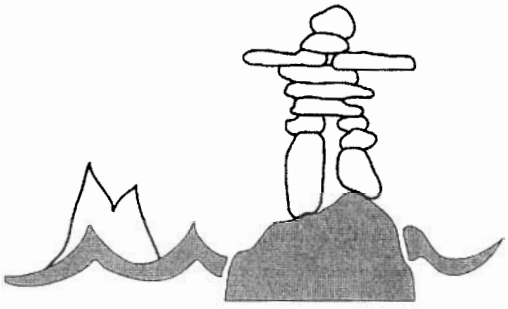
Philippe Simon, P.Eng., Ph.D.
Project engineer

cc. Harry Flaherty, Director, Environmental Services, QC
Scott Mitchell, Contaminated Sites Office, DIAND
John Poland, Analytical Services Unit, Queen's University

ANNUAL REPORT

Water License
Permit No. NWB5RES9803

RESOLUTION ISLAND PROJECT



Resolution Island, Nunavut

submitted to:

Nunavut Water Board
P.O. Box 119
Gjoa Haven, Nunavut, X0E 1J0

by:

Qikiqtaaluk Corporation
P.O. Box 1228
Iqaluit, Nunavut, X0A 0H0

March 2001

EXECUTIVE SUMMARY

Qikiqtaaluk Corporation holds a Water License (NWB5RES9803) from the Nunavut Water Board (NWB) on behalf of DIAND for the Resolution Island Project. The following annual report presents various information concerning the following:

- Fresh Water Quantities
- Sewage Water Quantities
- Waste Discharge
- Summary of Construction Work
- Surveillance Network Program
- Environmental Monitoring Program
- Anticipated Work
- Future Studies
- Unauthorized Discharged
- Communication Exercises
- Operation and Maintenance Plan
- Contingency Plan Revisions
- Trenches and Sumps
- Clean Up Procedures
- Public Consultation

In references to this annual report, several documents are appended. In summary, all conditions of the Water License were complied with.

GENERAL CONDITIONS

As a licensee, Qikiqtaaluk Corporation implemented various procedures to comply with conditions described in the Water License (issued July 31st 1998). related to the Resolution Island Project. The following document summarizes water use data and describes various activities conducted on-site as required by the General Conditions of the Permit.

p. Fresh Water Quantities

For project supply, fresh water was pumped from the water supply lake into a 11 m^3 water truck and delivered to tanks nearby the core camp. Fresh water was mainly used for sanitary and kitchen uses and for fire drills. Fresh water was also used for clean up operations. At the end of the season, the existing steel tanks for camp fresh water supply were replaced with 3 closed top polyethylene reservoirs of 5265 liters in capacity each. The next table presents the monthly and annual quantities of fresh water used for the project. Estimates are based on the average number of truck loads per week.

Period	June	July	August	September
Fresh water used (m^3)	0	343	396	198
Total (m^3)	937			

The permit stipulates that no more than 400 m^3 of fresh water per month be exceeded. This requirement was met.

q. Sewage Water Quantities

Sewage water was discharged from the core camp through a single pipe into a sewage lagoon. Monthly and annual estimates are presented in the following table.

Period	June	July	August	September
Sewage water used (m^3)	0	220	255	128
Total (m^3)	603			

As part of the 2000 work plan, the sewage lagoon was relocated at a farther distance from the camp.

r. Waste Discharge

Solid waste produced during on-site activities was transferred to a covered metal vault outside the core camp on a daily basis and incinerated using a double chambers forced-air Westland incinerator. Solid waste mainly originated from the kitchen operations and from packaging of materials and supplies. The following table presents the monthly and annual quantities of solid waste managed during the 2000 field season at Resolution Island. Estimates are based on the assumption that every person in the camp generated, on average, approximately 2.5 kg of solid waste per day.

Period	June	July	August	September
Waste produced (Tons)	0	2.05	3.75	1.87
Total (Tons)	7.67			

s. Summary of Construction Work

Construction activities conducted at Resolution Island during the 2000 season are summarized in a report submitted to Department of Indian Affairs and Northern Development (DIAND) in November 2000 by Qikiqtaaluk Corporation and LDS Consultants Inc. (see appended document: Summary of 2000 Activities - Resolution Island Project).

t. Surveillance Network Program

Factors that could generate environmental impacts have been evaluated and are found in the document entitled "Environmental Screening Report" submitted with the application. Results of the Surveillance Network Program (SNP) can be found in the document entitled "Scientific Investigations - Resolution Island 2000" prepared by Queen's University, Analytical Services Unit (see appended document). Furthermore, the Quality Assurance (QA) and Quality Control (QC) program used for the SNP is also included in this appended document.

u. Environmental Monitoring Program

Details of the Environmental Monitoring Program conducted during the 2000 season are described in the document entitled "Scientific Investigations - Resolution Island 2000" prepared by Queen's University, Analytical Services Unit (see appended document). Furthermore, DIAND conducted a Water Licence Inspection where water samples were collected. The inspection report is found in appendix 5 of the appended report "Summary of 2000 Activities - Resolution Island Project" prepared by Qikiqtaaluk Corporation and LDS Consultants Inc.. Recommendations found in this report will be implement next season.

v. Anticipated Work

The following list describes the tasks planned during the 2001 field season:

1.Open roads / set up camp
- 1.1. remove snow, repair roads
- 1.2. camp start up and maintenance

2.Dump excavation / PCB removal
- 2.1.Soil excavation at S1/S4
  - stockpile PCB contaminated soil < 50 ppm inside the contaminated area
  - operate the contaminated screening plant
  - remove PCB CEPA soil from former buildings and road areas
  - construct temporary road to access the S1/S4 valley
  - remove PCB CEPA soil from the S1/S4 valley
  - treat/manage potentially contaminated water (vacuum truck)
- 2.2.Metal debris management
  - establish and implement cleaning procedures for non CEPA metal debris for further disposal into a non-hazardous waste landfill
- 2.3.Trial barrier installation
  - construct a silt fence structure
  - install a barrier in the furniture dump drainage pathway
- 2.4.Tier II soil/debris
  - develop a plan to move Tier II soils (select a location, haul material)
- 2.5.Airstrip Dump / Beach Dump
  - investigate the airstrip dump (geophysical) to determine the depth of waste
  - address the beach dump (excavate, sort and dispose waste from the landfill)
- 2.6.Battery Dump
  - remediate dump area / containerize Zinc contaminated batteries/debris

3.POL/Barrel handling / NH landfill
- 3.1.Drain POL tanks and lines
  - transfer fuel from old beach tanks and POL lines into sound barrels
- 3.2.Incinerate POL products
  - haul barrels containing POL products stockpiled in various caches to the incineration platform (maintenance building area)
  - operate the transfer station (settling tank/diluting) and incinerators
- 3.3.Consolidate POL products to be shipped south
  - manage POL products in barrels that cannot be incinerated and prepare for eventual shipment
  - color code barrel and install classification placards
- 3.4.Shred barrels and metallic debris
  - haul empty barrels and debris to beach non-hazardous landfill area
  - shred and landfill non-hazardous waste

3.5.Close non-hazardous waste landfill
- close sections of the beach and summit non-hazardous landfill as material is being placed and compacted

3.6.Treat contaminated water
- Phenol contaminated water from old POL tanks

4.Sealift

4.1.Selected containers shipping/management
- stage/handle containers
- stage/handle other equipment

4.2.Off-site CEPA soil shipping
- coordinate with contractor(s)

5.CEPA soil Containerization

5.1.Setup/Operate the boxing platform
- develop and implement procedures
- implement tracking system

5.2.Haul/Stage filled containers at the beach
- select and prepare beach staging platform

6.Other Tasks

6.1.Complete training center
- complete building set up
- set up a training area for outside instructions

6.2.Complete Main PCB Storage Facility electrical work
- complete wiring and generator installation for lighting

6.3.Implement drinking water alternatives
- set up and implement chemical addition (pH control)

6.4.Recycle copper
- collect material/debris containing copper/aluminum

6.5.Site facilities/Camp improvements
- setup old lab and install medic/hospital facility
- convert the radome building into the project site's office
- convert remaining dormitories into an emergency shelter
- install new women washrooms inside main camp
- upgrade the mud room
- convert beach and maintenance area trailers into washroom/coffee room areas
- set up a non-smoking TV room

h. Future Studies

The Nunavut Impact Review Board (NIRB) has conducted public hearing in Iqaluit and Kimmirut (Sep./Oct. 2000) based on an Environmental Impact Statement (EIS) prepared by DIAND to evaluate options for the treatment/transportation/disposal of PCB contaminated soils at Resolution Island. DIAND presented their preferred option which consists in the shipping of all CEPA soil to

an off-site registered destruction facility (i.e. Bennett Environmental in St-Ambroise Quebec).

NIRB has submitted their recommendations to the DIAND's Minister. The Minister has not yet respond to these recommendations which are also not yet public. Any future studies depend on the Minister's response to NIRB recommendations.

i. Unauthorized Discharged

No unauthorized discharge of liquid/solid waste was observed and/or recorded during the 2000 field season at Resolution Island.

j. Communication Exercises

All persons that worked on-site (including sub-contractors) were instructed on camp rules and safety requirements. Drills were conducted for fire emergency and spill prevention events. Fire safety and spill contingency plans were implemented.

k. Operation and Maintenance Plan

Details of the O&M plan were initially presented in the project's Specifications and project's Environmental Protection Plan submitted with the application. No revisions to the initial plan were implemented.

l. Contingency Plan Revisions

Details of the contingency plan were initially presented in the project's Specifications and project's Environmental Protection Plan submitted with the application. A Spill Contingency plan was submitted to NWB in September 1998 and was revised at the end of the 1999 field season and resubmitted. No new revisions were prepared in 2000.

m. Trenches and Sumps

Locations of new trenches are indicated in the as-built drawings attached to the document entitled Resolution Island Project - Summary of 2000 Activities (see appended document).

n. Clean Up Procedures

During the 2000 season, clean up procedures included:

- Demolish PCB contaminated building and containerize CEPA material
- Complete clean up of the Furniture dump (i.e. removal/management of CEPA, Tier II and Tier I PCB contaminated soil from dump and drainage areas and from PCB contaminated debris)
- Remove CEPA soil within the S1/S4 building area
- Reorganize PCB and other hazardous waste storage facilities.
- Stockpile PCB CEPA contaminated soil inside the former maintenance building
- Set up and operate a drum staging/sorting/pumping/washing station
- Manage an oil/water separation/treatment system
- Incinerate waste oil
- Drain old fuel lines

Details of these activities are summarized in a report submitted to Department of Indian Affairs and Northern Development (DIAND) in November 2000 by Qikiqtaaluk Corporation and LDS Consultants Inc. (see appended document: Summary of 2000 Activities - Resolution Island Project).

o. Public Consultation

Public consultations were held in Kimmirut in October 2000 The following provides the minutes recorded during the 2000 community consultations.

Resolution Island Project **Community Consultation: - Kimmirut**		
Date: October 9th, 2000 8:10 PM	**Presenting the project:** Chris Giroux (CG) Harry Flaherty (HF) - Chair Carole Mills (CM) Philippe Simon (PS) - Minutes	**Location:** Community Hall, Kimmirut

Intervener	**Issue**
	Presentation to Community members (approximately 25 people)
HF	Introduces the consultation and the team.
CM	Thanks people for being here. Mentions that tonight is about the big project (Resolution Island Project), different from what is scheduled tomorrow with NIRB (disposal of PCB >50 ppm contaminated soil). Presents a brief history: where Resolution Island is located, earlier assessment (1990's) showing high levels of contaminants (i.e. PCBs). The Resolution Island Project started three

	(3) years ago and DIAND joined with Qikiqtaaluk Corporation to conduct the work.
HF	Summarizes some aspects of the Project over the last three years. People from Iqaluit and Kimmirut are most involved. Field season is from mid June to mid September. QC planned to come in Kimmirut before the field season for consultation but the schedule was too tight. Through the project, people from Iqaluit and Kimmirut are being trained. There are many polar bears on the Island.
PS	Summarizes the main activities conducted last summer: -demolish buildings that were contaminated -remove/clean a dump that contained electrical equipment and PCBs -collect scattered old drums spread around the site and burn/incinerate fuel/oil -conduct many camp operations (like this summer we had to replace the water drinking tanks) Many heavy equipment and tools are available on the Island. These are used to perform the work and provide training in heavy equipment and trades such as carpentry, welding, electrical.
HF	Summarizes the previous seasons: 1997: get the equipment onsite, organize the camp 1998: proceed with clean up activities 1999: ship debris and hazardous waste offsite, continue clean up Presents an overhead showing the summit area: shows the camp, building that were demolished. Mentions that health and safety is a priority. Presents an overhead showing the site layout: shows the location of the airstrip, where new roads where constructed. Presents an overhead showing barrels of PCBs: worked last year to remove those from the island. Contaminated soils are now being excavated. Presents an overhead showing transformers: these were found near the camp. They are now crated and ready to be shipped south. Presents an overhead showing PCB liquid tranfer from transformers to overpack drums: training is provided and safety equipment are mandatory. Presents an overhead showing contaminated building demolition: building were demolished but floor were packaged to be shipped. The area was restricted, safety procedures were followed. Showed that these building were well constructed and difficult to tear down. Presents overheads showing the Furniture dump (before and after): this dump contained electrical equipment (transformers). The whole area in contact with liquid (PCBs) had to be excavated. Three (3) different types of contaminated soil levels were handled and managed.

	Should be mentioned that three ships came to supply the island (one per year) over the last three years.
HF	The project was summarized. We started with 19 employees, last year we had 60 Inuit involved. This year 73 persons were employed. We have more employees and more training. In three years, a lot of funding was given to this project. Some people from Kimmirut received training and this is good in the long run.
	5-minute break at 8:50 pm
HF	Thanks people for being here. Regarding training, formal training with Certificates was provided: 1-St-John Ambulance, CPR level 1; 2-Hazardous Operation and Emergency Response. After this summer, 5 people from Kimmirut will get training Certificates. Matthew Tikivik and Ooloopie Killiktee (employees living in Kimmirut, working on site last summer and present at the consultation) are called to get their Certificates. Asks people is they have any question concerning the project.
	Question period
Q1	Q: With the three different types of gravel to excavate, which is the more difficult to work with? A: PS- The three type are based on the level (amount) of PCBs. We have more requirements and procedures to implement for the most contaminated soil.
Q2	Q: PCBs went to the ocean. How and to what extent they affect us? A: CM- PCBs won't stay in water, they will go in the food chain, from sculpins, to fish and marine mammals. That's how they can affect people. PCBs in country food mainly come from international atmospheric long range transport but we still need to stop local sources. Sculpins near the site were found to have higher PCB level than normal.
Q3	Q: For food chain, did you studied to know how PCBs go from small to larger animal? A: CM- Many studies were done showing that contaminants accumulate in higher levels of the food chain.

Q4	Q: We have seen that workers use white suits and masks to work. What about polar bears? A: CM- That's why we are cleaning the Island, to make sure that wildlife, not just marine animals, are not exposed to these contaminants. HF- In July, we have seen 30 polar bears but they don't normally climb up where most PCBs are. They use a migration path which is outside the contaminated areas.
Q5	Q: How long to go with this project? A: HF- Three years to go, but because of funding, we are not sure.
Q5	Q: Do you have an idea when PCBs started going into the ocean? A: CM- By 1987, we found it. For water, it probably started a couple of years after the site started to be used by the army.
Q6	Q: Are you going to remove all the buildings? A: CM- The purpose of the project is to bring the site into legal compliance. The project cost is about $35M. DIAND does not have money for everything, so some buildings (neither contaminated nor unsafe) will remain.
Q7	Q: Where do you put all the material like transformers? A: HF- Containers are used for soil. Transformers are crated and placed in sea cans (like those shipped last year). There are lots of old barrels everywhere. Those are emptied, washed, crushed and placed in landfill.
	Closing remarks
CM	What we've presented is the big project with excavation, containerization, monitoring, training and scientific activities. Tomorrow, NIRB will review the disposal project. DIAND is proposing that all PCB contaminated soil (>50 ppm) be shipped south and that no experimental technologies be used onsite. NIRB's hearings start at 10:00AM.
Q8	Q: What can the people of Kimmirut do to support the option of shipping PCBs away? A: CM- Come tomorrow and tell NIRB that's what you want.

HF	NIRB's public hearings. This proposed project has an impact on Nunavut. Tomorrow is a good time to express your opinion and concerns.
	Consultation adjourned 9:30 pm