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April 14, 2003

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Dear Sir or Madam:

**Re: Kiggavik / Sissons Projects – 2003 Plans**

Please find attached our "2003 Clean-Up Proposal" document which outlines our plans for this summer. Licences and permits affected by this proposal are:

• DIAND Land Use Permit	N200J0040	Expiring:	21 September 2004
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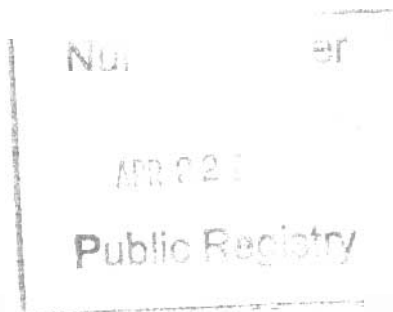
Sincerely,

Cathy Padfield  
Land Administrator

Encl.  
KIGSIS-CP.03-52.cp

cc. K. Wheatley, Senior Geologist (*via email*)

020414NWB2SIS plans - ILAE



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**COGEMA Resources Inc.**

**KIGGAVIK / SISSONS PROJECTS**

**2003 CLEAN-UP PROPOSAL**

## 1 INTRODUCTION

The Kiggavik Sissons Project is a uranium surface exploration project located approximately 80 km west of Baker Lake, in the Kivalliq Region of Nunavut (Figure 1). The project is made of two large groups of mining leases and mineral claims subdivided in two projects, Kiggavik to the north and Sissons, the larger project, to the south. The earliest lease expiry date is 2009. The project includes a camp, office, core shack and drill core storage at the Kiggavik site as well as core shack and core storage at the Andrew Lake site about 17 km to the southwest, in the Sissons Project. There is also a small core storage area at a former camp at Pointer Lake, near the Kiggavik site. Exploration drilling has not taken place at the project since the end of the 1997 field season.

COGEMA Resources Inc. (COGEMA) is the majority owner and operator of the property. This report describes the proposed cleanup plan by COGEMA.

## 2 PROJECT HISTORY AND STATUS

### 2.1 History

A previous operator, Urangesellschaft Canada Ltd. (UGC), started this uranium exploration project nearly 30 years ago. Several orebodies were discovered during the 1970's and 1980's. The original requirement for a removal licence was thus triggered when the amount of uranium contained in the drill cores for a year exceeded the 10 kg amount specified in the Atomic Energy Control Board (AECB) Uranium and Thorium Mining Regulations(1988, AECB-RL-157-0). Some engineering and environmental studies were done by UGC, but these studies did not lead to a development decision. COGEMA became the project operator in 1993, when our parent company purchased a majority interest in Urangesellschaft's world-wide uranium interests, including UGC. The overall resources for the project are in the order of 40,000 tonnes of uranium (about 100 million pounds of  $U_3O_8$ ) but at an average grade of less than 0.5%.

### 2.2 Status

#### 2.2.1 Technical Status

Exploration carried out by COGEMA between 1993 and 1997 focussed on:

- extending the drill grids to ensure that they completely covered the Andrew Lake and End Grid orebodies
- checking additional targets on the Sissons project.

In total 100 drillholes were completed, but 1993 was the last year when 10 kg of uranium or more was recovered.

As usual the Kiggavik camp and Andrew Lake site were prepared for the winter conditions at the end of the 1997 field season. It was hoped to come back for the 1998 field season but this was not possible. A prefeasibility study finished in November 1997 showed the project is not economic at current uranium prices. Since 1998, COGEMA has had no plans to resume exploration activities.

### **2.2.2 Regulatory Status**

The AECB removal license had no expiry date, and had been in a ceased activity (care and maintenance) status since the end of the 1997 field program. The Nuclear Safety and Control Act replaced the Atomic Energy Control Act in May 2000. An application to revoke the AECB removal license was made by COGEMA on the basis that activities currently being carried out on this project are surface exploration activities which are exempt from the CNSC regulatory framework that is now applicable. A commission considered this application at a public hearing on April 18, 2002, and a decision was made to revoke the license effective September 20, 2002.

### **2.3 Future Project Plans**

COGEMA intends to carry out a number of clean-up activities in the immediate future. These will put the core storage facilities, and those camp facilities that remain following the cleanup, into a low maintenance condition until work resumes on the property.

Future project plans are summarized as follows:

- No exploration is currently being done and none is currently planned at Kiggavik-Sissons
- Site will be maintained in a care and maintenance mode
- A CNSC licence is not required for this activity
- There are no current plans for further development.

Environmental assessment and licensing, including CNSC requirements, will be necessary if and when further development of this project occurs. An extensive public consultation program would be a key advance activity to any future forward movement of this project.

COGEMA is not able at this time, to forecast when, or even if, further exploration or development will occur.

### 3 CLEAN-UP ACTIVITIES

In addition to buildings and facilities at each of the exploration locations, there are numerous other issues that require some degree of clean-up. Photos contained within Appendix 1, taken during the August 2002 site inspection, provide illustrations of many of these features.

#### 3.1 Kiggavik Area

**The drill area** – the drill grid is located immediately east of the camp area. The summer 2002 survey showed that elevated gamma readings  $> 1\mu\text{Sv/hr}$  were not related to drilling activity. Therefore remedial work will be not dictated by radiological concerns. Steel casing will be cut off at ground level. Drill steel will be disposed in the two existing trenches excavated within the grid. These are areas where the uranium mineralization is exposed at surface and radioactivity measurements are naturally elevated. Following placement of materials (radioactive cuttings from around mineralized drill holes and protruding drill stems), the trenches will be back-filled using the same material that was blasted out of the trenches. Some of the markers on the grid (trig points) will remain for future reference, as well as the wooden pegs used to mark the grids.

**Core boxes at the camp site** – core boxes that contain radioactive materials exceeding the threshold value ( $1\mu\text{Sv/hr}$ ) will be moved and stored in a new separate core compound and then fenced with appropriate signs, including translation in Inutiktut. All core racks will be repaired and secured as much as possible in the absence of heavy equipment.

**Miscellaneous campsite - empty drums and propane bottles** will be collected and secured for removal to Baker Lake. A few **drums of stove oil and Jet Fuel B** will remain on site for later use and for safety purposes. The **pieces of the dismantled communication tower** will be used in the construction of the new core compound. **Fuel-contaminated soil** near the electrical generator building, at the stove oil supply sites behind each cabin and around the fuel cache sites, will be collected in drums and moved to the Baker Lake landfill. **Miscellaneous combustible debris** which has been blown around and adjacent to the camp site will be collected and burnt. **Cabins** that are in bad shape will be either dismantled and used for packaging, or destroyed and burnt. COGEMA will keep some of the cabins for later use, and some will be offered to the local residents for personal use and will be removed from the site.

#### 3.2 Andrew Lake Area

The radiometric grid survey of the mineralized holes in the drilling area will be completed. Radioactive cuttings identified by the survey will be collected, placed in drums and transported to the trenches on the Kiggavik site for final disposal. As with the Kiggavik area, drill steel casing, if any, will be cut off at ground level and transported for disposal in the trenches.

**Radioactive core** ( $> 1\mu\text{Sv/hr}$ ) identified in the existing core racks will be separated and transported to the Kiggavik newly fenced area for storage.

All remaining empty **drums, stove oil and Jet Fuel B** will be moved to Kiggavik in preparation for final transport to Baker Lake. Remaining **equipment and debris** will also be collected, burned where possible or prepared for transport to Baker Lake.

### **3.3 End Grid**

This grid will be surveyed like the Andrew Lake grid and any radioactive cuttings around the collar of the mineralized drill sites will be cleaned, with cuttings put in containers and moved to Kiggavik trenches, along with any protruding drill steel. The drillers shack will be dismantled and burned. Drill materials within the shack will be brought back to Baker Lake for disposal.

Any potential waste material will be removed (pails, drums, pieces of equipment) to Kiggavik and then to Baker Lake.

The area surrounding the grid will be flown and debris, if any, will be collected and properly disposed by either burning, depositing in the trenches at Kiggavik, or brought to Baker Lake.

### **3.4 Pointer Lake Core Storage**

There is no radioactive core in this area. Wooden debris will be disposed of by burning.

### **3.5 Other Locations**

Various areas not included above, but where drilling took place over the years, will be flown and inspected. The following actions will be taken as required:

- Any protruding steel casing will be cut off at ground level and transported to the Kiggavik trenches for final disposal.
- Radioactive cuttings (highly improbable in most cases) will be identified by a gamma survey and collected for Kiggavik trench disposal.
- Miscellaneous debris / pieces of equipment will be collected and consolidated at Kiggavik site for eventual transport and disposal at the Baker Lake landfill.
- Some loose drums were already sent to the Kiggavik camp in August; there may be some more remaining.

### **3.6 Conclusions**

At the end of the 2003 summer program, the number of buildings will have been reduced and some equipment put in boxes and be ready to be moved to Baker Lake. It is proposed to leave a few drums of stove oil and Jet B fuel at Sissons/Andrew Lake and at the Kiggavik camp for safety purposes. Radioactive cores will be stored in a single place (at Kiggavik), within a fenced boundary with signs identifying the radioactivity.

After this partial decommissioning, the need for maintenance at the Andrew Lake site will be minimal. The remaining solitary building should not constitute a problem for safety or aesthetics. This will be different for Kiggavik where the task is much more involved

## **4 SUMMARY OF CLEAN-UP PLANS**

### **4.1 Immediate Clean-Up**

COGEMA is planning an initial clean-up of the sites for the summer of 2003. The following is a description of the work that is intended.

#### **4.1.1 Kiggavik Site** (Photo 1)

- Separate the core to remove those boxes which contain mineralization yielding a gamma reading of 1  $\mu\text{Sv/hr}$  or greater. Relocate these core boxes to a new fenced core rack compound to be constructed near the existing site and post signs warning of a radiological field.
- Repair, whenever possible, the remaining core racks (photo 3) such that they will remain until final decommissioning.
- Cut off all remaining drill steel (photo 4) within the drill grid at ground level.
- Complete trench filling using the steel pipe cut from protruding drill holes, contaminated cuttings from around the collars of the mineralized holes, and the native material initially blasted from the trenches (photos 5 and 6).
- Prepare (by stacking and packing) fuel, hazardous materials, equipment, empty drums and other metallic materials for transport to Baker Lake at the end of the upcoming winter when soft-tired tundra trucks can be used. Clean up, organize and secure the equipment to be left on site in the event that further field work may be required at some time in the future.
- Reduce the number of buildings at the site by burning those structures (or using the materials) that will not be required any further or are damaged beyond repair (see Figure 2a). An offer will be made to Baker Lake residents to take the buildings for free, as long as they are moved away from the camp site by the end of the winter.
- Retain a few drums of stove oil within one of the remaining buildings to allow for the final clean-up and burning of buildings and wooden structures. Retain a few drums of Jet Fuel B for helicopter use during final decommissioning. Some drums will also be kept for safety purposes.
- The wooden walkways (photo 2) will be maintained between the buildings that will be kept. The remaining walkways will be dismantled and will be burned or used for packaging.

#### **4.1.2 Andrew Lake Site**

- Separate the core to remove those boxes which contain mineralization yielding a gamma reading of 1  $\mu\text{Sv/hr}$  or greater. Relocate these core boxes to the new fenced core rack compound constructed at the Kiggavik site.
- Repair the remaining non-radioactive core racks such that they will be secure until final decommissioning.
- Complete the radiological survey within the drilling area and collect contaminated cuttings (photo 9 – not necessarily radioactive) from drill holes where the radiological assessment indicated gamma readings in excess of 1  $\mu\text{Sv/hr}$  at 1 metre above the ground surface. Place this material in drums for transport to the Kiggavik trenches where it will be disposed. The empty drums will be scanned for contamination, cleaned and brought back to Baker Lake for disposal. COGEMA Resources Inc.'s intention is to reduce the level of radioactivity at the collars of mineralized holes. This can be done by the removal method, or by shovelling clean dirt on top of the collar areas until the readings drop below 1  $\mu\text{Sv/hr}$  (authorization will be required for either method from the CNSC).
- Cut off any potential drill steel at ground level and dispose of the steel in the Kiggavik trenches.
- Prepare (by stacking and packing) fuel, hazardous materials, equipment, calcium chloride, empty drums and other metallic materials (photo 8) for transport to Baker Lake at the end of the upcoming winter when soft-tired tundra trucks can be used. Retain a drum of stove oil within the core shack to allow for the final burning of the core shack.
- Burn all buildings and wooden structures (or otherwise use the material), with exception of the core shack (see Figure 2b and photo 7).

#### **4.1.3 Other Locations**

##### **4.1.3.1 End Grid Drillholes**

- A radiological survey of the grid identified no readings >1  $\mu\text{Sv/hr}$
- Proceed as for Andrew Lake grid with any potential steel casing, debris, etc. to complete the cleanup
- After the above tasks are carried out, no further work will be required in this area.

##### **4.1.3.2 Pointer Lake Core Storage**

- The initial survey has confirmed that no core boxes contain core exceeding 1  $\mu\text{Sv/hr}$
- Collect and burn all surplus wooden materials



#### 4.1.3.3 *Other Locations*

- Fly over the areas not listed above and check for abandoned materials and waste. Collect and transport non-burnable waste to Kiggavik camp and then to the Baker Lake landfill.

### 4.2 **Conceptual Decommissioning Plan**

The program planned for 2003 will complete the majority of outstanding work at the site. However, there will be a few buildings, drill core and some equipment remaining on the site in the event that a further program may be considered at a later date.

Financial assurances are currently in place with the Kivalliq Inuit Association (\$82,780) and Indian and Northern Affairs Canada (\$74,720). These financial assurances were calculated based on remediation of the site prior to the work to be conducted in 2003 and, after that work is completed, will be far in excess of the funding actually required to complete the clean up. However, COGEMA is prepared to retain these financial assurances until final clean up is complete to ensure the above regulators are suitably indemnified from any future liability with regard to the Kiggavik Sissons Project.

## 5. **LOGISTICS ASSOCIATED WITH THE 2003 CLEAN-UP**

### 5.1 **Personnel**

COGEMA Resources Inc. personnel on site will be Jean-Charles Nadeau (Exploration Logistics Officer) and Darren Spelay (Radiation Protection Specialist). The geologist in charge of the project is Ken Wheatley (Senior Geologist). Other personnel is currently dependent on who gets the tender for the clean-up work. There will be three companies who will receive the bid.

These companies will have to provide a power supply, heating sources for the kitchen and the sleeping quarters, cooking, refrigeration and freezer equipment. They will also have to supply the equipment for cutting the drill steel and completing the clean-up work.

### 5.2 **Timing**

The clean-up work is currently scheduled for July of 2003, and should last approximately two to three weeks.

### 5.3 **Logistics**

The existing cabins and kitchen at Kiggavik will be used for the CRI personnel and contractors. A helicopter will be borrowed from Cumberland Resources on an intermittent basis for transportation and slinging of materials. Water will be retrieved from the small lake north of the

camp (see photo 1), and treated before consumption. Chemical toilets will be rented for the duration of the clean-up. Grey water will be released onto the ground under the kitchen. Supplies will be flown in from Baker Lake on a regular basis, with enough food left in camp at any time to survive several weather days. Communications will be carried out by means of satellite phone. CRI personnel are certified in First Aid, and it will be requested that the contractor employees will be trained as well.

#### **5.4 Authorization**

Approvals or authorization will be sought for the following items:

a) authorization by the municipality of Baker Lake to use the Baker Lake dump to dispose the fuel-contaminated soil and empty fuel drums, and any non-burnable scrap materials or chemicals

b) authorization from the KIA to give away selected buildings to be taken off site for personal or municipal use

c) authorization from the CNSC to dispose the radioactive cuttings collected from the mineralized drill hole collars into the trenches before being back-filled by the original material. Authorization will be needed to transport the radioactive core from Andrew Lake to the Kiggavik camp.

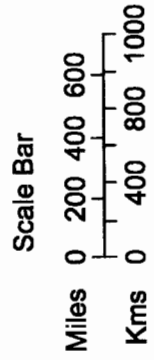
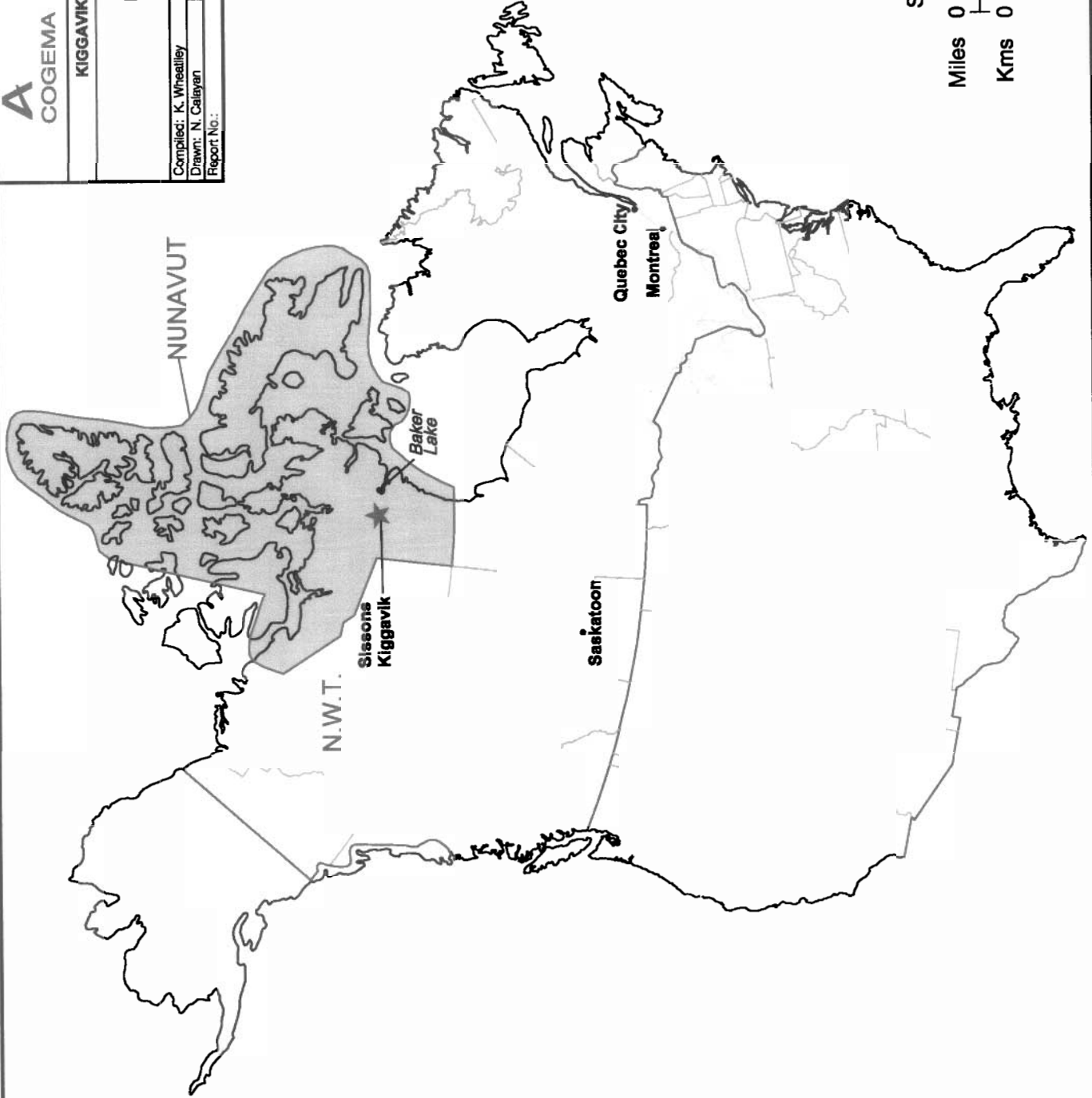
d) authorization from DIAND to dispose the excess steel drill casing in the trenches before being back-filled by the original material.

e) authorization from the KIA, DIAND and the WCB to proceed with the clean-up. The Nunavut Impact Review Board and the Nunavut Water Board will be notified that this work will be taking place.

**KIGGAVIK / SISSONS PROJECTS**

**Location Map**

Compiled: K. Whealley	Scale:
Drawn: N. Callahan	Date: April 10, 2003
Report No.:	File Name: 0351-818
	Figure No.: 1

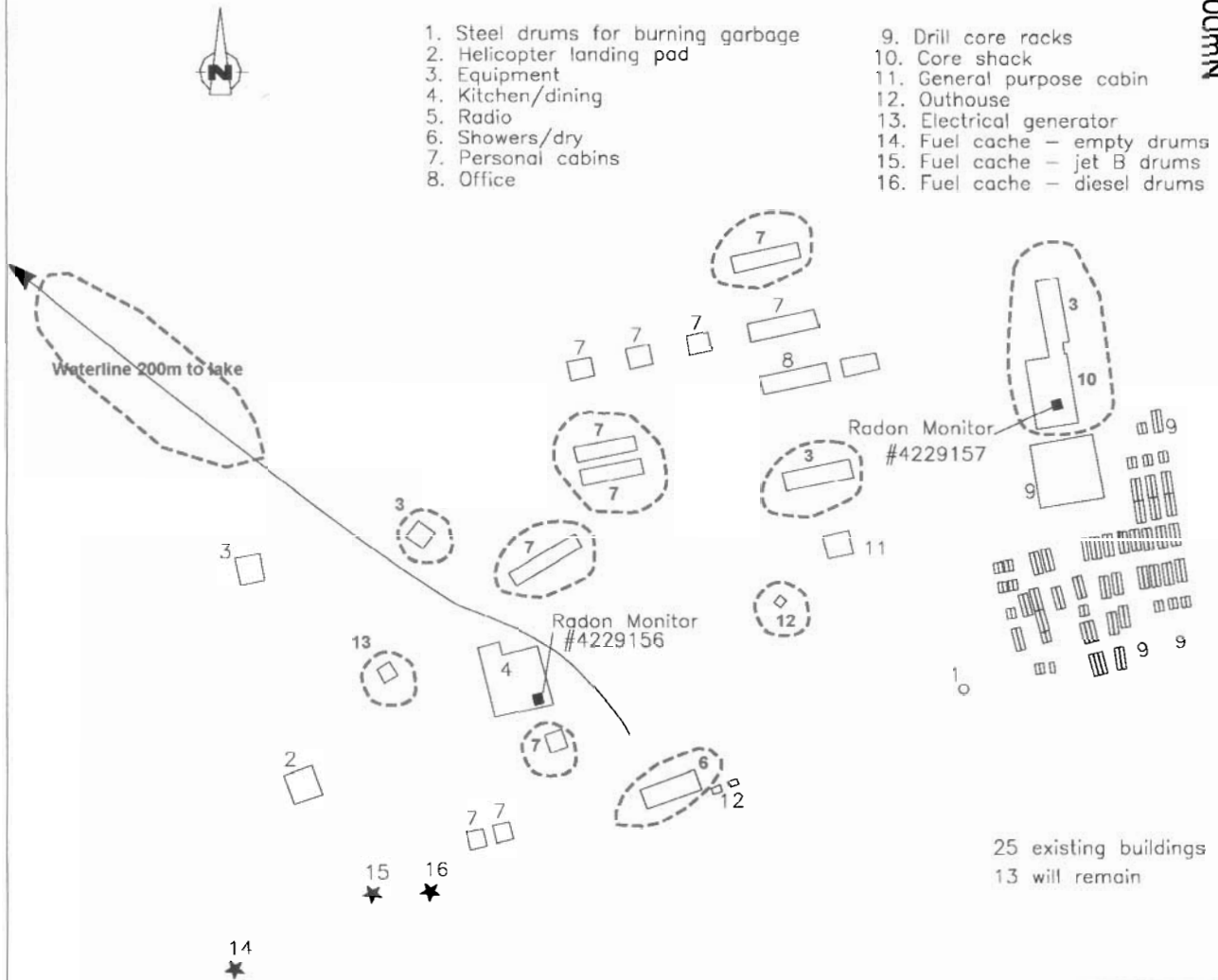


**Fig. 2a**

**Kiggavik Camp**

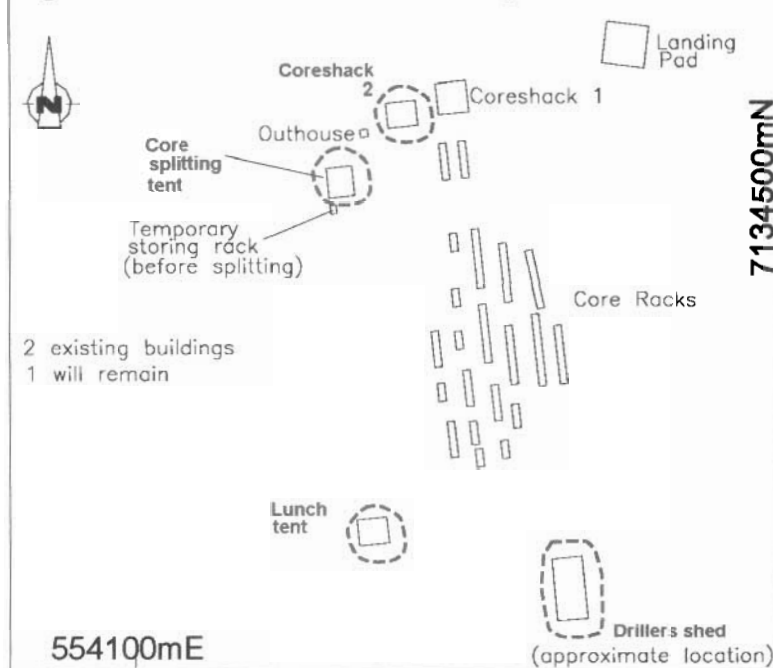
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**Fig. 2b**

**Andrew Lake Camp**



**KIGGAVIK / SISSONS AREA  
Partial Decommissioning**

**Legend**

--- To be dismantled

FULL SIZE SCALE (m)



1:1 500

**Fig. 2**



Photo 1: Kiggavik Camp



Photo 2: Kiggavik Kitchen and Boardwalk



Photo 3: Kiggavik Core Racks



Photo 4: Protruding drill stem at Kiggavik





Photo 5: Trench 1 at Kiggavik



Photo 6: Trench 2 at Kiggavik



Photo 7: Core Shack at Andrew lake



Photo 8: Fuel storage and Shipping Stands at Andrew Lake





Photo 9: Drill Cuttings at Andrew Lake

## Confirmation Report - Memory Send

Time : Apr-23-2003 10:44am  
Tel line : 08679832732  
Name : NPC

Job number : 540  
Date : Apr-23 10:29am  
To : 08678739052-----47608463572230  
Document pages : 017  
Start time : Apr-23 10:29am  
End time : Apr-23 10:44am  
Pages sent : 017  
Status : OK

Job number : 540

\*\*\* SEND SUCCESSFUL \*\*\*

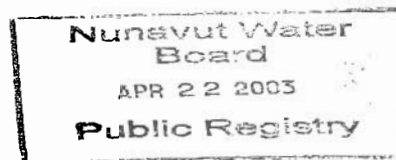


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Land Administrator

Encl.  
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cc. K. Wheatley, Senior Geologist (via email)

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Winner: Environment