Resolution Island Remediation and Clean-up Plan - 2003

The proposed cleanup plan will remediate the site according to a combination of CCME guidelines and DEW line clean up criteria and protocols. The use of these guidelines and protocols is consistent with INAC Contaminated Sites Management Framework.

The major activity required is the excavation of PCB contaminated soils. The excavation of CEPA (concentration >50 ppm PCB) soils, which were a major part of the legal compliance project, requires completion. The largest volume of CEPA soil that still needs to be excavated is at the S1/S4 beach. This area is not easy to access and the soils are on a very steep incline that will make excavation difficult. Some soil will have to be left because of the extreme hazard involved in the excavation. Smaller amounts of CEPA soil still need to be excavated from the S1/S4 valley, the DND helipad, and the airstrip dump. All CEPA soils will be containerized and shipped south for destruction.

The Tier II and Tier I soils were not included in the initial legal compliance project. Large volumes of these soils (*i.e.*, approximately 20,000 m³) will be excavated in this project. Most soils are PCB contaminated but some metal contaminated soils (*i.e.*, lead, mercury, and cobalt) will also be excavated and landfilled on site. The Tier II soils will be placed in an engineered lined landfill specifically designed for the Arctic. The landfill will be located at the site of the current Main PCB storage facility. Construction of this landfill will therefore require removal of the PCB soil presently in the facility and demolition of the building. Large amounts of gravel and clean fill will be required to cover the landfill and build the required berms. The Tier I soils will be placed in non-hazardous landfills as intermediate fill. Small amounts of inaccessible Tier I soils will be left in place without being covered. Because all contaminated soil cannot be removed from crevices in rock, barriers will be designed and installed in the S1/S4 drainage pathway (*i.e.*, valley and beach areas).

In addition to the excavation of soils described above, some remaining work on dumps is required. The largest of these tasks will be the remediation of the airstrip dump. CEPA soil and visible drums containing petroleum products will be removed prior to covering the entire dump with clean fill. Minor excavation of non-hazardous debris and Tier I and II soils will be required at the two beach dumps, the maintenance dump, the PCL dump and the north slope dump. Soils contaminated by heavy petroleum hydrocarbons (*i.e.*, lubricating oil and grease) will be excavated, and disposed on site or shipped off-site. Soils contaminated with lighter petroleum products (*i.e.*, diesel fuel and gasoline) are to be identified, excavated and landfarmed. Some of the other tasks that are included in the new remediation plan are the incineration and shipping south of remaining drum contents and remediation of an Asbestos lined water line.

Table 1 below summarizes the major activities required to complete the new remediation plan.

Table 1: Summary of Major Tasks in the New Remediation Plan

| Area | Materials | | | Soil (m ³) | | |
|---|---|---|-------|------------------------|---------------------|--|
| | Non-Hazardous | Hazardous | CEPAª | Tier II ^b | Tier I ^c | |
| S1/S4 Buildings and Valley | Install barriers; Remove Tier I and II debris | Remove S4 building floor | 300 | 6,000 | 5,000 | |
| Core Camp and Vicinity (DND Helipad, PCL and North Slope Dumps) | Close two landfills; Demolish/move core camp | Remove old barrier material for off site disposal | 10 | 255 | 200 | |
| Maintenance Area | Demolish maintenance buildings; Remove debris from toe of dump | Containerise CEPA soil in storage facility; Construct Tier II landfill; Excavate fuel contaminated soil | - | 50 | - | |
| Airstrip | Barrels | Remediate Dump | 50 | - | - | |
| Beach Area | Excavate remaining debris in dumps; Close non-hazardous landfill | Excavate oily soil from barrel cache valley and cotton grass area and fuel contaminated soil from near POL tanks | - | 500 | 300 | |
| S1/S4 Beach Area | Build road and stream crossing; Install barrier | | 2,100 | 3,000 | 4,000 | |
| Other | Gravel production; Remove Asbestos from water line | Incinerate/ship waste grease/fuel from remaining drums | | | | |

 ^a CEPA soils to be placed in steel conical containers and shipped off site;
 ^b Tier II soil to be placed in engineered, lined Tier II landfill;
 ^c Tier I soils to be placed in non-hazardous landfills or used in Tier II landfill construction.

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