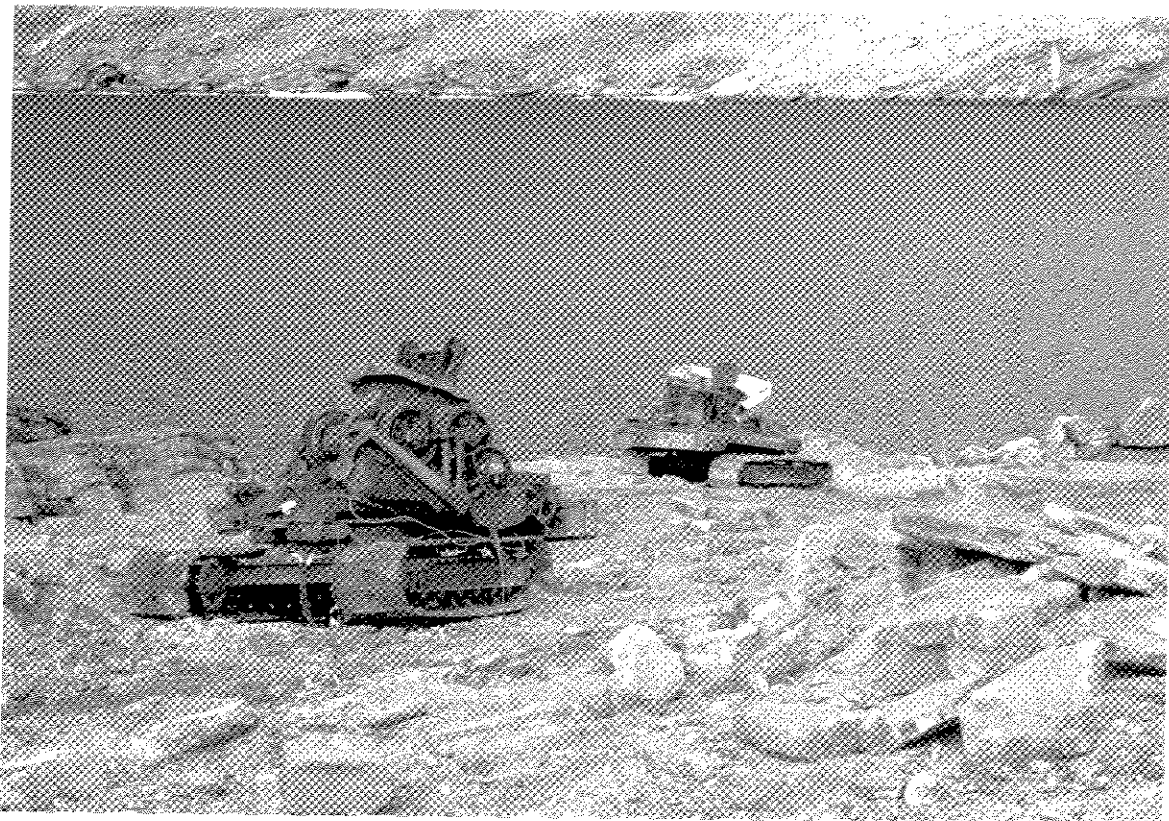




Photograph II-21: Excavating Metal Contaminated Soils at the Beach Dump



Photograph II-22: Two Large Old Pieces of Equipment Were All that Remained at the Main Beach Dump After Contaminated Soil Was Excavated to Bedrock

**Table II-7: PCB and Metal Concentrations in Soil Samples Collected Prior to
Excavation at the Beach Dump**

Sample (prefix RI05-)	Grid Number	PCBs	Copper	Lead	Zinc
		ppm	ppm	ppm	ppm
102	T	<1.0	<50	<50	140
103	R	<1.0	127	143	317
104	M	3.7	76	240	185
105	K	2.4	59	404	386
106	I	<1.0	71	<50	67
107	E	<1.0	370	140	646
108	B	<1.0	59	284	219
113	T	1.2	80	67	108
114	Q	<1.0	140	210	139
115	N	1.3	66	325	299
116	K	1.1	<50	208	180
117	L	1.1	300	2570	407

**Table II-8: PCB and Metal Concentrations in Soil Samples Collected During
Excavation at the Beach Dump**

Sample (prefix RI05-)	Grid Number	PCBs	Copper	Lead	Zinc
		ppm	ppm	ppm	ppm
211	J	<1.0	<50	466	594
212	J	<1.0	112	144	408
213	L	<1.0	58	141	71
214	N	<1.0	175	217	213
216	O	<1.0	<50	155	204
217	N	<1.0	63	296	224
218	L	<1.0	72	147	270
219	J	<1.0	<50	101	126
220	J	1.8	54	238	223
227	D	<1.0	<50	252	255
228	D	<1.0	83	233	198
229	E	<1.0	438	199	240
230	C	<1.0	205	172	291
341	K	<1.0	72	374	360
342	L	<1.0	79	53	313
343	N-L	<1.0	72	<50	177
327	I	<1.0	<50	200	514
328	K	<1.0	<50	173	410

III. SITE INVESTIGATIONS

A. General

This chapter contains reports on the various scientific research activities and routine analyses conducted by the ASU this year. All the work related to hydrocarbon remediation activities is reported in chapter V while all research related to PCB barriers is written up in chapter VI. Section M contains the QA/QC data for the entire report.

B. Tier II Landfill

As part of the new remediation plan, a special lined landfill was constructed at the Maintenance area for all Tier II soils and other materials. Construction of this facility was started in 2003 with the partial building of three of the four berms. In 2004 the berms were completed and the bottom liner installed. This year all the Tier II material at the site was placed within the landfill (Photographs III-1 to III-4). In addition all the Tier I soil was placed in the landfill as intermediate or top fill. When all contaminated material was in place, a sand layer was placed on top of the landfill and then a liner added (Photograph III-5). Finally top cover of sufficient thickness to ensure freeze back within the landfill was added (Photograph III-6).

During the placement of Tier II material in the landfill, precipitation became an issue for landfill compaction as water ponded within the bermed and lined area (Photograph III-7). A vacuum truck was used to transport the water from the landfill to the S1/S4 valley where it was discharged and filtered through the PCB barrier system. New charcoal filters were previously installed in the barrier. The Tier II landfill was not exclusively for Tier II PCB contaminated soils. As listed in Table III-1, the landfill also contained metal contaminated soils and PCB contaminated metal, insulation and wood. Materials other than wood were placed on Tier II soil within the landfill so as to not impact the top or bottom liners and in specific recorded locations within the facility. Thermistors were placed in the landfill as part of the long term monitoring program (Photograph III-8)

The borrow pit at the old water lake from which some fill for the top cover was generated, was sampled and tested for PCBs, TPH and metals. Results given in Table III-2 shows that this material was not contaminated. Other borrow pit sources were checked for contamination in 2004.

Table III-1 Contents of the Tier II Landfill

Item	Contaminant
SOILS	
S1/S4 buildings and valley	PCBs
S1/S4 beach	PCBs
Furniture dump	PCBs
PCL dump	PCBs
North Slope dump	Copper
Maintenance dump	Cobalt
Beach dump	Copper, Lead and Zinc
DND Helipad	PCBs
Wooden boxes of soil	Mercury, Copper, Lead and Zinc
OTHER MATERIALS	
Debris from S1/S4 buildings area	PCBs
Furniture dump debris	PCBs
Shredded wood	PCBs
Insulation from PCB storage building	PCBs

Table III-2: Results of Analyses for Metals, PCBs and TPH of Samples Taken From the Borrow Source of Material for the Landfill Construction

Sample	Units	RI05-329/1061
As	ppm	<1.0
Cd	ppm	<1.0
Cr	ppm	42
Co	ppm	18.8
Cu	ppm	83
Pb	ppm	<10
Ni	ppm	82
Zn	ppm	71
PCBs	ppm	<1.0
TPH (total)	ppm	<40



Photograph III-1: Soil was Transported From the Various Tier II Contaminated Areas and Placed Within the Lined Area of the Tier II Landfill



Photograph III-2: Soil Was Placed in Lifts in the Landfill and Compacted: Metal Contaminated Soils Previously Stored in Wooden Boxes Were Placed in the Landfill



Photograph III-3: Contaminated Soil was Added to the Landfill in Lifts and Compacted



Photograph III-4: Constructing the Landfill in Foggy Conditions

