II. REMEDIATION

A. General

Excavation work to remove CEPA soils continued at the S1/S4 Building and Valley Areas this year as described in section C. The small area of CEPA soil was removed from the PCL Dump this year and is reported in section D. Some further excavation at the beach Dump is described in section E. Section B describes the methodology for this work. QA/QC relating to the analytical work is given in Chapter III, section K.

B. Methodology

1. Excavation

The following is the general methodology that was used to excavate CEPA soils.

Ropes and spray paint of various colours were placed on the ground to indicate the extent of PCB contamination at the >2000 ppm (green), CEPA (yellow), Tier II (blue) and Tier I (pink) levels. Spray paint was found to be more useful when heavy equipment was working in the vicinity. Soil containing >2000 ppm were excavated and placed directly into steel containers. Other CEPA soils were excavated and taken to the screening plant. Material not passing through the screener was classified as Tier II and stockpiled. The CEPA material passing through the 2 inch screen was classified as CEPA soil and taken to the main PCB storage facility. At the PCB storage facility the soil was put into conical steel containers. After excavating to the depth indicated from the sampling/analysis work, generally 30 cm, the soil in the area was tested to ascertain if its concentration was now below the CEPA criterion. If not, further excavation was carried out. The soils were dug up with an excavator equipped with a bucket or clam. However, in many areas the bedrock needed to be further cleared of PCB-contaminated soils which could not be excavated with heavy machinery. This was achieved by shoveling by hand and by using a vacuum truck. This work was slow and arduous, however, the new vacuum truck purchased in 2001 did significantly improve the process.

The old International trucks were used to transport the CEPA soils. One truck stayed in the clean area and the screened CEPA soils were loaded carefully so as not to contaminate the outer parts of the truck. The wheels of the truck did not contact the soil in the storage facility because they drove to the edge of the soil pile on a piece of

geotextile fabric. If the truck did contact the soil it was decontaminated. The soil within the facility was piled higher with a loader.

Decontamination centers were set up for personnel at all locations where contaminated soil and leaking barrels were being dealt with. The large decontamination trailer was used at the S1/S4 area but smaller units comprised of containers of wash water and supplies of personal protective equipment were used elsewhere. The personal protective equipment used is given in the Health and Safety Plan and was described fully in the 1999 ASU report. Tyvec suits, gloves and rubber boots were always worn when working in contaminated areas. In general, half-faced respirators were used whenever the odour of Askarel (PCB mixture) was encountered; dust masks were worn whenever it was dusty.

2. Sampling

Soil samples were collected using plastic scoops and placed in WhirlPak bags. Discrete sampling locations were marked with a six inch nail to which was attached a numbered metal disk and a piece of flagging tape. However, most soil samples taken this year were composite samples for areas that had been excavated. The size of the areas from which composite samples were taken depended on the overall size of the area excavated, and the terrain. The general guidelines were to sample each 3 m by 3 m quadrant or equivalent area. Tables containing the analytical results cross reference sample numbers with location. Soil samples were generally restricted to the upper 10 cm but in order to determine the depth of contamination, test pits were also excavated (manually and by machine) and samples collected at specific depths.

Water samples for PCBs were collected in 1 L Teflon bottles. Absorbent boom material was collected by cutting open a small section of boom and extracting some material by hand. The absorbent material was placed in WhirlPak bags. Care was taken to extract boom material from the center of the boom to avoid material that was in direct contact with contaminated soil (this barrier work is reported in Chapter III, Section C).

Most samples were analysed on site in the mobile laboratory. Other samples were shipped by guaranteed air freight to Queen's University for testing. In order to conform with regulations regarding sample control, a rigorous chain of custody was maintained. Chain-of-custody forms were filled out and checked for each sample before shipment

from the North, and the contents of shipments were verified upon receipt in the laboratory. The relevant documentation is available on request.

3. PCB Analysis

Two methods were used to analyze for PCBs in soils namely the standard laboratory technique using gas chromatography with an electron capture detector (GC/ECD) and the field method using immunoassay test kits; for all other matrices only the GC/ECD method was employed. Only a few samples were analysed by test kits this year.

a) Field Test Kits (Soil Samples)

Field analyses of polychlorinated biphenyls (PCBs) were performed with Millipore EnviroGard™ PCB Test Kits. The immunoassay was carried out according to the manufacturer's instruction, but with a few minor modifications. A sub-sample was spread out on absorbent paper towels and allowed to air dry overnight. Then a 5 g portion was weighed and extracted with 5 mL methanol. The soil-methanol mixture was filtered and an aliquot of the extract used for subsequent analysis. A 25 µL aliquot was used, and the colour intensity recorded on a portable spectrometer. Results from previous studies indicated Aroclor 1260 was the principal constituent; therefore, Aroclor 1260 standards were used for calibration, rather than the Aroclor 1248 standards supplied by the manufacturer. These were prepared by dilution of a 200 ppm standard. For samples with high levels of PCBs a 1.0 g sample was taken from a well mixed soil sample, and if required the methanol extract was diluted before analysis.

b) Laboratory Analyses (GC/ECD) (Soil Samples)

The standard analytical procedure for the analysis of PCBs, namely gas chromatography with an electron capture detector (GC/ECD) was used. These analyses were performed at the Mobile Laboratory on-site and at the Analytical Services Unit, Queen's University by the following procedure. A separate soil sample was first taken for the determination of wet weight/dry weight ratio. Soils were analyzed by using approximately 10 g (dry weight equivalent), spiking with an internal standard solution (decachlorobiphenyl) and extracting. Two extraction methods were used. The soxhlet method used approximately 250 mL dichloromethane in a soxhlet extractor for four hours. The shaker method used 3 times 25 mL dichloromethane with agitation on a platform shaker for 20 minutes for each extract. The shaker method was used for most

soil samples while the soxhlet method was generally used for other solid matrices. The solutions obtained from either extraction method were concentrated to 1-2 mL and the solvent exchanged for hexane. This concentrate was then applied to a Florisil column (Supelco SPE tube) and the resulting eluent analyzed using an HP 5890 Series II Plus gas chromatograph equipped with electron capture detector and a 30 m SPB-1 capillary column and calibrated with Aroclor 1260 standards.

c) Laboratory Analyses (GC/ECD) (Other Matrices)

Samples of metal, wood and barrier absorbent materials were analyzed as for soil by generally using the soxhlet extraction techniques. Water was analyzed by using approximately 800 mL of sample, spiking with internal standard and extracting three times with dichloromethane. The extract was filtered through sodium sulphate and concentrated to 1-2 mL and the solvent exchanged for hexane. This concentrate was then applied to a Florisil column for cleanup of the extract and the resulting eluent analyzed by GC/ECD. Air samples were analysed according to NIOSH Method 5503 by desorbing both the filter and absorbent with hexane and running the samples on a GC/ECD system.

C. S1/S4 Buildings Area

1. Background

The soil in the S1/S4 Buildings and Valley Area were found during the environmental investigations (1993-94) to be highly contaminated with PCBs. The PCBs originating in the area surrounding the buildings migrated over the years down the S1/S4 Valley Area and over the cliff to the S1/S4 Beach Area. In the 2001 summer season, an estimated 985 m^3 of CEPA soil was excavated from the S1/S4 Buildings Area. Map II-1 shows the extent of the remaining CEPA soil contamination at the start of the work this year. During the 2002 season the S1/S4 Building Area excavation was completed as well as much of the S1/S4 Valley Area.

2. Mapping

A 20 x 20 m grid system, graphically constructed using Autocad Map 2000 was established in 2001. The grid was labelled A to S (in a N/S orientation) and 1 to 25 (in a W/E orientation). This grid was graphically constructed to contain all of the contaminated S1/S4 areas of concern in the S1/S4 Buildings and S1/S4 Valley Areas. For the 2002 field season, the majority of working areas were encompassed by grid co-ordinates I9 to L17 (Map II-1). Each grid reference relates to the bottom right hand corner of the relevant 20 x 20 m square. The co-ordinates required to set-up the grid were exported to a Reliance mapping program and uploaded as a waypoint file to a GPS FS/2 handheld controller unit. On Resolution Island, the Ashtech Reliance differential GPS mobile receiver system was operated in 'rover mode' which allowed navigation to the individual grid points to within 1 m accuracy (Photograph II-1). Individual grid points were marked with flags and an "X", using purple spray paint. The grid co-ordinates were marked in several locations within the confines of the grid, on available surfaces and rocks. This provided a convenient reference point for workers and provided the scientific team with an accurate method of documenting the cleanup process.

Three map binders were constructed. The first contained individual maps for all the quadrants of interest. These maps include color coded contamination levels, previous sampling locations, tag and sample numbers and rope locations pertaining to the site as it appeared at the beginning of the 2001 Field Season. When any sampling or excavation occurred in a grid, the details were recorded on a quadrant log sheet and were sketched onto the relevant map. Where possible, samples were restricted according to the grid lines

and sampling areas did not cross grid lines. Ongoing map and log sheets were placed in a 2nd binder 'Map Work in Progress'. A new map was used and updated for every day work occurred in that grid. When the grid had been excavated such that any remaining soil tested < 50 ppm PCBs (or was completely removed), the quadrant log sheet was dated and signed by a Queens Representative (Team Leader), an Engineering representative and a QC representative (Site Supervisor). All of the individual maps for that quadrant were attached to the log sheet and transferred to a third binder 'Completed Map Quadrants'. Copies of the completed documents were given to the engineering company (Sinanni) and to the Qikiqtaaluk Corporation. Copies of all quadrant log sheets completed this year are included in Chapter VII: Appendix.

Early in the season the grid markers for quadrants I12, J12, J13, J14, J15, K13, K14, K15, K16, set up in 2001, were repaired and 24 more locations were marked out: I9, I10, I11, J11, L13, L14, L15, L16, L17, L18, M15, M16, M17, M18, M18, M20, M21, N15, N16, N17, N18, N19, N20 and N21. Distances between grids were checked using a surveyors 80 m tape reel (Photograph II-2). In most cases the error was to within 1 m. In instances where multi-path distortion from structures resulted in > 1 m error, the value obtained from the tape measurement was used.

3. Soil Excavation

Most of the remaining contaminated soil was removed from the S1/S4 Buildings and Valley Areas this year. Map II-2 shows the extent of remediation and contamination at the end of the excavation work this year. Table II-1 contains the sample dates and sample numbers, a description of sampling locations and PCB concentrations of soil samples taken in and around the S1/S4 area for the 2002 season.

Problems encountered at the start of the 2001 season as a result of silt migration following the summer melt, were largely negated by the construction of a berm (grid references K16-K17) at the end of the 2001 season. This helped prevent the movement of PCB contaminated material into adjoining areas. Confirmatory samples were taken and used to establish a starting point for the excavation this year.

Excavation started on 23 July 02. Two excavators (1 equipped with a clam attachment), a vacuum truck and 2 international trucks were mobilized. Many of the CEPA areas in grids K14, 15, 16 and 17 were brought into compliance by the excavation to a depth of 30 cm of soil. In some cases, this resulted in excavation to bedrock.

Vacuuming was required all along the ridge (grids K15, 16 and 17), and access was provided by the construction of new roads. Smaller rocks were removed from the ridge areas using manual excavation by a team of workers. Work in these areas progressed much faster than normal as a result of the unusually dry and fog free weather (Photographs II-3 and II-4).

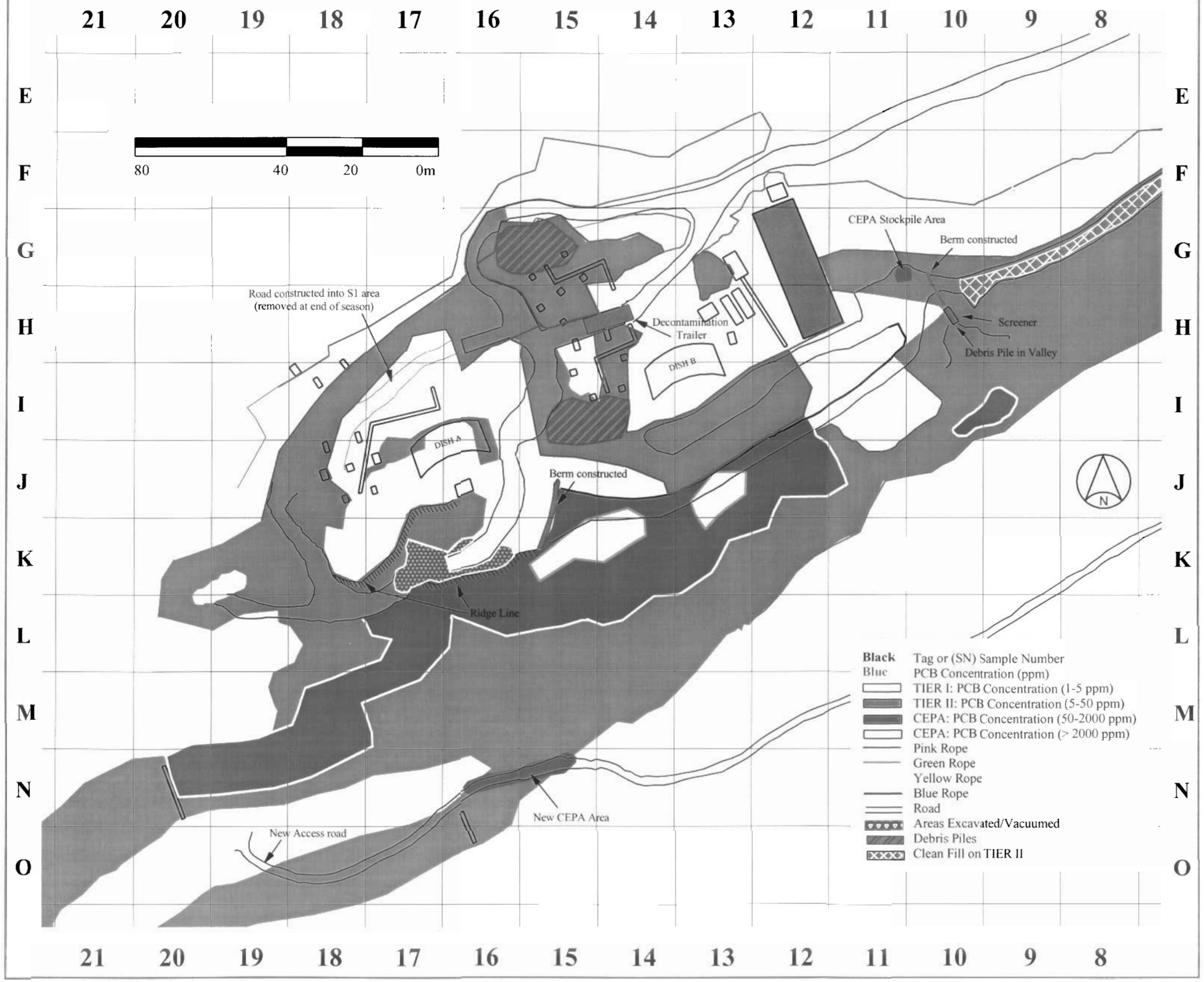
Large rocks from the highly contaminated >2000 ppm area (J14, K14, K15), were removed and the soil underneath was excavated and placed directly into the conical steel containers. The soil in the >2000 ppm area was highly contaminated all the way to the bedrock and vacuuming was required over the entire area. As this area was cleaned, fill was added to extend the road through K14-K15 and to provide access to lower grids. At the same time, a road was constructed through quadrants K17-L17 to access CEPA material from the west, from a location below the ridge line.

To provide a third front, a road was constructed from G8, to access the CEPA areas in quadrants I9-10. Tier II rocks from the screener were placed on the ground to provide a stable surface for the heavy machinery. The road was extended to L13, which allowed removal of CEPA soil from remaining (lower) grids.

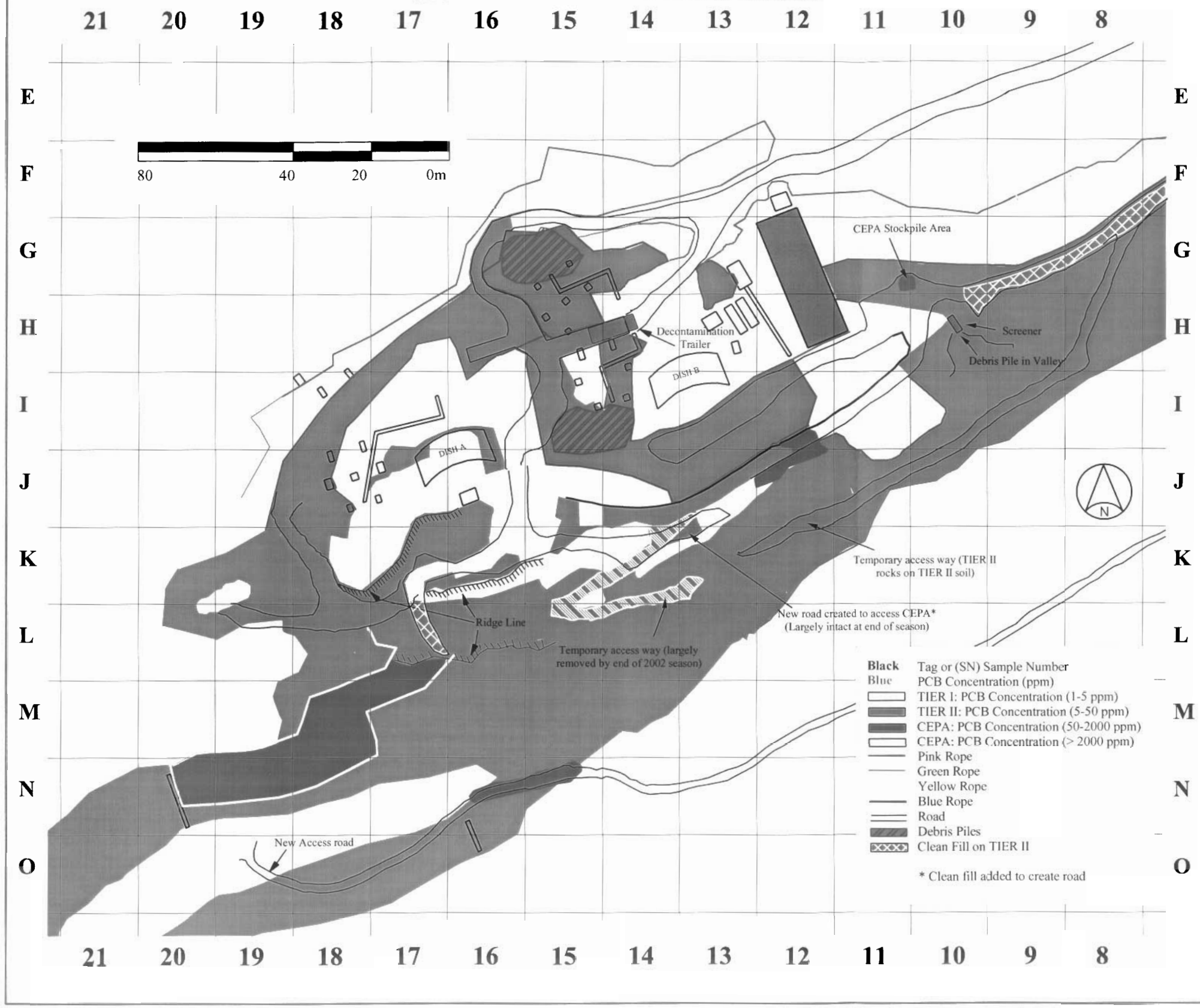
Later in the season, work in the S1/S4 area focused on the CEPA material located on the road to the screener. Excavation of the remaining >2000 ppm soil (J13) was undertaken from a position adjacent to and from below J13. Soil in this area was highly contaminated all the way to bedrock and vacuuming was required. As the soil was removed, clean fill was used to extend the road, into grid J12. The quantity of soil in remaining grids was greater than expected and as the weather turned to fog and snow, progress was slow. The camp closed before the excavation in grids J12, J13 and I12 could be completed.

Filled containers were assigned PCB labels and the number of each label was recorded. The containers were moved to the beach area to await shipment to the south. This season, soil contaminated with PCBs above the CEPA criteria was completely removed from 15 grid locations: G15, I8, I10, J11, J14, J15, K12, K13, K14, K15, K16, K17, L14, L15 and L16. This included the remainder of soil contaminated with PCBs at a level >2000 ppm. Details are provided in Chapter VII: Appendix.

Map II-1: Contaminated Zones in the S1/S4 Buildings and Valley Areas at the Start of the 2002 Field Season



Map II-2: Contaminated Zones in the S1/S4 Buildings and Valley Areas at the End of the 2002 Field Season



Photograph II-1: Using the GPS System in the S1/S4 Valley and Buildings Area

Photograph II-2: Placing Flags at the Corners of the Quadrants in the S1/S4 Valley

Photograph II-3: Beside the Road Between the S1/S4 Valley and Buildings S2 and S4 in 1994

Photograph II-4: Beside the Road Between the S1/S4 Valley and Buildings S2 and S4 in 2002 After Excavation of CEPA Material

Table II-1: PCB Concentrations in Soil Samples Collected During the Excavation in the S1/S4 Buildings and Valley Areas

Date Sampled	Sample (prefix RI02-)	Quadrant	PCB Conc. by GC/ECD (ppm)	Comments
19 July 02	001	F14-G14	<1.0	Confirmatory Analysis on upper road
19 July 02	002	G14-F14	2.9	Confirmatory Analysis on upper road
19 July 02	003	G16-F16	3.2	Confirmatory Analysis on upper road
19 July 02	004	J15-J16	2.6	Confirmatory Analysis on clean fill at arch beside barrier
19 July 02	005	K16-K17	42	Confirmatory Analysis for area scheduled to be vacuumed
19 July 02	006	G15	12	Confirmatory Analysis in missed corner of grid
23 July 02	007	K14	35	Excavation to edge of 2000 area and beyond. Samples were taken along the face to check if the extent of excavation was sufficient
23 July 02	008	K14	120	Excavation to edge of 2000 area and beyond. Samples were taken along the face to check if the extent of excavation was sufficient
23 July 02	009	K15	78	Excavation to edge of 2000 area and beyond. Samples were taken along the face to check if the extent of excavation was sufficient
23 July 02	010	K15	38	Excavation to edge of 2000 area and beyond. Samples were taken along the face to check if the extent of excavation was sufficient
23 July 02	011	J14-K15	330	Sample taken from all along the top of the road just before the excavated 2000 area
24 July 02	019	L17	15.5	Sample taken in the relatively flat area in the center of the grid
24 July 02	020	L17	29	Sample taken in the relatively flat area in the center of the grid
25 July 02	121	K16-K17	93	Sample taken from the area on the ridge where rocks were removed
25 July 02	120	K16	51	Sample taken from the area on the ridge where rocks were removed

Date Sampled	Sample (prefix RI02-)	Quadrant	PCB Conc. by GC/ECD (ppm)	Comments
26 July 02	026	L15-L16	17.0	Area to the south of the road used to access the 2000ppm area
26 July 02	027	L15	18.7	Area to the south of the road used to access the 2000ppm area, taken, to the right of sample 027
27 July 02	182	L16-L17	12.5	Area immediately to the right of the relatively flat area to the center of the grid; see 020.
27 July 02	183	K16-L16	5.0	Scraped CEPA area leading to the access road around the south of the 2000ppm area
28 July 02	035	K16-L16	22	Scraped CEPA area south-south-west of berm.
28 July 02	036	K15-L15	36	Scraped CEPA area south of 2000 ppm area.
29 July 02	184	L14	20	Scraped CEPA area south of lower road.
29 July 02	190	K14-K13	6.7	Scraped CEPA area below debris between two roads.
29 July 02	185	K13	6.0	Scraped CEPA area south-east of debris between two roads.
29 July 02	186	K13	29	Scraped CEPA area east of debris between two roads.
31 July 02	037	J14-J15	75	Scraped CEPA on road leading to berm.
31 July 02	038	J15-K15	66	Scraped CEPA immediately east of berm.
31 July 02	039	J15	14.5	Scraped CEPA immediately east of berm and above RI02-038
31 July 02	040	K14	13.0	Scraped CEPA on new road.
31 July 02	041	K15	128	Scraped CEPA on new road..
31 July 02	043	K15-L15	109	Scraped CEPA on new road.
1 Aug 02	045	K15-L15	3.6	Re-Sampled after further scraping of CEPA road. Same location as RI02-043.
1 Aug 02	046	K15	40	Half of berm has been removed this sample is the soil where the berm was.
1 Aug 02	047	J15-K15	13.9	Scraped CEPA immediately east of berm. A re-sample of RI02-038 after further scraping.

Date Sampled	Sample (prefix RI02-)	Quadrant	PCB Conc. by GC/ECD (ppm)	Comments
1 Aug 02	048	J14-J15	4.4	Scraped CEPA on road leading to berm. A re-sample of RI02-037 after further scraping.
2 Aug 02	012	K15	39	Scraped CEPA road at intersection point with road.
3 Aug 02	049	K15	53	All of berm has been removed this is a resample of RI02-046
3 Aug 02	050	J15	26	All of berm has been removed and scraped this is upper portion of where berm was.
4 Aug 02	242	J14	7.6	CEPA road leading to berm.
4 Aug 02	242 (Field dup)	J14	16.2	Field duplicate of CEPA road leading to berm.
5 Aug 02	245	I9-I10	47	Edges of CEPA patch which is filled with water.
5 Aug 02	244	I9-I10	7.6	Middle of CEPA patch which is filled with water.
5 Aug 02	243	J14	11.9	CEPA road leading to berm.
6 Aug 02	246	K15	27	Rocky area above lower road.
6 Aug 02	030	K14	89	Rocky area above lower road.
7 Aug 02	051	K14-K15	41	CEPA road after scraping
7 Aug 02	052	K14	23	CEPA road after scraping
8 Aug 02	053	K14	63	CEPA road after scraping
8 Aug 02	204	I9-I10	70	North edge of pool
8 Aug 02	205	I9	28	Edge of pool
8 Aug 02	127	I10	5.2	Edge of pool
8 Aug 02	128	I10	92	Edge of pool
9 Aug 02	013	Off Grid	43	Small square roped at end of S1-S4 valley
13 Aug 02	170	K14, J13	37	Scraped CEPA road to the point in which 2000 area begins on the road.
13 Aug 02	171	K14	82	Steep area beside CEPA area that requires vacuuming.
13 Aug 02	172	I10	22	CEPA patch west edge
13 Aug 02	173	I9, I10	4.1	CEPA patch south edge

Date Sampled	Sample (prefix RI02-)	Quadrant	PCB Conc. by GC/ECD (ppm)	Comments
14 Aug 02	174	J13	65	Scraped steep part of 2000 area.
16 Aug 02	175	K13-K14	106	Scraped sloped part below CEPA road.
16 Aug 02	134	K13-K14	78	Scraped sloped part below CEPA road.
16 Aug 02	132	J13	18.2	1 foot taken off 2000 area on road then sampled.
16 Aug 02	177	K13	2.5	Path from I9-I10 to CEPA area in K13 was taken by 322, retesting of RI02- 186, 190, and 185 as one large composite due to movement over area.
17 Aug 02	169	K13	44	Scraped side of steep part in K13. Can be reached due to path from I9-I10 area.
17 Aug 02	133	J13	5.3	Composite of 2 foot hole dug in 2000 area on road
17 Aug 02	168	J13	4.1	Composite 1 foot hole dug in 2000 area on road
17 Aug 02	144	J13	470	Composite of sloped area below 2000 area
17 Aug 02	143	J13	250	Composite of flat area below RI02-144
17 Aug 02	139	K13	64	Composite below 2000 area.
17 Aug 02	142	J13	36	Ledge below 2000 area
17 Aug 02	178	K13	10.3	Composite in top right corner of K13
17 Aug 02	141	K13	11.4	Composite below RI02-169
18 Aug 02	146	K13	9.9	Composite of small area below RI02-178
18 Aug 02	147	K12	21	Composite of small CEPA area in top left hand corner
19 Aug 02	148	J12	30	Composite of area west of western water filled depression
19 Aug 02	149	J12	27	Composite between western water filled depression and ridge
19 Aug 02	153	J12	11.9	Composite small area behind rock and water filled depression and in front of ridge
19 Aug 02	151	J12-J11	21	Composite of eastern water filled depression below ridge

Date Sampled	Sample (prefix RI02-)	Quadrant	PCB Conc. by GC/ECD (ppm)	Comments
19 Aug 02	152	J12	3.6	Composite from water filled depression in middle of grid
19 Aug 02	150	J13	93	Composite above the CEPA area between rocks and vacuumed area. Lower half of RI02-144
19 Aug 02	154	J13	77	Composite below road between rocks and vacuumed area. Upper half of RI02-144
21 Aug 02	197	J12		Middle left hand quadrant of grid. Small ridge just below road.
21 Aug 02	198	J11 ; J12	44	Large flat area, top right hand corner of grid J12
21 Aug 02	207	J12	28	Top center of grid flat area under soil sloping from road
21 Aug 02	208	J12	55	Small ridge just above lower flat area of grid beside lower road.
21 Aug 02	209	K13	36	Area vacuumed and clean fill added. Re-sampled to ensure CEPA was removed. Small ledge just under 2000 area
21 Aug 02	210	K13	10.3	Area vacuumed and clean fill added. Re-sampled to ensure CEPA removed. Small ledge just under RI02-209 area
22 Aug 02	107	J13	33	A 50cm section of road was removed to determine how far into the road the CEPA contamination extends. Sample was taken on the face of the newly excavated area
22 Aug 02	106	J13	43	Sample was taken on the bedrock on the newly excavated section
24 Aug 02	059	J12	230	Adjacent to RI02-062. Taken on the side of the road to the extent of the scraping
24 Aug 02	060	J12	3.4	Road above/adjacent to RI02-059
24 Aug 02	062	J12	290	Extends into J13. Taken along edge of the road on scree slope.
24 Aug 02	065	J13	5.5	Top right hand section of road.
25 Aug 02	068	J12	61	Ledge below the road beside vacuumed area
25 Aug 02	069	J12	71	Face of hill below road. Extends into J13
25 Aug 02	070	J12	69	Face of hill below the road.

Date Sampled	Sample (prefix RI02-)	Quadrant	PCB Conc. by GC/ECD (ppm)	Comments
25 Aug 02	071	J12	28	Ledge below road up to the second rock marked with yellow paint on far side of road
25 Aug 02	072	J12	54	Face of hill below the road. Area is covered with metal debris and overlaps with RI02-075 in I12.
25 Aug 02	073	J12	32	Road up to pipe that extends under the road. Overlaps with RI02-076 in I12
25 Aug 02	075	I12	76	On face below road covered with metal debris. Overlaps with RI02-072 in J12
25 Aug 02	076	I12	69	Road on either side of pipe running under the road. Overlaps with RI02-073 in J12

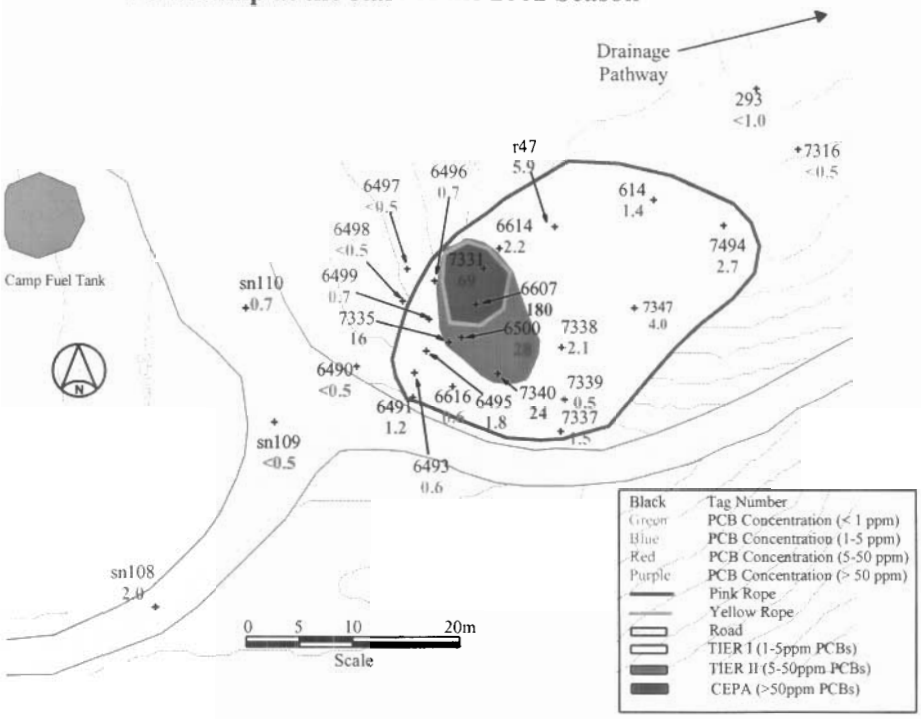
* all samples were composites unless a tag number is entered in the comments column

D. PCL Dump

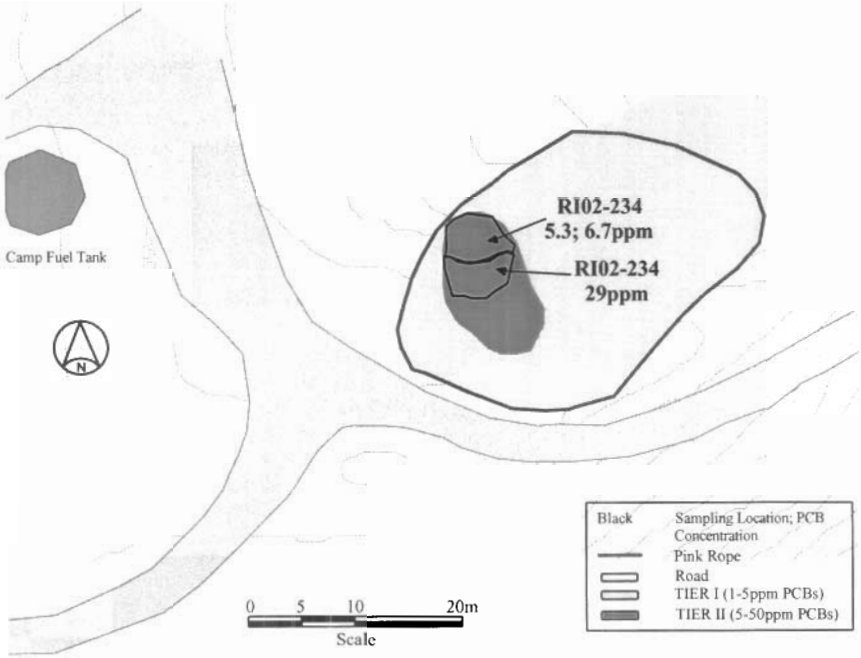
This dump was originally established by PCL during the construction of the North Warning SRR Station in the late eighties. Small amounts of camp debris were added to one side of the dump in 1997 and 1998. The material was moved and shredded into the new landfill just across the road in 1999. The area was re-sampled in 1999 and two samples were found to contain PCBs at levels above 50 ppm (69 and 180 ppm). This finding was reported to Environment Canada. In 2000, 13 were collected in order to determine the extent of the CEPA contamination. None of the samples taken in 2000 contained > 50 ppm PCBs. Map II-3 shows the PCB contaminant level boundaries at the start of this year.

The CEPA soil was excavated this year. Excavation was to a depth of approximately 30 cm. The soil and remaining ground was very muddy. Two composite confirmatory samples were taken from the excavated area. RI02-033 from the SW portion gave a result of 29 ppm PCBs and RI02-034 from the NE portion gave a result of 6.0 from duplicate analyses. Therefore further excavation was not required. The volume of CEPA soil excavated was estimated as 15 m^3. Map II-4 shows the remaining contaminant levels at the end of the season.

Map II-3: Sampling Locations and PCB Concentrations at the PCL Dump at the start of the 2002 Season



Map II-4: Confirmatory Sampling Locations and PCB Concentrations at the PCL Dump at the end of the 2002 Season



E. Beach Dump

Most of the debris in the dump was removed in 1999 and 2001. Partial excavation was also carried out on a second smaller dump near the main beach dump. This year a small amount of debris was removed from both dumps. The remaining debris in the main dump was in the permafrost and will be excavated as it thaws next year. The dump was delineated in 2001 and areas contaminated at the Tier II and Tier I level identified. No further analysis were deemed necessary this year.

Photograph II-5: The Beach Dump Area in 2002 Showing Some Debris Awaiting Transport to the Non-Hazardous Landfill and Spill Trays Set Out to Receive Oil From Leaky Barrels if Required.