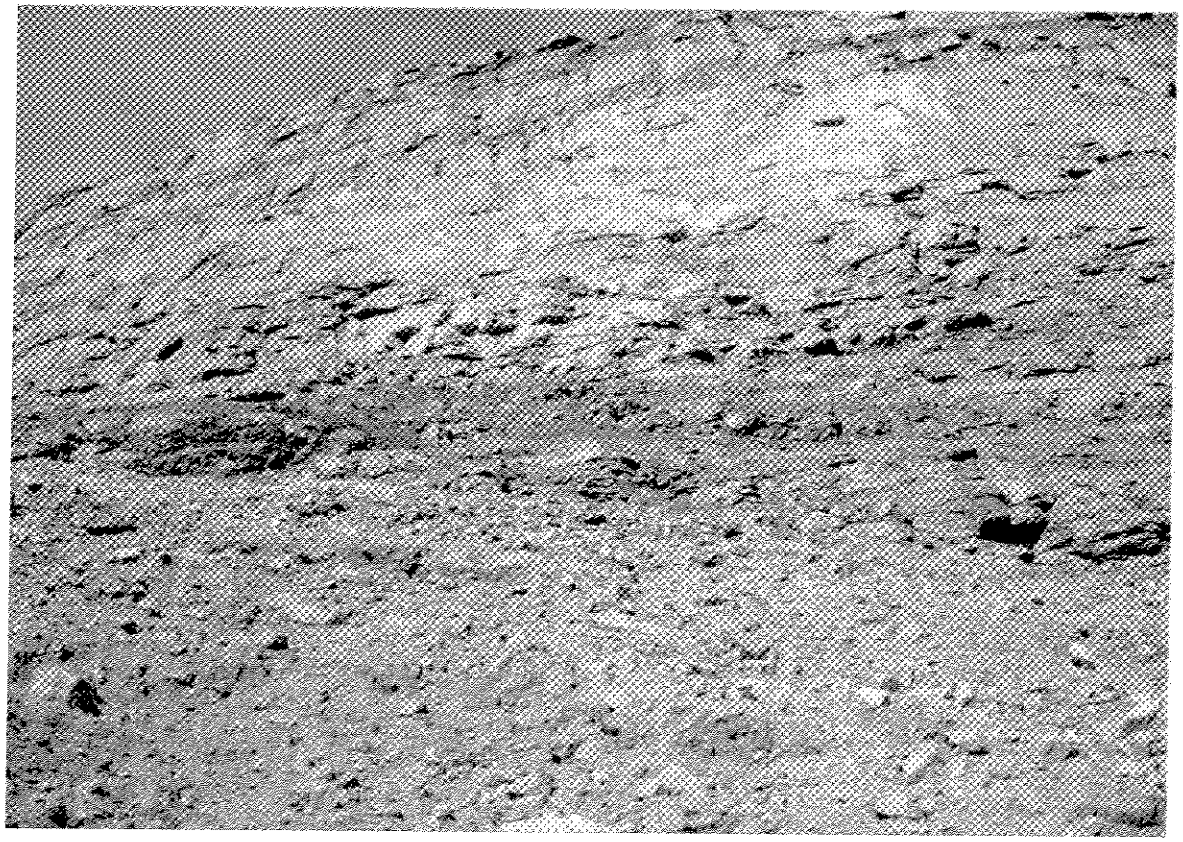
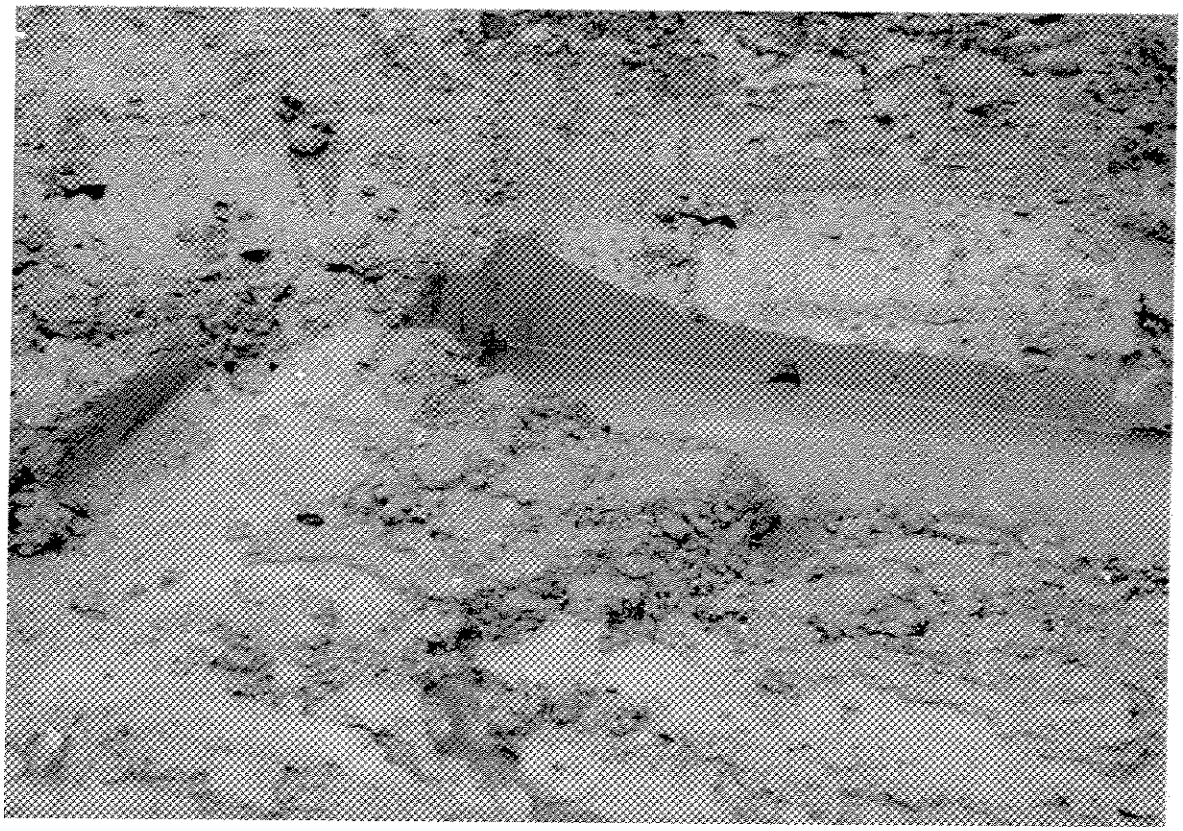


Photograph II-7: The S1/S4 Beach Area After Excavation



Photograph II-8: The Clay Stratum Beneath the Tier II and Tier I Excavated Area

Table II-1: PCB Concentrations in Soil Samples Collected During Excavation at the S1/S4 Beach Area

Sample (prefix RI05-)	Date Sampled	Quadrant	PCB (ppm)
001	28-Jun-05	F7	7.8
002	28-Jun-05	G8	<1.0
003	28-Jun-05	G8	1.3
004	28-Jun-05	G8	<1.0
005	28-Jun-05	G8	8.0
012	29-Jun-05	7F-8E	4.3
013	29-Jun-05	E8	<1.0
019	29-Jun-05	E8	2.0
020	29-Jun-05	E8	7.1
021	29-Jun-05	E8	10.0
008	29-Jun-05	E5	4.0
009	29-Jun-05	D5	1.5
010	29-Jun-05	D5	6.3
011	29-Jun-05	C5	48
016	29-Jun-05	D5	2.3
017	29-Jun-05	D5	6.6
018	29-Jun-05	C5	40
006	29-Jun-05	F9	2.8
007	29-Jun-05	F8	20
022	29-Jun-05	F9	66
024	29-Jun-05	F9	<1.0
025	29-Jun-05	F9	<1.0
028	30-Jun-05	D6	1.5
029	30-Jun-05	D6	4.4
030	30-Jun-05	D6	5.5
031	30-Jun-05	D6	6.7
032	30-Jun-05	D6	6.0

Sample (prefix RI05-)	Date Sampled	Quadrant	PCB (ppm)
037	30-Jun-05	D6	6.5
014	30-Jun-05	D7	<1.0
015	30-Jun-05	D7	2.9
023	30-Jun-05	D7	4.0
038	30-Jun-05	G9	<1.0
050	30-Jun-05	F9	1.6
056	30-Jun-05	F8/G8	2.1
057	30-Jun-05	F8	7.4
058	30-Jun-05	F9/F8	16.0
059	30-Jun-05	F8	14.0
061	30-Jun-05	F8	6.1
062	30-Jun-05	E8/F8	1.5
064	30-Jun-05	E8	5.2
065	30-Jun-05	F8	2.9
066	01-Jul-05	C6/D6	5.0
060	01-Jul-05	C5	3.8
063	01-Jul-05	D5	<1.0
067	01-Jul-05	D5	1.7
068	01-Jul-05	C5	10.2
026	30-Jun-05	C6	30
027	30-Jun-05	D6	20
036	30-Jun-05	D7	8.2
038	30-Jun-05	G9	<1.0
091	03-Jul-05	C5	21
092	03-Jul-05	D5	<1.0
093	03-Jul-05	D5	<1.0
094	03-Jul-05	F8-F9	3.3
095	03-Jul-05	F8	4.9
096	03-Jul-05	F8	1.3

Sample (prefix RI05-)	Date Sampled	Quadrant	PCB (ppm)
097	03-Jul-05	D5	1.4
085	04-Jul-05	C5	7.2
086	04-Jul-05	C5	2.5
087	04-Jul-05	C5	20
088	04-Jul-05	D5	<1.0
089	04-Jul-05	D5	4.6
090	04-Jul-05	D7	3.7
101	04-Jul-05	E7	<1.0
098	07-Jul-05	C5	12.0
099	08-Jul-05	C5	5.6
125	09-Jul-05	C5	4.0
126	09-Jul-05	C5	15.0
127	10-Jul-05	C5	2.6
128	10-Jul-05	C5	30
129	10-Jul-05	C5	18.6
130	10-Jul-05	D5	<1.0
100	11-Jul-05	C5	2.9
139	11-Jul-05	C5	13.5
140	11-Jul-05	C5	16.1
152	11-Jul-05	D7	3.1
153	11-Jul-05	E7	4.7
154	11-Jul-05	E7	7.6
155	11-Jul-05	D6	8.3
156	11-Jul-05	D6	2.0
177	12-Jul-05	C5	4.8
178	12-Jul-05	C5	8.7
179	12-Jul-05	C5	22
189	13-Jul-05	C5	2.6
190	13-Jul-05	C5	3.0

Sample (prefix RI05-)	Date Sampled	Quadrant	PCB (ppm)
191	13-Jul-05	C5	4.3
198	14-Jul-05	C6-D6	4.0
199	14-Jul-05	C6-D6	13.6
200	14-Jul-05	D6	1.3
201	14-Jul-05	C6	9.9
202	14-Jul-05	D6	5.0
203	14-Jul-05		1.5
204	14-Jul-05	D6	2.6
205	14-Jul-05	D7	1.0
206	14-Jul-05	E7	<1.0
256	25-Jul-05	D8	<1.0
291	25-Jul-05	E7	<1.0
305	25-Jul-05	E7	<1.0
306	25-Jul-05	F8	<1.0
307	25-Jul-05	E8	<1.0
308	25-Jul-05	E8	<1.0
309	25-Jul-05	D7	<1.0
310	25-Jul-05	E7	<1.0
293	26-Jul-05	D5	<1.0
294	26-Jul-05	D6-E6	<1.0
297	26-Jul-05	C5	1.0
298	26-Jul-05	C6	<1.0
292	28-Jul-05	D7	<1.0
311	28-Jul-05	D7	<1.0
312	28-Jul-05	C6	4.6
313	28-Jul-05	C7	<1.0

D. S1/S4 Buildings and Valley Area

1. Background

The largest volume of PCB contaminated soil found at the site was in the S1/S4 buildings and valley area. The PCBs had their origin in the S1/S4 buildings where large quantities were used in the transformers within these buildings. The transformers were emptied and removed in 1994 but it is evident that large quantities of PCBs were discarded from the buildings prior to that time and these PCBs migrated down the valley. All known CEPA soils in the area were excavated in the 2002 and 2003 and Tier II soils were scraped into stockpiles in 2004. Map II-3 shows the extent of the remaining Tier I and Tier II soil contamination at the start of the work this year and the stockpile locations.

2. Soil Excavation

The flags, ropes and spray paint were replaced where necessary to re-establish the grid corners and the areas requiring excavation. The Tier II soil in the stockpiles was first loaded on to trucks and taken to the Tier II landfill. In some grid areas where larger stockpiles existed, (P23, 24, Q23, 24, N19, 20) frozen soil was discovered within the stockpile and as a result, these soil piles were left until the soils had thawed. The excavation of Tier II below Dish B (grids I13, J13)) and building S4 (grids H11, I11) uncovered CEPA soil (Photographs II-9 and II-10). This is not unexpected given the delineation and excavation history at these two locations. The CEPA soil was excavated and transported to the beach area where it was placed in conical steel containers. The Tier II debris pile in grids I14, I15 and F6 were then removed and placed in the Tier II landfill where the landfill base thickness and compaction was considered sufficient. The excavation of the Tier II in the S1/S4 valley was then continued until all areas were deemed to contain PCB contamination below the 5 ppm level (Photographs II-11 and II-12).

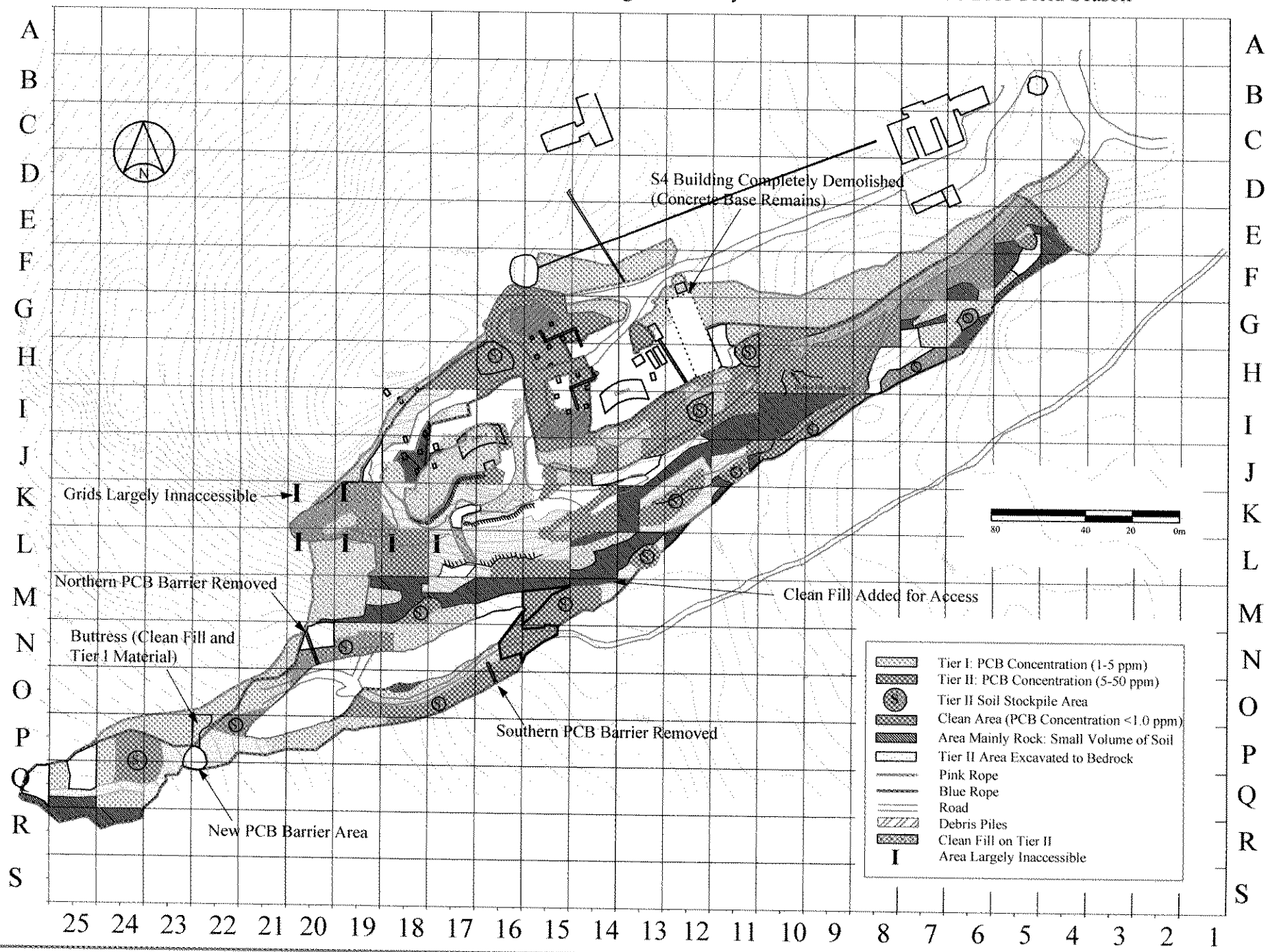
Nearly all of the Tier I soil was then excavated and in many areas bedrock was reached (Photographs II-13 and II-14). There was a section of Tier 1 soil stretching from grid F15 to F7 near the camp sewage lagoon and beyond S4 that was unexcavated. The area contains approximately 80 m^3 of Tier 1 soil. This area was covered in place. Two areas near Dish A and B were excavated for Tier 1 and after 0.3 m of soil was removed the underlying soil was considered to be mostly large boulders. Clean fill was placed on

Tier I in these two cases, (grids J17, J18, K17, and K18). Below Dish B in grid I13 there is a small area of frozen Tier II soil (surface area of 5 m^2) that was covered with clean fill. Tier I pockets in inaccessible areas near the cliff edge have been left untouched (grids Q25, P24, P23, P22 and O22) due to safety concerns. An area stretching from M20 to L18 contained a very thin layer of Tier I and Tier II soils on a steep terrain that could not be accessed. The small area of Tier I soil in quadrants E7 to D3 was not excavated as the soil was very thin and mostly boulders.

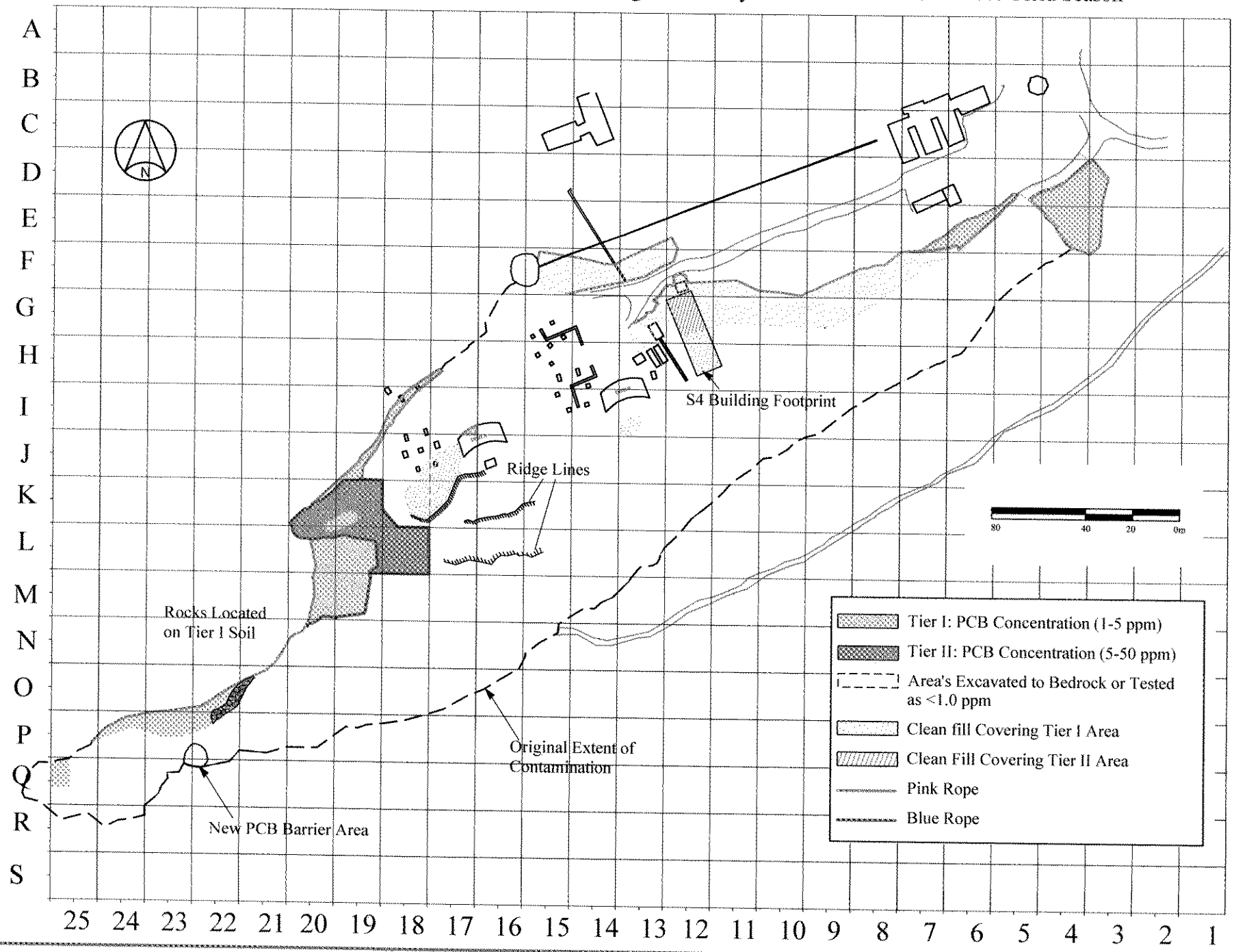
The concrete base of building S4 was covered with clean fill and rocks added to increase the stability in the area.

Map II-4 shows the S1/S4 buildings and valley areas at the end of the excavation work. The position of the permanent barrier, which is designed to trap any remaining PCB contamination that is transported down through the catchment area, is also marked on the map. Activities associated with the barrier are described in chapter VI.

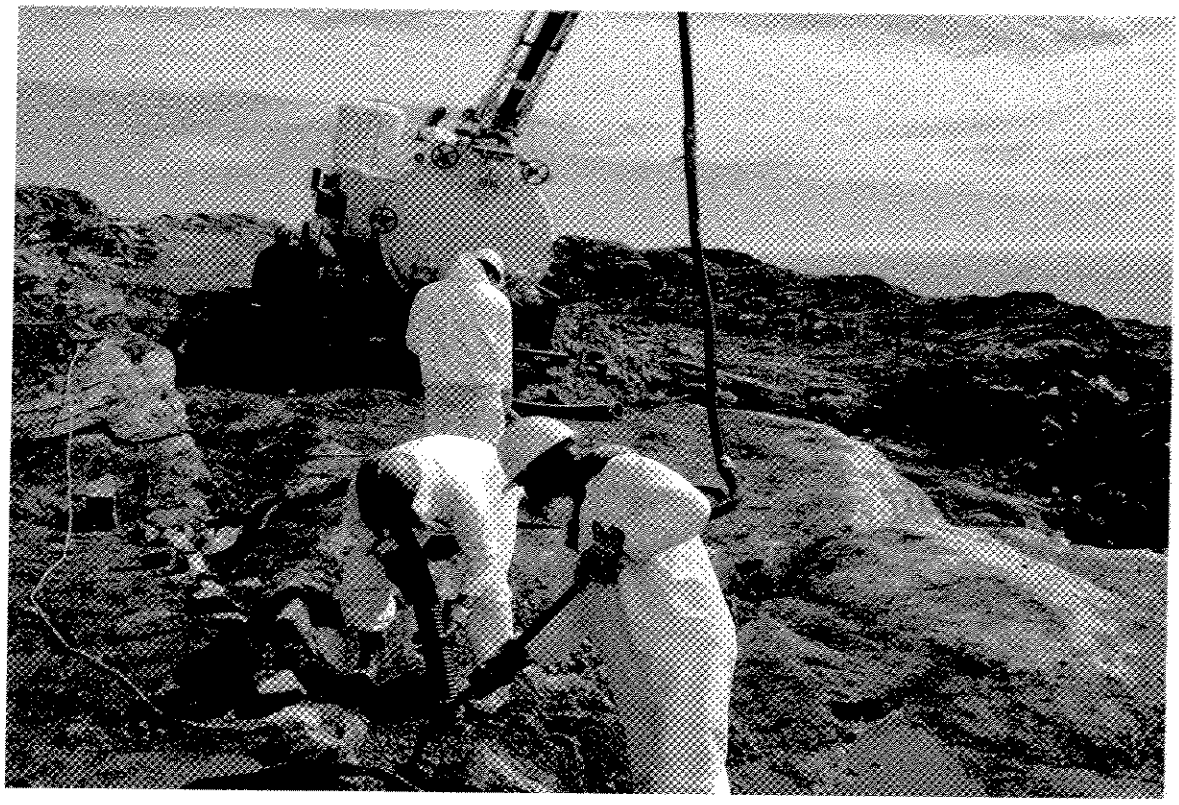
Map II-3: Contaminated Zones in the S1/S4 Buildings and Valley Areas for the Start of the 2005 Field Season



Map II-4: Contaminated Zones in the S1/S4 Buildings and Valley Areas at the End of the 2005 Field Season



Photograph II-9: Removing the Last of the CEPA Soil by Hand From a Pocket of High Contamination Found Below Dish B



Photograph II-10: Using the Vacuum Truck to Remove the CEPA Soil From Near Building S4