P.O. BOX 16
CAMBRIDGE BAY
NU X0B 0C0
Ph: 867-983-2337
Fax: 867-983-2193

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12/08/03

Nunavut Water Board
Gjoa Haven, Nunavut

Re Application for Environmental Tank Farm

Attached please find a proposal from The Kitnuna Corporation of Cambridge Bay for the above.

I have tried on numerous occasions to reach your office by phone, but so far I have had no success.

The Hamlet Council of Cambridge Bay is currently investigating amending our water licence to include the above proposal. Would you please fax all the necessary forms for such an amendment and any comments you have on this proposal to:

Attention Colin Dickie
Lands Officer
Hamlet of Cambridge Bay
Cambridge Bay, Nunavut
PH: 983-2337
Fax 983-2193

A quick response to our inquiries would be greatly appreciated. I thank you in advance.

Sincerely

Colin Dickie
Lands Officer coldic@polarnet.ca

c. Marl Calliou
S.A.O

KITNUNA
KITNUNA CORPORATION

Box 92
Cambridge Bay, NU X0B 0C0
Phone: 867-983-7500
Fax: 867-983-7501
Email: kitnuna@polarnet.ca

Mark Kalliou
Senior Administrative Officer
Hamlet of Cambridge Bay
Cambridge Bay
Nunavut
XOB OCO

Re: Creation of an Environmental Land Farm at the Cambridge Bay Metal Dump

Dear Sir

Over the years there has been a number of documented petroleum product spills in the area of our tank farms. One of our goals this year is to complete the required remediation and start with a clean environmental report card. The following is some information that will lead to a request to create a small land farm in the Cambridge Bay metal dump or at the top deck of the town landfill.

This would involve building a burmed area to size and install an approved liner. The contaminated soils would be placed in the land farm, treated and tilled until the soil was at an acceptable level, they could then be used as cover material at the town dump or as directed by the Hamlet. Initially we would want to use the land farm for our own purposes to remediated some contaminated fuel we have on our lots.

In two or three years the land farm could be decommissioned or be kept in tact for similar uses in the future. The maintenance of a land farm are very light but would include periodic de-watering, tilling if there are any contents. Decommissioning would involve land filling the liner and removing the burm material or simply spreading it on site.

The cost would be burdened by Kitnuna Corporation to establish the land farm and decommission the land farm if this is what the Hamlet requested.

At this point we would like approval to construct the land farm on a site within the dump boundaries and to use the land farm as stated. We will run and manage the land farm and once the tests indicated safe disposal of the remediated soil we will consult with Hamlet officials on manner of final disposal. This work will be done under the supervision of Environmental Engineering consulting firm.

I have attached some useful information on this project. This year we hope to install some features to our operation that will reduce the possibility of re occurring petroleum product spills. I look forward to your early response to this matter.

Sincerely

W. C. W.

Wilf Wilcox
Vice President

Figure 4 - Location of South Tank Farm Test Pits

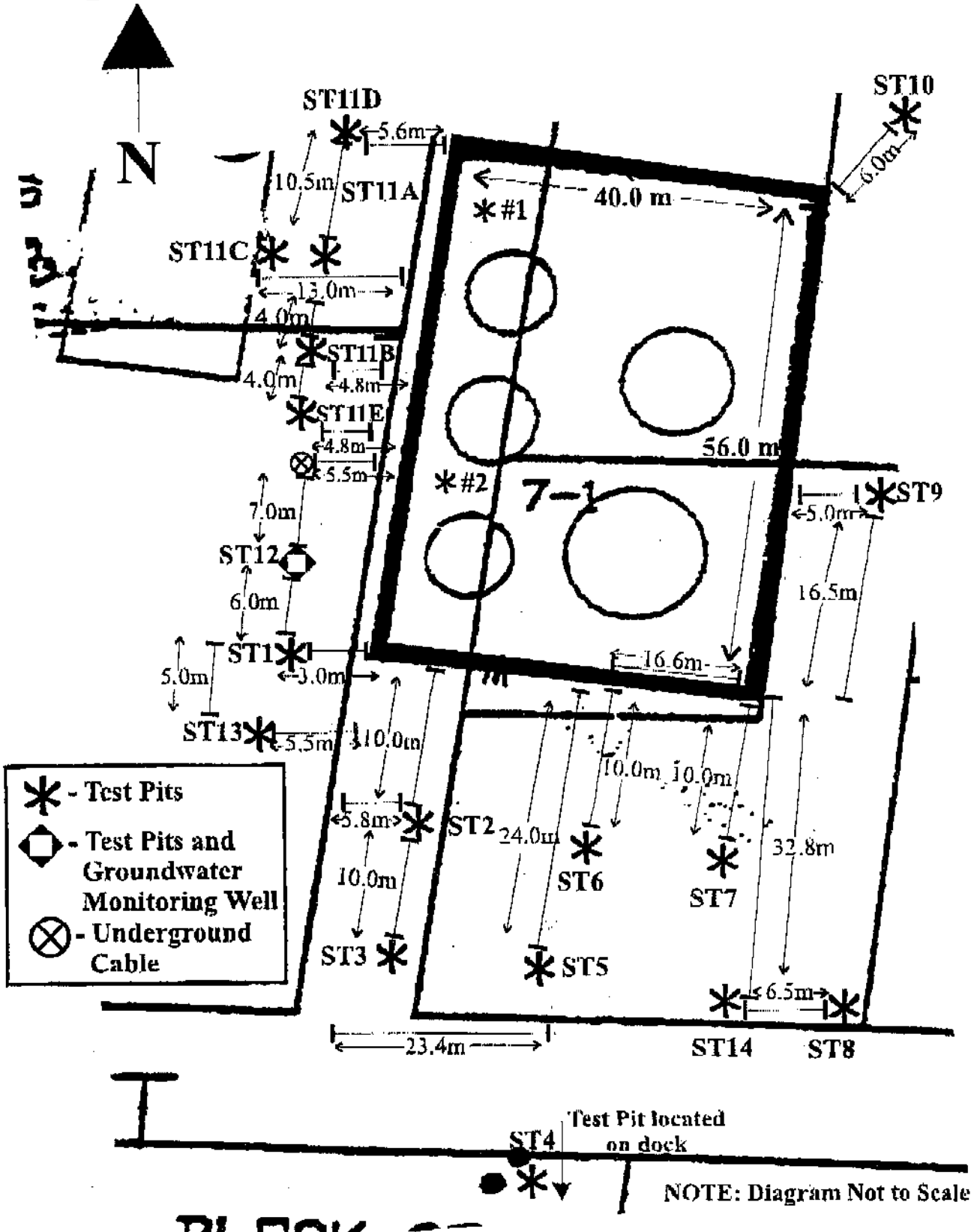
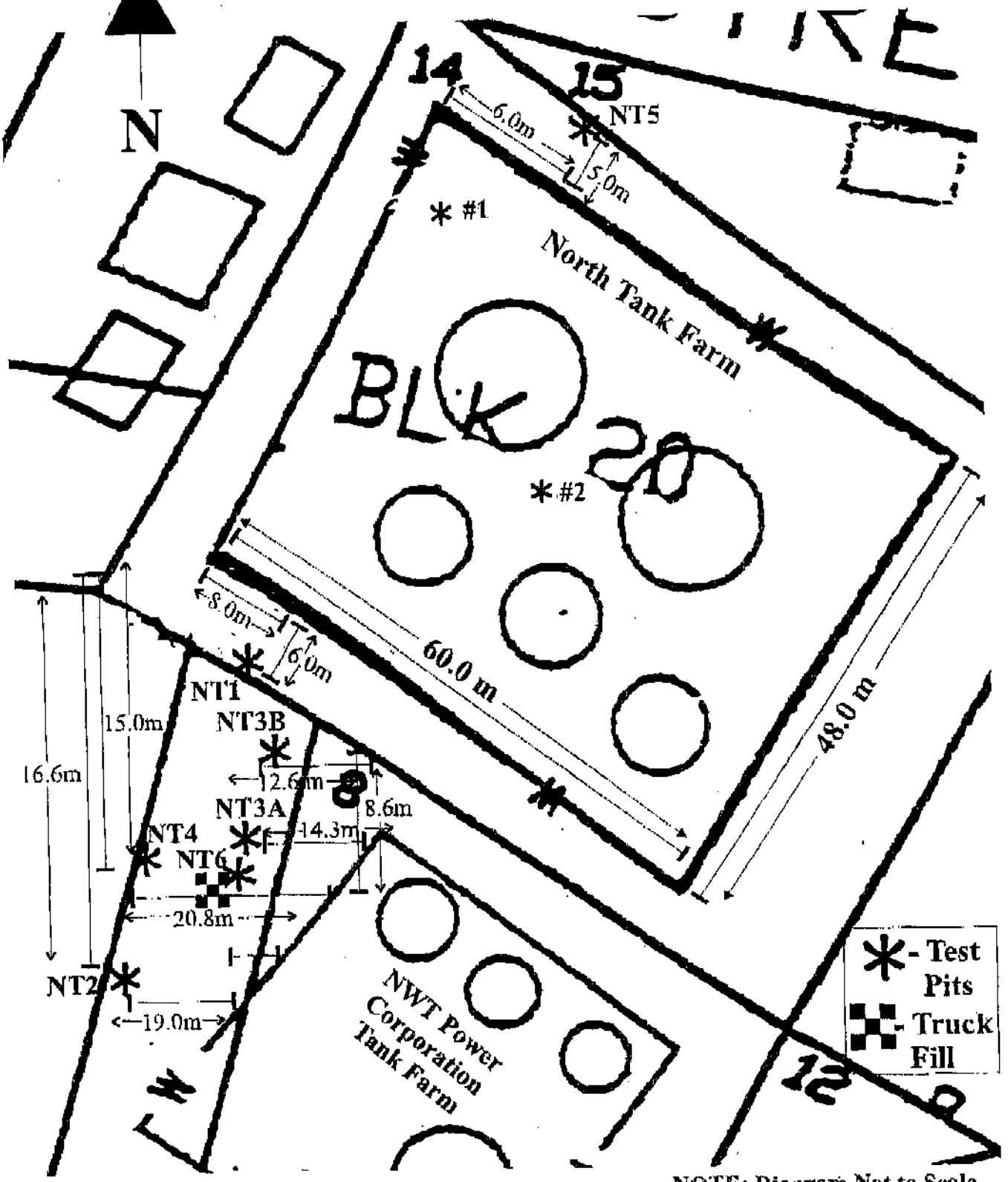
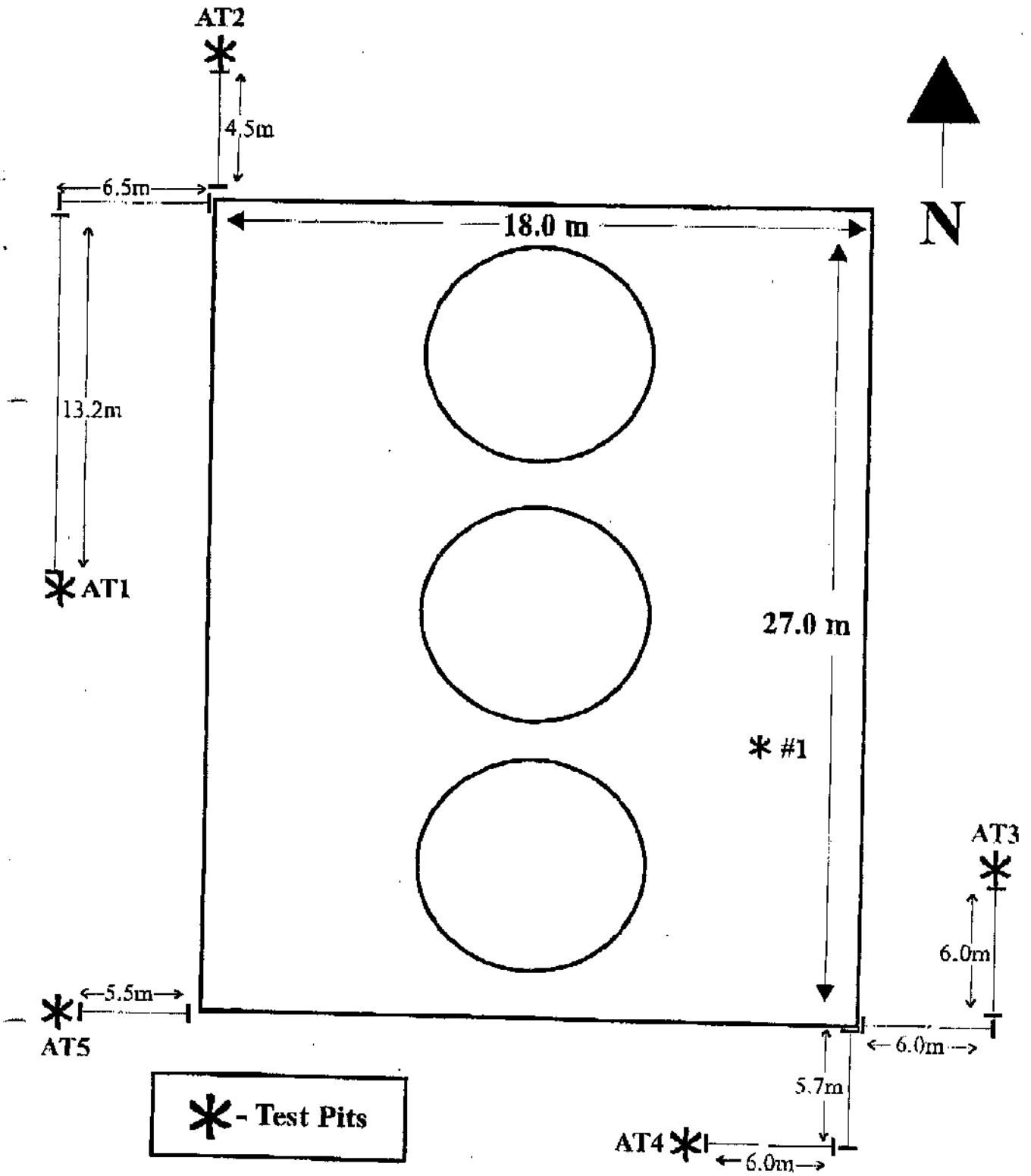


Figure 5 - Location of North Tank Farm Test Pits



NOTE: Diagram Not to Scale

Figure 6 - Location of Airport Tank Farm Test Pits



NOTE: Diagram Not to Scale

5.0 Field and Lab Results

5.1 Field Test Results for Soil

One field sample and one laboratory sample (replicate) was collected from each test pit location. All of the field samples were analyzed using a PetroFLAG Hydrocarbon Analyzer and the results are summarized below in Table 2. To conduct field tests, only 1.0 g of sample was required. One gram of sample was weighed out from the field sample jar and tested. One gram of soil allows for a maximum reading of 20,000 ppm. Since the readings are more subject to error at the range limits, an over-range reading is reported only as greater than the highest definite reading. The GNWT remediation guideline for Industrial Land is 2,500 ppm for Total Petroleum Hydrocarbons (TPH) in soil.

Table 2 - Soil Sample Information and PetroFLAG Field Results

	Sample ID	Depth (m)	Soil Type	Odour	TPH (ppm)	Comments
			SOUTH TANK FARM			
1	STF-1	1.04	Mostly clay rock	Musky odour	2,270	Soil is wet due to permafrost seepage
2	STF-2	0.99	Sand, silt, stones, organic material and clay	Dank, musky odour	1,710	No groundwater - dry
3	STF-3	0.90	Sand, silt and small rocks	HC odour	1,790	No groundwater - dry
4	STF-4	0.20	Gravel with some sand	No odour	990	No organics
5	STF-5	1.08	Clay and Rock with some sand and silt	No odour	340	No groundwater - dry and no organics
6	STF-6	1.05	Clay and Rock with some sand and silt	No odour	320	No groundwater - dry and no organics
7	STF-7	1.00	Sand, silt, organics, clay and rocks	No odour	280	No groundwater - dry
8	STF-8	0.93	Mostly clay and rock	Mild HC odour	9,300	No groundwater - dry and no organics
9	STF-9	1.07	Sand, silt, organics, clay and rocks	No odour	1,100	Test pit where oil stain was. Dry.
10	STF-10	0.90	Clay and Rock with some sand and silt	Faint HC odour	890	No groundwater - dry
11	STF-11A	0.98	Clay and Rock with some sand and silt	Strong HC odour	9,200	Oil staining in pit. Permafrost - wet
12	STF-11B	0.93	Clay and Rock with some sand and silt	Strong HC odour	1,040	Oil staining in test pit. Dry.
13	STF-11C	0.85	Clay and Rock with some sand and silt	HC odour	4,400	Moist
14	STF-11D	0.76	Clay and Rock with some sand and silt	HC odour	4,300	Moist
15	STF-11E	0.55	Clay and Rock with some sand and silt	HC odour	9,000	Moist
16	STF-12	0.85	Clay and Rock with some sand and silt	HC odour	8,100	Groundwater - install monitoring well
17	STF-13	0.85	Clay and Rock with some sand and silt	Faint HC odour	310	No groundwater - dry

Phase II Environmental Site Assessment (ESA) of the North, South and Airport Tank Farms
Cambridge Bay, NU
Nunasi Corporation

	Sample ID	Depth (m)	Soil Types	Odour	TPH (ppm)	Comments
18	STF-14	0.80	Clay and Rock with some sand and silt	No odour	0	No groundwater - dry
19	#1 NW vicinity inside STF	0.25	Sand, silt and small rocks	Faint HC odour	550	No groundwater - dry
20	#2 SW section inside STF	0.25	Sand, silt and small rocks	No odour	0	No groundwater - dry
	NORTH TANK FARM					
21	NTF-1	1.10	Medium brown clay, rock	No odour	120	No groundwater - dry
22	NTF-2	1.10	Medium brown clay, rock	No odour	150	No groundwater - dry
23	NTF-3A	1.00	Medium brown clay, rock	HC odour	1,325	No groundwater - dry
24	NTF-3B	1.00	Medium brown clay, rock	HC odour	1,290	No groundwater - dry
25	NTF-4	0.90	Medium brown clay, rock	Faint HC odour	1,460	No groundwater - dry
26	NTF-5	0.90	Medium brown clay, rock	HC odour	930	Wet
27	NTF-6	0.90	Medium brown clay, rock, and sand	HC odour	[illegible]	No groundwater - dry
28	#1 inside NTF Central Area	0.25	Sand, silt and small rocks	HC odour	[illegible]	No groundwater - dry
29	#2 inside NTF Below Valve	0.25	Sand, silt and small rocks	HC odour	[illegible]	No groundwater - dry
	AIRPORT TANK FARM					
30	ATF-1	0.20	Sand, silt, clay and organic	No odour	500	No groundwater - dry
31	ATF-2	1.00	Sand, silt, clay and organic	No odour	20	No groundwater - dry
32	ATF-3	1.05	Sand, silt, and clay	Faint HC odour	0	No groundwater - dry
33	ATF-4	0.90	Mainly clay with organic material	Faint HC odour	470	No groundwater - dry
34	ATF-5	0.95	Clay with some organic material	Faint HC odour	480	No groundwater - dry
35	#1 inside ATF on East Side	0.25	Sand, silt, and small rocks	Faint HC odour	[illegible]	No groundwater - dry
36	#1 South Side Dispenser Pipe	0.25	Sand, silt, and small rocks	Faint HC odour	[illegible]	No groundwater - dry
37	#2 North Side Dispenser Pipe	0.25	Sand, silt, and small rocks	Faint HC odour	960	No groundwater - dry

Total Petroleum Hydrocarbons (TPH) GNWT Remedial Guidelines for an Industrial Area is 2,500 ppm
STF = South Tank Farm
NTF = North Tank Farm
ATF = Airport Tank Farm
HC = Hydrocarbon

For the south tank farm, the sample collected at the STF-8 test pit exceeded the criteria for the GNWT Remedial Guidelines for Industrial Land with a TPH value of 8,300 ppm, well above the 2,500 ppm guideline. Test Pit STF-8 was located down gradient from the south east corner of the

Figure 7 - Estimated Vicinity of the Contaminated Soil at the South Tank Farm

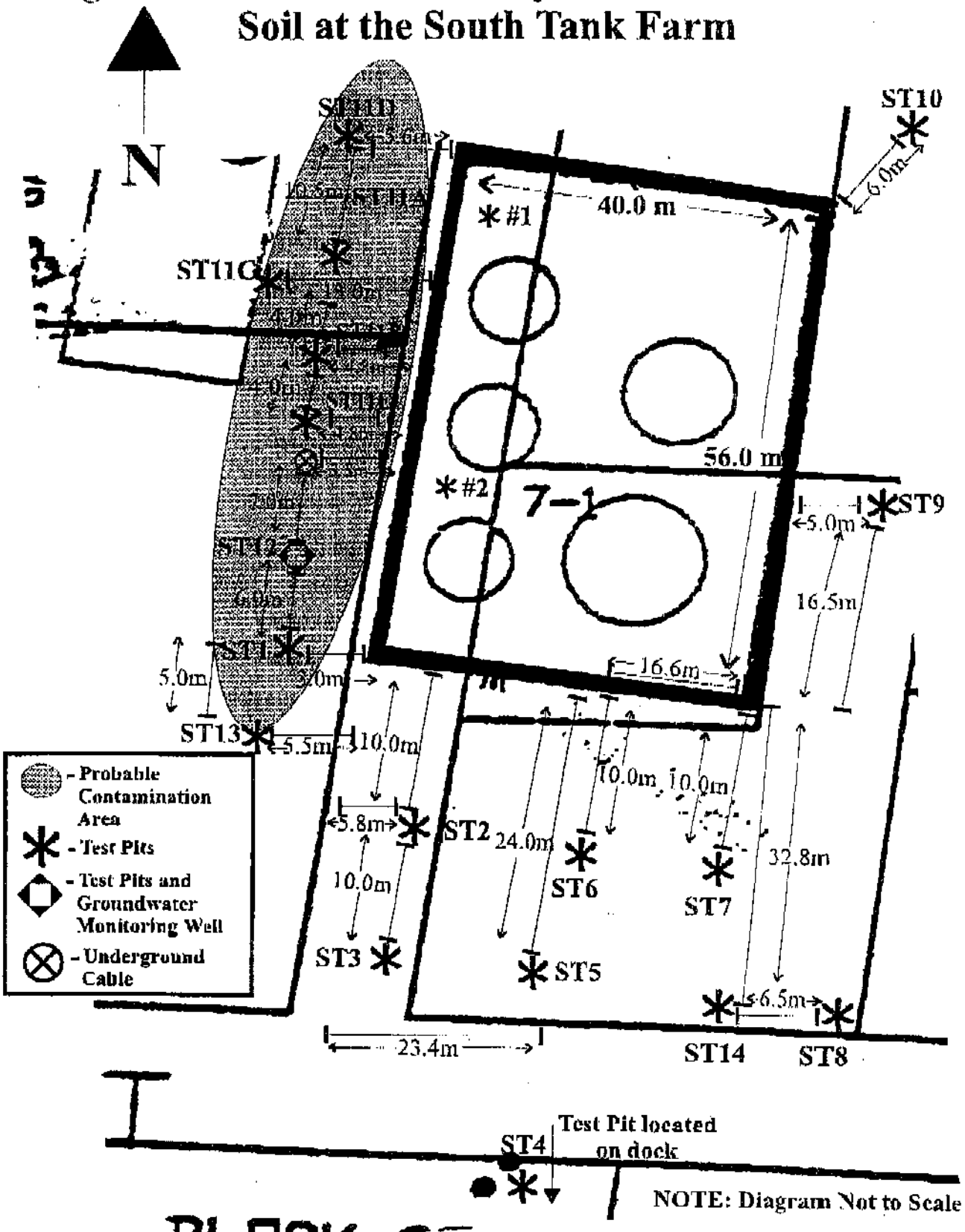
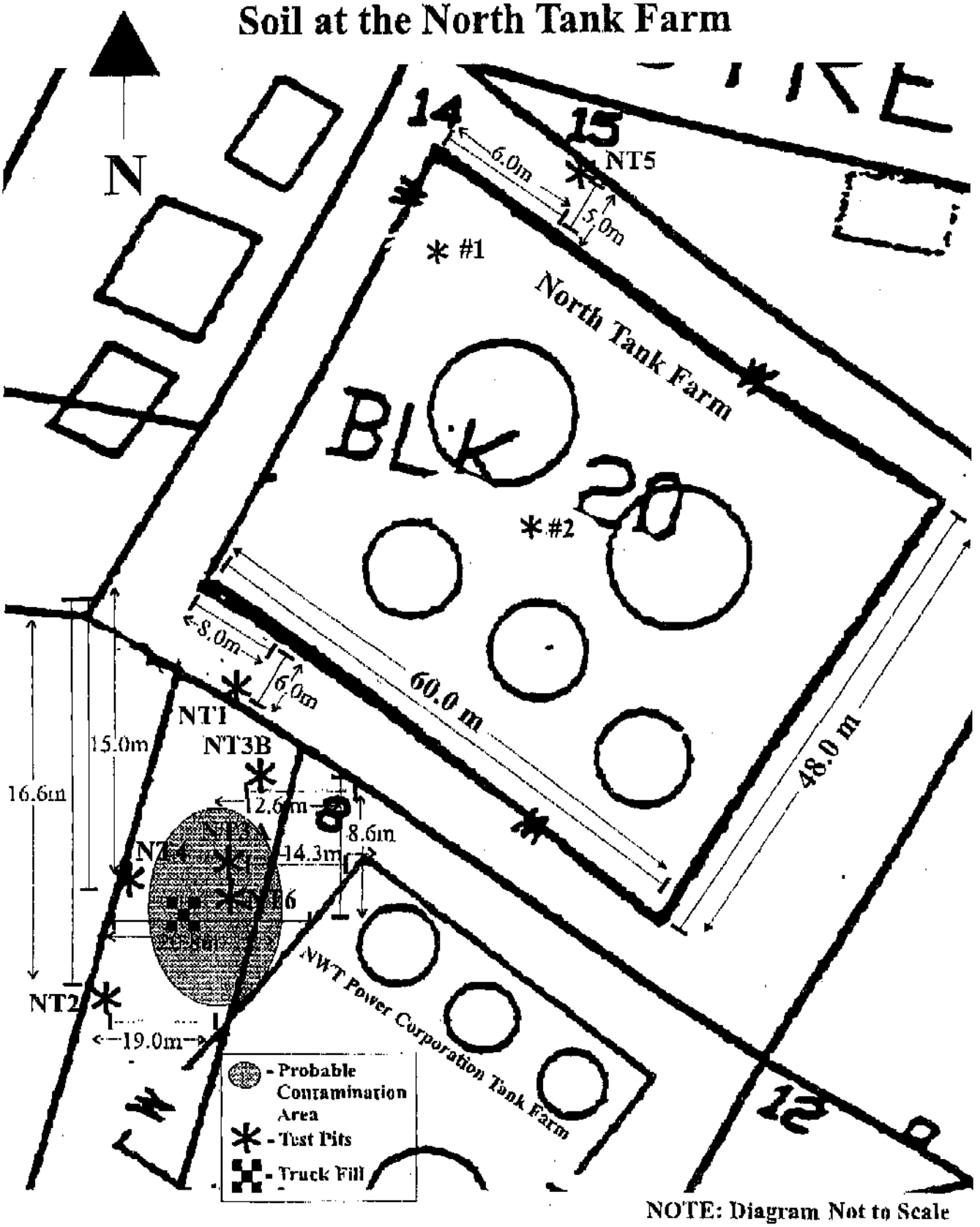
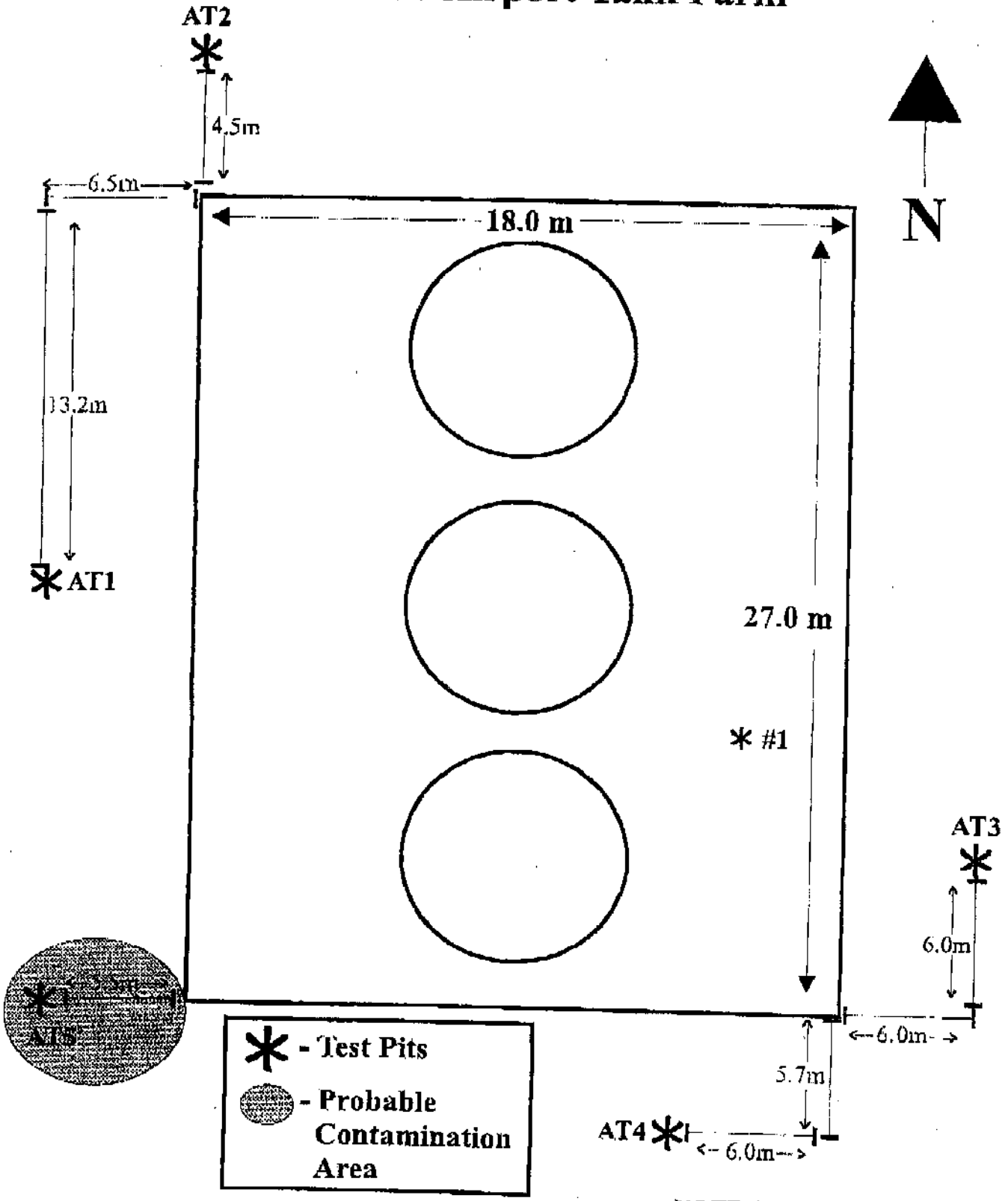


Figure 8 - Estimated Vicinity of the Contaminated Soil at the North Tank Farm



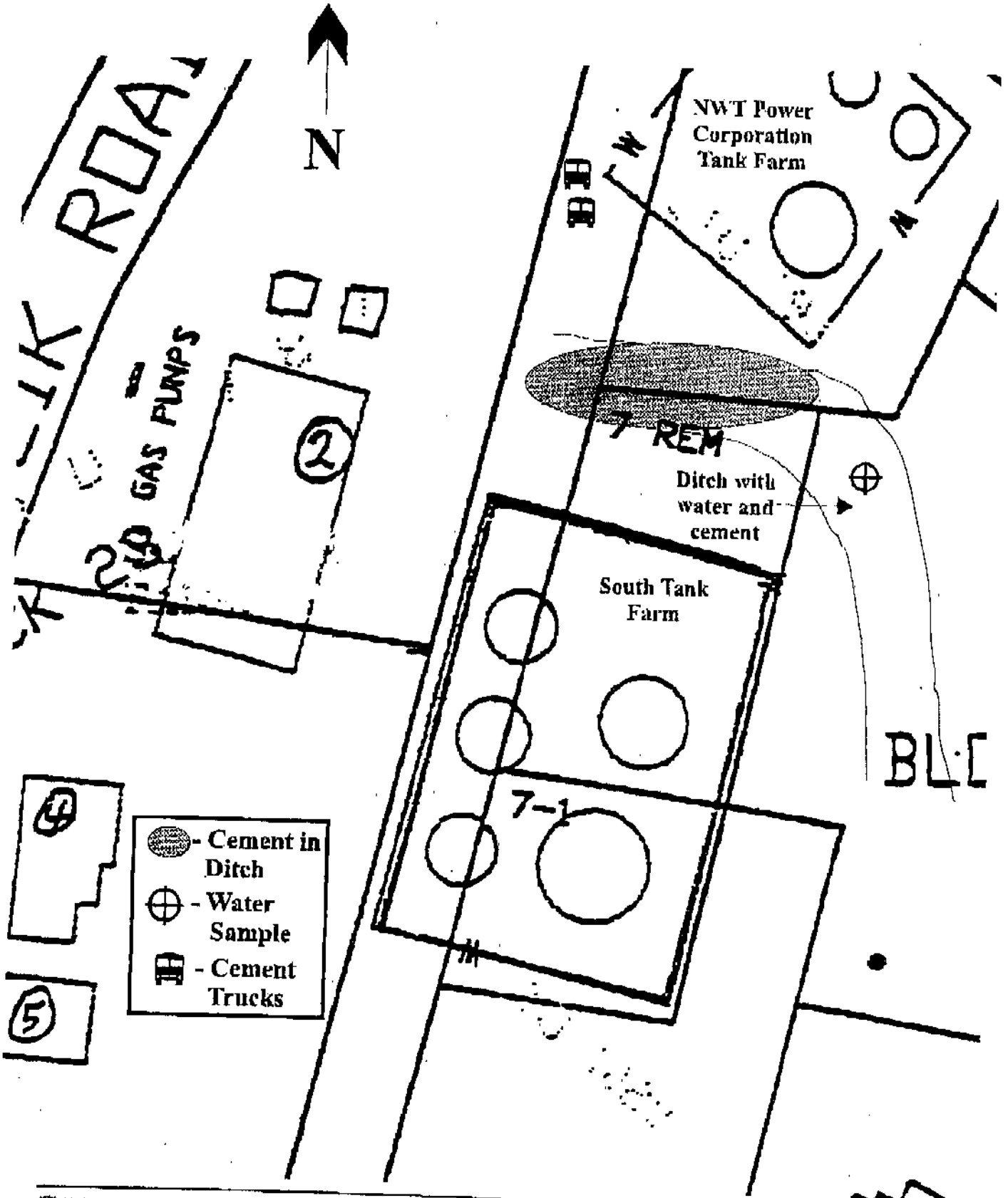
NOTE: Diagram Not to Scale

Figure 9 - Estimated Vicinity of the Contaminated Soil at the Airport Tank Farm

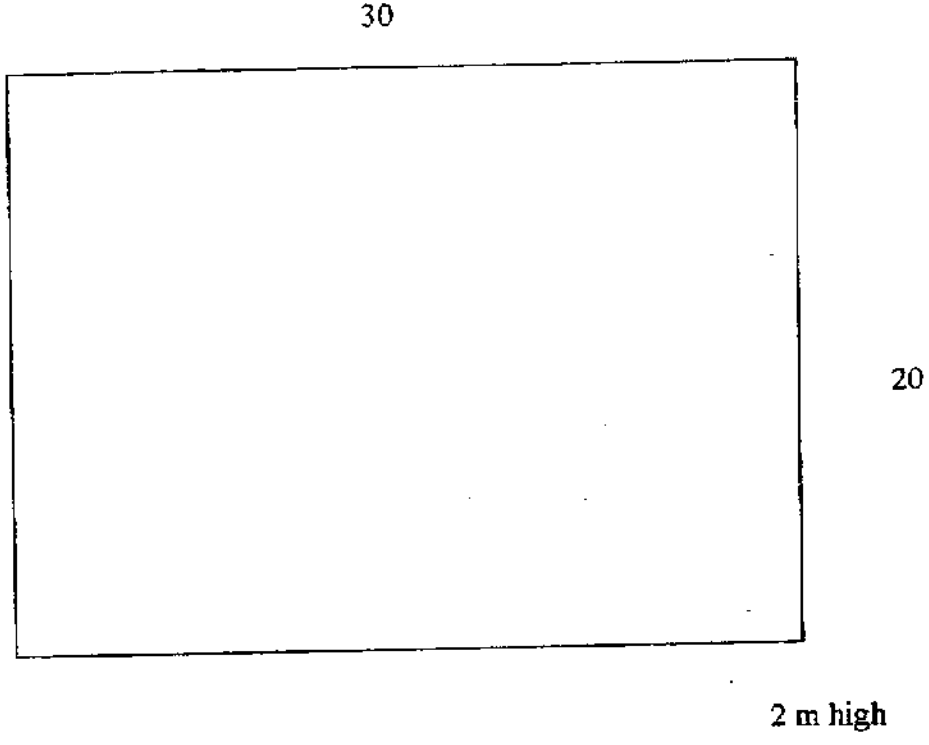


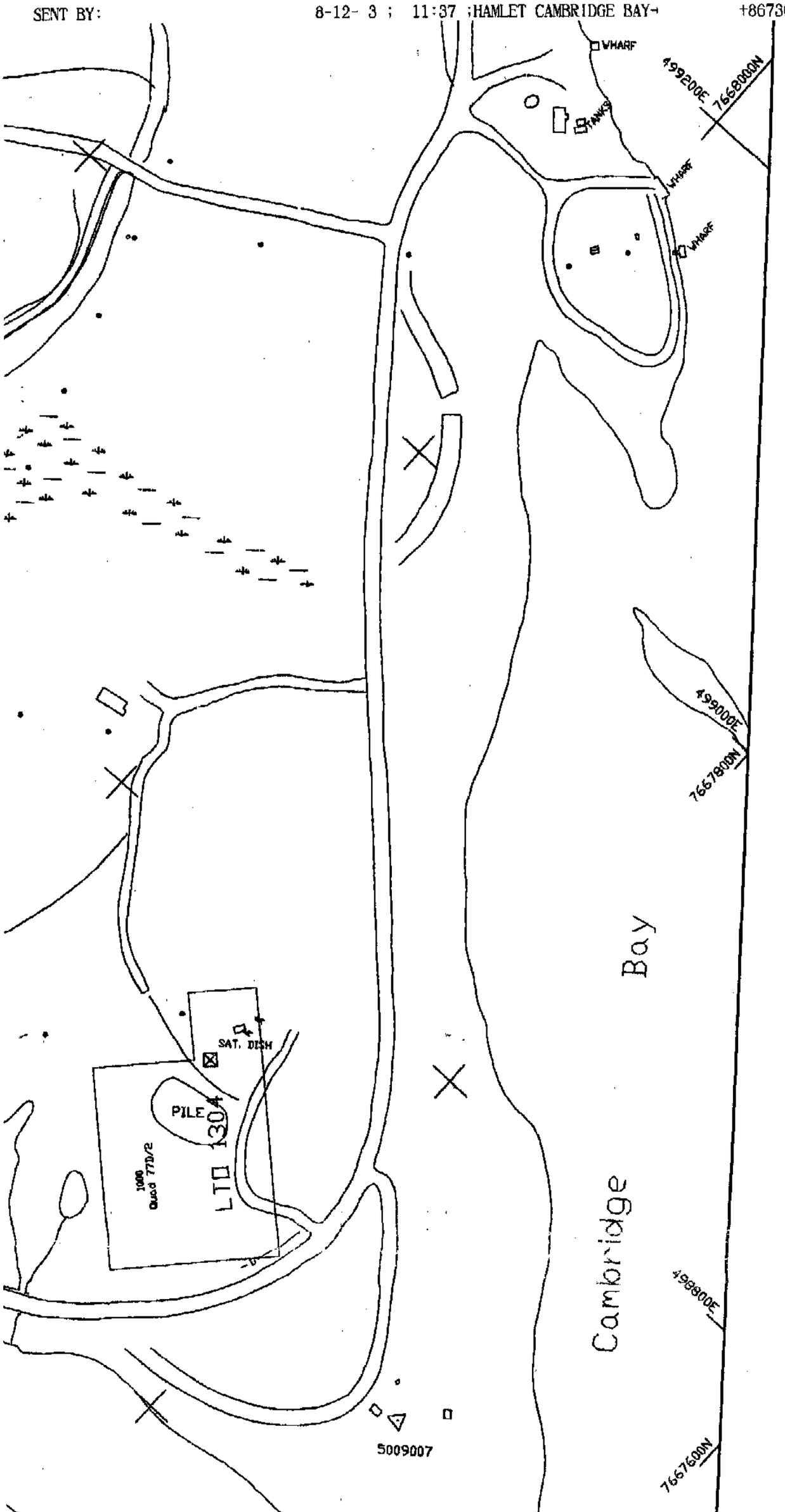
NOTE: Diagram Not to Scale

Figure 10 - Water and Cement Product in Ditch



Proposed Land Farm Size

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