



**Group, Inc.**  
Engineers • Scientists • Planners

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## MEMORANDUM

Job No. **02685**

Date: November 16, 2004

Subject: Subsurface investigations along Nemasket Street September 24, 28, 29 and  
October 1, 2004

To: File From: Barbara Markley  
cc: Al Hanscom, PIP repository

### Summary

On September 24, 28, 29 and October 1, 2004, BETA personnel observed the advancement and characterization of fill material from 37 soil borings located along Nemasket Street, which abuts McCoy Field to the south. Soil borings were advanced to determine the depth and aerial extent of fill material, till and/or organic material. Of the 37 soil borings, 24 samples were submitted for laboratory analysis of polychlorinated byphenyls (PCBs) and composite samples were submitted for RCRA 8 Metals and semivolatile organic compounds (SVOCs) analyses. Generally, the borings advanced with little resistance to depths ranging from 4 to 12 feet below grade depending on their proximity to utilities located within the sample area. Two (2) of the 37 soil borings were composed of clean backfill materials associated with the installation of the utilities. Eighteen (18) of the 37 locations had a grass and soil cover ranging from 0.2 to 1 feet in thickness. At the remaining 19 locations, fill material was present at the surface. Fill material was present at depths ranging from 5 to 9.5 feet below grade. At locations where the soil borings were advanced to 12 feet below grade, the average depth of fill was approximately eight (8) feet below grade. Organics were encountered at depths ranging from five (5) to 9.5 feet below grade. Till was observed at four (4) locations at depths ranging from 11.5 to nearly 12 feet below grade. Fill material was dark brown to black and primarily composed of crushed debris with traces of silt, minimal glass and traces of metal debris, with slight to no noticeable odor. This fill material exhibited characteristics different from the material underlying McCoy Field (more ash material, higher glass and metal content, dark brown to black in color and a strong odor).

COPIES TO: PIP Doc. Repository

SIGNED: \_\_\_\_\_

SUMMIT STREET

RS-4  
ISOLATED AREA  
SUBJECT TO FLOODING  
3,628± S.F.  
0.08 Ac

RS-3

RUGGLES STREET

RS-2

RS-1

EXISTING BUILDING

EXISTING BUILDING

WOOD FENCE

SHED

DRAIN SWALE

DMH

STANDING WATER  
4-28-00

8" SEWER PIPE

20" SEWER PIPE

BITUMINOUS CONCRETE WALK

GRANITE CURB

McCoy Field

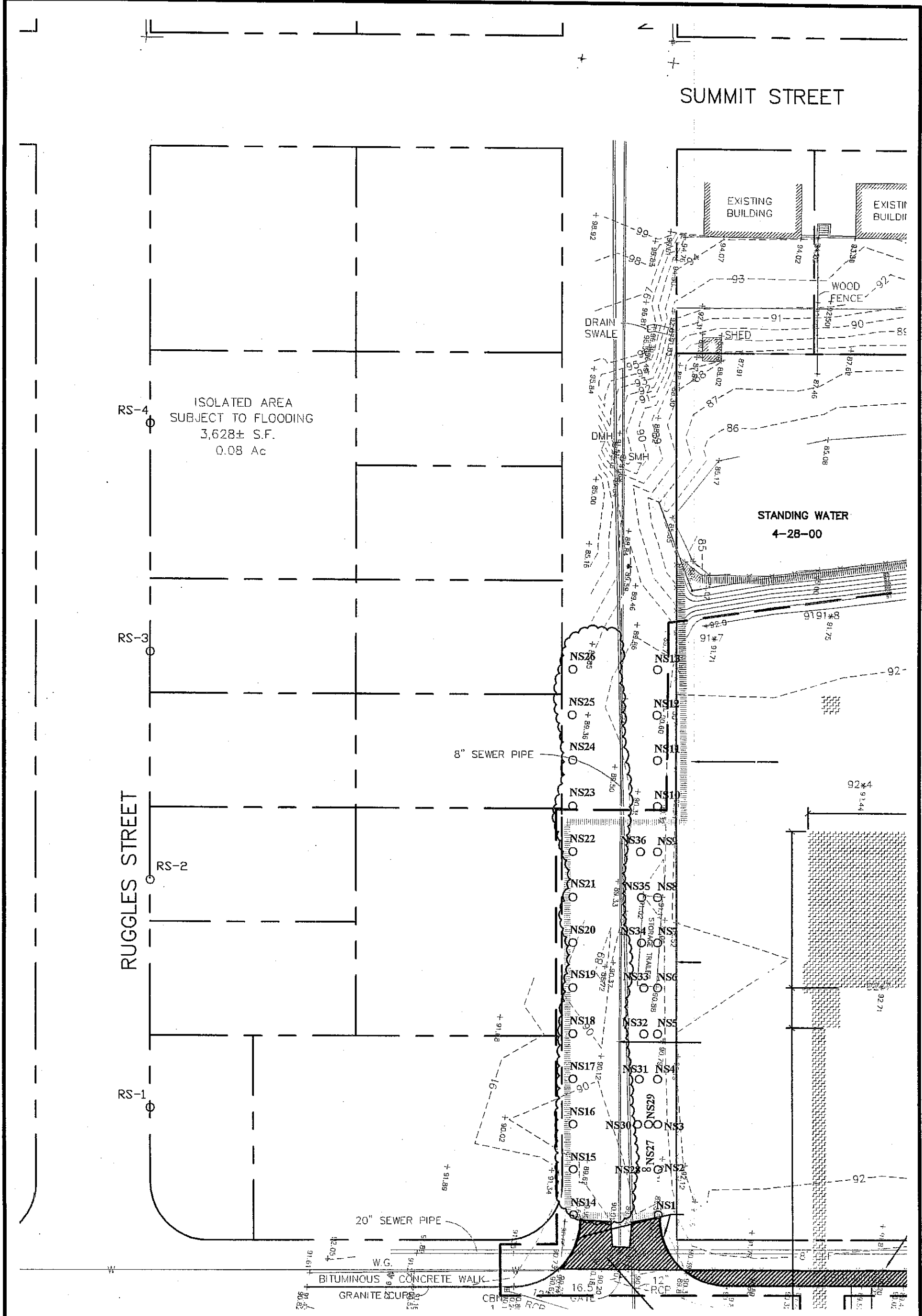
New Bedford, Massachusetts

Scale: 1" = 40'

Peripheral Areas  
South of McCoy Field

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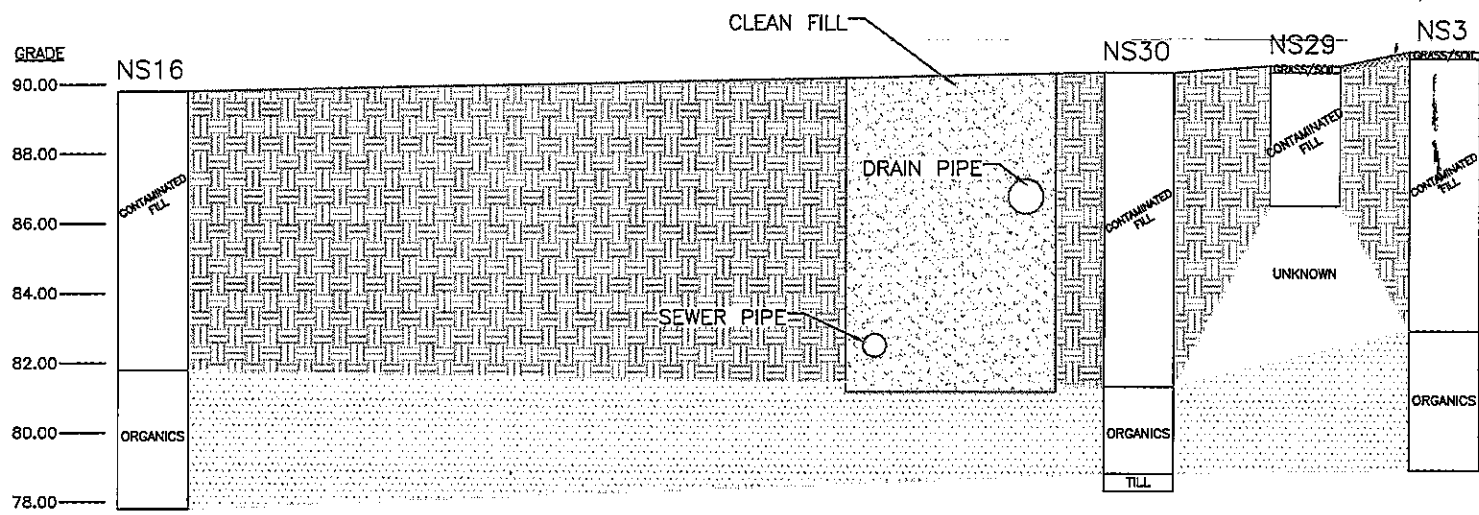
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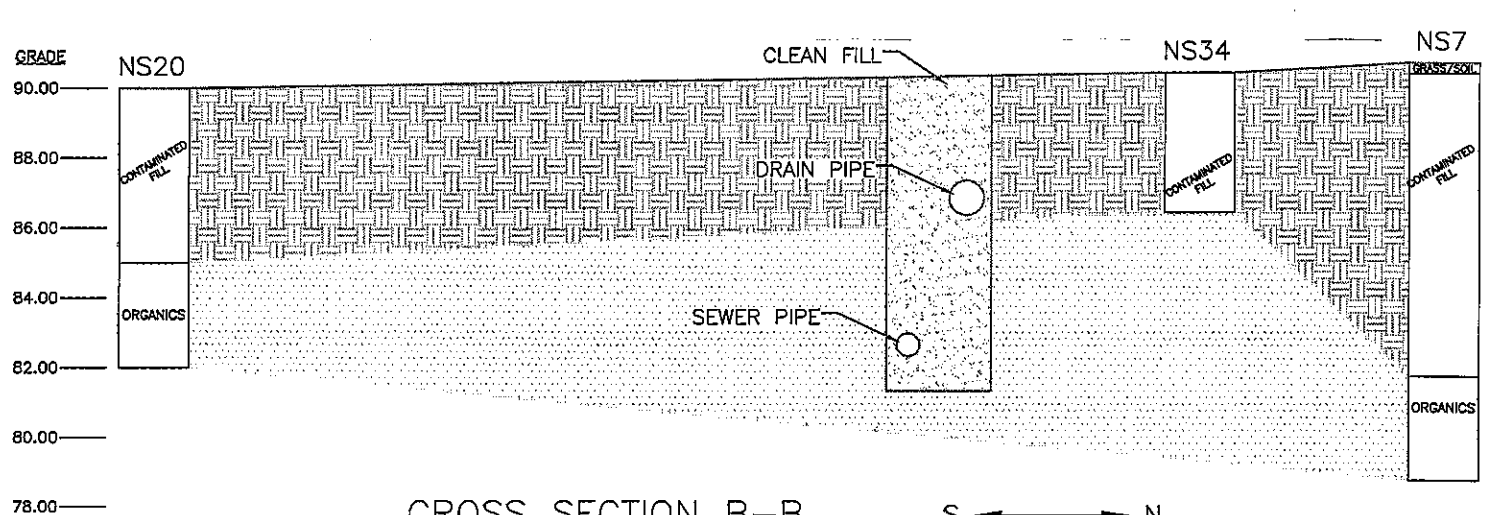
Nemasket Street Soil Borings

Boring ID	Grass/Soil	Asphalt	Clean Fill	Contaminated Fill	Organics	Till	End of Exploration	Notes	
NS1	0-0.3'	4"-8"	8"-8'				8'		
NS2	0-0.5'			0.5-8.5'	8.5-12'	~12'	12'		
NS3	0.2'			2"-8'	8.5-12'	~12'	12'		
NS4	0-0.25'			3"-8.5'	8.5-12'	~12'	12'		
NS5	0-0.2'			0.2-8.5'	8.5-12'		12'		
NS6	0-0.2'			0.2-9'	9-12'		12'		
NS7	0-0.3'			0.3-9'	9-12'		12'		
NS8	0-0.3'			0.3-9'	9-12'		12'		
NS9				0-8.5'	8.5-12'		12'		
NS10	0-0.2'			0.2-9.5'	9.5-12'		12'		
NS11				0-9'	9-12'		12'	Ref@4.5', moved 12" W ref@2.5', final boring 12" E	
NS12				0-9'	9-12'		12'	Ref@6', 12"W ref@2.2', final boring 12"E	
NS13				0-9'	9-12'		12'		
NS14	0-0.2'		0.2-12'				12'		
NS15				0-8.25'	8.25-12'		12'		
NS16				0-8'	8-12'		12'		
NS17				0-8'	8-12'		12'		
NS18	0-1'			1-9'	9-12'		12'		
NS19				0-7.5'	7.5-12'		12'		
NS20				0-5'	5-8'		8'		
NS21				0-6.5'	6.5-8'		8'		
NS22				0-7.25'	7.25-8'		8'		
NS23				0-8.25'	8.25-12'		12'		
NS24				0-5'	5-8'		8'	Ref@5-6', moved 4"W, 2"W, 2"N (ref@~5ft), final boring 2"E	
NS25	0-0.5'			0.5-8'	5-12'		12'		
NS26	0-0.5'			0.5-8'	8-12'		12'	Ref@6', moved 12"W ref@6', final boring 2"E	
NS27	<b>NO SAMPLE</b>								
NS28			1-1.5, 2.5-3'	0-1', 1.5-2.5', 3-4'			4'		
NS29	0-0.2'			0.2-4'			4'		
NS30				0-9'	9-11.5'	11.5-12'	12'		
NS31				0-4'			4'		
NS32				0-4'			4'		
NS33	0-0.2'			0.2-4'			4'		
NS34				0-4'			4'		
NS35	0-0.2'			0.2-4'			4'		
NS36	0-0.5'			0.5-4'			4'		
NS37	0-0.5'			0.5-4'			4'		

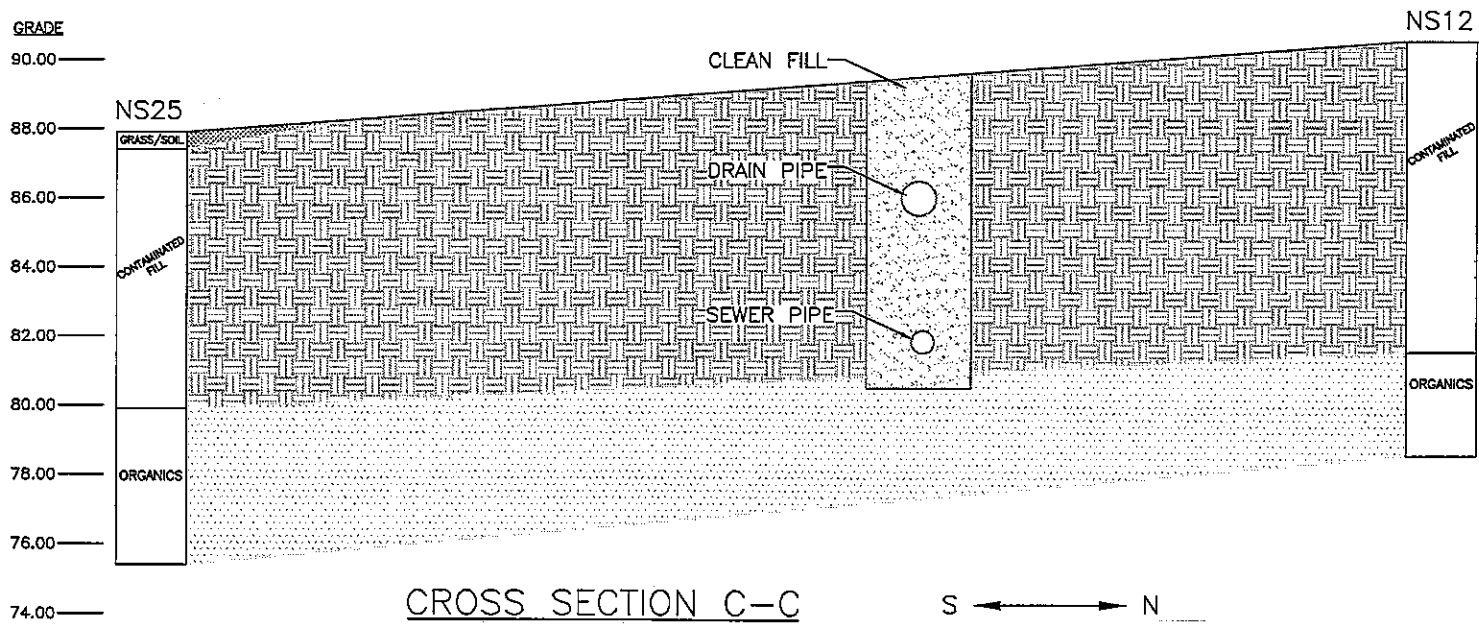
O:\2600s\2685 - New Bedford Sampling Plan\AutoCad Files\McCoy Site Characterization\PROFILE.dwg Nov 17, 2004 10:27am



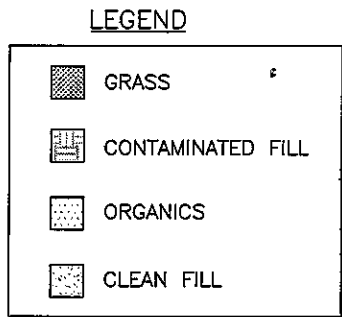
CROSS SECTION A-A S ← N



CROSS SECTION B-B S ← N



CROSS SECTION C-C S ← N



NOTE: INVERT ELEVATIONS OF THE DRAIN PIPES AND SEWER PIPES ARE APPROXIMATE. THE AREA OF CLEAN FILL SURROUNDING THE PIPES ARE ESTIMATES.

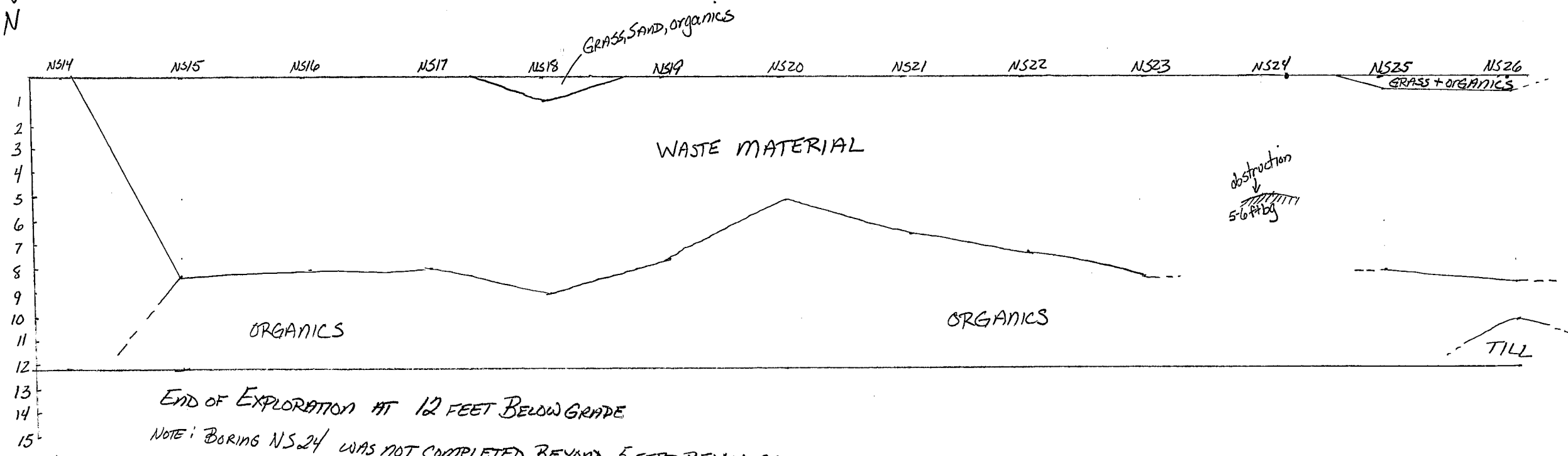
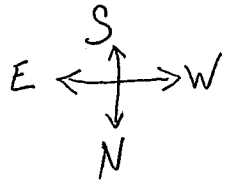
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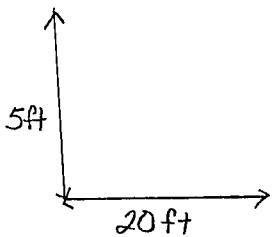
Nemasket Street

New Bedford, MA  
Not to Scale

Cross-Sections



LOCATION: NEMASKET STREET  
SITE: McCoy



Nemasket Street  
Polychlorinated Biphenyls

Sample Identification	Depth	Date	RCS-1 Turnkey Acceptance Limit UCL								
			Total PCBs	PCB-1221	PCB-1232	PCB-1016/1242	PCB-1248	PCB-1254	PCB-1260	PCB-1262	PCB-1268
			(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
			2,000	~	~	~	~	~	~	~	~
50,000	~	~	~	~	~	~	~	~			
100,000	~	~	~	~	~	~	~	~			
NS2-0.5-4'	0.5-4	9/24/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS2-4-8.5'	4-8.5	9/24/04	2,040	ND	ND	ND	ND	2,040	ND	ND	ND
NS3-0.2-4'	0.2-4	9/24/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS3-4-8.5'	4-8.5	9/24/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS4-0.2-4'	0.2-4	9/24/04	4,920	ND	ND	ND	ND	4,920	ND	ND	ND
NS4-4-8.5'	4-8	9/24/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS5-0.2-4'	1.2-4	9/24/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS5-4-8.5'	4-8	9/24/04	2,990	ND	ND	ND	ND	2,990	ND	ND	ND
NS6-0.2-4'	0.2-4	9/28/04	2,145	ND	ND	ND	ND	2,145	ND	ND	ND
NS6-4-9'	4-9	9/28/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS7-0.3-4'	0.3-4	9/28/04	8,740	ND	ND	ND	ND	8,740	ND	ND	ND
NS7-4-9'	4-9	9/28/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS8-0.3-4'	0.3-4	9/28/04	3,300	ND	ND	ND	ND	3,300	ND	ND	ND
NS8-4-9'	4-9	9/28/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS9-0-4'	0-4	9/28/04	14,160	ND	ND	ND	ND	14,160	ND	ND	ND
NS9-4-8.5'	4-8.5	9/28/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS10-0.2-4'	0.2-4	9/28/04	5,380	ND	ND	ND	ND	5,380	ND	ND	ND
NS10-4-9.5'	4-9.5	9/28/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS11-0-4'	0-4	9/28/04	3,000	ND	ND	ND	ND	3,000	ND	ND	ND
NS11-0-4' MS	0-4	9/29/04	8,000	ND	ND	ND	ND	8,000	ND	ND	ND
NS11-0-4' MSD	0-4	9/29/04	6,100	ND	ND	ND	ND	6,100	ND	ND	ND
NS11-4-9'	4-9	9/29/04	2,100	ND	ND	ND	ND	2,100	ND	ND	ND
DUPLICATE 146 (NS 11-4-9')	4-9	9/29/04	1,860	ND	ND	ND	ND	1,860	ND	ND	ND
NS12-0-4'	0-4	9/29/04	61,000	ND	ND	ND	ND	61,000	ND	ND	ND
NS12-4-9'	4-9	9/29/04	3,500	ND	ND	ND	ND	3,500	ND	ND	ND
NS13-0-4'	0-4	9/29/04	9,600	ND	ND	ND	ND	9,600	ND	ND	ND
NS13-4-9'	4-9	9/29/04	7,350	ND	ND	ND	ND	7,350	ND	ND	ND
NS15-0-4'	0-4	10/1/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS15-4-8.25'	4-8.25	10/1/04	17,300	ND	ND	ND	ND	17,300	ND	ND	ND
NS16-0-4'	0-4	10/1/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS16-4-8'	4-8	10/1/04	8,250	ND	ND	ND	ND	8,250	ND	ND	ND
NS17-0-4'	0-4	10/1/04	12,200	ND	ND	ND	ND	12,200	ND	ND	ND
NS17-4-8'	4-8	10/1/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS18-1-4'	1-4	10/1/04	16,100	ND	ND	ND	ND	16,100	ND	ND	ND
NS18-4-9'	4-9	10/1/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS19-0-4'	0-4	10/1/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS19-4-7.5'	4-7.5	10/1/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS20-0-4'	0-4	10/1/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS20-4-5'	4-5	10/1/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS21-0-4'	0-4	10/1/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS21-4-6.5'	4-6.5	10/1/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
DUPLICATE 151 (NS21-4-6.5)	4-6.5	10/1/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS22-0-4'	0-4	10/1/04	2,900	ND	ND	ND	ND	2,900	ND	ND	ND
NS22-4-7.25'	4-7.25	10/1/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS23-0-4'	0-4	10/1/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS23-4-8.25'	4-8.25	10/1/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS24-0-4'	0-4	10/1/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS24-4-5'	4-5	10/1/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
NS25-0.5-4	0.5-4	10/1/04	98,600	ND	ND	ND	ND	98,600	ND	ND	ND
NS25-4-8'	4-8	10/1/04	ND	ND	ND	ND	ND	>16667	ND	ND	ND
NS26-0.5-4'	0.5-4	10/1/04	ND	ND	ND	ND	ND	>33333	ND	ND	ND
NS26-4-8.5'	4-8.5	10/1/04	ND	ND	ND	ND	ND	ND	ND	ND	ND

Nemasket Street  
RCRA 8 Metals

RCS-1  
Toxicity Characteristic (20 Times) Rule  
Regulatory Limit  
UCL

RCRA 8 Metals								TCLP			
Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Lead (mg/L)	Barium (mg/L)	Mercury (mg/L)	Chromium (mg/L)
30	1,000	30	1,000	300	20	400	100	~	~	~	~
100	2,000	20	100	100	4	20	100	~	~	~	~
~	~	~	~	~	~	~	~	5.0	100.0	0.2	5.0
300	10,000	800	10,000	6,000	600	10,000	2,000	~	~	~	~

Sample Identification	Depth	Date	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Lead (mg/L)	Barium (mg/L)	Mercury (mg/L)	Chromium (mg/L)
NS2,3 Shallow	Shallow	9/24/04	63	3,860	7.05	86	1550	0.677	ND	0.67	0.8	1.44	~	~
NS2,3 Deep	Deep	9/24/04	35	2,030	5.55	385	3900	0.416	ND	0.75	3	2.67	~	<0.02
NS4,5 Shallow	Shallow	9/24/04	20	656	5.96	55	3260	1.03	ND	0.68	3.1	~	~	~
NS4,5 Deep	Deep	9/24/04	27	783	16.00	167	903	0.531	ND	1.34	2.1	0.02	~	~
NS 6,7,8,9 Shallow	Shallow	9/28/04	20	635	5	67	658	0.64	ND	4.16	0.9	~	~	~
NS 6,7,8,9 Deep	Deep	9/28/04	83	3,680	11	244	1260	1.03	ND	ND	0.9	2.19	~	<0.02
Comp NS 10,11,12 Shallow	Shallow	9/29/04	19	602	4.12	70	572	0.51	ND	ND	3	~	~	~
Comp NS 10,11,12 Deep	Deep	9/29/04	11	289	4.70	28	437	0.32	ND	ND	0.6	~	~	~
NS15,16,17 Shallow	Shallow	10/1/04	10	320	1.50	79	700	1.10	ND	1.40	~	~	~	~
NS 15,16,17,Deep	Deep	10/1/04	18	160	5.00	43	1300	1.400	ND	1.80	~	~	~	~
NS 18,19,20 Shallow	Shallow	10/1/04	16	450	4.10	160	920	1.100	ND	0.68	~	~	~	~
NS 18,19,20 Deep	Deep	10/1/04	26	110	1.00	28	4900	0.380	ND	ND	~	~	~	~
NS 21,22,23 Shallow	Shallow	10/1/04	4	110	30.00	11	370	0.330	ND	1.50	~	~	~	~
NS 21,22,23 Deep	Deep	10/1/04	10	310	28.00	42	480	1.20	ND	ND	~	~	~	~
NS 24,25,26 Shallow	Shallow	10/1/04	16	430	2.50	210	1100	1.900	ND	1.10	~	~	~	~
NS 24,25,26 Deep	Deep	10/1/04	15	560	2.50	120	1100	1.600	ND	0.86	~	~	~	~

NOTE: Samples collected on 10/1/04 are still pending TCLP analytical results.