
**STAUFFER MANAGEMENT COMPANY
SKANEATELES FALLS SITE
SKANEATELES FALLS, NEW YORK**

**FINAL REMEDIAL
DESIGN
REPORT FOR SITE WIDE
SOILS / DEBRIS REMEDIATION**

**VOLUME 3 OF 5
O'Brien & Gere Supporting Documentation
(Appendix N)**

December 13, 2002

Prepared for:

**Stauffer Management Co.
1800 Concord Pike
Wilmington, DE 19850-5438**

Prepared by:



**18 Computer Drive West
Albany, NY 12205**

SPEC Consulting Project #99-004

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The supporting documents included in this Appendix N of the Final Remedial Design for the SMC Site at Skaneateles Falls, NY were excerpted from the NYSDEC approved Soil Remediation Design Report for the SMC Site Skaneateles Fall, NY and prepared by O'Brien and Gere dated December 1998. These documents have been excerpted from this previously approved plan and included as an appendix as requested by the NYSDEC during a review of the SPEC Remedial Design Report dated February 28, 2002.

Supporting documents included in this Appendix N are:

- A. Tables
 - A-1 Summary of ground water analytical results
 - A-2 Summary of geotechnical testing program – physical characteristics
 - A-3 Summary of geotechnical testing program – strength and hydraulic conductivity data
 - A-4 Summary of soil analytical results
- C. *In situ* hydraulic conductivity test results
- D. Boring logs
- E. Test pitch/trench logs
- F. Soil analytical results and chain of custody forms
- G. Wetland delineation report
- V. Emissions evaluation
- W. Area north of the Main Plant Building HELP model results
- X. Area north of the Main Plant Building sliding results
- Z. Area north of the Main Plant Building USLE calculations



Appendix A

Tables

Table A-1
Summary of Ground Water Analytical Results
Stauffer Management Company
Skaneateles Falls, New York

Parameter	MW-1S 6/23/97	MW-2S 6/23/97	MW-4S 6/23/97	MW-5S 6/23/97	MW-7S 6/23/97	LFP-1 6/23/97	LFP-2 6/23/97
Organics (ug/l)							
cis-1,2-Dichloroethylene	<1	<1	<5	<500	15	<100	<500
trans-1,2-Dichloroethylene	<1	<1	<5	<500	2	<100	<500
Toluene	<1	<1	<5	<500	<1	<100	690
Vinyl Chloride	<1	<1	<5	<500	1	<100	<500
Xylene (total)	<3	<3	180	3,600	4	3,100	33,000
Phenol	<10	<100	<10	<100	<11	190	<100
4-Methylphenol	<10	<100	<10	<100	<11	140	<100
2,4-Dimethylphenol	<10	<100	<10	<100	<11	160	290
Benzoic acid	<52	<510	<51	<510	<55	600	650
o-Toluic acid	<10	2,600	<10	3,600	2,300	30,000	63,000
m-Toluic acid	<10	1,300	13	2,800	3,000	56,000	74,000
p-Toluic acid	<10	210	<10	130	350	7,000	1,600
Trace metals - filtered (mg/l)							
Aluminum	<.1	0.2	<.1	0.2	<.1	0.3	0.1
Arsenic	<.005	0.018	0.006	0.011	0.024	0.012	<.005
Barium	<.1	<.1	<.1	0.1	<.1	<.1	<.1
Calcium	100	16	37	28	42	4	16
Chromium	<0.01	<0.01	<0.01	0.06	<0.01	0.02	<0.01
Copper	<0.01	<0.01	<0.01	0.32	<0.01	0.01	<0.01
Iron	<0.5	1.6	1.5	1.3	0.17	0.48	0.67
Lead	<.005	<.005	<.005	0.45	<.005	0.012	<.005
Magnesium	18	4	8	8	54	2	8
Manganese	<0.05	<0.05	0.74	0.08	<0.05	0.06	0.09
Mercury	<.0002	<.0002	<.0002	0.0014	<.0002	0.0003	<.0002
Potassium	<5	<5	<5	20	8	100	89
Sodium	44	520	270	350	500	1000	840
Thallium	<.005	<.005	<.005	<.005	<.005	0.006	<.005
Zinc	<.01	0.02	<.01	0.16	<.01	0.05	0.01
Sodium	42	570	220	340	490	1500	800
Wet chemistry (mg/l)							
Hardness	570	76	160	130	470	170	140
BOD 5	<5	28	13	24	22	330	630
MBAS	<.1	0.6	0.5	0.4	0.5	5.4	3
Total Dissolved Solids	480	1400	760	870	1500	10000	2200
Total Suspended Solids	160	38	330	13	180	160	160
COD	40	110	40	250	90	680	2400
Total organic carbon	<2	40	6	90	18	180	880
Total phosphorus	0.4	6.1	1.5	2.4	4.8	33	5.7

TABLE A - 2
SUMMARY OF GEOTECHNICAL TESTING PROGRAM - PHYSICAL CHARACTERISTICS
STAUFFER MANAGEMENT COMPANY
SKANEATELES FALLS, NEW YORK

Sample Identification (depth)	Percent Passing No. 200 Sieve (%)⁽¹⁾	Liquid Limit (%)⁽²⁾	Plastic Limit (%)⁽²⁾	Plasticity Index ⁽²⁾	Soil Classification Based on Unified Soil Classification System⁽³⁾
SWB-1 Composite Sample	34.6	N/A	N/A	N/A	SM
SWB-2 Composite Sample	32.7	N/A	N/A	N/A	SM
SWB-3 Composite Sample	38.0	N/A	N/A	N/A	SM
SWB-4 Composite Sample	20.7	N/A	N/A	N/A	SM
SWB-5 Composite Sample	26.2	N/A	N/A	N/A	SM
SWB-6 Composite Sample	23.2	N/A	N/A	N/A	SM
SWB-7 Composite Sample	42.9	N/A	N/A	N/A	SM
SWB-8 Composite Sample	18.8	N/A	N/A	N/A	GM
SWB-9 Composite Sample	52.7	N/A	N/A	N/A	ML
SWB-10 Composite Sample	54.4	N/A	N/A	N/A	ML
SWB-11 Composite Sample	57.5	N/A	N/A	N/A	ML
SWB-12 Composite Sample	70.0	N/A	N/A	N/A	ML
SWB-13 Composite Sample	40.4	N/A	N/A	N/A	SM

TABLE A - 2
SUMMARY OF GEOTECHNICAL TESTING PROGRAM - PHYSICAL CHARACTERISTICS
STAUFFER MANAGEMENT COMPANY
SKANEATELES FALLS, NEW YORK

Sample Identification (depth)	Percent Passing No. 200 Sieve (%)⁽¹⁾	Liquid Limit (%)⁽²⁾	Plastic Limit (%)⁽²⁾	Plasticity Index ⁽²⁾	Soil Classification Based on Unified Soil Classification System⁽³⁾
SWB-14 Composite Sample	53.1	N/A	N/A	N/A	ML
SWB-15 Composite Sample	29.1	N/A	N/A	N/A	SM
SWB-16 Composite Sample	39.1	N/A	N/A	N/A	SM
SWB-17 Composite Sample	41.6	N/A	N/A	N/A	SM
SWB-18 Composite Sample	71.4	N/A	N/A	N/A	ML
SWB-19 Composite Sample	36.7	N/A	N/A	N/A	SM
SWB-20 Composite Sample	16.4	N/A	N/A	N/A	GM
TB-1 Composite Sample	36.7	N/A	N/A	N/A	SM
TB-2 Composite Sample	16.7	N/A	N/A	N/A	GM
TB-3 Composite Sample	35.2	N/A	N/A	N/A	SM
SWB-1 (6'-8')	37.4	N/A	N/A	N/A	SM
SWB-2 (4'-6')	80.9	N/A	N/A	N/A	ML
SWB-2 (10'-12')	N/A	31	18	13	N/A
SWB-2 (14'-16')	27.5	N/A	N/A	N/A	GM

TABLE A - 2
SUMMARY OF GEOTECHNICAL TESTING PROGRAM - PHYSICAL CHARACTERISTICS
STAUFFER MANAGEMENT COMPANY
SKANEATELES FALLS, NEW YORK

Sample Identification (depth)	Percent Passing No. 200 Sieve (%)⁽¹⁾	Liquid Limit (%)⁽²⁾	Plastic Limit (%)⁽²⁾	Plasticity Index ⁽²⁾	Soil Classification Based on Unified Soil Classification System⁽³⁾
SWB-4 (16'-18')	N/A	43	24	19	N/A
SWB-9 (8'-10')	63.3	N/A	N/A	N/A	ML
SWB-9 (10'-12')	N/A	34	22	12	N/A
SWB-12 (2'-4')	88.6	N/A	N/A	N/A	ML
SWB-13 (10'-12')	94	23.3	14.3	9.0	CL
SWB-14 (14'-16')	42.8	N/A	N/A	N/A	SM
SWB-15 (10'-12')	N/A	15	14	1	N/A
SWB-16 (4'-6')	38.3	N/A	N/A	N/A	SM
SWB-16 (6'-8')	95.8	N/A	N/A	N/A	ML
SWB-16 (10'-12')	N/A	21	15	6	N/A
SWB-16 (12'-14')	17.6	N/A	N/A	N/A	GM
SWB-17 (8'-10')	100	37.8	19.1	18.7	CL
SWB-17 (12'-14')	N/A	23	17	6	N/A

TABLE A - 2
SUMMARY OF GEOTECHNICAL TESTING PROGRAM - PHYSICAL CHARACTERISTICS
STAUFFER MANAGEMENT COMPANY
SKANEATELES FALLS, NEW YORK

Sample Identification (depth)	Percent Passing No. 200 Sieve (%) ⁽¹⁾	Liquid Limit (%) ⁽²⁾	Plastic Limit (%) ⁽²⁾	Plasticity Index ⁽²⁾	Soil Classification Based on Unified Soil Classification System ⁽³⁾
SWB-18 (10'-12')	N/A	28	18	10	N/A
TB-1 (10'-12')	N/A	33	19	14	N/A

Notes:

- (1) ASTM D422 - Method for Particle-Size Analysis of Soils
- (2) ASTM D4318 - Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- (3) ASTM D2487 - Standard Test Method for Classification of Soils for Engineering Purposes
- (4) N/A indicates not analyzed.
- (5) SM indicates silty sand.
- (6) GM indicates silty gravel.
- (7) ML indicates low plasticity silt.
- (8) CL indicates low plasticity clay.

i:/div76/5618010/4/15.wpd

TABLE A - 3
SUMMARY OF GEOTECHNICAL TESTING PROGRAM
STRENGTH AND HYDRAULIC CONDUCTIVITY DATA
STAUFFER MANAGEMENT COMPANY
SKANEATELES FALLS, NEW YORK

Sample Identification (depth)	Estimated Shear Strength Based on Results of Unconsolidated Undrained Triaxial Test ⁽¹⁾ (psf)	Hydraulic Conductivity⁽²⁾ (cm/sec)
SWB-13 (10'-12')	3500	6.5×10^{-8} cm/sec
SWB-17 (8'-10')	2000	3.6×10^{-8} cm/sec

Notes:

(1) ASTM D2850 - Standard Test Method for Unconsolidated, Undrained Compressive Strength of Cohesive Soils in Triaxial Compression

(2) ASTM D5084 - Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

i:/div76/5618010/4/16.wpd

Table A-4
Summary of Soil Analytical Results
Stauffer Management Company
Skaneateles Falls, New York

Parameter	Remedial Action Objectives	NPTP-7-1 7/22/97	NPTP-7-2 7/22/97	NPTP-8-1 7/22/97	NPTP-8-2 7/22/97	NPTP-9-1 7/23/97	NPTP-9-2 7/23/97	NPTP-10-1 7/23/97	NPTP-11-1 7/23/97
Volatile (ug/kg)									
Chloromethane		U	U	U	U	U	2800 J	4 J	U
Bromomethane		U	U	700 J	U	U	2700 J	U	U
Methylene Chloride		3 J	5 J	U	6 J	14 J	U	12 J	3 J
Acetone		51	200	U	42	330	U	85	29
Carbon Disulfide		U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)		U	U	U	U	U	U	U	U
2-Butanone		6 J	40	U	8 J	81	U	17 J	4 J
Trichloroethene		13	53	U	32	120	U	98	11 J
Tetrachloroethene		U	U	U	U	U	U	3 J	U
Toluene	1,500	U	U	U	U	8 J	U	3 J	U
Ethylbenzene		U	U	U	U	U	1600 J	U	U
Xylene (total)	1,200	U	58	66000	8 J	1800	140000	780	4 J
Semivolatile (ug/kg)									
Phenol		U	U	U	U	110 J	U	U	U
4-Methylphenol		U	U	U	U	130 J	U	430 J	U
2,4-Dimethylphenol		U	U	240 J	U	280 J	U	65 J	U
Naphthalene		U	U	240 J	U	290 J	U	73 J	92 J
2-Methylnaphthalene		U	U	U	U	180 J	U	U	42 J
Acenaphthene		U	U	U	U	130 J	U	U	U
Dibenzofuran		U	U	U	U	230 J	U	U	U
Fluorene		U	U	U	U	170 J	U	54 J	U
Phenanthrene		U	U	90 J	U	1000	550 JD	260 J	150 J
Anthracene		U	U	U	U	180 J	U	57 J	U
Fluoranthene		U	U	230 J	U	710	410 JD	270 J	190 J
Pyrene		U	U	300 J	U	1100	800 JD	390 J	220 J
Benzo[a]anthracene	224	U	U	140 J	U	430 J	U	190 J	110 J
Chrysene	400	U	U	200 J	U	570	U	260 J	170 J
bis(2-Ethylhexyl)phthalate		U	42 J	58 J	U	73 J	2300 JD	160 J	46 J
Benzo[b]fluoranthene	1,100	U	U	240 J	U	460 J	U	220 J	180 J
Benzo[k]fluoranthene	1,100	U	U	85 J	U	190 J	U	89 J	61 J
Benzo[a]pyrene	61	U	U	160 J	U	310 J	U	140 J	110 J
Indeno[1,2,3-cd]pyrene		U	U	100 J	U	170 J	U	67 J	62 J
Dibenz[a,h]anthracene		U	U	U	U	U	U	U	U
Benzo[g,h,i]perylene		U	U	100 J	U	160 J	U	68 J	62 J
Carbazole		U	U	U	U	93 J	U	U	U
o-Toluic Acid	50,000	U	44 J	240 J	U	200 J	U	U	270 J
m-Toluic Acid	50,000	U	U	78 J	U	120 J	U	U	U
Benzoic Acid		U	43 J	U	110 J	87 J	U	63 J	U

Notes:

1. J indicates an estimated value.
2. D indicates sample diluted.
3. U indicates results not detected.

4. B indicates contaminant found in blank.
5. E indicates concentration exceeded method detection limits.

Table A-4
Summary of Soil Analytical Results
Stauffer Management Company
Skaneateles Falls, New York

Parameter	Remedial Action Objectives	NPTP-11-2 7/23/97	NPTP-12-1 7/23/97	NPTP-13-1 7/24/97	NPTP-13-2 7/24/97	NPTP-14 7/24/97	NPTP-15 7/24/97	NPTP-16 7/24/97	NPTP-17 7/24/97
Volatile (ug/kg)									
Chloromethane		2600 J	U	4 J	U	U	U	2 JB	U
Bromomethane		1300 J	U	U	U	U	U	U	U
Methylene Chloride		U	6 J	4 J	U	U	U	U	U
Acetone		U	U	530	28	4 J	12	7 J	160
Carbon Disulfide		U	U	110	U	U	U	U	3 J
1,2-Dichloroethene (total)		U	U	4 J	U	U	U	U	U
2-Butanone		U	U	100	U	U	U	U	52
Trichloroethene		U	140	130	10 J	28	26	42	26
Tetrachloroethene		U	11 J	4 J	U	2 J	U	3 J	U
Toluene	1,500	U	U	U	U	U	U	U	U
Ethylbenzene		U	U	U	U	U	U	U	U
Xylene (total)	1,200	26000	U	41	250	U	U	3 J	3 J
Semivolatiles (ug/kg)									
Phenol		U	U	1500	U	U	U	U	U
4-Methylphenol		1400	U	53 J	U	U	U	U	U
2,4-Dimethylphenol		380 J	U	U	U	U	U	U	U
Naphthalene		520 J	U	210 J	510	U	U	U	U
2-Methylnaphthalene		160 J	130 JD	380 J	U	U	U	U	U
Acenaphthene		U	U	54 J	U	U	U	U	U
Dibenzofuran		U	U	220 J	U	U	U	U	U
Fluorene		U	U	390 J	U	U	U	U	U
Phenanthrene		450 J	240 JD	1300	43 J	U	U	910 JD	U
Anthracene		110 J	U	340 J	U	U	U	U	U
Fluoranthene		390 J	140 JD	2700	93 J	U	U	1200 JD	U
Pyrene		640 J	220 JD	4400 E	90 J	U	U	2100 JD	U
Benzo[a]anthracene	224	270 J	130 JD	1500	52 J	U	U	1100 JD	U
Chrysene	400	490 J	230 JD	2000	63 J	U	U	1100 JD	U
bis(2-Ethylhexyl)phthalate		140 J	86 JD	200 J	43 J	60 J	U	U	76 J
Benzo[b]fluoranthene	1,100	470 J	210 JD	2200	77 J	U	U	1600 JD	U
Benzo[k]fluoranthene	1,100	130 J	84 JD	750	U	U	U	450 JD	U
Benzo[a]pyrene	61	230 J	120 JD	1300	45 J	U	U	1000 JD	U
Indeno[1,2,3-cd]pyrene		240 J	U	690	U	U	U	500 JD	U
Dibenz[a,h]anthracene		U	U	67 J	U	U	U	U	U
Benzo[g,h,i]perylene		360 J	80 JD	600	U	U	U	520 JD	U
Carbazole		U	U	U	U	U	U	U	U
o-Toluic Acid	50,000	660 J	U	470 J	U	U	U	U	54 J
m-Toluic Acid	50,000	120 J	U	430 J	U	U	U	U	U
Benzoic Acid		110 J	U	98 J	U	U	U	U	65 J

Notes:

1. J indicates an estimated value.
2. D indicates sample diluted.

4. B indicates contaminant found in blank.
5. E indicates concentration exceeded method detection limits.

***In situ* hydraulic conductivity test
results**

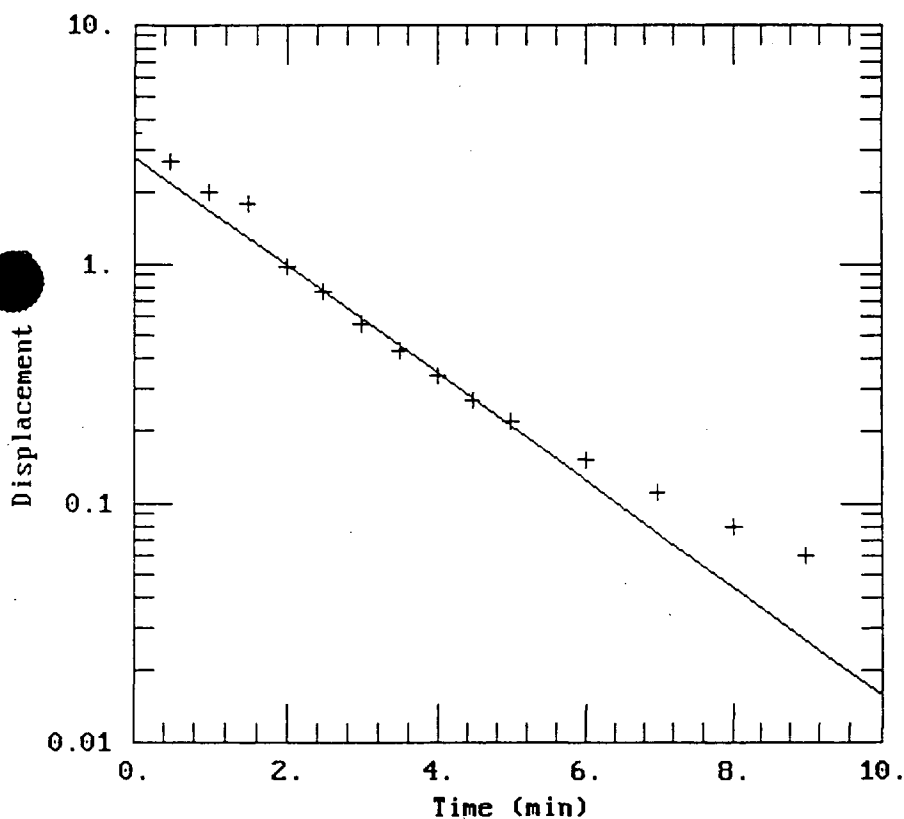
CLIENT: Stauffer Management Company

COMPANY: O'Brien & Gere Engineers, Inc.

LOCATION: Skaneateles Falls, NY

PROJECT: 5618.010

LFP-1



DATA SET:
LFP1.DAT
06/26/97

AQUIFER MODEL:
Unconfined
SOLUTION METHOD:
Bouwer-Rice

TEST DATA:
H0 = 3.56 ft
 $r_c = 0.082$ ft
 $r_w = 0.33$ ft
L = 5. ft
b = 18.29 ft
H = 5.4 ft

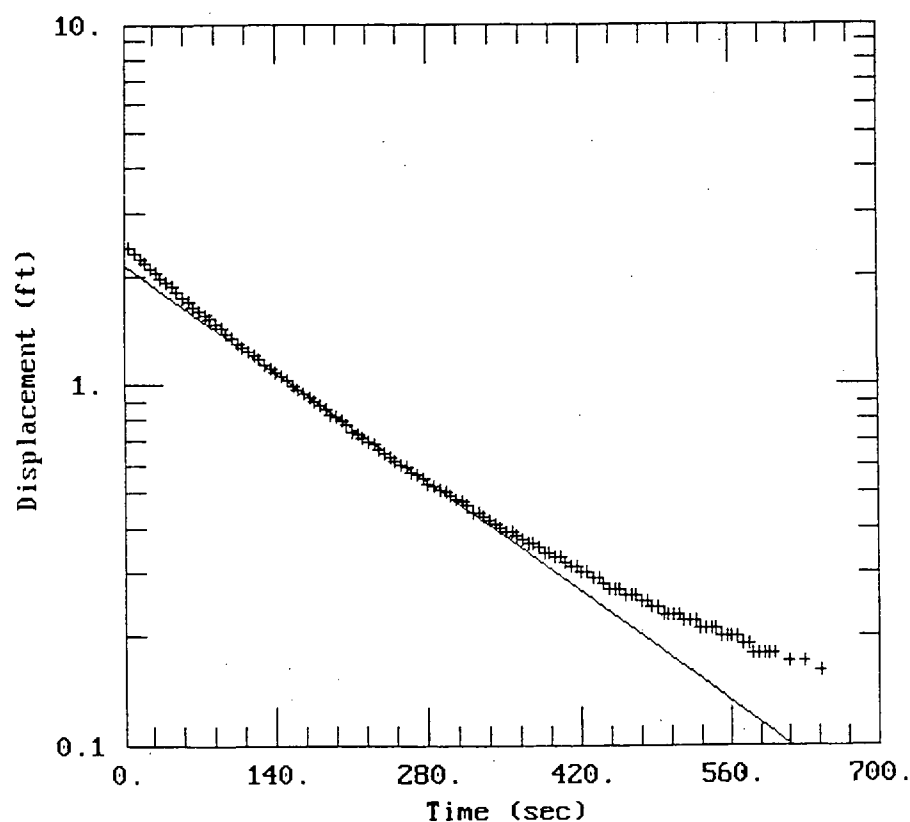
PARAMETER ESTIMATES:
K = 25.22 gal/day/ft²
y0 = 2.771 ft

$$2.34 \times 10^{-3} \text{ ft/min}$$
$$= 1.19 \times 10^{-3} \text{ cm/sec}$$

AQTESOLV

CLIENT: Stauffer Management Company	COMPANY: O'Brien & Gere Engineers, Inc.
LOCATION: Skaneateles Falls, NY	PROJECT: 5618.010

MW-2S



DATA SET:
MW2S.DAT
02/05/98

AQUIFER MODEL:
Unconfined
SOLUTION METHOD:
Bouwer-Rice

TEST DATA:
H₀ = 2.4 ft
r_c = 0.17 ft
r_w = 0.42 ft
L = 5. ft
b = 7.13 ft
H = 7.13 ft

PARAMETER ESTIMATES:
K = 151.5 cm/day
y₀ = 2.139 ft

$$= 1.75 \times 10^{-3} \text{ cm/sec}$$

AQTESOLV

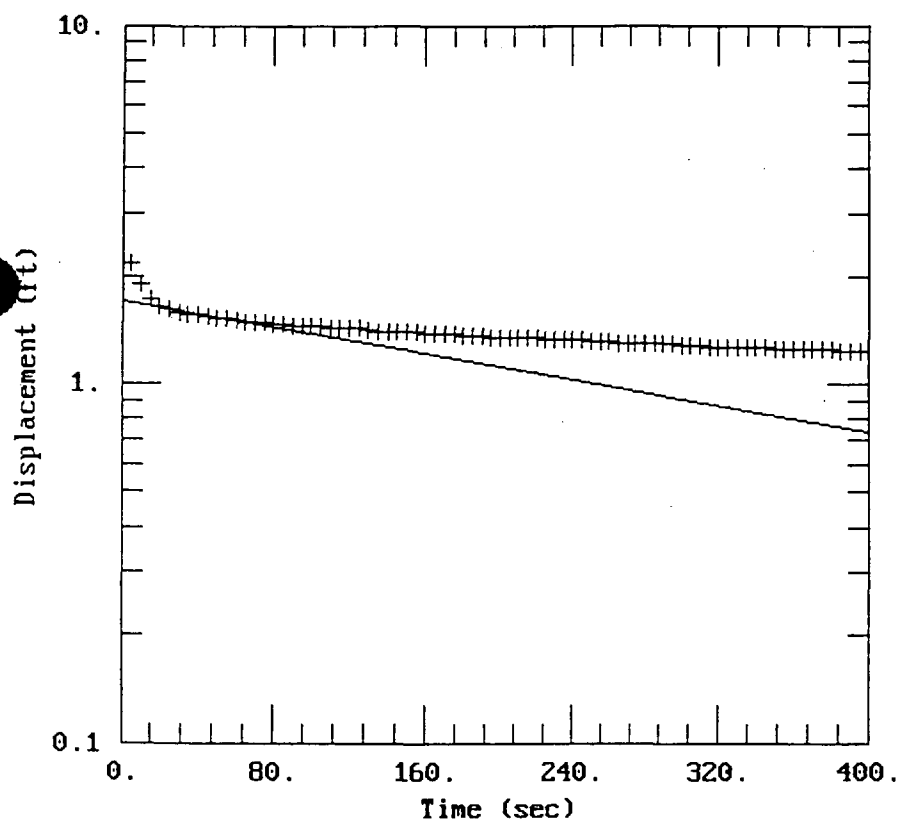
CLIENT: Stauffer Management Company

COMPANY: O'Brien & Gere Engineers, Inc.

LOCATION: Skaneateles Falls, NY

PROJECT: 5618.010

MW-5S



DATA SET:
MW5S.DAT
06/26/97

AQUIFER MODEL:
Unconfined
SOLUTION METHOD:
Bouwer-Rice

TEST DATA:
H0 = 2.16 ft
rc = 0.17 ft
rw = 0.42 ft
L = 8.11 ft
b = 8.11 ft
H = 8.11 ft

PARAMETER ESTIMATES:
K = 10.59 gal/day/ft²
y0 = 1.698 ft

$$= 9.83 \times 10^{-4} \text{ ft/min}$$

$$= 5.00 \times 10^{-4} \text{ cm/sec}$$

AQTESOLV

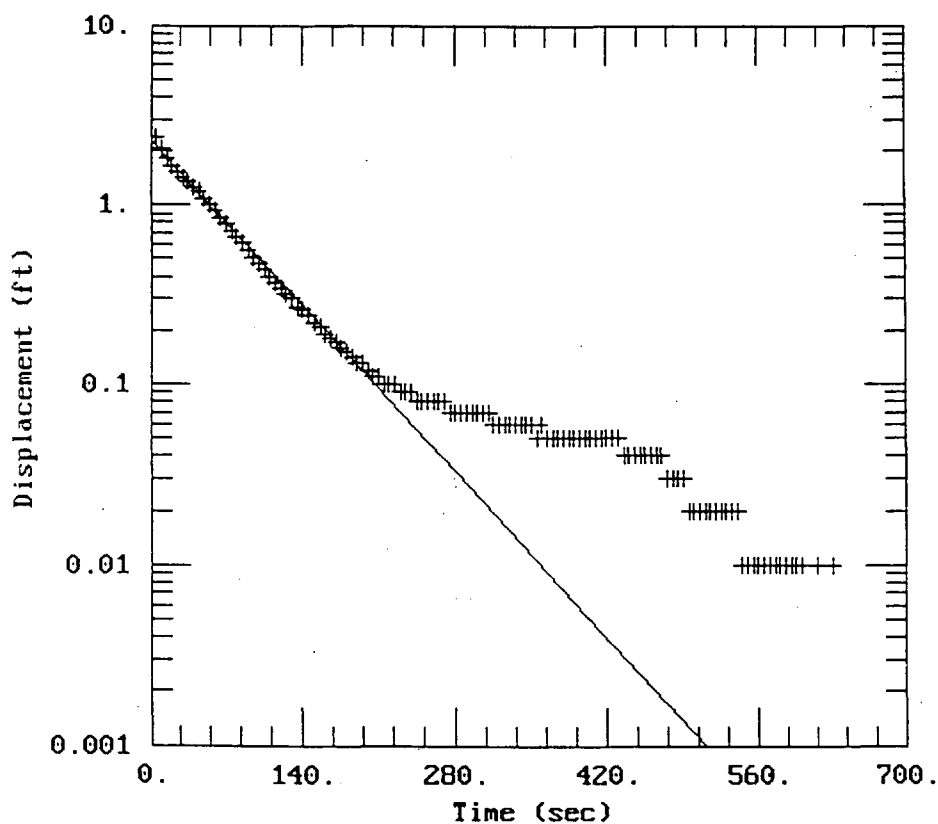
CLIENT: Stauffer Management Company

COMPANY: O'Brien & Gere Engineers, Inc.

LOCATION: Skaneateles Falls, NY

PROJECT: 5618.010

MW-7S



DATA SET:
MW7S.DAT
06/26/97

AQUIFER MODEL:
Unconfined
SOLUTION METHOD:
Bouwer-Rice

TEST DATA:
 $H_0 = 2.36$ ft
 $r_c = 0.17$ ft
 $r_w = 0.42$ ft
 $L = 5$ ft
 $b = 5.3$ ft
 $H = 5.3$ ft

PARAMETER ESTIMATES:
 $K = 103.6$ gal/day/ft²
 $y_0 = 2.24$ ft
 $= 9.60 \times 10^{-3}$ ft/min
 $= 4.89 \times 10^{-3}$ cm/sec

AQTESOLU

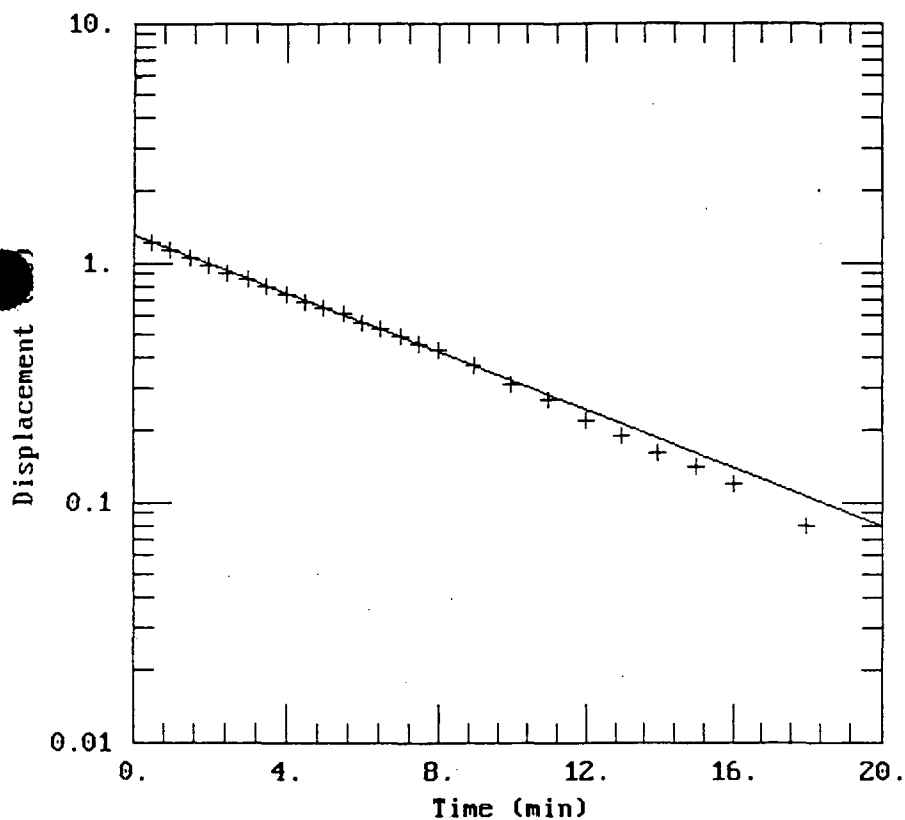
CLIENT: Stauffer Management Company

COMPANY: O'Brien & Gere Engineers, Inc.

LOCATION: Skaneateles Falls, NY

PROJECT: 5618.010

MW-12S



DATA SET:
MW12S.DAT
06/26/97

AQUIFER MODEL:
Unconfined

SOLUTION METHOD:
Bouwer-Rice

TEST DATA:
H₀ = 5.88 ft
r_c = 0.17 ft
r_w = 0.42 ft
L = 8.42 ft
b = 11.64 ft
H = 8.42 ft

PARAMETER ESTIMATES:
K = 10.28 gal/day/ft²
y₀ = 1.298 ft
= 9.54×10^{-4} ft/min
= 4.85×10^{-4} cm/sec

AQTESOLV

Appendix D

Boring logs

O'BRIEN & GERE ENGINEERS, INC.						TEST BORING LOG	REPORT OF BORING TB-1		
Client: SMC						Drill Method: Hollow stem auger	Page 1 of 1		
Proj. Loc: Skaneateles Falls, NY						Sampler: 2-Inch Split Spoon	Location:		
Bore No.: 5618.010						Hammer: 140-lb	Start Date: 9/17/97		
Boring Company: SJB Services, Inc.						Fall: 30-inch	End Date: 9/18/97		
Foreman: Chris Ackley						Screen =	Grout		
Drill Rig: CME-75						Riser	Sand Pack		
OBG Geologist: DJ Carnevale						Steel //	Bentonite		
Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0		2	37-35 14-4	2/2	49	Gravelly road fill			112
1									
2		4	2-3 3-4	2/0	6	No recovery			-
3									
4		6	1-1 1-3	2/2	2	Olive gray (5Y 4/1), moist, soft, silty CLAY, black stained interval from ~4.4 to 4.6 ft			130
5									
6		8	3-3 2-3	2/2	5	Moderate olive brown (5Y 4/4), moist, firm, CLAY, little fine sand and silt, trace angular gravel			2.4
7									
8		10	WOH-1 1-1	2/2 0805	2	Brownish gray (5YR 4/1), saturated, soft, CLAY, little silt, trace fine angular gravel			290
9									
10		12	1-1 50/0.2	1.2/1.0	>51	Brownish gray (5YR 4/1), saturated, soft, CLAY with fine angular limestone fragments to ~11 ft, to dense limestone to ~11.2 ft			150
11									
12						Auger refusal at 11.5 ft bg			
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

Ground water recovery trench boring (1 + 00 location on 30% design drawing)

O'BRIEN & GERE ENGINEERS, INC.		TEST BORING LOG	REPORT OF BORING TB-2
Client:	SMC	Drill Method: Hollow stem auger Sampler: 2-Inch Split Spoon Hammer: 140-lb	Page 1 of 1 Location:
Proj. Loc:	Skaneateles Falls, NY	Fall:	30-inch
File No.:	5618.010	Drilling Company:	SJB Services, Inc.
Drill Riser:	Chris Ackley	Drill Riser:	CME-75
Drill Rig:	DJ Carnevale	Drill Rig:	DJ Carnevale
Drill Rig:		Screen	=
Drill Rig:		Riser	
Drill Rig:		Steel	//
Drill Rig:		Grout	\
Drill Rig:		Sand Pack	
Drill Rig:		Bentonite	

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0		2	25-8 6-7	2/1 0930	14	Concrete with gravel base			20
1									
2		4	3-5 6-4	2/2	11	Black (N1), stained, moist, stiff, SILT and fine sand, little medium sand and angular gravel, strong chemical odor			200
3									
4		6	WOH-1 3-5	1/2/1.8 2/0.5	4	Black (N1), stained moist to saturated, loose, fine SAND and SILT, little fine angular gravel			120
5									
6		8	5-5 6-50/0.3	1.2/1.8	11	Black (N1), stained, saturated, angular fine to medium limestone fragments, some to little silt			220
7									
8		10	WOH-2 7-8	2/0.5	9	Black (N1), stained, saturated, angular fine to medium limestone fragments, little SILT			108
9									
10		12	1-8 18-12	2/2	26	Black (N1) to olive gray (5Y 4/1), moist to saturated, hard SILT with fine to medium angular limestone fragments			126
11									
12		14	5-5 50/0.1	1.1/0.8	>55	Black (N1) to olive gray (5Y 4/1), moist to saturated, hard SILT with fine to medium angular limestone fragments to ~13 ft			
13									
14						Auger refusal at 13 ft bg			
15									
16									
17									
18									
19									
20									
21									
22									

Notes: Ground water collection trench boring (2 + 00 reference on 30% design drawing)

O'BRIEN & GERE ENGINEERS, INC.						TEST BORING LOG		REPORT OF BORING TB-3	
Client: SMC						Drill Method: Hollow stem auger		Page 1 of 1	
Proj. Loc: Skaneateles Falls, NY						Sampler: 2-Inch Split Spoon		Location:	
No.: 5618.010						Hammer: 140-lb		Start Date: 9/18/97	
Boring Company: SJB Services, Inc.						Fall: 30-inch		End Date: 9/18/97	
Foreman: Chris Ackley						Screen =		Grout	
Drill Rig: CME-75						Riser		Sand Pack	
OBG Geologist: DJ Carnevale						Steel //		Bentonite	
Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0		2	2-5	2/2	11	Gravel and cindery fill to ~1.5 ft, to dark yellowish brown (10YR 4/2), damp SILT			0.4
1			6-9	1225					
2		4	2-3	2/2	12	Light olive (10Y 5/4), moist, stiff, CLAY, little silt and fine subrounded gravel			8.2
3			9-9						
4		6	1-1	2/1.5	3	Light olive gray (5Y 5/2), saturated, soft, clayey SILT			1.4
5			2-8						
6		8	3-50/0.1	0.6/0		No recovery			
7									
8		10	8-50/0.3	0.8/0.5		Limestone fragments			4.8
						Auger refusal at ~9 ft bg			
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

D'BRIEN & GERE ENGINEERS, INC.		TEST BORING LOG	REPORT OF BORING SWB-1
Client: SMC		Drill Method: Hollow stem auger Sampler: 2-Inch Split Spoon Hammer: 14-lb	Page 1 of 1 Location: North Plant
Proj. Loc: Skaneateles Falls, NY		Fall: 30-inch	Start Date: 9/15/97 End Date: 9/15/97
File No.: 5618.010			
Boring Company: SJB Services, Inc. Foreman: Chris Ackley Drill Rig: CME-75 BGB Geologist: DJ Carnevale			Screen = ☐ Grout Riser ☐ Sand Pac Steel // ☒ Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0		2	10-12 9-6	2/2	21	Olive gray (5Y 4/1), moist, medium dense (hard), SILT with coarse to medium angular gravel, little fine sand			4.8
1									
2		4	3-3 3-3	2/2	6	Olive gray (5Y 4/1), moist, firm, silty CLAY, trace fine sand, roots, coal fragments			0.8
3									
4		6	1-5 8-5	2/2	13	Olive gray (5Y 4/1), moist, stiff, SILT to ~5.5 ft, to pale reddish brown (10R 5/4), hard, damp, silty clay till			0.2
5									
6		8	5-8 5-4	2/2	13	Olive gray (4Y 4/1), saturated, medium dense, fine SAND and SILT, little medium sand and fine angular gravel			0.0
7									0.0
8		10	1-2 4-5	2/2	6	Pale reddish brown (10R 5/4), damp, firm, silty CLAY to ~9.5 ft, to olive gray (5Y 4/1), saturated, loose, fine SAND and SILT to 10 ft			
9									
10		12	WOH-5 4-1	2/0.8	9	Olive gray (5Y 4/1), saturated, loose, fine SAND and SILT, little fine to medium angular gravel			0.4
11									
12		14	2-3 4-13	2/2	7	Olive gray (5Y 4/1), saturated, loose, fine SAND and SILT, little medium sand and fine angular gravel			0.2
13									
14		16	11-5/0.1	0.6/0.6	-	Grayish orange (10R 7/4), moist, extremely hard SILT, angular limestone fragments in tip of shoe			-
15									
16		18	50/0.0	0/0	-	Auger refusal at 16.0 ft bg			-
17									
18									
19									
20									
21									
22									

es:

O'BRIEN & GERE ENGINEERS, INC.						TEST BORING LOG		REPORT OF BORING SWB-2	
Client: SMC						Drill Method: Hollow stem auger		Page 1 of 1	
Proj. Loc: Skaneateles Falls, NY						Sampler: 2-Inch Split Spoon		Location: North Plant	
No.: 5618.010						Hammer: 140-lb		Start Date: 9/15/97	
Boring Company: SJB Services, Inc.						Fall: 30-inch		End Date: 9/15/97	
Foreman: Chris Ackley						Screen =		Grout	
Drill Rig: CME-75						Riser		Sand Pack	
OBG Geologist: DJ Carnevale						Steel //		Bentonite	
Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0		2	2-4	2/2	12	Moderate yellowish brown (10YR 5/4) to olive gray (5Y 4/1), moist, medium dense, fine SAND and SILT, some wood, and medium angular gravel			0.2
1			8-7						
2		4	2-2	2/2	3	Brownish black (5Y 2/1), moist, soft, SILT, little fine sand, highly organic peaty			0.2
3			1-2						
4		6	WOH-WOH	2/2	<1	Brownish black (5YR 2/1), saturated, very soft, highly organic SILT (peaty)			0.2
5			WOH-WOH						
6		8	WOH-WOH	2/2	<1	Grayish brown (5YR 3/2), saturated, very soft, highly organic SILT, trace fine sand			0.2
7			WOH-WOH						
8		10	WOH-WOH	2/2	<1	Olive gray (5Y 4/1), saturated, very loose, fine SAND and SILT			0.2
			WOH-1						
10		12	WOH-1	2/2	<1	Olive gray (5Y 4/1), saturated, very loose fine SAND and SILT to ~11 ft, to olive gray (5Y 4/1), saturated, silty CLAY to 12 ft			0.2
11			WOH-WOH						
12		14	1-2	2/1	5	Olive gray (5Y 4/1), saturated, loose, fine SAND and SILT, little fine to medium angular gravel			-
13			3-4						
14		16	3-5	2/1	20	Olive gray (5Y 4/1), saturated, medium dense, fine SAND and SILT with fine to medium angular limestone fragments			14.8
15			15-7						
16		18	1-5	1.4/1	>55	Olive gray (5Y 4/1) saturated, very dense, angular limestone fragments, little silt			22
17			50/0.4						
18						Auger refusal at 17 ft bg			
19									
20									
21									
22									

D'BRIEN & GERE ENGINEERS, INC.		TEST BORING LOG	REPORT OF BORING SWB-3
Client: SMC		Drill Method: Hollow stem auger	Page 1 of 1
Proj. Loc: Skaneateles Falls, NY		Sampler: 2-Inch Split Spoon	Location: North Plant
File No.: 5618.010		Hammer: 140-lb	Start Date: 9/15/97
Boring Company: SJB Services, Inc.		Fall: 30-inch	End Date: 9/15/97
Foreman: Chris Ackley		Screen =	Grout
Drill Rig: CME-75		Riser	Sand Pack
BGB Geologist: DJ Carnevale		Steel //	Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0		2	4-4 50/0.4	1.4/0.5 1510	>54	Wood, gravel			
1									
2		4	7-9 3-2	2/0.5 1520	12	Wood			
3									
4		6	WOH/2 ft	2/2	<1	Brownish black (5YR 2/1), saturated, very soft, highly organic SILT, little fine sand, chemical odor			26
5									
6		8	WOH/2 ft	2/2	<1	Brownish black (5YR 2/1), saturated, very soft, highly organic, fine SAND, little silt, chemical odor			48
7									
8		10	WOH/12 13-10	2/2	<13	Brownish black (5YR 2/1), saturated, very soft, highly organic fine SAND, little silt, chemical odor to ~9.7 ft, to olive gray (5Y 4/1), saturated limestone fragments to 10 ft			46
9									
10		12	1-2 2-4	2/1	4	Pale yellowish orange (10YR 8/6), saturated, soft SILT, little clay and fine sand			68
11									
12		14	1-11 43-29	2/2	54	Pale yellowish orange (10YR 8/6), saturated, soft SILT, little clay and fine sand to ~13 ft to olive gray (5Y 4/1), limestone fragments to 14 ft			18
13									
14		16	6-50/0.3	0.8/0.3	>50	Olive black weathered bedrock limestone			14.2
15						Auger refusal at 15 ft bg			
16									
17									
18									
19									
20									
21									
22									

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O'BRIEN & GERE ENGINEERS, INC.						TEST BORING LOG		REPORT OF BORING SWB-4		
Client: SMC						Drill Method: Hollow stem auger		Page 1 of 1		
Proj. Loc: Skaneateles Falls, NY						Sampler: 2-Inch Split Spoon		Location North Plant		
No.: 5618.010						Hammer: 140-lb		Start Date: 9/16/97		
Boring Company: SJB Services, Inc.						Fall: 30-inch		End Date: 9/16/97		
Foreman: Chris Ackley						Screen =		Grout		
Drill Rig: CME-75						Riser		Sand Pack		
OBG Geologist: DJ Carnevale						Steel //		Bentonite		
Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	
0		2	4-8	2/2	18	Dark yellowish brown (10YR 4/2), moist, SILT, some medium angular gravel, little fine sand			28	
1			10-11							
2		4	5-4	2/2	12	Olive gray (5Y 4/1), moist, stiff, SILT, little fine sand and fine angular gravel, chemical odor			119	
3			8-8							
4		6	5-2	2/2	4	Brownish black (5YR 2/1), saturated, loose, fine SAND and SILT, trace medium sand, chemical odor			420	
5			2-3							
6		8	1-2	2/2	3	Black (N1), saturated, very loose, fine SAND, some silt, trace medium sand, strong chemical odor			89	
7			1-2							
8		10	9-6	2/2	17	Olive black (5Y 2/1), saturated, medium dense, fine SAND and SILT, some fine subangular limestone gravel, trace medium subangular limestone gravel			22	
9			11-5							
10		12	2-7	2/2	17	Olive black (5Y 2/1), saturated, medium dense, fine SAND and SILT, some fine subangular limestone gravel, trace medium subangular limestone gravel			6.8	
11			10-16			to ~11.5 ft, to grayish orange (10YR 7/4), moist, hard silt with fine subangular embedded gravel, little fine sand				
12		14	48-26	2/2	49	Moderate yellowish brown (10YR 5/4), moist to saturated, very hard SILT and fine SAND with fine subangular embedded gravel, little medium angular gravel			5.4	
13			23-19							
14		16	10-22	2/2	35	Greenish black (5GY 2/1), saturated, dense, SILT with fine angular gravel, little fine sand			8.8	
15			13-12							
16		18	25-13	2/2	15	Greenish black (5GY 2/1), saturated, dense, SILT with fine angular gravel, little fine sand to ~17 ft, to moderate yellowish brown (10YR 5/4), saturated, soft CLAY, trace silt to 18 ft			0.8	
17			2-10							
18		20	2/0			Push shelby tube from 18 to 20 ft.				
19										
20						Auger refusal at 20 ft bg				

O'BRIEN & GERE ENGINEERS, INC.						TEST BORING LOG	REPORT OF BORING SWB-5		
Client: SMC						Drill Method: Hollow stem auger	Page 1 of 1		
Proj. Loc: Skaneateles Falls, NY						Sampler: 2-Inch Split Spoon	Location: North Plant		
File No.: 5618.010						Hammer: 140-lb	Start Date: 9/16/97		
Boring Company: SJB Services, Inc.						Fall: 30-inch	End Date: 9/16/97		
Foreman: Chris Ackley						Screen =	Grout		
Drill Rig: CME-75						Riser	Sand Pack		
BGB Geologist: DJ Carnevale						Steel //	Bentonite		
Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0		2	6-11	2/2	18	Dark yellowish brown (10YR 4/2), moist, hard, SILT and fine to medium angular GRAVEL			0.4
1			7-7						
2		4	6-5	62/2	9	Moderate brown (5YR 4/4), damp, clayey SILT, little fine subangular gravel			0.4
3			4-4						
4		6	WOH-3	2/2	9	Moderate brown (5YR 3/4), damp, silty CLAY, trace fine sand to ~5.8 ft to black (N1), moist stained fine sand, little silt, tarry to 6 ft.			1.4
5			6-5						
6		8	4-8	2/2	18	Black (N1), stained, moist to saturated, medium dense fine SAND and SILT, some fine to medium subangular gravel, strong chemical odor			34
7			10-14						
8		10	18-18	2/1	23	Black (N1), stained, moist to saturated, medium dense, fine SAND and SILT, little fine to medium subrounded to subangular gravel			5.0
9			5-11						
10		12	2-34	2/0.75	84	Olive black (5Y 2/1), saturated, extremely dense, fine to coarse angular limestone fragments			10.4
11			50-50/0.0						
12						12 to 13 ft boulder			
13		15	6-17	1/1	>67	Olive black (5Y 2/1), damp, extremely dense limestone fragments (weathered bedrock)			15.8
14			50/0.1						
15		17	50/0.2	0.2/0.2	-	Slough from above, no further recovery			-
16						Auger refusal at 15 ft bg			
17									
18									
19									
20									
21									
22									

O'BRIEN & GERE ENGINEERS, INC.						TEST BORING LOG	REPORT OF BORING SWB-6		
Client: SMC						Drill Method: Hollow stem auger		Page 1 of 1	
Proj. Loc: Skaneateles Falls, NY						Sampler: 2-Inch Split Spoon		Location North Plant	
Job No.: 5618.010						Hammer: 140-lb		Start Date: 9/17/97	
Boring Company: SJB Services, Inc.						Fall: 30-inch		End Date: 9/17/97	
Foreman: Chris Ackley						Screen =		Grout	
Drill Rig: CME-75						Riser		Sand F	
OBG Geologist: DJ Carnevale						Steel //		Benton	
Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Test PID (ppm)
0		2	40-43	2/0.5	55	Dusky yellowish brown (10YR 2/2), damp, very dense fine SAND and fine angular gravel, little silt			0.8
1			12-3						
2		4	1-1	2/0.5	2	Dusky yellowish brown (10YR 2/2), moist, loose, slaggy fill, little fine SAND and SILT			1.8
3			1-1						
4		6	1-3	2/0.5	5	Dark yellowish orange (10YR 6/6), saturated, loose, slaggy fill			0.2
5			2-3						
6		8	4-3	2/0	5	No recovery			-
7			2-3						
8		10	2-50/0.3	0.2/0.5	-	Olive black (5Y 2/1), saturated, extremely dense, angular limestone fragments and silt, little fine sand			2.0
						Auger refusal at 8 ft bg			
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

O'BRIEN & GERE ENGINEERS, INC.		TEST BORING LOG	REPORT OF BORING SWB-7
Client: SMC		Drill Method: Hollow stem auger Sampler: 2-Inch Split Spoon Hammer: 140-lb	Page 1 of 1 Location North Plant
Proj. Loc: Skaneateles Falls, NY		Fall: 30-inch	Start Date: 9/17/97 End Date: 9/17/97
File No.: 5618.010			
Boring Company: SJB Services, Inc. Foreman: Chris Ackley Drill Rig: CME-75 DBG Geologist: DJ Carnevale		Screen = ☐ Grout Riser ☐ Sand Pack Steel // ☐ Bentonite	

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0		2	6-5 7-5	2/1	12	Dark yellowish brown (10YR 4/2), moist, medium to dense, fine SAND and gravel FILL			0.4
1									
2		4	3-3 4-5	2/2	7	Moderate yellowish brown (10YR 5/4), moist, firm, silty CLAY, little fine sand			0.0
3									
4		6	1-2 3-4	2/2	5	Moderate yellowish brown (10YR 5/4), moist, firm, silty CLAY, little fine sand			1.4
5									
6		8	1-4 2-6	2/2	6	Moderate yellowish brown (10YR 5/4), moist, firm, silty CLAY			18.8
7									
8		10		2/0		Attempt to push Shelby Tube from 8 to 10 ft.			-
9									
10		12	18-19 6-6	2/0.5	25	Olive gray (5Y 4/1), moist, hard SILT and fine SAND with medium to coarse angular limestone fragments			12.2
11									
12		14	21- 50/0.1	0.6/0.6	-	Poor recovery, fine to coarse limestone fragments			-
13						Auger refusal at 12.2 ft bg			
14									
15									
16									
17									
18									
19									
20									
21									
22									

es:

O'BRIEN & GERE ENGINEERS, INC.						TEST BORING LOG		REPORT OF BORING SWB-8	
Client: SMC						Drill Method: Hollow stem auger		Page 1 of 1	
Proj. Loc: Skaneateles Falls, NY						Sampler: 2-Inch Split Spoon		Location North Plant	
No.: 5618.010						Hammer: 140-lb		Start Date: 9/17/97	
Boring Company: SJB Services, Inc.						Fall: 30-inch		End Date: 9/17/97	
Foreman: Chris Ackley						Screen =		Grout	
Drill Rig: CME-75						Riser		Sand Pack	
OBG Geologist: DJ Carnevale						Steel //		Bentonite	
Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0		2	9-18	2/2	30	Moderate yellowish brown (10YR 5/4), moist, dense fine SAND and SILT, some angular gravel			0.0
			12-30						
1									
2		4	39-33	2/2	62	Black (N1), moist, very dense, SILT with embedded angular gravel (fill)			0.4
			29-8						
3									
4		6	2-2	1.6/1.5	6	Dark yellowish brown (10YR 4/2), moist, firm, SILT, little clay, trace fine sand to ~5.5 ft to limestone fragments to 5.6 ft			
			4-50/0.1						
5									
6		8				Auger refusal at 6 ft, will pull rig ahead ~5 ft and try to advance hole further			
7									
						Auger refusal at 6 ft on second attempt			
8									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

O'BRIEN & GERE ENGINEERS, INC.			TEST BORING LOG			REPORT OF BORING SWB-9			
Client: SMC			Drill Method: Hollow stem auger Sampler: 2-Inch Split Spoon Hammer: 140-lb			Page 1 of 1 Location North Plant			
Proj. Loc: Skaneateles Falls, NY			Fall: 30-inch			Start Date: 9/17/97 End Date: 9/17/97			
Boring Company: SJB Services, Inc.			Screen = Riser Steel // Grout Sand Pack Bentonite						
Foreman: Chris Ackley									
Drill Rig: CME-75									
BGB Geologist: DJ Carnevale									
Depth Elevation Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0		2	10-7 8-6	2/2	15	Dark yellowish brown (10YR 4/2), damp, stiff, SILT with fine subrounded gravel			0.2
1									
2		4	4-7 5-5	2/2	12	Dark yellowish brown (10YR 4/2), damp, stiff, SILT with fine subrounded gravel			1.2
3									
4		6	1-2 1-2	2/2	13	Olive black (5Y 2/1), moist, soft, silty CLAY, little fine angular gravel			28
5									
6		8	4-8 5-16	2/2	13	Olive gray (5Y 4/1), moist, soft silty CLAY with plant matter to ~7.5 ft, to light olive brown (5Y 5/1), fine sandy clay to 8 ft			9.2
7									
8		10	1-3 2-6	2/2	5	Pale reddish brown (10R 5/4), damp, firm silty CLAY, trace fine subrounded gravel to ~9.5 ft, to dark yellowish brown (10YR 4/2), saturated, fine SAND and SILT to 10 ft.			9.8
9									
10		12	1-1 1-1	2/2	2	Auger refusal at 12.2 ft			
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

O'BRIEN & GERE ENGINEERS, INC.						TEST BORING LOG	REPORT OF BORING SWB-10		
Client: SMC						Drill Method: Hollow stem auger	Page 1 of 1		
Proj. Loc: Skaneateles Falls, NY						Sampler: 2-Inch Split Spoon	Location: Landfill		
Bore No.: 5618.010						Hammer: 140-lb	Start Date: 9/18/97		
Boring Company: SJB Services, Inc.						Fall: 30-inch	End Date: 9/18/97		
Foreman: Chris Ackley						Screen ☐ = ☐ \ Grout Riser ☐ Sand P Steel ☐ // ☐ Benton			
Drill Rig: CME-75									
OBG Geologist: DJ Carnevale									
Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Test PID (ppm)
0		2	3-3	2/2	6	Top soil to ~0.5 to moderate yellowish brown (10YR 5/4), damp, CLAY, little silt			0.8
1			3-4						
2		4	5-5	2/1	9	Pale reddish brown (10R 5/4), damp, stiff CLAY, trace fine subrounded gravel			0.4
3			4-4						
4		6	1-4	2/2	7	Pale reddish brown (10R 5/4), damp, stiff CLAY, trace fine subrounded gravel to ~4.5 ft to olive gray (5Y 4/1), moist to saturated firm SILT, little fine sand and fine subrounded gravel			0.2
5			3-8						
6		8	5-50/	0.6/0.3	--	Poor recovery, olive gray (5Y 4/1), moist, firm SILT to ~6.5 ft to limestone fragments to 6.6 ft			0.0
7			0.1						
8						Auger refusal at 6.5 ft bg			
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

D'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SWB-11
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Client: SMC Proj. Loc: Skaneateles Falls, NY File No.: 5618.010 Boring Company: SJB Services, Inc. Foreman: Chris Ackley Drill Rig: CME-75 DBG Geologist: DJ Carnevale	Drill Method: Hollow stem auger Sampler: 2-Inch Split Spoon Hammer: 140-lb Fall: 30-inch	Page 1 of 1 Location Landfill Start Date: 9/18/97 End Date: 9/18/97 Screen = Riser Steel // \ Grout Sand Pack Bentonite
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Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0		2	3-7	2/2	14	Moderate yellowish brown (10YR 5/4), damp, stiff, SILT and CLAY, trace fine angular gravel			0.2
1			7-7						
2		4	7-7	2/2		Moderate yellowish brown (10YR 5/4), damp, stiff, SILT and CLAY, trace fine angular gravel, to 3.5 ft, to pale reddish brown (10R 5/4), damp, silty CLAY to 4 ft			0.2
3			9-8						
4		6	2-2	2/0.5	4	Pale reddish brown (10R 5/4), moist, soft, fine SAND and SILT, little clay, trace fine subangular gravel			0.2
5			2-4						
6		8	4-3	2/1	8	Pale reddish brown (10R 5/4), moist, soft, fine SAND and SILT, little clay, trace fine subangular gravel to ~6.5 ft, to dark gray (N3), saturated, medium to coarse angular limestone fragments			0.2
7			5-41						
8		10				Auger refusal at 8 ft bg			
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

O'BRIEN & GERE ENGINEERS, INC.						TEST BORING LOG	REPORT OF BORING SWB-12		
Client: SMC						Drill Method: Hollow stem auger	Page 1 of 1		
Proj. Loc: Skaneateles Falls, NY						Sampler: 2-Inch Split Spoon	Location Landfill		
No.: 5618.010						Hammer: 140-lb	Start Date: 9/18/97		
						Fall: 30-inch	End Date: 9/18/97		
Boring Company: SJB Services, Inc.						Screen =	Grout		
Foreman: Chris Ackley						Riser	Sand Pack		
Drill Rig: CME-75						Steel //	Bentonite		
OBG Geologist: DJ Carnevale									
Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0		2	1-2	2/2	5	Top soil to ~0.5 ft, to pale reddish brown (10R 5/4), damp, silty CLAY, trace fine subangular gravel to 2 ft			0.0
1			3-4						
2		4	5-11	2/1	40	Pale reddish brown (10R 5/4), damp, silty CLAY			0.0
3			29-13						
4		6	2-3	2/2	7	Pale reddish brown (10R 5/4), damp, silty CLAY, trace fine subangular gravel			0.2
5			4-4						
6		8		2/0.5		Attempt to collect shelby tube from 6 to 8 ft bg large rock in end of tube only 0.5 ft recovery			--
7									
8		10	4-11	2/2	18	Brownish gray (5YR 4/1), saturated, hard, SILT with embedded fine subrounded gravel to ~9.8 ft to broken limestone fragments			0.4
9			7-8						
10		12	2/0.3	2/0.3	6	Saturated loose, fine to medium limestone fragments			0.4
11			5-7						
12		14	6-9	2/2	21	Grayish brown (5YR 3/2), moist, hard, SILT with root holes, little clay			0.4
13			12-22						
14						Auger refusal at 14 ft bg			
15									
16									
17									
18									
19									
20									
21									
22									

O'BRIEN & GERE ENGINEERS, INC.		TEST BORING LOG		REPORT OF BORING	
Client: SMC		Drill Method: Hollow stem auger		Page 1 of 1	
Proj. Loc: Skaneateles Falls, NY		Sampler: 2-Inch Split Spoon		Location: Landfill	
File No.: 5618.010		Hammer: 140-lb		Start Date: 9/19/97	
Boring Company: SJB Services, Inc.		Fall: 30-inch		End Date: 9/19/97	
Foreman: Chris Ackley				Screen =	
Drill Rig: CME-75				Riser	
DBG Geologist: DJ Carnevale				Steel //	
				Grout	
				Sand Pack	
				Bentonite	

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0		2	3-5	2/2	14	Top soil to ~0.5 ft, to pale reddish brown (10R 5/4) dry to damp, stiff, silty CLAY, little fine angular gravel			0.2
1			9-9	0820					
2		4	8-7	2/2	14	Top soil to ~0.5 ft, to pale reddish brown (10R 5/4) dry to damp, stiff, silty CLAY, little fine angular gravel to ~3.5 ft, to olive gray (5Y 4/1), damp. SILT, trace fine angular gravel			0.0
3			7-9						
4		6	5-6	2/2	11	Dark yellowish brown (10YR 4/2), damp, stiff, SILT and fine sand, little fine angular gravel			0.0
5			5-3						
6		8	3-5	2/2	7	Dark yellowish brown (10YR 4/2), damp, stiff, SILT and fine sand, little fine angular gravel to ~7.5 ft to gravel and PVC (possible collection pipe)			
7			2-5						
8		10	3-3	2/2	7	Moderate yellowish brown (10YR 5/4), damp, firm SILT, little clay, root holes, vertical clay lined fractures			0.2
9			4-6						
10		12	Push	2/2	—	Attempt to collected shelby tube from 10 to 12 ft bg, shelby tube collected 10 to 12 ft			—
11									
12		14	5-50/ 0.4	0.9/0.9	—	Moderate yellowish brown (10YR 5/4), damp, firm SILT, little clay, root holes to ~12.8 ft, to limestone fragments to 13 ft			0.2
13									
14		16	12-8 5-11	2/1	13	Olive gray (5Y 4/1), saturated, medium dense, limestone fragments, some silt			0.4
15									
16		18	8-8 50/0.4	1.4/1.4	>58	Olive gray (5Y 4/1), saturated, very dense, lime-stone fragments some to little silt to ~17 ft, to extremely dense limestone to ~17.5 ft			0.4
17									
18						Auger refusal at 17.5 ft			
19									
20									
21									
22									

es:

O'BRIEN & GERE ENGINEERS, INC.						TEST BORING LOG	REPORT OF BORING SWB-14		
Client: SMC						Drill Method: Hollow stem auger	Page 1 of 1		
Proj. Loc: Skaneateles Falls, NY						Sampler: 2-Inch Split Spoon	Location Landfill		
No.: 5618.010						Hammer: 140-lb	Start Date: 9/19/97		
Boring Company: SJB Services, Inc.						Fall: 30-inch	End Date: 9/19/97		
Foreman: Chris Ackley						Screen =	Grout		
Drill Rig: CME-75						Riser	Sand Pack		
OBG Geologist: DJ Carnevale						Steel //	Bentonite		
Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0		2	8-4	2/2	10	Top soil to 0.5 ft, to pale reddish brown (10R 5/4), dry, medium dense, silty clay to 2 ft			0.4
1			6-7	1025					
2		4	8-10	2/0.1	18	Limestone fragments in tip of shoe			-
3			8-4						
4		6	4-3	2/0.2	7	Limestone fragments in tip of shoe			-
5			4-4						
6		8	4-4	2/0.2	14	Limestone fragments in tip of shoe			-
7			10-4						
8		10	2-3	2/2	9	Moderate yellowish brown (10YR 5/4), damp, stiff, SILT, little clay, vertical fractures filled with clay some root holes			0.2
			6-7						
10		12	Push	2/1.7		Collect shelby tube from 10 to 12 ft			-
11									
12		14	17-4	2/2	14	Olive gray (5Y 4/1), saturated, loose limestone GRAVEL to ~13 ft to moderate yellowish brown (10YR 5/4), moist, stiff, clay, little silt to 14 ft			0.2
13			5-4						
14		16	1-1	2/0.75	6	Olive gray (5Y 4/1), saturated, loose, SILT and fine subrounded gravel, little fine sand to ~15.5 ft to limestone fragments to 16 ft			0.2
15			5-24						
16		18	8-19	2/2	49	Dark yellowish orange (10YR 6/6), moist, dense, SILT with embedded fine angular limestone fragments to ~17.5 ft to weathered limestone bedrock to 18 ft			0.2
17			20-20						
18						Bottom of boring at 18 ft			
19									
20									
21									
22									

O'BRIEN & GERE ENGINEERS, INC.		TEST BORING LOG	REPORT OF BORING SWB-15
Client: SMC		Drill Method: Hollow stem auger	Page 1 of 1
Proj. Loc: Skaneateles Falls, NY		Sampler: 2-Inch Split Spoon	Location Landfill
File No.: 5618.010		Hammer: 140-lb	Start Date: 9/19/97
Boring Company: SJB Services, Inc.		Fall: 30-inch	End Date: 9/19/97
Foreman: Chris Ackley		Screen =	
Drill Rig: CME-75		Riser	
BG Geologist: DJ Carnevale		Steel //	

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0		2	1-3 4-6	2/2 1315	7	Dark yellowish brown (10YR 4/2), damp, loose, SILT and fine angular gravel, little fine sand			0.4
1									
2		4	1-1 2-1	2/1	3	Dark yellowish brown (10YR 4/2), damp, loose, SILT and fine angular gravel, little fine sand			0.4
3									
4		6	WOH-2 4-4	2/2	6	Olive gray (5Y 4/1), moist, firm, SILT, little clay, root holes			0.8
5									
6		8	2-3 4-9	2/2	7	Olive gray (5Y 4/1), moist, firm, CLAY, little SILT, root holes to ~7.5 ft, to olive gray (5Y 4/1), saturated, loose, fine sand and silt, little fine angular gravel to 8 ft			0.8
7									
8		10	10-30 50/0.3	1.4/0.2	>80	Poor recovery, limestone fragments in tip of shoe			-
9									
10		12	24-15 50/0.3	1.3/1.3	>65	Limestone fragments to 10.5 ft, to olive gray (5y 4/1), saturated, stiff CLAY with fine sub-rounded little fine sand to 11.5 ft to limestone fragments to 12 ft			0.6
11									
12		14	50/0.3	0.3/0.3		Limestone fragments			0.2
13									
14		16				Auger refusal at 13 ft bg on boulder			
15						Relocated SWB-15 ~10 ft to west and encountered auger refusal at 13.5 ft bg			
16									
17									
18									
19									
20									
21									
22									

O'BRIEN & GERE ENGINEERS, INC.						TEST BORING LOG		REPORT OF BORING SWB-16			
Client: SMC						Drill Method: Hollow stem auger		Page 1 of 2			
Proj. Loc: Skaneateles Falls, NY						Sampler: 2-Inch Split Spoon		Location Landfill			
No.: 5618.010						Hammer: 140-lb		Start Date: 9/22/97			
Boring Company: SJB Services, Inc.						Fall: 30-inch		End Date: 9/22/97			
Foreman: Chris Ackley								Screen =		Grout	
Drill Rig: CME-75								Riser		Sand Pack	
OBG Geologist: DJ Carnevale								Steel //		Bentonite	
Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)		
0	1	0-2	3-6	2.0/0.8	14	Pale brown (5YR 5/2), damp, medium dense, SILT, some fine to medium sand, little coarse sand, trace fine gravel (subrounded to angular)			0.0		
1			8-10								
2	2	2-4	10-10	2.0/0.1	17	Piece of steel in tip of spoon, poor recovery			NA		
3			7-8								
4	3	4-6	3-4	2.0/1.7	13	Grayish brown (5YR 3/2), damp, medium dense, fine SAND, some silt, little medium to coarse sand, trace fine gravel (subrounded to angular)			0.0		
5			9-10								
6	4	6-8	5-8								
7			13-20	2.0/2.0	21	Moderate brown (5YR 4/4), damp, hard, CLAY, little silt			0.0		
8	5	8-10	NA	1.3'1/3'		Push a shelby tube approximately 1.3 ft, refusal on a cobble (partially lodged in tube), 9.3 ft end of tube contains moderate brown (5YR 4/4), damp, CLAY, little silt, trace cobble fragments (subangular to angular)			NA		
10	6	10-12	21-12	2.0/2.0	24	Moderate brown (5YR 3/2), damp, hard CLAY, little silt, trace fine gravel (subrounded to sub-angular), increasing percentage of gravel, little coarse sand near tip of spoon			0.0		
11			12-30								
12	7	12-14	49-36	2.0/1.4	68	Brownish gray (5Y 4/1), saturated, very dense, fine to coarse SAND, some coarse to fine gravel (sub-angular to angular) (cobble fragments), little silt			0.0		
13			32-33								
14	8	14-15.4	47-42	1.4/1.2	92+	Brownish gray (5YR 4/1), wet, extremely dense fine to medium SAND, some silt, little fine to coarse gravel (subangular to angular), trace coarse sand			1.2		
15			50/0.4								
16	9	16-18	17-29	2.0/1.5	58	Brownish gray (5YR 4/1), saturated, very dense, fine to medium SAND, some fine to coarse gravel (subangular to angular), little silt			1.8		
17			29-21								
18	10	18-20	25-30	2.0/1.4	63	Brownish gray (5YR 4/1), wet to saturated, very dense, fine to medium SAND, some coarse to fine gravel (cobble fragments), subangular to angular, little coarse sand, trace silt			0.6		
19			33-31								
20	11	20-22	25-22	2.0/1.5	63	Brownish gray (5YR 4/1), wet, very dense, fine to medium SAND, some coarse sand, little coarse to fine gravel (subangular to angular), trace silt, tip of spoon possible fragmented weathered bedrock chips					
21			41-48								

REPORT OF BORING

O'Brien & GERE ENGINEERS, INC.		TEST BORING LOG	REPORT OF BORING SWB-17
Client: SMC	Drill Method: Hollow stem auger	Page 1 of 1	
Proj. Loc: Skaneateles Falls, NY	Sampler: 2-Inch Split Spoon	Location Landfill	
No.: 5618.010	Hammer: 140-lb	Start Date: 9/22/97	
	Fall: 30-inch	End Date: 9/22/97	

Boring Company: SJB Services, Inc.		Screen =  Grout Riser  Sand Pack Steel //  Bentonite
Foreman: Chris Ackley		
Drill Rig: CME-75		
OBG Geologist: CP O'Dell		

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing	
									PID (ppm)	
0	1	0-2	3-5	2.0/1.0	13	Dark yellowish brown (10YR 4/2), damp, medium , dense, fine SAND, some silt, little fine to medium gravel (angular), trace organics (plant roots)			0.0	
			8-9							
1										
2	2	2-4	5-5	2.0/1.9	11	Dusky brown (5YR 2/2), damp, medium dense, SILT, some fine sand, little medium to coarse sand, trace fine gravel (angular)			0.0	
			6-9							
3										
4	3	4-6	2-6	2.0/1.6	14	Dusky brown (5Y 2/2), damp, medium dense, SILT, some very fine sand, little medium to coarse sand, trace fine gravel (angular)			0.0	
			8-8							
5										
6	4	6-8	5-7	2.0/0.9	16	Moderate brown (5YR 4/4), damp, hard, CLAY, little silt			0.0	
			9-9							
7										
8	5	8-10	NA	2.0/1.8	NA	Push shelby tube, bottom of tube is moderate brown (5YR 4/4), with light brown (5YR 6/4) mottling, damp, CLAY, some silt			NA	
10	6	10-12	3-9	2.0/2.0	19	Moderate (5YR 4/4), damp, hard, CLAY, some silt, trace fine gravel (subangular)			0.0	
			10-17							
11										
12	7	12-14	13-19	2.0/2.0	40	Moderate brown (5YR 4/4), damp, very hard, CLAY, little silt, trace fine gravel (subrounded to sub-angular)			0.0	
			21-27							
13										
14	8	14-16	12-35	2.0/1.5	77	Brownish gray (5YR 4/1), saturated, very dense, medium to coarse SAND, some fine sand, little fine to coarse gravel (subangular to angular)			0.0	
			42-38							
15										
16	9	16-16.6	24-50/	0.6/0.5	100+	Brownish gray (5YR 4/1), saturated, extremely dense, medium to coarse SAND, some coarse to fine gravel (angular), little fine sand	0.0			
			0.1							
17										
18	10	18-20	20-25	2.0/1.4	52	Brownish gray (5YR 4/1), saturated, very dense, medium to fine SAND, some fine gravel (angular), little coarse sand, trace silt	0.0			
			27-27							
19										
20	11	20-20.4	50/0.4	0.4/0.3	100+	Brownish gray (5YR 4/1), saturated, very dense, medium to fine SAND, some coarse sand, little fine to medium gravel (angular), trace silt. Apparent bedrock chips in spoon tip. Borehole terminated at 20.4 ft	0.0			
21										
22										

the borehole is backfilled with cement/bentonite grout.

O'Brien & GERE ENGINEERS, INC.		TEST BORING LOG	REPORT OF BORING SWB-18
Client: SMC		Drill Method: Hollow stem auger	Page 1 of 1
Proj. Loc: Skaneateles Falls, NY		Sampler: 2-Inch Split Spoon	Location Landfill
File No.: 5618.010		Hammer: 140-lb	Start Date: 9/22/97
Boring Company: SJB Services, Inc.		Fall: 30-inch	End Date: 9/22/97
Boreman: Chris Ackley		Screen = ☐ Grout Riser ☐ Sand Pack Steel // ☐ Bentonite	
Drill Rig: CME-75			
BG Geologist: CP O'Dell			

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0	1	0-2	5-7	2.0/2.0	16	Dark yellowish brown (10YR 4/2), damp, medium dense, fine SAND, some silt, trace medium to coarse sand			0.0
1			9-12						
2	2	2-4	4-8	2.0/1.4	20	Grayish brown (5YR 3/2), damp, medium dense, SILT, some fine sand, little fine gravel (subangular) trace clay			0.0
3			12-9						
4	3	4-6	4-7	2.0/2.0	17	Moderate brown (5YR 4/4), damp, hard, SILT, some clay			0.0
5			10-11						
6	4	6-8	12-13	2.0/2.0	27	Moderate brown (5YR 4/4), damp, hard, CLAY, some silt, trace fine gravel (subangular)			0.0
7			14-18						
8	5	8-10	NA	2.0/1.7	NA	Drive shelly tube, bottom of tube moderate brown (5YR 4/4), damp, CLAY, some silt			NA
9									
10	6	10-10.7	13-50/ 0.2	0.7/0.6	100+	Moderate brown (5YR 4/4), damp, extremely hard, CLAY, some silt, trace fine gravel (subangular), coarse gravel at tip of spoon			0.0
11									
12	7	12-12.9	9-50/ 0.4	0.9/0.7	100+	Brownish gray (5YR 4/1), saturated, extremely dense fine to medium SAND, some coarse sand, little fine gravel (angular), trace medium to coarse gravel (angular)			0.0
13									
14	8	14-14.2	50/0.2	0.2/0.1	100+	Brownish gray (5YR 4/1), saturated, extremely dense medium to fine SAND, some coarse sand, little fine to medium gravel (angular), apparent bed-rock fragments in tip of spoon. Borehole terminated at 14.2 ft			0.0
15									
16									
17									
18									
19									
20									
21									
22									

s: Cement/bentonite grout the boring to the surface

O'Brien & GERE ENGINEERS, INC.						TEST BORING LOG	REPORT OF BORING SWB-19		
Client: SMC						Drill Method: Hollow stem auger	Page 1 of 1		
Proj. Loc: Skaneateles Falls, NY						Sampler: 2-Inch Split Spoon	Location Landfill		
No.: 5618.010						Hammer: 140-lb	Start Date: 9/22/97		
Boring Company: SJB Services, Inc.						Fall: 30-inch	End Date: 9/22/97		
Foreman: Chris Ackley						Screen =	Grout		
Drill Rig: CME-75						Riser	Sand Pack		
OBG Geologist: CP O'Dell						Steel //	Bentonite		
Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0	1	0-2	8-12	2/1.3	26	Pale brown (5YR 5/2), damp, medium dense, fine SAND, some silt, little fine to medium gravel			0.0
1			14-12						
2	2	2-4	6-7	2.0/2.0	16	Grayish brown (5YR 3/2), damp, medium dense, SILT, some fine sand, little medium to coarse sand, trace fine gravel (angular)			0.0
3			9-12						
4	3	4-4.7	13-50/	0.7/0.6	100+	Dark yellowish brown (10YR 4/2), saturated, extremely dense, fine to medium SAND. Apparent bedrock fragments at 4.7 ft in spoon			0.0
5			0.2						
6									
7						Spon refusal at 4.7 ft, auger to 5.0 ft for auger refusal			
8						Second auger attempt ~5 ft, east was terminated at 5.3 ft (refusal)			
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

ement/bentonite grout the boring to the surface

O'Brien & GERE ENGINEERS, INC.		TEST BORING LOG	REPORT OF BORING SWB-20
Client: SMC		Drill Method: Hollow stem auger	Page 1 of 1
Proj. Loc: Skaneateles Falls, NY		Sampler: 2-Inch Split Spoon	Location Landfill
File No.: 5618.010		Hammer: 140-lb	Start Date: 9/22/97
Boring Company: SJB Services, Inc.		Fall: 30-inch	End Date: 9/22/97
Foreman: Chris Ackley		Screen =	Grout
Drill Rig: CME-75		Riser	Sand Pack
BGB Geologist: CP O'Dell		Steel //	Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
0	1	0-2	14-31 21-28	2/1.7	52	Brownish gray (5YR 4/1), damp, very dense, fine to medium SAND, some fine to coarse gravel (angular) little silt			0.0
1									
2	2	2-4	8-13 9-25	2/1.5	22	Brownish black (5YR 2/1), damp, medium dense, fine to medium SAND, some silt, little coarse gravel (angular), trace fine to medium gravel (angular)			0.0
3									
4	3	4	50-12 50/0.1	1.1/0.7	100+	Medium gray (N5), damp, extremely dense, coarse to fine gravel (boulder/cobble fragments), little fine sand to silt			0.0
5									
6	4	6-6.1	50/0.1	0.1/0.1	100+	Dark gray (N3), saturated, extremely dense, coarse to medium gravel (angular), boulder/bedrock fragments			0.0
7									
8	5	7-8.1	10-20 24-50/ 0.1	1.1/0.8	54	Dark gray (N3), saturated, very dense, coarse to fine gravel (weathered bedrock fragments), angular, little fine to medium sand			0.0
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

es: Cement/bentonite grout the boring to the surface

Test pit/trench logs

TABLE 1
Test Pit Descriptions

Stauffer Management Company
Skaneateles Falls, New York

Landfill Test Pits

Test Pit I.D.	Excavation Depth (ft bgs)	Clay Cap Interval (ft bgs)	Fill Interval (ft bgs)	Silty Clay Interval (ft bgs)	Silty Sand & Gravel Interval (ft bgs)	Depth to Bedrock (ft bgs)	Depth to Water (ft bgs)
TP-1	8	NE	0.5 - 4	4 - 8	NE	>8	NE
TP-2	13	0.5 - 2	2 - 4	4 - 13	NE	>13	NE
TP-3	8	0.5 - 2.5	2.5 - 4	4 - 5.5	5.5 - 8	>8	5.5
TP-4	7.5	NE	0.5 - 2.5	2.5 - 7.5	NE	>7.5	6
TP-5	5	NE	0.5 - 3	5	3 - 5	>5	NE
TP-6	3	NE	1 - 3	1 - 3	NE	3	NE
TP-7	5	NE	1 - 3	NE	NE	4	NE
TP-8	8	NE	0.5 - 4	4 - 8	NE	>8	NE
TP-9	4	NE	2 - 4	NE	NE	>4	NE
TP-10	6	NE	NE	5 - 6	2 - 5	>6	NE
TP-11	3	NE	2 - 3	NE	NE	>3	NE
TP-12	7	NE	NE	1 - 7	NE	>7	NE
TP-13	4	NE	2 - 4	NE	NE	>4	NE
TP-26	8.5	1 - 3	5 - 8.5	NE	3 - 5	>8.5	5
TP-27	9	1 - 3	6 - 9	NE	3 - 6	>9	10
TP-28	2	NE	0.5 - 2	NE	NE	>2	NE
TP-29	6	NE	1 - 3	NE	3 - 6	>6	NE
TP-30	2	NE	0.5 - 2	NE	NE	>2	NE
TP-31	3	1 - 2	2 - 3	NE	NE	3	NE
TP-32	4	0.5 - 2.5	2.5 - 4	NE	NE	>4	NE
TP-33	10	NE	0.5 - 2	2 - 10	NE	>10	NE
TP-34	4	NE	0.5 - 1.5	1.5 - 4	NE	>4	NE
TP-35	6	NE	0.5 - 4.5	4.5 - 6	NE	>6	NE
TP-36	10	NE	0.5 - 3	7 - 10	3 - 7	>10	NE
TP-37	10	NE	0.5 - 3	7 - 10	3 - 7	>10	NE
TP-38	6	NE	NE	NE	0.5 - 6	>6	NE

Notes: 1. ft bgs = feet below ground surface
2. NE = Not Encountered

Test Pit Descriptions

Stauffer Management Company
Skaneateles Falls, New York

North Plant Area Test Pits

Test Pit I.D.	Excavation Depth (ft bgs)	Fill Interval (ft bgs)	Silty Clay Interval (ft bgs)	Silty Sand & Gravel Interval (ft bgs)	Depth to Bedrock (ft bgs)	Depth to Water (ft bgs)
NPTP-1	8	0 - 3	3 - 5	5 - 8	>8	5
NPTP-2	10	0 - 3	3 - 10	NE	>10	5
NPTP-3	3	0 - 3	NE	NE	>3	3
NPTP-4	4	0 - 3	3 - 4	NE	>4	2
NPTP-5	9	0 - 3	3 - 9	NE	>9	3
NPTP-6	6	0 - 3	NE	3 - 6	>6	3.5

- Notes:
1. ft bgs = feet below ground surface
 2. NE = Not Encountered
 3. Water encountered in TP-1, TP-2, and TP-5 occurred in thin sand seams which did not readily flow into the test pits.
 4. Water encountered in TP-3, TP-4, and TP-6 was associated with fill materials and/or foundations.

Tab Continued
Test Descriptions

Stauffer Management Company
Skaneateles Falls, New York

Eastern and Northern Area Test Pits

Test Pit I.D.	Excavation Depth (ft bgs)	Sandy, Cobbly Cover (ft bgs)	Very Fine Sand Interval (ft bgs)	Silty Clay Interval (ft bgs)	Silty Sand & Gravel Interval (ft bgs)	Depth to Bedrock (ft bgs)	Depth to Water (ft bgs)
TP-14	10	0 - 4	4 - 8	8 - 9	9 - 10	>10	9.5
TP-15	4.5	0 - 4.5	NE	NE	NE	4.5	NE
TP-16	2	0 - 2	NE	NE	NE	2	NE
TP-17	10	0 - 3	NE	3.5 - 10	3 - 3.5	>10	9.5
TP-18	10	0 - 2	NE	2 - 10	NE	>10	NE
TP-19	2	0 - 2	NE	NE	NE	2	NE
TP-20	8	0 - 2	NE	2 - 4	4 - 7	7	7
TP-21	3	0 - 3	NE	NE	NE	3	NE
TP-22	6	0 - 3	NE	6	3 - 6	>6	NE
TP-23	8	0 - 3	NE	6	3 - 6	>8	NE
TP-24	10	0 - 1	NE	6 - 9	1 - 6 / 9 - 10	>10	NE
TP-25	10	0 - 2.5	NE	8 - 9	2.5 - 5.5 / 9 - 10	>10	5.5
TP-39	2	0 - 2	NE	NE	NE	2	NE
TP-40	7	0 - 2	NE	2 - 5	NE	5	NE
TP-41	1	0 - 1	NE	NE	NE	1	NE
TP-42	8	0 - 1	NE	NE	1 - 8	8	7.5
TP-43	6	0 - 4	NE	4 - 6	NE	6	NE
TP-44	6	0 - 3	NE	NE	3 - 6	6	6
TP-45	10	0 - 2	NE	2 - 10	NE	>10	NE
TP-46	11	0 - 1	NE	1 - 4	4 - 11	>11	10
TP-47	10	0 - 4	NE	NE	4 - 10	>10	8.5
TP-48	9	0 - 4	NE	NE	4 - 9	9	8.5
TP-49	10	0 - 3.5	NE	3.5 - 10	NE	>10	NE
TP-50	10	0 - 2.5	NE	5.5 - 10	2 - 5.5	>10	NE
TP-51	17	NE	NE	NE	0 - 17	NE	NE
TP-52	11.5	0 - 5	NE	5 - 11.5	NE	11.5	NE
TP-53	12.5	0 - 2.5	NE	2.5 - 4	4 - 12.5	12.5	NE
TP-54	14	0 - 2.5	NE	2.5 - 5	5 - 14	14	NE
TP-55	9.5	0 - 1.5	NE	1.5 - 3	3 - 9.5	9.5	NE
TP-56	9	0 - 2	NE	2 - 6	2 - 6	6	6

Notes:

1. ft bgs = feet below ground surface
2. NE = Not Encountered
3. TP-25 was installed in the former settling pond; settling pond sludge was encountered between 5.5 and 8 ft bgs.

From: David J. Carnevale
Re: North Plant Test Pits - VOC Delineation
File: 5618.010
Date: July 28, 1997

cc: DYWright
TMEddy
SWAnagnost
KKohl-Dyson

This memo documents the test pits activities completed in the North Plant area at the Stauffer Management Company (SMC) facility in Skaneateles Falls, NY. The objective of the test pit activities was to delineate the extent of impacted soils.

A total of eleven test pits (NPTP-7 through NPTP-17) were completed between July 22 and 24, 1997. Eight test pits (NPTP-7, 8, 9, 10, 11, 13, 16, and 17) were completed in the North Plant area. Two test pits (NPTP-12 and 15) were completed in the northwest corner of the property (former church area), and one test pit (NPTP-14) was completed west of the sanitary leach field.

The soils within each test pits were described and logged by the on-site hydrogeologist. Soil samples were also field screened for VOCs using a photoionization detector (PID). The field screening consisted of placing a representative portion of the soil into a plastic ziplock bag, allowing the sample to reach ambient temperature, then screening the headspace within the bag. Soil descriptions and PID data are documented on the attached log.

The following soil samples were collected for VOC and SVOC analyses from each test pit:

NPTP-7-1	25 ft from west start, 5 ft below grade
NPTP-7-2	60 ft from west start, 5 ft below grade
NPTP-8-1	5 ft from west start, 4 ft below grade
NPTP-8-2	30 ft from east start, 6 ft below grade
NPTP-9-1	15 ft from east start, 6 ft below grade
NPTP-9-2	At west start, 3 ft below grade
NPTP-10	10 ft from east start, 6 ft below grade
NPTP-11-1	10 ft from east start, 5 ft below grade
NPTP-11-2	95 ft from east start, 4 ft below grade
NPTP-12	20 ft from northwest start, 5 ft below grade
NPTP-13-1	10 ft from east start, 4 ft below grade
NPTP-13-2	15 ft from west start, 3 ft below grade
NPTP-14	40 ft from north start, 5 ft below grade
NPTP-15	10 ft from south start, 5 ft below grade
NPTP-16	25 ft from east start, 3 ft below grade
NPTP-17	13 ft from north start, 2.5 ft below grade

The soil samples were collected from areas which appeared to be "clean" (<1 ppm for individual VOCs and/or <10 ppm total VOCs) based on visual and PID screening data.

In addition, one ground water sample was collected from NPTP-9 approximately 50 ft west of the start of the test pit. Small, dark brown beads of LNAPL were noted on the water.

5618.010
July 28, 1997
Page 2

Fill materials were encountered in all the test pits. Depth to fill ranged from 1 ft below grade in the North Plant test pits to 6 ft below grade in the northwest corner of the property (NPTP-12 and 15) and west of the sanitary leach field (NPTP-14).

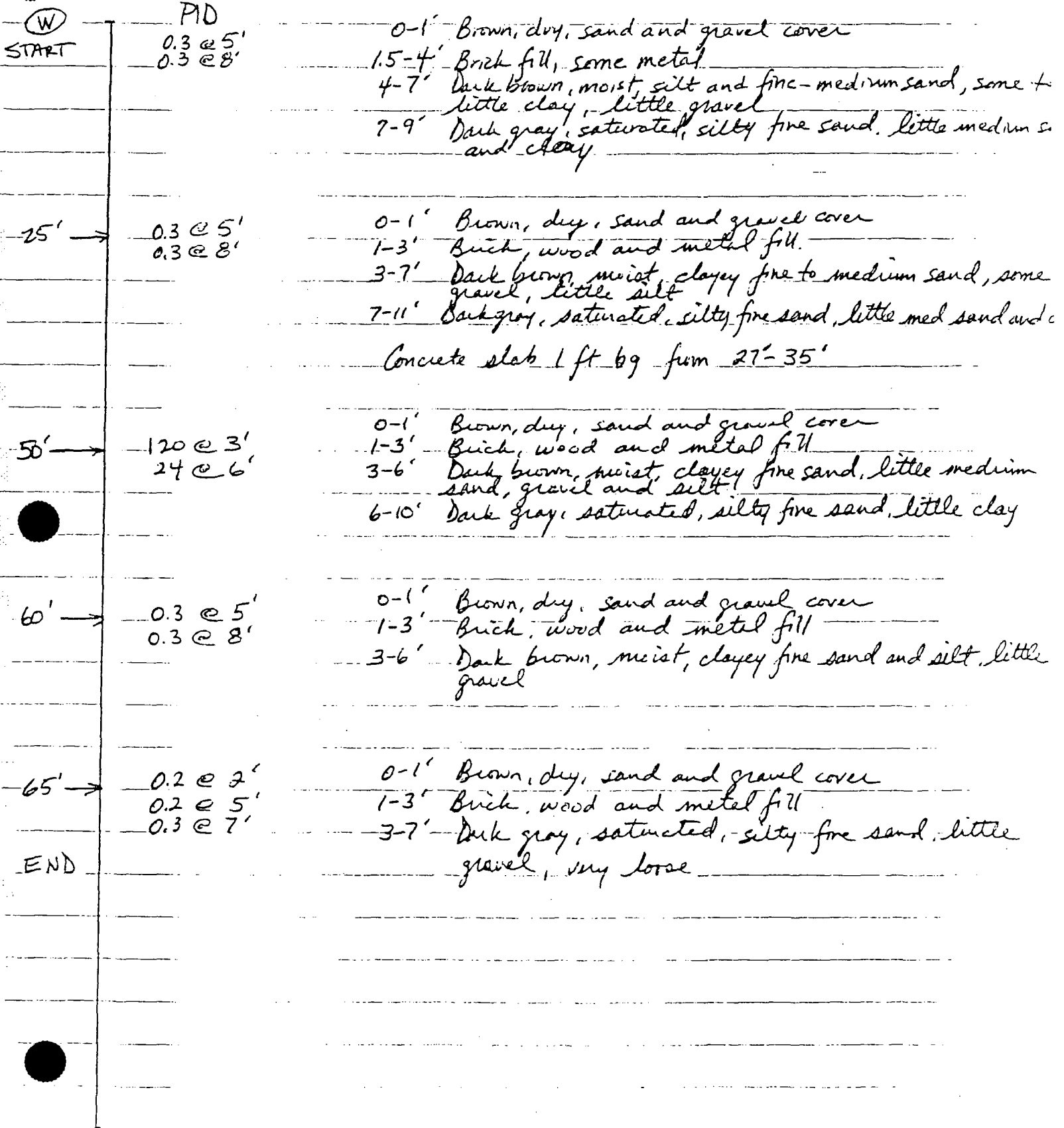
Ground water was encountered approximately 6 to 8 ft below grade in the majority of the test pits; however, perched water was encountered approximately 1 to 2 ft below grade in portions of the test pits completed adjacent to the asphalt driveways and foundations. A slight sheen was noted on the water surface in test pits NPTP-8, 9, 10, 11, 13, and 16. Oily saturated soils were noted in NPTP-9 and NPTP-13.

Visual observations and field PID screening of the unsaturated soils in the source areas identified by EA Engineering (northwest corner of the property and west of the sanitary leach field) did not appear to contain source material.

DJC:ers/div76/3_memos/smcnptp.doc



SUBJECT	SHEET	BY	DATE	JOB NO.
MC Shancateles Falls NPTP-7	1/1	(dj)	7/22/97	5618.010





SUBJECT

SMC Skaneateles Falls NPTP-8

SHEET

1/1

BY

Djv

DATE

7/22/97

JOB NO.

5618.010

PID

(W)
ART

140 @ 3'

58 @ 7'

0-1'

Brown, dry, sand and gravel cover

1-3'

Brick and wood fill

3-7'

Black (stained), moist silt, little fine sand and gravel, strong odor

7-11'

Olive brown, moist to saturated silt, some little fine sand, little medium sand and gravel, strong odor

5' →

240 @ 5'

110 @ 8'

0-1'

Brown, dry, sand and gravel cover

1-3'

Brick, wood and metal fill

3-7'

Black (stained), moist, silt, little fine sand and gravel, strong odor

7-11'

Olive brown, moist to saturated, silt, some little fine sand, little med sand and gravel strong odor
Standing water at ~ 9 ft bg.

5' →

340 @ 5'

210 @ 8'

0-0.5'

Brown, dry, sand and gravel cover

0.5-1'

Reddish brown, damp, silty clay

1-3'

Brick, wood, metal fill

3-6'

Black (stained), moist silt, little fine sand and gravel, strong odor

6-12.5'

Olive brown, moist to saturated silt, some little fine sand, little medium sand, strong odor
Standing water at ~ 12 ft bg.

5' →

320 @ 2'

180 @ 5'

0-0.5'

Brown, dry, sand and gravel cover

0.5-1'

Reddish brown, damp, silty clay

1-3'

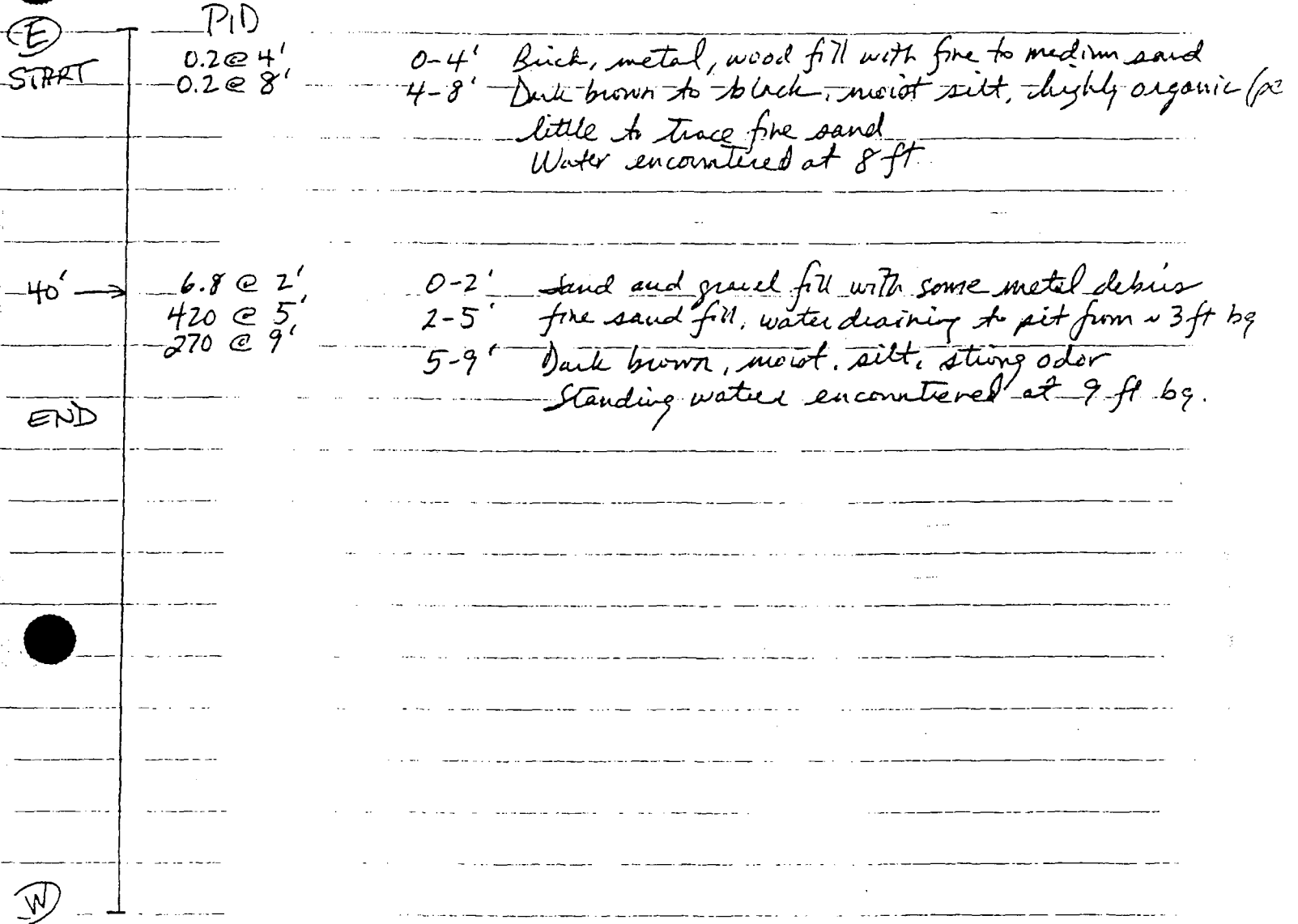
Wood, brick and metal fill

3-7'

Black (stained), moist, silt, little fine sand and gravel, little medium sand



SUBJECT	SHEET	BY	DATE	JOB NO.
SNC Shancateles Falls NPTP-8 Con't	1/1	GP	7/22/97	5618.010

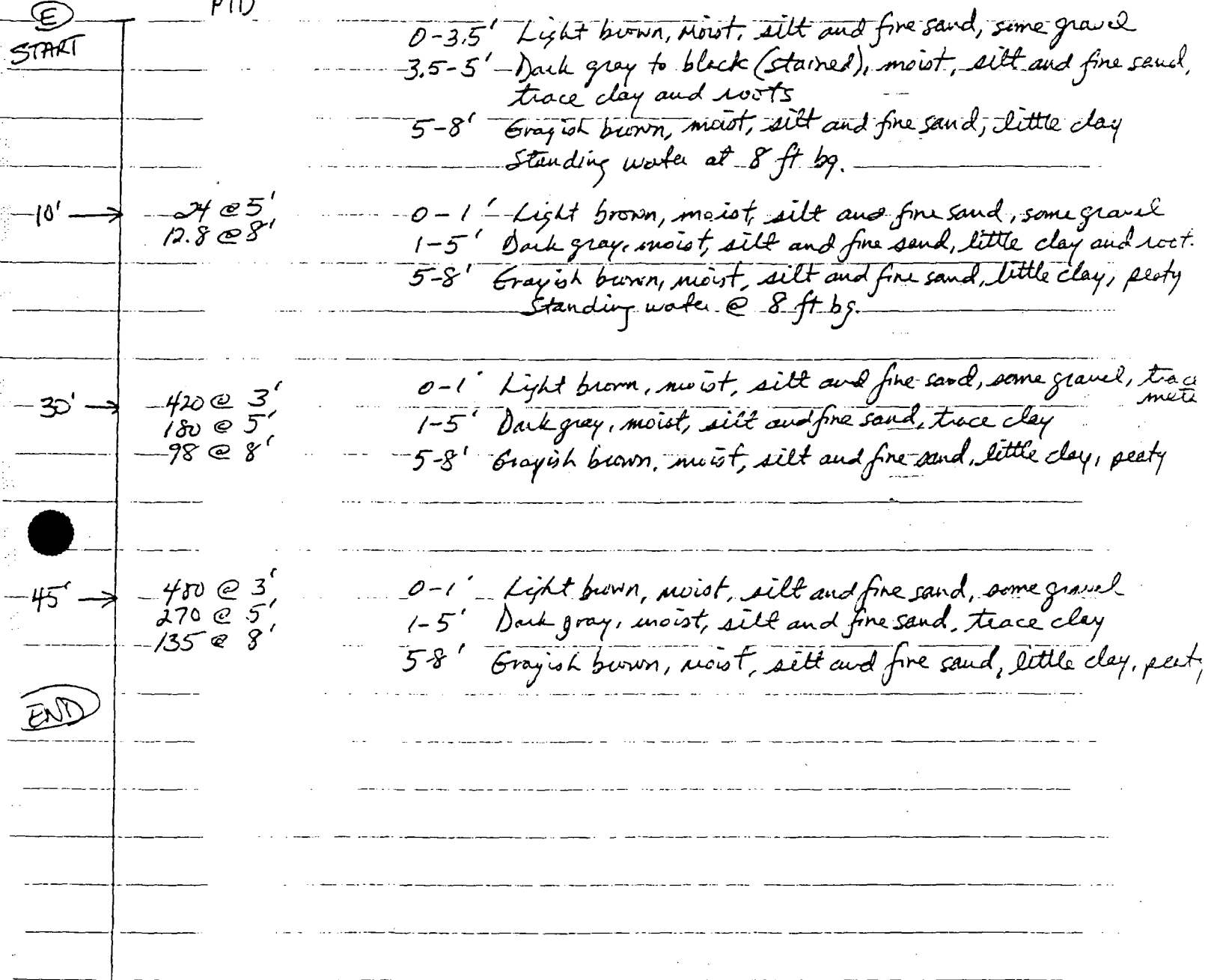


SUBJECT		SHEET	BY	DATE	JOB NO.
SMC Skaneateles Falls NPTP-9		1/1	djo	7/23/97	5618.010

PID			
RT	28 @ 5'	0-3'	Light brown, damp, fine sand and silt, some gravel
	17 @ 8'	3-5'	Dark gray, moist, silt, little fine sand and gravel slight odor
		5-8'	Dark gray to black, moist, silt, trace clay, peaty Standing water at 8 ft.
10' →	8 @ 2'	0-3'	Light brown, damp, fine sand and silt, some gravel
	30 @ 4'	3-5'	Dark gray, moist silt, some fine sand and gravel, slight odor
		5-8'	Dark gray to black, moist, silt, trace clay, peaty
10' →	12.5 @ 3'		
	9.8 @ 6'		
D' →	1.4 @ 2'	0-3'	Light brown, damp, fine sand, silt and gravel, trace wood fill
	6.8 @ 4'	3-6'	Dark gray, moist, silt, trace clay, peaty
	32 @ 6'	6-10'	Dark gray, saturated, silty fine sand and gravel oily residue from 7-7.5 ft b9
→	3.40 @ 3'	0-1'	Concrete, sand, trace metal fill
		2-4'	Black (stained), saturated gravel, little fine sand free phase oil present
		4-	Reddish brown, silty clay

SUBJECT	SHEET	BY	DATE	JOB NO.
MC Skaneateles Falls NPTP-10	1/1	DJC	7/23/97	5618.D10

PID



SUBJECT: SMC Shearwater Falls NPTP-11 SHEET: 1/1 BY: JD DATE: 7/23/97 JOB NO.: 5618.010

E ART	PID	
	2.8 @ 2'	0-4' Light brown, moist, fine sand and gravel fill with wood sh.
	100 @ 4'	4-6' Dark gray, moist, fine sand, little silt, slight odor
	5 @ 6'	6-8' Dark gray, saturated, fine sand, some silt
5' →	38 @ 2'	Pipe ~ 1.5 ft bg running N-S Drum with white, soft material at ~ 2 ft bg.
35' →	44 @ 2'	0-2' Light brown, dry, gravel, some sand
	148 @ 4'	2-8' Black, saturated, fill of glass, metal, paper, drums
	122 @ 6'	Concrete at 8 ft bg.
5' →	17 @ 2'	
	75 @ 4'	
	48 @ 6'	
5' →	0.4 @ 2'	0-2' Light brown, dry, gravel, some sand
	0.6 @ 4'	2-8' Black, saturated, fill containing glass, metal, paper
	4.2 @ 6'	and drums
→	0.3 @ 2'	0-2' Light brown, dry, gravel and sand
	1.4 @ 4'	2-6' Black, saturated, fill containing glass, metal, wood
	2.8 @ 6'	Cannot excavate beyond 6' due to boulders or concrete.
ID		



SUBJECT	SHEET	BY	DATE	JOB NO.
MC Skaneateles Falls NPTP-12	1/1	GD	7/23/97	5618-010

(NW)
START

PID

0.2 @ 2'

0-4' Dry fill, glass, brick, cloth, paper, shoes

0.2 @ 6'

4-7' Reddish brown, moist, clay

1.2 @ 8'

7-8' Saturated, cinderly fill, sleg, little sand.

10' →

0.2 @ 4'

0-6' Dry fill of cinders/sleg, cloth, paper, glass

0.3 @ 8'

6-8' Saturated cinderly/sleggy fill

30' →

0.4 @ 4'

0-6' Dry fill of cinders/sleg, cloth, glass, metal

0.8 @ 7'

6-7' Saturated, cinderly/sleggy fill.

50' →

0.2 @ 4'

0-6' Dry cinderly/sleggy fill

0.2 @ 8'

6-8' Saturated cinderly fill

E
END

SUBJECT

SMC Skaneateles Falls NPTP-13

SHEET

1/1

BY

Di

DATE

7/24/97

JOB NO.

5618.010

PID		
START	0.2 @ 4'	0-1' Light brown, dry, sand and gravel cover
		1-4' Reddish brown, damp, silty clay, tight
10' →	0.4 @ 2'	0-1' Light brown, dry, sand and gravel cover
	9.8 @ 7'	1-4' Reddish brown, damp, silty clay, tight
		4-8' Black, moist to saturated, silt, some to little fine sand and gravel with wood and metal fill
25' →	1.4 @ 3'	0-1.5' Light brown, dry, sand and gravel cover
	4.2 @ 6'	1.5-4' Moist, light brown sand and brick fill
		4-6' Black, saturated, silt, some to little sand and gravel, roots, slight odor Concrete footer at ~ 6 ft b.g.
40' → ND	2.8 @ 3'	0-1.5' Light brown, dry, sand and gravel cover
	120 @ 5'	1.5-4' Light brown, moist, fine to medium sand and brick fill
		4-6' Black, saturated, silt, little sand and gravel
0' →	1850 @ 3'	0-1' Light brown, dry, sand and gravel cover
		1-3.5' Light brown, dry sand and gravel, some metal fill
		3.5-5' Black, saturated, oily, silt and fine sand, some gravel, strong odor
→	1040 @ 3'	0-1' Light brown, dry, sand and gravel cover
	980 @ 6'	1-3' Olive gray, moist, clayey silt, strong odor
		3-6' Black, saturated, metal, glass fill with silt and fine sand.
→	1100 @ 3'	0-1' Light brownish gray, dry, sand and gravel cover
		1-3' Olive gray, moist, clay, strong paint like odor Concrete footer at ~ 3 ft b.g.

HRT

)

SUBJECT	SHEET	BY	DATE	JOB NO.
MC Skamonteller Falls NPTP-14	1/1	Dix	7/24/97	5618.010

N START	P1b	
	0.2 @ 2'	0-1.5' Light brown, dry, fine sand, silt and gravel 1.5-4' Brown, damp, silt, some fine sand and gravel Weathered bedrock at 4 ft.
25' →	0.2 @ 3'	
30' →	1.2 @ 3' 1.8 @ 6' 14.2 @ 9'	0-6' Light brown, damp, silt, little fine sand and gravel 6-8' Dark gray, moist silt, some to little fine sand with brick, glass and metal fill 8-9' Dark gray, saturated, silt with large angular rock boulders
40' →	0.3 @ 2' 1.4 @ 4' 1.6 @ 6' 20.2 @ 8'	1-6' Light brown, damp, silt, little fine sand and gravel 6-8' Dark gray, moist, silt, some to little fine sand w. Th brick, glass and metal fill 8-9' Dark gray, saturated, silt with large angular rock boulders
ND		

SUBJECT

SMC Skaneateles Falls NPTP-15

SHEET

1/1

BY

EJD

DATE

7/24/97

JOB NO.

5618.010

SW	PID	
ART	0.2 @ 2'	0-1' Asphalt and base
	0.6 @ 4'	1-3' Reddish brown, damp, silty clay
	0.4 @ 6'	3-6' Reddish brown, moist, silty clay
		6-8' Brownish black, saturated, cindery, slaggy fill

10' →	0.2 @ 3'	0-1' Asphalt and base
	0.4 @ 5'	1-3' Light brown, dry, fine sand fill
	0.8 @ 6'	3-6' Reddish brown, damp, silty clay
		6-8' Brownish black, saturated, cindery slaggy fill with cloth, glass and metal

30' →	0.4 @ 3'	SAME AS AT 10 ft.
	0.6 @ 6'	

10' →	0.6 @ 2'	0-1' Asphalt and base
	0.4 @ 4'	1-3' Dark gray, damp, silt and fine sand, some cinders
	0.8 @ 7'	3-6' Brownish black, moist, cindery slaggy fill
D		6-7' Brownish black, saturated cindery slaggy fill

SUBJECT	SHEET	BY	DATE	JOB NO.
INC Skaneateles Falls NPTP-16	1/1	di	7/24/97	5818.010

E	PID	
START	0.4 @ 2'	0-1' Brown, damp, sand and gravel cover
	0.8 @ 5'	1-3' Grayish brown, moist, silt and fine sand, some gran
		3-5' Black (stained), saturated silt and fine sand fill
		with wood, metal and glass
		Standing water at 5.5 ft b.g., water has sheen
		No noticeable odors
10'	0.8 @ 2'	SAME AS START
	1.2 @ 5'	
20'		Drum encountered ~ 19 ft west of start
		Concrete footer w/ ft b.g. and 1 ft thick
35'	0.4 @ 2'	0-1' Brownish gray, damp, sand and gravel cover
	0.4 @ 4'	1-3' Brownish gray, moist, silt and fine sand fill
	0.8 @ 6'	3-5' Black (stained), saturated, silt and fine sand fill
END		with metal and glass debris

SUBJECT	SHEET	BY	DATE	JOB NO.
SMC Skaneateles Falls NPTP-17	1/1	GO	7/24/97	5618.010

N HRT	PID 20 @ 2'	0-1'	Asphalt and base
		1-3'	Black (stained), silty clay, slight odor
		3-	Reddish brown, damp, silty clay
10' →		Concrete cradle support? 0.5 ft by.	
13' →	15.4 @ 2'	0-1'	Asphalt and base
	9.6 @ 4'	1-3'	Black (stained), damp, silty clay, slight odor
20' → D	20 @ 2'	0-1'	Asphalt and subbase
		1-3'	Black (stained), damp, silty clay, slight odor
		3-	Reddish brown, damp, silty clay.

**Soil analytical results and chain of
custody forms**

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4387

Lab Name: OBG Laboratories Contract: Zeneca-Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-7-1

Sample wt/vol: 5.0 (g/ml) G Lab File ID: P8484.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: not dec. 17.5 Date Analyzed: 08/01/97

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	51	
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-4	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	6	J
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	13	
71-43-2	Benzene	12	U
124-48-1	Dibromochloromethane	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
79-00-5	1,1,2-Trichloroethane	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (total)	12	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4388

Lab Name: OBG Laboratories Contract: Zeneca-Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-7-2

Sample wt/vol: 5.0 (g/ml) G Lab File ID: P8492.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: not dec. 19.1 Date Analyzed: 08/01/97

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
74-87-3	Chloromethane	12	U	
74-83-9	Bromomethane	12	U	
75-01-4	Vinyl Chloride	12	U	
75-00-3	Chloroethane	12	U	
75-09-2	Methylene Chloride	5	J	
67-64-1	Acetone	200		
75-15-0	Carbon Disulfide	12	U	
75-35-4	1,1-Dichloroethene	12	U	
75-34-4	1,1-Dichloroethane	12	U	
540-59-0	1,2-Dichloroethene (total)	12	U	
67-66-3	Chloroform	12	U	
107-06-2	1,2-Dichloroethane	12	U	
78-93-3	2-Butanone	40		
71-55-6	1,1,1-Trichloroethane	12	U	
56-23-5	Carbon Tetrachloride	12	U	
75-27-4	Bromodichloromethane	12	U	
78-87-5	1,2-Dichloropropane	12	U	
10061-01-5	cis-1,3-Dichloropropene	12	U	
79-01-6	Trichloroethene	53		
71-43-2	Benzene	12	U	
124-48-1	Dibromochloromethane	12	U	
10061-02-6	trans-1,3-Dichloropropene	12	U	
79-00-5	1,1,2-Trichloroethane	12	U	
75-25-2	Bromoform	12	U	
108-10-1	4-Methyl-2-Pentanone	12	U	
591-78-6	2-Hexanone	12	U	
127-18-4	Tetrachloroethene	12	U	
79-34-5	1,1,2,2-Tetrachloroethane	12	U	
108-88-3	Toluene	12	U	
108-90-7	Chlorobenzene	12	U	
100-41-4	Ethylbenzene	12	U	
100-42-5	Styrene	12	U	
1330-20-7	Xylene (total)	58		

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4389DL

Lab Name: OBG Laboratories Contract: Zeneca-Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-8-1
 Sample wt/vol: 4.0 (g/ml) G Lab File ID: P8493.D
 Level: (low/med) MED Date Received: 07/23/97
 % Moisture: not dec. 19.3 Date Analyzed: 08/01/97
 GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
74-87-3	Chloromethane		3100	U
74-83-9	Bromomethane		700	J
75-01-4	Vinyl Chloride		3100	U
75-00-3	Chloroethane		3100	U
75-09-2	Methylene Chloride		3100	U
67-64-1	Acetone		3100	U
75-15-0	Carbon Disulfide		3100	U
75-35-4	1,1-Dichloroethene		3100	U
75-34-4	1,1-Dichloroethane		3100	U
540-59-0	1,2-Dichloroethene (total)		3100	U
67-66-3	Chloroform		3100	U
107-06-2	1,2-Dichloroethane		3100	U
78-93-3	2-Butanone		3100	U
71-55-6	1,1,1-Trichloroethane		3100	U
56-23-5	Carbon Tetrachloride		3100	U
75-27-4	Bromodichloromethane		3100	U
78-87-5	1,2-Dichloropropane		3100	U
10061-01-5	cis-1,3-Dichloropropene		3100	U
79-01-6	Trichloroethene		3100	U
71-43-2	Benzene		3100	U
124-48-1	Dibromochloromethane		3100	U
10061-02-6	trans-1,3-Dichloropropene		3100	U
79-00-5	1,1,2-Trichloroethane		3100	U
75-25-2	Bromoform		3100	U
108-10-1	4-Methyl-2-Pentanone		3100	U
591-78-6	2-Hexanone		3100	U
127-18-4	Tetrachloroethene		3100	U
79-34-5	1,1,2,2-Tetrachloroethane		3100	U
108-88-3	Toluene		3100	U
108-90-7	Chlorobenzene		3100	U
100-41-4	Ethylbenzene		3100	U
100-42-5	Styrene		3100	U
1330-20-7	Xylene (total)		66000	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4390

Lab Name: OBG Laboratories Contract: Zeneca-Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-8-2

Sample wt/vol: 5.0 (g/ml) G Lab File ID: P8485.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: not dec. 28.8 Date Analyzed: 08/01/97

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
74-87-3	Chloromethane		14	U
74-83-9	Bromomethane		14	U
75-01-4	Vinyl Chloride		14	U
75-00-3	Chloroethane		14	U
75-09-2	Methylene Chloride		6	J
67-64-1	Acetone		42	
75-15-0	Carbon Disulfide		14	U
75-35-4	1,1-Dichloroethene		14	U
75-34-4	1,1-Dichloroethane		14	U
540-59-0	1,2-Dichloroethene (total)		14	U
67-66-3	Chloroform		14	U
107-06-2	1,2-Dichloroethane		14	U
78-93-3	2-Butanone		8	J
71-55-6	1,1,1-Trichloroethane		14	U
56-23-5	Carbon Tetrachloride		14	U
75-27-4	Bromodichloromethane		14	U
78-87-5	1,2-Dichloropropane		14	U
10061-01-5	cis-1,3-Dichloropropene		14	U
79-01-6	Trichloroethene		32	
71-43-2	Benzene		14	U
124-48-1	Dibromochloromethane		14	U
10061-02-6	trans-1,3-Dichloropropene		14	U
79-00-5	1,1,2-Trichloroethane		14	U
75-25-2	Bromoform		14	U
108-10-1	4-Methyl-2-Pentanone		14	U
591-78-6	2-Hexanone		14	U
127-18-4	Tetrachloroethene		14	U
79-34-5	1,1,2,2-Tetrachloroethane		14	U
108-88-3	Toluene		14	U
108-90-7	Chlorobenzene		14	U
100-41-4	Ethylbenzene		14	U
100-42-5	Styrene		14	U
1330-20-7	Xylene (total)		8	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4391DL

Lab Name: OBG Laboratories Contract: Zeneca-Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-9-1

Sample wt/vol: 1.0 (g/ml) G Lab File ID: P8488.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: not dec. 37.8 Date Analyzed: 08/01/97

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
74-87-3	Chloromethane	80	U	
74-83-9	Bromomethane	80	U	
75-01-4	Vinyl Chloride	80	U	
75-00-3	Chloroethane	80	U	
75-09-2	Methylene Chloride	14	J	
67-64-1	Acetone	330		
75-15-0	Carbon Disulfide	80	U	
75-35-4	1,1-Dichloroethene	80	U	
75-34-4	1,1-Dichloroethane	80	U	
540-59-0	1,2-Dichloroethene (total)	80	U	
67-66-3	Chloroform	80	U	
107-06-2	1,2-Dichloroethane	80	U	
78-93-3	2-Butanone	81		
71-55-6	1,1,1-Trichloroethane	80	U	
56-23-5	Carbon Tetrachloride	80	U	
75-27-4	Bromodichloromethane	80	U	
78-87-5	1,2-Dichloropropane	80	U	
10061-01-5	cis-1,3-Dichloropropene	80	U	
79-01-6	Trichloroethene	120		
71-43-2	Benzene	80	U	
124-48-1	Dibromochloromethane	80	U	
10061-02-6	trans-1,3-Dichloropropene	80	U	
79-00-5	1,1,2-Trichloroethane	80	U	
75-25-2	Bromoform	80	U	
108-10-1	4-Methyl-2-Pentanone	80	U	
591-78-6	2-Hexanone	80	U	
127-18-4	Tetrachloroethene	80	U	
79-34-5	1,1,2,2-Tetrachloroethane	80	U	
108-88-3	Toluene	8	J	
108-90-7	Chlorobenzene	80	U	
100-41-4	Ethylbenzene	80	U	
100-42-5	Styrene	80	U	
1330-20-7	Xylene (total)	1800		

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4395DL

Lab Name: OBG Laboratories Contract: Zeneca-Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: SDG No.: 4568

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-11-2

Sample wt/vol: 4.0 (g/ml) G Lab File ID: P8494.D

Level: (low/med) MED Date Received: 07/23/97

% Moisture: not dec. 62.3 Date Analyzed: 08/01/97

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
74-87-3	Chloromethane		2600	J
74-83-9	Bromomethane		1300	J
75-01-4	Vinyl Chloride		3300	U
75-00-3	Chloroethane		3300	U
75-09-2	Methylene Chloride		3300	U
67-64-1	Acetone		3300	U
75-15-0	Carbon Disulfide		3300	U
75-35-4	1,1-Dichloroethene		3300	U
75-34-4	1,1-Dichloroethane		3300	U
540-59-0	1,2-Dichloroethene (total)		3300	U
67-66-3	Chloroform		3300	U
107-06-2	1,2-Dichloroethane		3300	U
78-93-3	2-Butanone		3300	U
71-55-6	1,1,1-Trichloroethane		3300	U
56-23-5	Carbon Tetrachloride		3300	U
75-27-4	Bromodichloromethane		3300	U
78-87-5	1,2-Dichloropropane		3300	U
10061-01-5	cis-1,3-Dichloropropene		3300	U
79-01-6	Trichloroethene		3300	U
71-43-2	Benzene		3300	U
124-48-1	Dibromochloromethane		3300	U
10061-02-6	trans-1,3-Dichloropropene		3300	U
79-00-5	1,1,2-Trichloroethane		3300	U
75-25-2	Bromoform		3300	U
108-10-1	4-Methyl-2-Pentanone		3300	U
591-78-6	2-Hexanone		3300	U
127-18-4	Tetrachloroethene		3300	U
79-34-5	1,1,2,2-Tetrachloroethane		3300	U
108-88-3	Toluene		3300	U
108-90-7	Chlorobenzene		3300	U
100-41-4	Ethylbenzene		3300	U
100-42-5	Styrene		3300	U
1330-20-7	Xylene (total)		26000	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4392DL

Lab Name: OBG Laboratories Contract: Zeneca-Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP92
 Sample wt/vol: 4.0 (g/ml) G Lab File ID: P8483.D
 Level: (low/med) MED Date Received: 07/23/97
 % Moisture: not dec. 13.2 Date Analyzed: 08/01/97
 GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 12.5 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
74-87-3	Chloromethane		2800	J
74-83-9	Bromomethane		2700	J
75-01-4	Vinyl Chloride		12000	U
75-00-3	Chloroethane		12000	U
75-09-2	Methylene Chloride		12000	U
67-64-1	Acetone		12000	U
75-15-0	Carbon Disulfide		12000	U
75-35-4	1,1-Dichloroethene		12000	U
75-34-4	1,1-Dichloroethane		12000	U
540-59-0	1,2-Dichloroethene (total)		12000	U
67-66-3	Chloroform		12000	U
107-06-2	1,2-Dichloroethane		12000	U
78-93-3	2-Butanone		12000	U
71-55-6	1,1,1-Trichloroethane		12000	U
56-23-5	Carbon Tetrachloride		12000	U
75-27-4	Bromodichloromethane		12000	U
78-87-5	1,2-Dichloropropane		12000	U
10061-01-5	cis-1,3-Dichloropropene		12000	U
79-01-6	Trichloroethene		12000	U
71-43-2	Benzene		12000	U
124-48-1	Dibromochloromethane		12000	U
10061-02-6	trans-1,3-Dichloropropene		12000	U
79-00-5	1,1,2-Trichloroethane		12000	U
75-25-2	Bromoform		12000	U
108-10-1	4-Methyl-2-Pentanone		12000	U
591-78-6	2-Hexanone		12000	U
127-18-4	Tetrachloroethene		12000	U
79-34-5	1,1,2,2-Tetrachloroethane		12000	U
108-88-3	Toluene		12000	U
108-90-7	Chlorobenzene		12000	U
100-41-4	Ethylbenzene		1600	J
100-42-5	Styrene		12000	U
1330-20-7	Xylene (total)		140000	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4393DL

Lab Name: OBG Laboratories Contract: Zeneca-Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-10-1

Sample wt/vol: 2.5 (g/ml) G Lab File ID: P8491.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: not dec. 37.5 Date Analyzed: 08/01/97

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
74-87-3	Chloromethane		4	J
74-83-9	Bromomethane		32	U
75-01-4	Vinyl Chloride		32	U
75-00-3	Chloroethane		32	U
75-09-2	Methylene Chloride		12	J
67-64-1	Acetone		85	
75-15-0	Carbon Disulfide		32	U
75-35-4	1,1-Dichloroethene		32	U
75-34-4	1,1-Dichloroethane		32	U
540-59-0	1,2-Dichloroethene (total)		32	U
67-66-3	Chloroform		32	U
107-06-2	1,2-Dichloroethane		32	U
78-93-3	2-Butanone		17	J
71-55-6	1,1,1-Trichloroethane		32	U
56-23-5	Carbon Tetrachloride		32	U
75-27-4	Bromodichloromethane		32	U
78-87-5	1,2-Dichloropropane		32	U
10061-01-5	cis-1,3-Dichloropropene		32	U
79-01-6	Trichloroethene		98	
71-43-2	Benzene		32	U
124-48-1	Dibromochloromethane		32	U
10061-02-6	trans-1,3-Dichloropropene		32	U
79-00-5	1,1,2-Trichloroethane		32	U
75-25-2	Bromoform		32	U
108-10-1	4-Methyl-2-Pentanone		32	U
591-78-6	2-Hexanone		32	U
127-18-4	Tetrachloroethene		3	J
79-34-5	1,1,2,2-Tetrachloroethane		32	U
108-88-3	Toluene		3	J
108-90-7	Chlorobenzene		32	U
100-41-4	Ethylbenzene		32	U
100-42-5	Styrene		32	U
1330-20-7	Xylene (total)		780	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4394

Lab Name: OBG Laboratories Contract: Zeneca-Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-11-1
 Sample wt/vol: 5.0 (g/ml) G Lab File ID: P8486.D
 Level: (low/med) LOW Date Received: 07/23/97
 % Moisture: not dec. 16.3 Date Analyzed: 08/01/97
 GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
74-87-3	Chloromethane		12	U
74-83-9	Bromomethane		12	U
75-01-4	Vinyl Chloride		12	U
75-00-3	Chloroethane		12	U
75-09-2	Methylene Chloride		3	J
67-64-1	Acetone		29	
75-15-0	Carbon Disulfide		12	U
75-35-4	1,1-Dichloroethene		12	U
75-34-4	1,1-Dichloroethane		12	U
540-59-0	1,2-Dichloroethene (total)		12	U
67-66-3	Chloroform		12	U
107-06-2	1,2-Dichloroethane		12	U
78-93-3	2-Butanone		4	J
71-55-6	1,1,1-Trichloroethane		12	U
56-23-5	Carbon Tetrachloride		12	U
75-27-4	Bromodichloromethane		12	U
78-87-5	1,2-Dichloropropane		12	U
10061-01-5	cis-1,3-Dichloropropene		12	U
79-01-6	Trichloroethene		11	J
71-43-2	Benzene		12	U
124-48-1	Dibromochloromethane		12	U
10061-02-6	trans-1,3-Dichloropropene		12	U
79-00-5	1,1,2-Trichloroethane		12	U
75-25-2	Bromoform		12	U
108-10-1	4-Methyl-2-Pentanone		12	U
591-78-6	2-Hexanone		12	U
127-18-4	Tetrachloroethene		12	U
79-34-5	1,1,2,2-Tetrachloroethane		12	U
108-88-3	Toluene		12	U
108-90-7	Chlorobenzene		12	U
100-41-4	Ethylbenzene		12	U
100-42-5	Styrene		12	U
1330-20-7	Xylene (total)		4	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4396DL

Lab Name: OBG Laboratories Contract: Zeneca-Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: SDG No.: 4568
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-12-1
 Sample wt/vol: 2.5 (g/ml) G Lab File ID: P8487.D
 Level: (low/med) LOW Date Received: 07/23/97
 % Moisture: not dec. 13.5 Date Analyzed: 08/01/97
 GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0
 Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
74-87-3	Chloromethane		23	U
74-83-9	Bromomethane		23	U
75-01-4	Vinyl Chloride		23	U
75-00-3	Chloroethane		23	U
75-09-2	Methylene Chloride		6	J
67-64-1	Acetone		23	U
75-15-0	Carbon Disulfide		23	U
75-35-4	1,1-Dichloroethene		23	U
75-34-4	1,1-Dichloroethane		23	U
540-59-0	1,2-Dichloroethene (total)		23	U
67-66-3	Chloroform		23	U
107-06-2	1,2-Dichloroethane		23	U
78-93-3	2-Butanone		23	U
71-55-6	1,1,1-Trichloroethane		23	U
56-23-5	Carbon Tetrachloride		23	U
75-27-4	Bromodichloromethane		23	U
78-87-5	1,2-Dichloropropane		23	U
10061-01-5	cis-1,3-Dichloropropene		23	U
79-01-6	Trichloroethene		140	
71-43-2	Benzene		23	U
124-48-1	Dibromochloromethane		23	U
10061-02-6	trans-1,3-Dichloropropene		23	U
79-00-5	1,1,2-Trichloroethane		23	U
75-25-2	Bromoform		23	U
108-10-1	4-Methyl-2-Pentanone		23	U
591-78-6	2-Hexanone		23	U
127-18-4	Tetrachloroethene		11	J
79-34-5	1,1,2,2-Tetrachloroethane		23	U
108-88-3	Toluene		23	U
108-90-7	Chlorobenzene		23	U
100-41-4	Ethylbenzene		23	U
100-42-5	Styrene		23	U
1330-20-7	Xylene (total)		23	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4398

Lab Name: OBG Laboratories Contract: Zeneca-Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568

Matrix: (soil/water) WATER Lab Sample ID: QC Trip Blank

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: P8495.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: not dec. _____ Date Analyzed: 08/01/97

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
74-87-3	Chloromethane		10	U
74-83-9	Bromomethane		10	U
75-01-4	Vinyl Chloride		10	U
75-00-3	Chloroethane		10	U
75-09-2	Methylene Chloride		10	U
67-64-1	Acetone		2	J
75-15-0	Carbon Disulfide		10	U
75-35-4	1,1-Dichloroethene		10	U
75-34-4	1,1-Dichloroethane		10	U
540-59-0	1,2-Dichloroethene (total)		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
78-93-3	2-Butanone		10	U
71-55-6	1,1,1-Trichloroethane		10	U
56-23-5	Carbon Tetrachloride		10	U
75-27-4	Bromodichloromethane		10	U
78-87-5	1,2-Dichloropropane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
79-01-6	Trichloroethene		10	U
71-43-2	Benzene		10	U
124-48-1	Dibromochloromethane		10	U
10061-02-6	trans-1,3-Dichloropropene		10	U
79-00-5	1,1,2-Trichloroethane		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-Pentanone		10	U
591-78-6	2-Hexanone		10	U
127-18-4	Tetrachloroethene		10	U
79-34-5	1,1,2,2-Tetrachloroethane		10	U
108-88-3	Toluene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
100-42-5	Styrene		10	U
1330-20-7	Xylene (total)		10	U

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: OBG Laboratories Contract: Zeneca-Stauffer
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: SDG No.: 4568
 Matrix Spike - EPA Sample No.: F4390 Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	70	0.0	58	83	59 - 172
Trichloroethene	70	32	100	101	62 - 137
Benzene	70	0.0	63	90	66 - 142
Toluene	70	0.0	66	94	59 - 139
Chlorobenzene	70	0.0	64	91	60 - 133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
1,1-Dichloroethene	70	65	93	11	22	59 - 172
Trichloroethene	70	110	111	13	24	62 - 137
Benzene	70	64	91	1	21	66 - 142
Toluene	70	73	104	10	21	59 - 139
Chlorobenzene	70	67	96	5	21	60 - 133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: OBG Laboratories Contract: Zeneca-Stauffer
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: SDG No.: 4568
 Matrix Spike - EPA Sample No.: F4392DL Level: (low/med) MED

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	7200	0.0	6000	83	59 - 172
Trichloroethene	7200	0.0	6800	94	62 - 137
Benzene	7200	0.0	7400	103	66 - 142
Toluene	7200	0.0	7100	99	59 - 139
Chlorobenzene	7200	0.0	7400	103	60 - 133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
1,1-Dichloroethene	7200	6300	88	6	22	59 - 172
Trichloroethene	7200	6700	93	1	24	62 - 137
Benzene	7200	7400	103	0	21	66 - 142
Toluene	7200	7300	101	2	21	59 - 139
Chlorobenzene	7200	7400	103	0	21	60 - 133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4387

Lab Name: OBG Laboratories Contract: Zeneca Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-7-1

Sample wt/vol: 30 (g/ml) G Lab File ID: S7297.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: 17.5 decanted:(Y/N) N Date Extracted: 07/28/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

111-44-4	bis(2-Chloroethyl)ether	400	U
108-95-2	Phenol	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
67-72-1	Hexachloroethane	400	U
621-64-7	N-Nitroso-di-n-propylamine	400	U
106-44-5	4-Methylphenol	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	400	U
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	1000	U
208-96-8	Acenaphthylene	400	U
131-11-3	Dimethyl phthalate	400	U
606-20-2	2,6-Dinitrotoluene	400	U
83-32-9	Acenaphthene	400	U
99-09-2	3-Nitroaniline	1000	U
51-28-5	2,4-Dinitrophenol	1000	U
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
100-02-7	4-Nitrophenol	1000	U
86-73-7	Fluorene	400	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4387

Lab Name: OBG Laboratories Contract: Zeneca Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-7-1

Sample wt/vol: 30 (g/ml) G Lab File ID: S7297.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: 17.5 decanted:(Y/N) N Date Extracted: 07/28/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

7005-72-3	4-Chlorophenyl phenyl ether	400	U
84-66-2	Diethyl phthalate	400	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	n-Nitrosodiphenylamine	400	U
101-55-3	4-Bromophenyl phenyl ether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	400	U
120-12-7	Anthracene	400	U
84-74-2	Di-n-butyl phthalate	400	U
206-44-0	Fluoranthene	400	U
129-00-0	Pyrene	400	U
85-68-7	Butyl benzyl phthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benzo[a]anthracene	400	U
218-01-9	Chrysene	400	U
117-81-7	bis(2-Ethylhexyl)phthalate	400	U
117-84-0	Di-n-octyl phthalate	400	U
205-99-2	Benzo[b]fluoranthene	400	U
207-08-9	Benzo[k]fluoranthene	400	U
50-32-8	Benzo[a]pyrene	400	U
193-39-5	Indeno[1,2,3-cd]pyrene	400	U
53-70-3	Dibenz[a,h]anthracene	400	U
191-24-2	Benzo[g,h,i]perylene	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U
86-74-8	Carbazole	400	U
118-90-1	o-Toluic Acid	400	U
99-94-5	p-Toluic Acid	400	U
99-04-7	m-Toluic Acid	400	U
65-85-0	Benzoic Acid	400	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4388

Lab Name: OBG Laboratories Contract: Zeneca Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-7-2

Sample wt/vol: 30 (g/ml) G Lab File ID: S7302.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: 19.1 decanted:(Y/N) N Date Extracted: 07/28/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

111-44-4	bis(2-Chloroethyl)ether	410	U
108-95-2	Phenol	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
95-48-7	2-Methylphenol	410	U
67-72-1	Hexachloroethane	410	U
621-64-7	N-Nitroso-di-n-propylamine	410	U
106-44-5	4-Methylphenol	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	bis(2-Chloroethoxy)methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	1000	U
208-96-8	Acenaphthylene	410	U
131-11-3	Dimethyl phthalate	410	U
606-20-2	2,6-Dinitrotoluene	410	U
83-32-9	Acenaphthene	410	U
99-09-2	3-Nitroaniline	1000	U
51-28-5	2,4-Dinitrophenol	1000	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
100-02-7	4-Nitrophenol	1000	U
86-73-7	Fluorene	410	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4388

Lab Name: OBG Laboratories Contract: Zeneca Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-7-2
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7302.D
 Level: (low/med) LOW Date Received: 07/23/97
 % Moisture: 19.1 decanted: (Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

7005-72-3	4-Chlorophenyl phenyl ether	410	U
84-66-2	Diethyl phthalate	410	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	n-Nitrosodiphenylamine	410	U
101-55-3	4-Bromophenyl phenyl ether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
84-74-2	Di-n-butyl phthalate	410	U
206-44-0	Fluoranthene	410	U
129-00-0	Pyrene	410	U
85-68-7	Butyl benzyl phthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	410	U
56-55-3	Benzo[a]anthracene	410	U
218-01-9	Chrysene	410	U
117-81-7	bis(2-Ethylhexyl)phthalate	42	J
117-84-0	Di-n-octyl phthalate	410	U
205-99-2	Benzo[b]fluoranthene	410	U
207-08-9	Benzo[k]fluoranthene	410	U
50-32-8	Benzo[a]pyrene	410	U
193-39-5	Indeno[1,2,3-cd]pyrene	410	U
53-70-3	Dibenz[a,h]anthracene	410	U
191-24-2	Benzo[g,h,i]perylene	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410	U
86-74-8	Carbazole	410	U
118-90-1	o-Toluic Acid	44	J
99-94-5	p-Toluic Acid	410	U
99-04-7	m-Toluic Acid	410	U
65-85-0	Benzoic Acid	43	J

18
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4389

Lab Name: OBG Laboratories Contract: Zeneca Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-8-1

Sample wt/vol: 30 (g/ml) G Lab File ID: S7309.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: 19.3 decanted:(Y/N) N Date Extracted: 07/28/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

111-44-4	bis(2-Chloroethyl)ether	410	U
108-95-2	Phenol	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
95-48-7	2-Methylphenol	410	U
67-72-1	Hexachloroethane	410	U
621-64-7	N-Nitroso-di-n-propylamine	410	U
106-44-5	4-Methylphenol	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	240	J
111-91-1	bis(2-Chloroethoxy)methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	240	J
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	1000	U
208-96-8	Acenaphthylene	410	U
131-11-3	Dimethyl phthalate	410	U
606-20-2	2,6-Dinitrotoluene	410	U
83-32-9	Acenaphthene	410	U
99-09-2	3-Nitroaniline	1000	U
51-28-5	2,4-Dinitrophenol	1000	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
100-02-7	4-Nitrophenol	1000	U
86-73-7	Fluorene	410	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4389

Lab Name: OBG Laboratories Contract: Zeneca Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-8-1
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7309.D
 Level: (low/med) LOW Date Received: 07/23/97
 % Moisture: 19.3 decanted: (Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

7005-72-3	4-Chlorophenyl phenyl ether	410	U
84-66-2	Diethyl phthalate	410	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	n-Nitrosodiphenylamine	410	U
101-55-3	4-Bromophenyl phenyl ether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	90	J
120-12-7	Anthracene	410	U
84-74-2	Di-n-butyl phthalate	410	U
206-44-0	Fluoranthene	230	J
129-00-0	Pyrene	300	J
85-68-7	Butyl benzyl phthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	410	U
56-55-3	Benzo[a]anthracene	140	J
218-01-9	Chrysene	200	J
117-81-7	bis(2-Ethylhexyl)phthalate	58	J
117-84-0	Di-n-octyl phthalate	410	U
205-99-2	Benzo[b]fluoranthene	240	J
207-08-9	Benzo[k]fluoranthene	85	J
50-32-8	Benzo[a]pyrene	160	J
193-39-5	Indeno[1,2,3-cd]pyrene	100	J
53-70-3	Dibenz[a,h]anthracene	410	U
191-24-2	Benzo[g,h,i]perylene	100	J
108-60-1	2,2'-oxybis(1-Chloropropane)	410	U
86-74-8	Carbazole	410	U
118-90-1	o-Toluic Acid	240	J
99-94-5	p-Toluic Acid	410	U
99-04-7	m-Toluic Acid	78	J
65-85-0	Benzoic Acid	410	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4390

Lab Name: OBG Laboratories Contract: Zeneca Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-8-2

Sample wt/vol: 30 (g/ml) G Lab File ID: S7298.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: 28.8 decanted:(Y/N) N Date Extracted: 07/28/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
111-44-4	bis(2-Chloroethyl)ether	470	U
108-95-2	Phenol	470	U
95-57-8	2-Chlorophenol	470	U
541-73-1	1,3-Dichlorobenzene	470	U
106-46-7	1,4-Dichlorobenzene	470	U
95-50-1	1,2-Dichlorobenzene	470	U
95-48-7	2-Methylphenol	470	U
67-72-1	Hexachloroethane	470	U
621-64-7	N-Nitroso-di-n-propylamine	470	U
106-44-5	4-Methylphenol	470	U
98-95-3	Nitrobenzene	470	U
78-59-1	Isophorone	470	U
88-75-5	2-Nitrophenol	470	U
105-67-9	2,4-Dimethylphenol	470	U
111-91-1	bis(2-Chloroethoxy)methane	470	U
120-83-2	2,4-Dichlorophenol	470	U
120-82-1	1,2,4-Trichlorobenzene	470	U
91-20-3	Naphthalene	470	U
106-47-8	4-Chloroaniline	470	U
87-68-3	Hexachlorobutadiene	470	U
59-50-7	4-Chloro-3-methylphenol	470	U
91-57-6	2-Methylnaphthalene	470	U
77-47-4	Hexachlorocyclopentadiene	470	U
88-06-2	2,4,6-Trichlorophenol	470	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	470	U
88-74-4	2-Nitroaniline	1200	U
208-96-8	Acenaphthylene	470	U
131-11-3	Dimethyl phthalate	470	U
606-20-2	2,6-Dinitrotoluene	470	U
83-32-9	Acenaphthene	470	U
99-09-2	3-Nitroaniline	1200	U
51-28-5	2,4-Dinitrophenol	1200	U
132-64-9	Dibenzofuran	470	U
121-14-2	2,4-Dinitrotoluene	470	U
100-02-7	4-Nitrophenol	1200	U
86-73-7	Fluorene	470	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4390

Lab Name: OBG Laboratories Contract: Zeneca Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-8-2
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7298.D
 Level: (low/med) LOW Date Received: 07/23/97
 % Moisture: 28.8 decanted:(Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

7005-72-3	4-Chlorophenyl phenyl ether	470	U
84-66-2	Diethyl phthalate	470	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-methylphenol	1200	U
86-30-6	n-Nitrosodiphenylamine	470	U
101-55-3	4-Bromophenyl phenyl ether	470	U
118-74-1	Hexachlorobenzene	470	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	470	U
120-12-7	Anthracene	470	U
84-74-2	Di-n-butyl phthalate	470	U
206-44-0	Fluoranthene	470	U
129-00-0	Pyrene	470	U
85-68-7	Butyl benzyl phthalate	470	U
91-94-1	3,3'-Dichlorobenzidine	470	U
56-55-3	Benzo[a]anthracene	470	U
218-01-9	Chrysene	470	U
117-81-7	bis(2-Ethylhexyl)phthalate	470	U
117-84-0	Di-n-octyl phthalate	470	U
205-99-2	Benzo[b]fluoranthene	470	U
207-08-9	Benzo[k]fluoranthene	470	U
50-32-8	Benzo[a]pyrene	470	U
193-39-5	Indeno[1,2,3-cd]pyrene	470	U
53-70-3	Dibenz[a,h]anthracene	470	U
191-24-2	Benzo[g,h,i]perylene	470	U
108-60-1	2,2'-oxybis(1-Chloropropane)	470	U
86-74-8	Carbazole	470	U
118-90-1	o-Toluic Acid	470	U
99-94-5	p-Toluic Acid	470	U
99-04-7	m-Toluic Acid	470	U
65-85-0	Benzoic Acid	110	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4391

Lab Name: OBG Laboratories Contract: Zeneca Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-9-1

Sample wt/vol: 30 (g/ml) G Lab File ID: S7311.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: 37.8 decanted: (Y/N) N Date Extracted: 07/28/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
111-44-4	bis(2-Chloroethyl)ether	540	U	
108-95-2	Phenol	110	J	
95-57-8	2-Chlorophenol	540	U	
541-73-1	1,3-Dichlorobenzene	540	U	
106-46-7	1,4-Dichlorobenzene	540	U	
95-50-1	1,2-Dichlorobenzene	540	U	
95-48-7	2-Methylphenol	540	U	
67-72-1	Hexachloroethane	540	U	
621-64-7	N-Nitroso-di-n-propylamine	540	U	
106-44-5	4-Methylphenol	130	J	
98-95-3	Nitrobenzene	540	U	
78-59-1	Isophorone	540	U	
88-75-5	2-Nitrophenol	540	U	
105-67-9	2,4-Dimethylphenol	280	J	
111-91-1	bis(2-Chloroethoxy)methane	540	U	
120-83-2	2,4-Dichlorophenol	540	U	
120-82-1	1,2,4-Trichlorobenzene	540	U	
91-20-3	Naphthalene	290	J	
106-47-8	4-Chloroaniline	540	U	
87-68-3	Hexachlorobutadiene	540	U	
59-50-7	4-Chloro-3-methylphenol	540	U	
91-57-6	2-Methylnaphthalene	180	J	
77-47-4	Hexachlorocyclopentadiene	540	U	
88-06-2	2,4,6-Trichlorophenol	540	U	
95-95-4	2,4,5-Trichlorophenol	1300	U	
91-58-7	2-Chloronaphthalene	540	U	
88-74-4	2-Nitroaniline	1300	U	
208-96-8	Acenaphthylene	540	U	
131-11-3	Dimethyl phthalate	540	U	
606-20-2	2,6-Dinitrotoluene	540	U	
83-32-9	Acenaphthene	130	J	
99-09-2	3-Nitroaniline	1300	U	
51-28-5	2,4-Dinitrophenol	1300	U	
132-64-9	Dibenzofuran	230	J	
121-14-2	2,4-Dinitrotoluene	540	U	
100-02-7	4-Nitrophenol	1300	U	
86-73-7	Fluorene	170	J	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4391

Lab Name: OBG Laboratories Contract: Zeneca Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-9-1
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7311.D
 Level: (low/med) LOW Date Received: 07/23/97
 % Moisture: 37.8 decanted: (Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

7005-72-3	4-Chlorophenyl phenyl ether	540	U
84-66-2	Diethyl phthalate	540	U
100-01-6	4-Nitroaniline	1300	U
534-52-1	4,6-Dinitro-2-methylphenol	1300	U
86-30-6	n-Nitrosodiphenylamine	540	U
101-55-3	4-Bromophenyl phenyl ether	540	U
118-74-1	Hexachlorobenzene	540	U
87-86-5	Pentachlorophenol	1300	U
85-01-8	Phenanthrene	1000	
120-12-7	Anthracene	180	J
84-74-2	Di-n-butyl phthalate	540	U
206-44-0	Fluoranthene	710	
129-00-0	Pyrene	1100	
85-68-7	Butyl benzyl phthalate	540	U
91-94-1	3,3'-Dichlorobenzidine	540	U
56-55-3	Benzo[a]anthracene	430	J
218-01-9	Chrysene	570	
117-81-7	bis(2-Ethylhexyl)phthalate	73	J
117-84-0	Di-n-octyl phthalate	540	U
205-99-2	Benzo[b]fluoranthene	460	J
207-08-9	Benzo[k]fluoranthene	190	J
50-32-8	Benzo[a]pyrene	310	J
193-39-5	Indeno[1,2,3-cd]pyrene	170	J
53-70-3	Dibenz[a,h]anthracene	540	U
191-24-2	Benzo[g,h,i]perylene	160	J
108-60-1	2,2'-oxybis(1-Chloropropane)	540	U
86-74-8	Carbazole	93	J
118-90-1	o-Toluic Acid	200	J
99-94-5	p-Toluic Acid	540	U
99-04-7	m-Toluic Acid	120	J
65-85-0	Benzoic Acid	87	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4392 10X

Lab Name: OBG Laboratories Contract: Zeneca Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-9-2
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7312.D
 Level: (low/med) LOW Date Received: 07/23/97
 % Moisture: 13.2 decanted: (Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97
 Injection Volume: 2.0 (uL) Dilution Factor: 10.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
111-44-4	bis(2-Chloroethyl)ether	3800		U
108-95-2	Phenol	3800		U
95-57-8	2-Chlorophenol	3800		U
541-73-1	1,3-Dichlorobenzene	3800		U
106-46-7	1,4-Dichlorobenzene	3800		U
95-50-1	1,2-Dichlorobenzene	3800		U
95-48-7	2-Methylphenol	3800		U
67-72-1	Hexachloroethane	3800		U
621-64-7	N-Nitroso-di-n-propylamine	3800		U
106-44-5	4-Methylphenol	3800		U
98-95-3	Nitrobenzene	3800		U
78-59-1	Isophorone	3800		U
88-75-5	2-Nitrophenol	3800		U
105-67-9	2,4-Dimethylphenol	3800		U
111-91-1	bis(2-Chloroethoxy)methane	3800		U
120-83-2	2,4-Dichlorophenol	3800		U
120-82-1	1,2,4-Trichlorobenzene	3800		U
91-20-3	Naphthalene	3800		U
106-47-8	4-Chloroaniline	3800		U
87-68-3	Hexachlorobutadiene	3800		U
59-50-7	4-Chloro-3-methylphenol	3800		U
91-57-6	2-Methylnaphthalene	3800		U
77-47-4	Hexachlorocyclopentadiene	3800		U
88-06-2	2,4,6-Trichlorophenol	3800		U
95-95-4	2,4,5-Trichlorophenol	9600		U
91-58-7	2-Chloronaphthalene	3800		U
88-74-4	2-Nitroaniline	9600		U
208-96-8	Acenaphthylene	3800		U
131-11-3	Dimethyl phthalate	3800		U
606-20-2	2,6-Dinitrotoluene	3800		U
83-32-9	Acenaphthene	3800		U
99-09-2	3-Nitroaniline	9600		U
51-28-5	2,4-Dinitrophenol	9600		U
132-64-9	Dibenzofuran	3800		U
121-14-2	2,4-Dinitrotoluene	3800		U
100-02-7	4-Nitrophenol	9600		U
86-73-7	Fluorene	3800		U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4392 10X

Lab Name: OBG Laboratories Contract: Zeneca Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-9-2
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7312.D
 Level: (low/med) LOW Date Received: 07/23/97
 % Moisture: 13.2 decanted: (Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97
 Injection Volume: 2.0 (uL) Dilution Factor: 10.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

7005-72-3	4-Chlorophenyl phenyl ether	3800	U
84-66-2	Diethyl phthalate	3800	U
100-01-6	4-Nitroaniline	9600	U
534-52-1	4,6-Dinitro-2-methylphenol	9600	U
86-30-6	n-Nitrosodiphenylamine	3800	U
101-55-3	4-Bromophenyl phenyl ether	3800	U
118-74-1	Hexachlorobenzene	3800	U
87-86-5	Pentachlorophenol	9600	U
85-01-8	Phenanthrene	550	JD
120-12-7	Anthracene	3800	U
84-74-2	Di-n-butyl phthalate	3800	U
206-44-0	Fluoranthene	410	JD
129-00-0	Pyrene	800	JD
85-68-7	Butyl benzyl phthalate	3800	U
91-94-1	3,3'-Dichlorobenzidine	3800	U
56-55-3	Benzo[a]anthracene	3800	U
218-01-9	Chrysene	3800	U
117-81-7	bis(2-Ethylhexyl)phthalate	2300	JD
117-84-0	Di-n-octyl phthalate	3800	U
205-99-2	Benzo[b]fluoranthene	3800	U
207-08-9	Benzo[k]fluoranthene	3800	U
50-32-8	Benzo[a]pyrene	3800	U
193-39-5	Indeno[1,2,3-cd]pyrene	3800	U
53-70-3	Dibenz[a,h]anthracene	3800	U
191-24-2	Benzo[g,h,i]perylene	3800	U
108-60-1	2,2'-oxybis(1-Chloropropane)	3800	U
86-74-8	Carbazole	3800	U
118-90-1	o-Toluic Acid	3800	U
99-94-5	p-Toluic Acid	3800	U
99-04-7	m-Toluic Acid	3800	U
65-85-0	Benzoic Acid	3800	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4393

Lab Name: OBG Laboratories Contract: Zeneca Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: SDG No.: 4568, 458

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-10-1

Sample wt/vol: 30 (g/ml) G Lab File ID: S7310.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: 37.5 decanted: (Y/N) N Date Extracted: 07/28/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) <u>UG/KG</u>	<u>Q</u>
111-44-4	bis(2-Chloroethyl)ether	530	U
108-95-2	Phenol	530	U
95-57-8	2-Chlorophenol	530	U
541-73-1	1,3-Dichlorobenzene	530	U
106-46-7	1,4-Dichlorobenzene	530	U
95-50-1	1,2-Dichlorobenzene	530	U
95-48-7	2-Methylphenol	530	U
67-72-1	Hexachloroethane	530	U
621-64-7	N-Nitroso-di-n-propylamine	530	U
106-44-5	4-Methylphenol	430	J
98-95-3	Nitrobenzene	530	U
78-59-1	Isophorone	530	U
88-75-5	2-Nitrophenol	530	U
105-67-9	2,4-Dimethylphenol	65	J
111-91-1	bis(2-Chloroethoxy)methane	530	U
120-83-2	2,4-Dichlorophenol	530	U
120-82-1	1,2,4-Trichlorobenzene	530	U
91-20-3	Naphthalene	73	J
106-47-8	4-Chloroaniline	530	U
87-68-3	Hexachlorobutadiene	530	U
59-50-7	4-Chloro-3-methylphenol	530	U
91-57-6	2-Methylnaphthalene	530	U
77-47-4	Hexachlorocyclopentadiene	530	U
88-06-2	2,4,6-Trichlorophenol	530	U
95-95-4	2,4,5-Trichlorophenol	1300	U
91-58-7	2-Chloronaphthalene	530	U
88-74-4	2-Nitroaniline	1300	U
208-96-8	Acenaphthylene	530	U
131-11-3	Dimethyl phthalate	530	U
606-20-2	2,6-Dinitrotoluene	530	U
83-32-9	Acenaphthene	530	U
99-09-2	3-Nitroaniline	1300	U
51-28-5	2,4-Dinitrophenol	1300	U
132-64-9	Dibenzofuran	530	U
121-14-2	2,4-Dinitrotoluene	530	U
100-02-7	4-Nitrophenol	1300	U
86-73-7	Fluorene	54	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4393

Lab Name: OBG Laboratories Contract: Zeneca Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: SDG No.: 4568, 458

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-10-1

Sample wt/vol: 30 (g/ml) G Lab File ID: S7310.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: 37.5 decanted: (Y/N) N Date Extracted: 07/28/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH:

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

7005-72-3	4-Chlorophenyl phenyl ether	530	U
84-66-2	Diethyl phthalate	530	U
100-01-6	4-Nitroaniline	1300	U
534-52-1	4,6-Dinitro-2-methylphenol	1300	U
86-30-6	n-Nitrosodiphenylamine	530	U
101-55-3	4-Bromophenyl phenyl ether	530	U
118-74-1	Hexachlorobenzene	530	U
87-86-5	Pentachlorophenol	1300	U
85-01-8	Phenanthrene	260	J
120-12-7	Anthracene	57	J
84-74-2	Di-n-butyl phthalate	530	U
206-44-0	Fluoranthene	270	J
129-00-0	Pyrene	390	J
85-68-7	Butyl benzyl phthalate	530	U
91-94-1	3,3'-Dichlorobenzidine	530	U
56-55-3	Benzo[a]anthracene	190	J
218-01-9	Chrysene	260	J
117-81-7	bis(2-Ethylhexyl)phthalate	160	J
117-84-0	Di-n-octyl phthalate	530	U
205-99-2	Benzo[b]fluoranthene	220	J
207-08-9	Benzo[k]fluoranthene	89	J
50-32-8	Benzo[a]pyrene	140	J
193-39-5	Indeno[1,2,3-cd]pyrene	67	J
53-70-3	Dibenz[a,h]anthracene	530	U
191-24-2	Benzo[g,h,i]perylene	68	J
108-60-1	2,2'-oxybis(1-Chloropropane)	530	U
86-74-8	Carbazole	530	U
118-90-1	o-Toluic Acid	530	U
99-94-5	p-Toluic Acid	530	U
99-04-7	m-Toluic Acid	530	U
65-85-0	Benzoic Acid	63	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE

F4394

Lab Name: OBG Laboratories Contract: Zeneca-Sta
 Lab Code: OBG Case No.: 45618.9.5 SAS No.: SDG No.: 4568,4588
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-11-1
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7308.D
 Level: (low/med) LOW Date Received: 07/23/97
 % Moisture: 16.3 decanted:(Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH:

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

51-28-5	2,4-Dinitrophenol	1000	U
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
100-02-7	4-Nitrophenol	1000	U
86-73-7	Fluorene	400	U
7005-72-3	4-Chlorophenyl phenyl ether	400	U
84-66-2	Diethyl phthalate	400	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	n-Nitrosodiphenylamine	400	U
101-55-3	4-Bromophenyl phenyl ether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	150	J
120-12-7	Anthracene	400	U
84-74-2	Di-n-butyl phthalate	400	U
86-74-8	Carbazole	400	U
206-44-0	Fluoranthene	190	J
129-00-0	Pyrene	220	J
85-68-7	Butyl benzyl phthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benzo[a]anthracene	110	J
218-01-9	Chrysene	170	J
117-81-7	bis(2-Ethylhexyl)phthalate	46	J
117-84-0	Di-n-octyl phthalate	400	U
205-99-2	Benzo[b]fluoranthene	180	J
207-08-9	Benzo[k]fluoranthene	61	J
50-32-8	Benzo[a]pyrene	110	J
193-39-5	Indeno[1,2,3-cd]pyrene	62	J
53-70-3	Dibenz[a,h]anthracene	400	U
191-24-2	Benzo[g,h,i]perylene	62	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4395

Lab Name: OBG Laboratories Contract: Zeneca Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-11-2
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7326.D
 Level: (low/med) LOW Date Received: 07/23/97
 % Moisture: 62.3 decanted: (Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/08/97
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

7005-72-3	4-Chlorophenyl phenyl ether	880	U
84-66-2	Diethyl phthalate	880	U
100-01-6	4-Nitroaniline	2200	U
534-52-1	4,6-Dinitro-2-methylphenol	2200	U
86-30-6	n-Nitrosodiphenylamine	880	U
101-55-3	4-Bromophenyl phenyl ether	880	U
118-74-1	Hexachlorobenzene	880	U
87-86-5	Pentachlorophenol	2200	U
85-01-8	Phenanthrene	450	J
120-12-7	Anthracene	110	J
84-74-2	Di-n-butyl phthalate	880	U
206-44-0	Fluoranthene	390	J
129-00-0	Pyrene	640	J
85-68-7	Butyl benzyl phthalate	880	U
91-94-1	3,3'-Dichlorobenzidine	880	U
56-55-3	Benzo[a]anthracene	270	J
218-01-9	Chrysene	490	J
117-81-7	bis(2-Ethylhexyl)phthalate	140	J
117-84-0	Di-n-octyl phthalate	880	U
205-99-2	Benzo[b]fluoranthene	470	J
207-08-9	Benzo[k]fluoranthene	130	J
50-32-8	Benzo[a]pyrene	230	J
193-39-5	Indeno[1,2,3-cd]pyrene	240	J
53-70-3	Dibenz[a,h]anthracene	880	U
191-24-2	Benzo[g,h,i]perylene	360	J
108-60-1	2,2'-oxybis(1-Chloropropane)	880	U
86-74-8	Carbazole	880	U
118-90-1	o-Toluic Acid	660	J
99-94-5	p-Toluic Acid	880	U
99-04-7	m-Toluic Acid	120	J
65-85-0	Benzoic Acid	110	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4396 2X

Lab Name: OBG Laboratories Contract: Zeneca Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-12-1

Sample wt/vol: 30 (g/ml) G Lab File ID: S7325.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: 13.5 decanted: (Y/N) N Date Extracted: 07/28/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/08/97

Injection Volume: 2.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) <u>UG/KG</u>	Q
111-44-4	bis(2-Chloroethyl)ether	770	U
108-95-2	Phenol	770	U
95-57-8	2-Chlorophenol	770	U
541-73-1	1,3-Dichlorobenzene	770	U
106-46-7	1,4-Dichlorobenzene	770	U
95-50-1	1,2-Dichlorobenzene	770	U
95-48-7	2-Methylphenol	770	U
67-72-1	Hexachloroethane	770	U
621-64-7	N-Nitroso-di-n-propylamine	770	U
106-44-5	4-Methylphenol	770	U
98-95-3	Nitrobenzene	770	U
78-59-1	Isophorone	770	U
88-75-5	2-Nitrophenol	770	U
105-67-9	2,4-Dimethylphenol	770	U
111-91-1	bis(2-Chloroethoxy)methane	770	U
120-83-2	2,4-Dichlorophenol	770	U
120-82-1	1,2,4-Trichlorobenzene	770	U
91-20-3	Naphthalene	770	U
106-47-8	4-Chloroaniline	770	U
87-68-3	Hexachlorobutadiene	770	U
59-50-7	4-Chloro-3-methylphenol	770	U
91-57-6	2-Methylnaphthalene	130	JD
77-47-4	Hexachlorocyclopentadiene	770	U
88-06-2	2,4,6-Trichlorophenol	770	U
95-95-4	2,4,5-Trichlorophenol	1900	U
91-58-7	2-Chloronaphthalene	770	U
88-74-4	2-Nitroaniline	1900	U
208-96-8	Acenaphthylene	770	U
131-11-3	Dimethyl phthalate	770	U
606-20-2	2,6-Dinitrotoluene	770	U
83-32-9	Acenaphthene	770	U
99-09-2	3-Nitroaniline	1900	U
51-28-5	2,4-Dinitrophenol	1900	U
132-64-9	Dibenzofuran	770	U
121-14-2	2,4-Dinitrotoluene	770	U
100-02-7	4-Nitrophenol	1900	U
86-73-7	Fluorene	770	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE

F4394

Lab Name: OBG Laboratories Contract: Zeneca-Sta
 Lab Code: OBG Case No.: 45618.9.5 SAS No.: _____ SDG No.: 4568,4588
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-11-1
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7308.D
 Level: (low/med) LOW Date Received: 07/23/97
 % Moisture: 16.3 decanted: (Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

111-44-4	bis(2-Chloroethyl)ether	400	U
108-95-2	Phenol	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U
95-48-7	2-Methylphenol	400	U
67-72-1	Hexachloroethane	400	U
621-64-7	N-Nitroso-di-n-propylamine	400	U
106-44-5	4-Methylphenol	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
65-85-0	Benzoic Acid	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	92	J
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
118-90-1	o-Toluic Acid	270	J
99-04-7	m-Toluic Acid	400	U
99-94-5	p-Toluic Acid	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	42	J
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	1000	U
208-96-8	Acenaphthylene	400	U
131-11-3	Dimethyl phthalate	400	U
606-20-2	2,6-Dinitrotoluene	400	U
83-32-9	Acenaphthene	400	U
99-09-2	3-Nitroaniline	1000	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4395

Lab Name: OBG Laboratories Contract: Zeneca Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-11-2

Sample wt/vol: 30 (g/ml) G Lab File ID: S7326.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: 62.3 decanted: (Y/N) N Date Extracted: 07/28/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/08/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
111-44-4	bis(2-Chloroethyl)ether	880		U
108-95-2	Phenol	880		U
95-57-8	2-Chlorophenol	880		U
541-73-1	1,3-Dichlorobenzene	880		U
106-46-7	1,4-Dichlorobenzene	880		U
95-50-1	1,2-Dichlorobenzene	880		U
95-48-7	2-Methylphenol	880		U
67-72-1	Hexachloroethane	880		U
621-64-7	N-Nitroso-di-n-propylamine	880		U
106-44-5	4-Methylphenol	1400		
98-95-3	Nitrobenzene	880		U
78-59-1	Isophorone	880		U
88-75-5	2-Nitrophenol	880		U
105-67-9	2,4-Dimethylphenol	380		J
111-91-1	bis(2-Chloroethoxy)methane	880		U
120-83-2	2,4-Dichlorophenol	880		U
120-82-1	1,2,4-Trichlorobenzene	880		U
91-20-3	Naphthalene	520		J
106-47-8	4-Chloroaniline	880		U
87-68-3	Hexachlorobutadiene	880		U
59-50-7	4-Chloro-3-methylphenol	880		U
91-57-6	2-Methylnaphthalene	160		J
77-47-4	Hexachlorocyclopentadiene	880		U
88-06-2	2,4,6-Trichlorophenol	880		U
95-95-4	2,4,5-Trichlorophenol	2200		U
91-58-7	2-Chloronaphthalene	880		U
88-74-4	2-Nitroaniline	2200		U
208-96-8	Acenaphthylene	880		U
131-11-3	Dimethyl phthalate	880		U
606-20-2	2,6-Dinitrotoluene	880		U
83-32-9	Acenaphthene	880		U
99-09-2	3-Nitroaniline	2200		U
51-28-5	2,4-Dinitrophenol	2200		U
132-64-9	Dibenzofuran	880		U
121-14-2	2,4-Dinitrotoluene	880		U
100-02-7	4-Nitrophenol	2200		U
86-73-7	Fluorene	880		U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4396 2X

Lab Name: OBG Laboratories Contract: Zeneca Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-12-1
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7325.D
 Level: (low/med) LOW Date Received: 07/23/97
 % Moisture: 13.5 decanted:(Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/08/97
 Injection Volume: 2.0 (uL) Dilution Factor: 2.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

7005-72-3	4-Chlorophenyl phenyl ether	770	U
84-66-2	Diethyl phthalate	770	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	n-Nitrosodiphenylamine	770	U
101-55-3	4-Bromophenyl phenyl ether	770	U
118-74-1	Hexachlorobenzene	770	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	240	JD
120-12-7	Anthracene	770	U
84-74-2	Di-n-butyl phthalate	770	U
206-44-0	Fluoranthene	140	JD
129-00-0	Pyrene	220	JD
85-68-7	Butyl benzyl phthalate	770	U
91-94-1	3,3'-Dichlorobenzidine	770	U
56-55-3	Benzo[a]anthracene	130	JD
218-01-9	Chrysene	230	JD
117-81-7	bis(2-Ethylhexyl)phthalate	86	JD
117-84-0	Di-n-octyl phthalate	770	U
205-99-2	Benzo[b]fluoranthene	210	JD
207-08-9	Benzo[k]fluoranthene	84	JD
50-32-8	Benzo[a]pyrene	120	JD
193-39-5	Indeno[1,2,3-cd]pyrene	770	U
53-70-3	Dibenz[a,h]anthracene	770	U
191-24-2	Benzo[g,h,i]perylene	80	JD
108-60-1	2,2'-oxybis(1-Chloropropane)	770	U
86-74-8	Carbazole	770	U
118-90-1	o-Toluic Acid	770	U
99-94-5	p-Toluic Acid	770	U
99-04-7	m-Toluic Acid	770	U
65-85-0	Benzoic Acid	770	U

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: OBG Laboratories Contract: Zeneca Stauffer
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix Spike - EPA Sample No.: F4390 Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	3500	0.0	2900	83	26 - 90
2-Chlorophenol	3500	0.0	2900	83	25 - 102
1,4-Dichlorobenzene	2300	0.0	1600	70	28 - 104
N-Nitroso-di-n-propylamine	2300	0.0	1900	83	41 - 126
1,2,4-Trichlorobenzene	2300	0.0	1800	78	41 - 126
4-Chloro-3-methylphenol	3500	0.0	3100	89	26 - 103
Acenaphthene	2300	0.0	2000	87	31 - 137
2,4-Dinitrotoluene	2300	0.0	2000	87	28 - 89
4-Nitrophenol	3500	0.0	3600	103	11 - 114
Pentachlorophenol	3500	0.0	4800	137 *	17 - 109
Pyrene	2300	0.0	2600	113	35 - 142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
Phenol	3500	2800	80	4	35	26 - 90
2-Chlorophenol	3500	2800	80	4	50	25 - 102
1,4-Dichlorobenzene	2300	1500	65	7	27	28 - 104
N-Nitroso-di-n-propylamine	2300	1700	74	11	38	41 - 126
1,2,4-Trichlorobenzene	2300	1700	74	5	38	41 - 126
4-Chloro-3-methylphenol	3500	3200	91	2	33	26 - 103
Acenaphthene	2300	2000	87	0	19	31 - 137
2,4-Dinitrotoluene	2300	2000	87	0	47	28 - 89
4-Nitrophenol	3500	3700	106	3	50	11 - 114
Pentachlorophenol	3500	5100	146 *	6	47	17 - 109
Pyrene	2300	2400	104	8	36	35 - 142

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 11 outside limits

Spike Recovery: 2 out of 22 outside limits

COMMENTS:

**O'Brien & Gere
Laboratories, Inc.**

**Analytical Results
Wet Chemistry**

Client: Zeneca-Stauffer Management Company
Project:
Proj. Desc: Skaneateles Falls, NY

Job No.: 5618.009.517
Certification NY No.: 10155

Sample: F4387
Samp. Description: NPTP-7-1

Collected: 07/22/97
Received: 07/23/97 16:35
Matrix: Solid

Parameter	Result Units	Method	Prepared Analyzed	QC Batch	Note
% Total Solids	82.5 %	2540-G	07/25/97	072597S18	

Notes:

Sample: F4388
Samp. Description: NPTP-7-2

Collected: 07/22/97
Received: 07/23/97 16:35
Matrix: Solid

Parameter	Result Units	Method	Prepared Analyzed	QC Batch	Note
% Total Solids	80.9 %	2540-G	07/25/97	072597S18	

Notes:

Sample: F4389
Samp. Description: NPTP-8-1

Collected: 07/22/97
Received: 07/23/97 16:35
Matrix: Solid

Parameter	Result Units	Method	Prepared Analyzed	QC Batch	Note
% Total Solids	80.7 %	2540-G	07/25/97	072597S18	

Notes:

Estimated value

Authorized: Monika Santucci
Date: August 5, 1997
Monika Santucci

O'Brien & Gere Laboratories, Inc.

Analytical Results Wet Chemistry

Client: Zeneca-Stauffer Management Company
Project:
Proj. Desc: Skaneateles Falls, NY

Job No.: 5618.009.517
Certification NY No.: 10155

Sample: F4390
Sample Description: NPTP-8-2

Collected: 07/22/97
Received: 07/23/97 16:35
Matrix: Solid

Parameter	Result Units	Method	Prepared Analyzed	QC Batch	Note
% Total Solids	71.2 %	2540-G	07/25/97	072597S18	

Notes:

Sample: F4391
Sample Description: NPTP-9-1

Collected: 07/23/97
Received: 07/23/97 16:35
Matrix: Solid

Parameter	Result Units	Method	Prepared Analyzed	QC Batch	Note
% Total Solids	62.2 %	2540-G	07/25/97	072597S18	

Notes:

Sample: F4392
Sample Description: NPTP-9-2

Collected: 07/23/97
Received: 07/23/97 16:35
Matrix: Solid

Parameter	Result Units	Method	Prepared Analyzed	QC Batch	Note
% Total Solids	86.8 %	2540-G	07/25/97	072597S18	

Notes:

Estimated value

Authorized: Monika Santucci
Date: August 5, 1997
Monika Santucci

O'Brien & Gere
Laboratories, Inc.

Analytical Results
Wet Chemistry

Client: Zeneca-Stauffer Management Company

Project:

Proj. Desc: Skaneateles Falls, NY

Job No.: 5618.009.517

Certification NY No.: 10155

Sample: F4393

Samp. Description: NPTP-10-1

Collected: 07/23/97

Matrix: Solid

Received: 07/23/97 16:35

Parameter	Result Units	Method	Prepared	Analyzed	QC Batch	Note
% Total Solids	62.5 %	2540-G		07/25/97	072597S18	

Notes:

Sample: F4394

Samp. Description: NPTP-11-1

Collected: 07/23/97

Matrix: Solid

Received: 07/23/97 16:35

Parameter	Result Units	Method	Prepared	Analyzed	QC Batch	Note
% Total Solids	83.7 %	2540-G		07/25/97	072597S19	

Notes:

Sample: F4395

Samp. Description: NPTP-11-2

Collected: 07/23/97

Matrix: Solid

Received: 07/23/97 16:35

Parameter	Result Units	Method	Prepared	Analyzed	QC Batch	Note
% Total Solids	37.7 %	2540-G		07/25/97	072597S19	

Notes:

Estimated value

Authorized: Monika Santucci

Date: August 5, 1997

Monika Santucci

O'Brien & Gere Laboratories, Inc.

Analytical Results Wet Chemistry

Client: Zeneca-Stauffer Management Company
Project:
Obj. Desc: Skaneateles Falls, NY

Job No.: 5618.009.517
Certification NY No.: 10155

Sample: F4396
Sample Description: NPTP-12-1

Collected: 07/23/97
Received: 07/23/97 16:35
Matrix: Solid

Parameter	Result Units	Method	Prepared	Analyzed	QC Batch	Note
Total Solids	86.4 %	2540-G		07/25/97	072597S19	

Notes:

Estimated value

Authorized: Monika Santucci
Date: August 5, 1997
Monika Santucci

**O'Brien & Gere
Laboratories, Inc.**

**Quality Control Summary
Duplicates
Wet Chemistry**

Sample: F4390

Samp. Description: NPTP-8-2

Number of analytes: 1

<u>Parameter</u>	<u>Sample Result</u>	<u>Duplicate Result</u>	<u>RPD</u>	<u>RPD Limits</u>	<u>Units</u>	<u>Note</u>
% Total Solids	71.22	72.51	2	0-6	%	

Notes:

J-Estimated value #-Outside limits

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4542DL

Lab Name: OBG Laboratories Contract: Zeneca-Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4588

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-13-1

Sample wt/vol: 2.5 (g/ml) G Lab File ID: P8504.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: not dec. 32.8 Date Analyzed: 08/02/97

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
74-87-3	Chloromethane		4	J
74-83-9	Bromomethane		30	U
75-01-4	Vinyl Chloride		30	U
75-00-3	Chloroethane		30	U
75-09-2	Methylene Chloride		4	J
67-64-1	Acetone		530	
75-15-0	Carbon Disulfide		110	
75-35-4	1,1-Dichloroethene		30	U
75-34-4	1,1-Dichloroethane		30	U
540-59-0	1,2-Dichloroethene (total)		4	J
67-66-3	Chloroform		30	U
107-06-2	1,2-Dichloroethane		30	U
78-93-3	2-Butanone		100	
71-55-6	1,1,1-Trichloroethane		30	U
56-23-5	Carbon Tetrachloride		30	U
75-27-4	Bromodichloromethane		30	U
78-87-5	1,2-Dichloropropane		30	U
10061-01-5	cis-1,3-Dichloropropene		30	U
79-01-6	Trichloroethene		130	
71-43-2	Benzene		30	U
124-48-1	Dibromochloromethane		30	U
10061-02-6	trans-1,3-Dichloropropene		30	U
79-00-5	1,1,2-Trichloroethane		30	U
75-25-2	Bromoform		30	U
108-10-1	4-Methyl-2-Pentanone		30	U
591-78-6	2-Hexanone		30	U
127-18-4	Tetrachloroethene		4	J
79-34-5	1,1,2,2-Tetrachloroethane		30	U
108-88-3	Toluene		30	U
108-90-7	Chlorobenzene		30	U
100-41-4	Ethylbenzene		30	U
100-42-5	Styrene		30	U
1330-20-7	Xylene (total)		41	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4543DL

Lab Name: OBG Laboratories Contract: Zeneca-Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4588

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-13-2

Sample wt/vol: 4.0 (g/ml) G Lab File ID: P8505.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: not dec. 17 Date Analyzed: 08/02/97

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
74-87-3	Chloromethane		15	U
74-83-9	Bromomethane		15	U
75-01-4	Vinyl Chloride		15	U
75-00-3	Chloroethane		15	U
75-09-2	Methylene Chloride		15	U
67-64-1	Acetone		28	
75-15-0	Carbon Disulfide		15	U
75-35-4	1,1-Dichloroethene		15	U
75-34-4	1,1-Dichloroethane		15	U
540-59-0	1,2-Dichloroethene (total)		15	U
67-66-3	Chloroform		15	U
107-06-2	1,2-Dichloroethane		15	U
78-93-3	2-Butanone		15	U
71-55-6	1,1,1-Trichloroethane		15	U
56-23-5	Carbon Tetrachloride		15	U
75-27-4	Bromodichloromethane		15	U
78-87-5	1,2-Dichloropropane		15	U
10061-01-5	cis-1,3-Dichloropropene		15	U
79-01-6	Trichloroethene		10	J
71-43-2	Benzene		15	U
124-48-1	Dibromochloromethane		15	U
10061-02-6	trans-1,3-Dichloropropene		15	U
79-00-5	1,1,2-Trichloroethane		15	U
75-25-2	Bromoform		15	U
108-10-1	4-Methyl-2-Pentanone		15	U
591-78-6	2-Hexanone		15	U
127-18-4	Tetrachloroethene		15	U
79-34-5	1,1,2,2-Tetrachloroethane		15	U
108-88-3	Toluene		15	U
108-90-7	Chlorobenzene		15	U
100-41-4	Ethylbenzene		15	U
100-42-5	Styrene		15	U
1330-20-7	Xylene (total)		250	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4544

Lab Name: OBG Laboratories Contract: Zeneca-Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4588
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-14
 Sample wt/vol: 5.0 (g/ml) G Lab File ID: P8506.D
 Level: (low/med) LOW Date Received: 07/23/97
 % Moisture: not dec. 9.3 Date Analyzed: 08/02/97
 GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
74-87-3	Chloromethane	11	U	U
74-83-9	Bromomethane	11	U	U
75-01-4	Vinyl Chloride	11	U	U
75-00-3	Chloroethane	11	U	U
75-09-2	Methylene Chloride	11	U	U
67-64-1	Acetone	4	J	J
75-15-0	Carbon Disulfide	11	U	U
75-35-4	1,1-Dichloroethene	11	U	U
75-34-4	1,1-Dichloroethane	11	U	U
540-59-0	1,2-Dichloroethene (total)	11	U	U
67-66-3	Chloroform	11	U	U
107-06-2	1,2-Dichloroethane	11	U	U
78-93-3	2-Butanone	11	U	U
71-55-6	1,1,1-Trichloroethane	11	U	U
56-23-5	Carbon Tetrachloride	11	U	U
75-27-4	Bromodichloromethane	11	U	U
78-87-5	1,2-Dichloropropane	11	U	U
10061-01-5	cis-1,3-Dichloropropene	11	U	U
79-01-6	Trichloroethene	28		
71-43-2	Benzene	11	U	U
124-48-1	Dibromochloromethane	11	U	U
10061-02-6	trans-1,3-Dichloropropene	11	U	U
79-00-5	1,1,2-Trichloroethane	11	U	U
75-25-2	Bromoform	11	U	U
108-10-1	4-Methyl-2-Pentanone	11	U	U
591-78-6	2-Hexanone	11	U	U
127-18-4	Tetrachloroethene	2	J	J
79-34-5	1,1,2,2-Tetrachloroethane	11	U	U
108-88-3	Toluene	11	U	U
108-90-7	Chlorobenzene	11	U	U
100-41-4	Ethylbenzene	11	U	U
100-42-5	Styrene	11	U	U
1330-20-7	Xylene (total)	11	U	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4545

Lab Name: OBG Laboratories Contract: Zeneca-Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4588
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-15
 Sample wt/vol: 5.0 (g/ml) G Lab File ID: P8507.D
 Level: (low/med) LOW Date Received: 07/23/97
 % Moisture: not dec. 11.3 Date Analyzed: 08/02/97
 GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
74-87-3	Chloromethane		11	U
74-83-9	Bromomethane		11	U
75-01-4	Vinyl Chloride		11	U
75-00-3	Chloroethane		11	U
75-09-2	Methylene Chloride		11	U
67-64-1	Acetone		12	
75-15-0	Carbon Disulfide		11	U
75-35-4	1,1-Dichloroethene		11	U
75-34-4	1,1-Dichloroethane		11	U
540-59-0	1,2-Dichloroethene (total)		11	U
67-66-3	Chloroform		11	U
107-06-2	1,2-Dichloroethane		11	U
78-93-3	2-Butanone		11	U
71-55-6	1,1,1-Trichloroethane		11	U
56-23-5	Carbon Tetrachloride		11	U
75-27-4	Bromodichloromethane		11	U
78-87-5	1,2-Dichloropropane		11	U
10061-01-5	cis-1,3-Dichloropropene		11	U
79-01-6	Trichloroethene		26	
71-43-2	Benzene		11	U
124-48-1	Dibromochloromethane		11	U
10061-02-6	trans-1,3-Dichloropropene		11	U
79-00-5	1,1,2-Trichloroethane		11	U
75-25-2	Bromoform		11	U
108-10-1	4-Methyl-2-Pentanone		11	U
591-78-6	2-Hexanone		11	U
127-18-4	Tetrachloroethene		11	U
79-34-5	1,1,2,2-Tetrachloroethane		11	U
108-88-3	Toluene		11	U
108-90-7	Chlorobenzene		11	U
100-41-4	Ethylbenzene		11	U
100-42-5	Styrene		11	U
1330-20-7	Xylene (total)		11	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4546

Lab Name: OBG Laboratories Contract: Zeneca-Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4588

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-16

Sample wt/vol: 5.0 (g/ml) G Lab File ID: P8517.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: not dec. 12 Date Analyzed: 08/04/97

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
74-87-3	Chloromethane		2	JB
74-83-9	Bromomethane		11	U
75-01-4	Vinyl Chloride		11	U
75-00-3	Chloroethane		11	U
75-09-2	Methylene Chloride		11	U
67-64-1	Acetone		7	J
75-15-0	Carbon Disulfide		11	U
75-35-4	1,1-Dichloroethene		11	U
75-34-4	1,1-Dichloroethane		11	U
540-59-0	1,2-Dichloroethene (total)		11	U
67-66-3	Chloroform		11	U
107-06-2	1,2-Dichloroethane		11	U
78-93-3	2-Butanone		11	U
71-55-6	1,1,1-Trichloroethane		11	U
56-23-5	Carbon Tetrachloride		11	U
75-27-4	Bromodichloromethane		11	U
78-87-5	1,2-Dichloropropane		11	U
10061-01-5	cis-1,3-Dichloropropene		11	U
79-01-6	Trichloroethene		42	
71-43-2	Benzene		11	U
124-48-1	Dibromochloromethane		11	U
10061-02-6	trans-1,3-Dichloropropene		11	U
79-00-5	1,1,2-Trichloroethane		11	U
75-25-2	Bromoform		11	U
108-10-1	4-Methyl-2-Pentanone		11	U
591-78-6	2-Hexanone		11	U
127-18-4	Tetrachloroethene		3	J
79-34-5	1,1,2,2-Tetrachloroethane		11	U
108-88-3	Toluene		11	U
108-90-7	Chlorobenzene		11	U
100-41-4	Ethylbenzene		11	U
100-42-5	Styrene		11	U
1330-20-7	Xylene (total)		3	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4547

Lab Name: OBG Laboratories Contract: Zeneca-Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4588

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-17

Sample wt/vol: 5.0 (g/ml) G Lab File ID: P8509.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: not dec. 23.6 Date Analyzed: 08/02/97

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	13	U
67-64-1	Acetone	160	
75-15-0	Carbon Disulfide	3	J
75-35-4	1,1-Dichloroethene	13	U
75-34-4	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (total)	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	52	
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	26	
71-43-2	Benzene	13	U
124-48-1	Dibromochloromethane	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
79-00-5	1,1,2-Trichloroethane	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (total)	3	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4548DL

Lab Name: OBG Laboratories Contract: Zeneca-Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4588

Matrix: (soil/water) SOIL Lab Sample ID: Field Duplicate

Sample wt/vol: 4.0 (g/ml) G Lab File ID: P8510.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: not dec. 17.7 Date Analyzed: 08/02/97

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
74-87-3	Chloromethane		15	U
74-83-9	Bromomethane		15	U
75-01-4	Vinyl Chloride		15	U
75-00-3	Chloroethane		15	U
75-09-2	Methylene Chloride		15	U
67-64-1	Acetone		61	
75-15-0	Carbon Disulfide		15	U
75-35-4	1,1-Dichloroethene		15	U
75-34-4	1,1-Dichloroethane		15	U
540-59-0	1,2-Dichloroethene (total)		15	U
67-66-3	Chloroform		15	U
107-06-2	1,2-Dichloroethane		15	U
78-93-3	2-Butanone		15	J
71-55-6	1,1,1-Trichloroethane		15	U
56-23-5	Carbon Tetrachloride		15	U
75-27-4	Bromodichloromethane		15	U
78-87-5	1,2-Dichloropropane		15	U
10061-01-5	cis-1,3-Dichloropropene		15	U
79-01-6	Trichloroethene		12	J
71-43-2	Benzene		15	U
124-48-1	Dibromochloromethane		15	U
10061-02-6	trans-1,3-Dichloropropene		15	U
79-00-5	1,1,2-Trichloroethane		15	U
75-25-2	Bromoform		15	U
108-10-1	4-Methyl-2-Pentanone		15	U
591-78-6	2-Hexanone		15	U
127-18-4	Tetrachloroethene		15	U
79-34-5	1,1,2,2-Tetrachloroethane		15	U
108-88-3	Toluene		3	J
108-90-7	Chlorobenzene		15	U
100-41-4	Ethylbenzene		15	U
100-42-5	Styrene		15	U
1330-20-7	Xylene (total)		2800	E

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4548DL

Lab Name: OBG Laboratories Contract: Zeneca-Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4588
 Matrix: (soil/water) SOIL Lab Sample ID: Field Duplicate
 Sample wt/vol: 0.5 (g/ml) G Lab File ID: P8518.D
 Level: (low/med) LOW Date Received: 07/23/97
 % Moisture: not dec. 17.7 Date Analyzed: 08/04/97
 GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
74-87-3	Chloromethane		120	U
74-83-9	Bromomethane		120	U
75-01-4	Vinyl Chloride		120	U
75-00-3	Chloroethane		120	U
75-09-2	Methylene Chloride		120	U
67-64-1	Acetone		63	J
75-15-0	Carbon Disulfide		120	U
75-35-4	1,1-Dichloroethene		120	U
75-34-4	1,1-Dichloroethane		120	U
540-59-0	1,2-Dichloroethene (total)		120	U
67-66-3	Chloroform		120	U
107-06-2	1,2-Dichloroethane		120	U
78-93-3	2-Butanone		120	U
71-55-6	1,1,1-Trichloroethane		120	U
56-23-5	Carbon Tetrachloride		120	U
75-27-4	Bromodichloromethane		120	U
78-87-5	1,2-Dichloropropane		120	U
10061-01-5	cis-1,3-Dichloropropene		120	U
79-01-6	Trichloroethene		17	J
71-43-2	Benzene		120	U
124-48-1	Dibromochloromethane		120	U
10061-02-6	trans-1,3-Dichloropropene		120	U
79-00-5	1,1,2-Trichloroethane		120	U
75-25-2	Bromoform		120	U
108-10-1	4-Methyl-2-Pentanone		120	U
591-78-6	2-Hexanone		120	U
127-18-4	Tetrachloroethene		120	U
79-34-5	1,1,2,2-Tetrachloroethane		120	U
108-88-3	Toluene		120	U
108-90-7	Chlorobenzene		120	U
100-41-4	Ethylbenzene		120	U
100-42-5	Styrene		120	U
1330-20-7	Xylene (total)		1200	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAPMLE

F4549

Lab Name: OBG Laboratories Contract: Zeneca-Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4588

Matrix: (soil/water) WATER Lab Sample ID: QC Trip Blank

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: P8519.D

Level: (low/med) LOW Date Received: 07/23/97

% Moisture: not dec. _____ Date Analyzed: 08/04/97

GC Column: DB-VRX ID: 0.45 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
74-87-3	Chloromethane		10	U
74-83-9	Bromomethane		10	U
75-01-4	Vinyl Chloride		10	U
75-00-3	Chloroethane		10	U
75-09-2	Methylene Chloride		10	U
67-64-1	Acetone		2	J
75-15-0	Carbon Disulfide		10	U
75-35-4	1,1-Dichloroethene		10	U
75-34-4	1,1-Dichloroethane		10	U
540-59-0	1,2-Dichloroethene (total)		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
78-93-3	2-Butanone		10	U
71-55-6	1,1,1-Trichloroethane		10	U
56-23-5	Carbon Tetrachloride		10	U
75-27-4	Bromodichloromethane		10	U
78-87-5	1,2-Dichloropropane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
79-01-6	Trichloroethene		10	U
71-43-2	Benzene		10	U
124-48-1	Dibromochloromethane		10	U
10061-02-6	trans-1,3-Dichloropropene		10	U
79-00-5	1,1,2-Trichloroethane		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-Pentanone		10	U
591-78-6	2-Hexanone		10	U
127-18-4	Tetrachloroethene		10	U
79-34-5	1,1,2,2-Tetrachloroethane		10	U
108-88-3	Toluene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
100-42-5	Styrene		10	U
1330-20-7	Xylene (total)		10	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4542

Lab Name: OBG Laboratories Contract: Zeneca Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-13-1
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7328.D
 Level: (low/med) LOW Date Received: 07/25/97
 % Moisture: 32.8 decanted:(Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/08/97
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

111-44-4	bis(2-Chloroethyl)ether	500	U
108-95-2	Phenol	1500	
95-57-8	2-Chlorophenol	500	U
541-73-1	1,3-Dichlorobenzene	500	U
106-46-7	1,4-Dichlorobenzene	500	U
95-50-1	1,2-Dichlorobenzene	500	U
95-48-7	2-Methylphenol	500	U
67-72-1	Hexachloroethane	500	U
621-64-7	N-Nitroso-di-n-propylamine	500	U
106-44-5	4-Methylphenol	53	J
98-95-3	Nitrobenzene	500	U
78-59-1	Isophorone	500	U
88-75-5	2-Nitrophenol	500	U
105-67-9	2,4-Dimethylphenol	500	U
111-91-1	bis(2-Chloroethoxy)methane	500	U
120-83-2	2,4-Dichlorophenol	500	U
120-82-1	1,2,4-Trichlorobenzene	500	U
91-20-3	Naphthalene	210	J
106-47-8	4-Chloroaniline	500	U
87-68-3	Hexachlorobutadiene	500	U
59-50-7	4-Chloro-3-methylphenol	500	U
91-57-6	2-Methylnaphthalene	380	J
77-47-4	Hexachlorocyclopentadiene	500	U
88-06-2	2,4,6-Trichlorophenol	500	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	500	U
88-74-4	2-Nitroaniline	1200	U
208-96-8	Acenaphthylene	54	J
131-11-3	Dimethyl phthalate	500	U
606-20-2	2,6-Dinitrotoluene	500	U
83-32-9	Acenaphthene	500	U
99-09-2	3-Nitroaniline	1200	U
51-28-5	2,4-Dinitrophenol	1200	U
132-64-9	Dibenzofuran	220	J
121-14-2	2,4-Dinitrotoluene	500	U
100-02-7	4-Nitrophenol	1200	U
86-73-7	Fluorene	390	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4542

Lab Name: OBG Laboratories Contract: Zeneca Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-13-1

Sample wt/vol: 30 (g/ml) G Lab File ID: S7328.D

Level: (low/med) LOW Date Received: 07/25/97

% Moisture: 32.8 decanted:(Y/N) N Date Extracted: 07/28/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/08/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
7005-72-3	4-Chlorophenyl phenyl ether	500	U
84-66-2	Diethyl phthalate	500	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-methylphenol	1200	U
86-30-6	n-Nitrosodiphenylamine	500	U
101-55-3	4-Bromophenyl phenyl ether	500	U
118-74-1	Hexachlorobenzene	500	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	1300	
120-12-7	Anthracene	340	J
84-74-2	Di-n-butyl phthalate	500	U
206-44-0	Fluoranthene	2700	
129-00-0	Pyrene	4400	E
85-68-7	Butyl benzyl phthalate	500	U
91-94-1	3,3'-Dichlorobenzidine	500	U
56-55-3	Benzo[a]anthracene	1500	
218-01-9	Chrysene	2000	
117-81-7	bis(2-Ethylhexyl)phthalate	200	J
117-84-0	Di-n-octyl phthalate	500	U
205-99-2	Benzo[b]fluoranthene	2200	
207-08-9	Benzo[k]fluoranthene	750	
50-32-8	Benzo[a]pyrene	1300	
193-39-5	Indeno[1,2,3-cd]pyrene	690	
53-70-3	Dibenz[a,h]anthracene	67	J
191-24-2	Benzo[g,h,i]perylene	600	
108-60-1	2,2'-oxybis(1-Chloropropane)	500	U
86-74-8	Carbazole	500	U
118-90-1	o-Toluic Acid	470	J
99-94-5	p-Toluic Acid	500	U
99-04-7	m-Toluic Acid	430	J
65-85-0	Benzoic Acid	98	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4543

Lab Name: OBG Laboratories Contract: Zeneca Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-13-2
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7303.D
 Level: (low/med) LOW Date Received: 07/25/97
 % Moisture: 17 decanted: (Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

111-44-4	bis(2-Chloroethyl)ether	400	U
108-95-2	Phenol	400	U
95-57-8	2-Chlorophenol	400	U
541-73-1	1,3-Dichlorobenzene	400	U
106-46-7	1,4-Dichlorobenzene	400	U
95-50-1	1,2-Dichlorobenzene	400	U
95-48-7	2-Methylphenol	400	U
67-72-1	Hexachloroethane	400	U
621-64-7	N-Nitroso-di-n-propylamine	400	U
106-44-5	4-Methylphenol	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	bis(2-Chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
120-82-1	1,2,4-Trichlorobenzene	400	U
91-20-3	Naphthalene	510	
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	400	U
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	1000	U
208-96-8	Acenaphthylene	400	U
131-11-3	Dimethyl phthalate	400	U
606-20-2	2,6-Dinitrotoluene	400	U
83-32-9	Acenaphthene	400	U
99-09-2	3-Nitroaniline	1000	U
51-28-5	2,4-Dinitrophenol	1000	U
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
100-02-7	4-Nitrophenol	1000	U
86-73-7	Fluorene	400	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4543

Lab Name: OBG Laboratories Contract: Zeneca Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-13-2

Sample wt/vol: 30 (g/ml) G Lab File ID: S7303.D

Level: (low/med) LOW Date Received: 07/25/97

% Moisture: 17 decanted: (Y/N) N Date Extracted: 07/28/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

7005-72-3	4-Chlorophenyl phenyl ether	400	U
84-66-2	Diethyl phthalate	400	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	n-Nitrosodiphenylamine	400	U
101-55-3	4-Bromophenyl phenyl ether	400	U
118-74-1	Hexachlorobenzene	400	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	43	J
120-12-7	Anthracene	400	U
84-74-2	Di-n-butyl phthalate	400	U
206-44-0	Fluoranthene	93	J
129-00-0	Pyrene	90	J
85-68-7	Butyl benzyl phthalate	400	U
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benzo[a]anthracene	52	J
218-01-9	Chrysene	63	J
117-81-7	bis(2-Ethylhexyl)phthalate	43	J
117-84-0	Di-n-octyl phthalate	400	U
205-99-2	Benzo[b]fluoranthene	77	J
207-08-9	Benzo[k]fluoranthene	400	U
50-32-8	Benzo[a]pyrene	45	J
193-39-5	Indeno[1,2,3-cd]pyrene	400	U
53-70-3	Dibenz[a,h]anthracene	400	U
191-24-2	Benzo[g,h,i]perylene	400	U
108-60-1	2,2'-oxybis(1-Chloropropane)	400	U
86-74-8	Carbazole	400	U
118-90-1	o-Toluic Acid	400	U
99-94-5	p-Toluic Acid	400	U
99-04-7	m-Toluic Acid	400	U
65-85-0	Benzoic Acid	400	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4546 10X

Lab Name: OBG Laboratories Contract: Zeneca Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-16
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7330.D
 Level: (low/med) LOW Date Received: 07/25/97
 % Moisture: 12 decanted: (Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/08/97
 Injection Volume: 2.0 (uL) Dilution Factor: 10.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
111-44-4	bis(2-Chloroethyl)ether	3800	U
108-95-2	Phenol	3800	U
95-57-8	2-Chlorophenol	3800	U
541-73-1	1,3-Dichlorobenzene	3800	U
106-46-7	1,4-Dichlorobenzene	3800	U
95-50-1	1,2-Dichlorobenzene	3800	U
95-48-7	2-Methylphenol	3800	U
67-72-1	Hexachloroethane	3800	U
621-64-7	N-Nitroso-di-n-propylamine	3800	U
106-44-5	4-Methylphenol	3800	U
98-95-3	Nitrobenzene	3800	U
78-59-1	Isophorone	3800	U
88-75-5	2-Nitrophenol	3800	U
105-67-9	2,4-Dimethylphenol	3800	U
111-91-1	bis(2-Chloroethoxy)methane	3800	U
120-83-2	2,4-Dichlorophenol	3800	U
120-82-1	1,2,4-Trichlorobenzene	3800	U
91-20-3	Naphthalene	3800	U
106-47-8	4-Chloroaniline	3800	U
87-68-3	Hexachlorobutadiene	3800	U
59-50-7	4-Chloro-3-methylphenol	3800	U
91-57-6	2-Methylnaphthalene	3800	U
77-47-4	Hexachlorocyclopentadiene	3800	U
88-06-2	2,4,6-Trichlorophenol	3800	U
95-95-4	2,4,5-Trichlorophenol	9500	U
91-58-7	2-Chloronaphthalene	3800	U
88-74-4	2-Nitroaniline	9500	U
208-96-8	Acenaphthylene	3800	U
131-11-3	Dimethyl phthalate	3800	U
606-20-2	2,6-Dinitrotoluene	3800	U
83-32-9	Acenaphthene	3800	U
99-09-2	3-Nitroaniline	9500	U
51-28-5	2,4-Dinitrophenol	9500	U
132-64-9	Dibenzofuran	3800	U
121-14-2	2,4-Dinitrotoluene	3800	U
100-02-7	4-Nitrophenol	9500	U
86-73-7	Fluorene	3800	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4546 10X

Lab Name: OBG Laboratories Contract: Zeneca Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-16
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7330.D
 Level: (low/med) LOW Date Received: 07/25/97
 % Moisture: 12 decanted: (Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/08/97
 Injection Volume: 2.0 (uL) Dilution Factor: 10.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
7005-72-3	4-Chlorophenyl phenyl ether	3800	U
84-66-2	Diethyl phthalate	3800	U
100-01-6	4-Nitroaniline	9500	U
534-52-1	4,6-Dinitro-2-methylphenol	9500	U
86-30-6	n-Nitrosodiphenylamine	3800	U
101-55-3	4-Bromophenyl phenyl ether	3800	U
118-74-1	Hexachlorobenzene	3800	U
87-86-5	Pentachlorophenol	9500	U
85-01-8	Phenanthrene	910	JD
120-12-7	Anthracene	3800	U
84-74-2	Di-n-butyl phthalate	3800	U
206-44-0	Fluoranthene	1200	JD
129-00-0	Pyrene	2100	JD
85-68-7	Butyl benzyl phthalate	3800	U
91-94-1	3,3'-Dichlorobenzidine	3800	U
56-55-3	Benzo[a]anthracene	1100	JD
218-01-9	Chrysene	1100	JD
117-81-7	bis(2-Ethylhexyl)phthalate	3800	U
117-84-0	Di-n-octyl phthalate	3800	U
205-99-2	Benzo[b]fluoranthene	1600	JD
207-08-9	Benzo[k]fluoranthene	450	JD
50-32-8	Benzo[a]pyrene	1000	JD
193-39-5	Indeno[1,2,3-cd]pyrene	500	JD
53-70-3	Dibenz[a,h]anthracene	3800	U
191-24-2	Benzo[g,h,i]perylene	520	JD
108-60-1	2,2'-oxybis(1-Chloropropane)	3800	U
86-74-8	Carbazole	3800	U
118-90-1	o-Toluic Acid	3800	U
99-94-5	p-Toluic Acid	3800	U
99-04-7	m-Toluic Acid	3800	U
65-85-0	Benzoic Acid	3800	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4545

Lab Name: OBG Laboratories Contract: Zeneca Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-15
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7301.D
 Level: (low/med) LOW Date Received: 07/25/97
 % Moisture: 11.3 decanted: (Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
111-44-4	bis(2-Chloroethyl)ether	380	U
108-95-2	Phenol	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
67-72-1	Hexachloroethane	380	U
621-64-7	N-Nitroso-di-n-propylamine	380	U
106-44-5	4-Methylphenol	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	bis(2-Chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	940	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	940	U
208-96-8	Acenaphthylene	380	U
131-11-3	Dimethyl phthalate	380	U
606-20-2	2,6-Dinitrotoluene	380	U
83-32-9	Acenaphthene	380	U
99-09-2	3-Nitroaniline	940	U
51-28-5	2,4-Dinitrophenol	940	U
132-64-9	Dibenzofuran	380	U
121-14-2	2,4-Dinitrotoluene	380	U
100-02-7	4-Nitrophenol	940	U
86-73-7	Fluorene	380	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4545

Lab Name: OBG Laboratories Contract: Zeneca Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-15

Sample wt/vol: 30 (g/ml) G Lab File ID: S7301.D

Level: (low/med) LOW Date Received: 07/25/97

% Moisture: 11.3 decanted: (Y/N) N Date Extracted: 07/28/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

7005-72-3	4-Chlorophenyl phenyl ether	380	U
84-66-2	Diethyl phthalate	380	U
100-01-6	4-Nitroaniline	940	U
534-52-1	4,6-Dinitro-2-methylphenol	940	U
86-30-6	n-Nitrosodiphenylamine	380	U
101-55-3	4-Bromophenyl phenyl ether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	940	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
84-74-2	Di-n-butyl phthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U
85-68-7	Butyl benzyl phthalate	380	U
91-94-1	3,3'-Dichlorobenzidine	380	U
56-55-3	Benzo[a]anthracene	380	U
218-01-9	Chrysene	380	U
117-81-7	bis(2-Ethylhexyl)phthalate	380	U
117-84-0	Di-n-octyl phthalate	380	U
205-99-2	Benzo[b]fluoranthene	380	U
207-08-9	Benzo[k]fluoranthene	380	U
50-32-8	Benzo[a]pyrene	380	U
193-39-5	Indeno[1,2,3-cd]pyrene	380	U
53-70-3	Dibenz[a,h]anthracene	380	U
191-24-2	Benzo[g,h,i]perylene	380	U
108-60-1	2,2'-oxybis(1-Chloropropane)	380	U
86-74-8	Carbazole	380	U
118-90-1	o-Toluic Acid	380	U
99-94-5	p-Toluic Acid	380	U
99-04-7	m-Toluic Acid	380	U
65-85-0	Benzoic Acid	380	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4544

Lab Name: OBG Laboratories Contract: Zeneca Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-14
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7295.D
 Level: (low/med) LOW Date Received: 07/25/97
 % Moisture: 9.3 decanted: (Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

111-44-4	bis(2-Chloroethyl)ether	370	U
108-95-2	Phenol	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
67-72-1	Hexachloroethane	370	U
621-64-7	N-Nitroso-di-n-propylamine	370	U
106-44-5	4-Methylphenol	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	bis(2-Chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	920	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	920	U
208-96-8	Acenaphthylene	370	U
131-11-3	Dimethyl phthalate	370	U
606-20-2	2,6-Dinitrotoluene	370	U
83-32-9	Acenaphthene	370	U
99-09-2	3-Nitroaniline	920	U
51-28-5	2,4-Dinitrophenol	920	U
132-64-9	Dibenzofuran	370	U
121-14-2	2,4-Dinitrotoluene	370	U
100-02-7	4-Nitrophenol	920	U
86-73-7	Fluorene	370	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4544

Lab Name: OBG Laboratories Contract: Zeneca Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-14

Sample wt/vol: 30 (g/ml) G Lab File ID: S7295.D

Level: (low/med) LOW Date Received: 07/25/97

% Moisture: 9.3 decanted: (Y/N) N Date Extracted: 07/28/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
7005-72-3	4-Chlorophenyl phenyl ether	370		U
84-66-2	Diethyl phthalate	370		U
100-01-6	4-Nitroaniline	920		U
534-52-1	4,6-Dinitro-2-methylphenol	920		U
86-30-6	n-Nitrosodiphenylamine	370		U
101-55-3	4-Bromophenyl phenyl ether	370		U
118-74-1	Hexachlorobenzene	370		U
87-86-5	Pentachlorophenol	920		U
85-01-8	Phenanthrene	370		U
120-12-7	Anthracene	370		U
84-74-2	Di-n-butyl phthalate	370		U
206-44-0	Fluoranthene	370		U
129-00-0	Pyrene	370		U
85-68-7	Butyl benzyl phthalate	370		U
91-94-1	3,3'-Dichlorobenzidine	370		U
56-55-3	Benzo[a]anthracene	370		U
218-01-9	Chrysene	370		U
117-81-7	bis(2-Ethylhexyl)phthalate	60		J
117-84-0	Di-n-octyl phthalate	370		U
205-99-2	Benzo[b]fluoranthene	370		U
207-08-9	Benzo[k]fluoranthene	370		U
50-32-8	Benzo[a]pyrene	370		U
193-39-5	Indeno[1,2,3-cd]pyrene	370		U
53-70-3	Dibenz[a,h]anthracene	370		U
191-24-2	Benzo[g,h,i]perylene	370		U
108-60-1	2,2'-oxybis(1-Chloropropane)	370		U
86-74-8	Carbazole	370		U
118-90-1	o-Toluic Acid	370		U
99-94-5	p-Toluic Acid	370		U
99-04-7	m-Toluic Acid	370		U
65-85-0	Benzoic Acid	370		U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4547

Lab Name: OBG Laboratories Contract: Zeneca Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix: (soil/water) SOIL Lab Sample ID: NPTP-17
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7304.D
 Level: (low/med) LOW Date Received: 07/25/97
 % Moisture: 23.6 decanted:(Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

111-44-4	bis(2-Chloroethyl)ether	440	U
108-95-2	Phenol	440	U
95-57-8	2-Chlorophenol	440	U
541-73-1	1,3-Dichlorobenzene	440	U
106-46-7	1,4-Dichlorobenzene	440	U
95-50-1	1,2-Dichlorobenzene	440	U
95-48-7	2-Methylphenol	440	U
67-72-1	Hexachloroethane	440	U
621-64-7	N-Nitroso-di-n-propylamine	440	U
106-44-5	4-Methylphenol	440	U
98-95-3	Nitrobenzene	440	U
78-59-1	Isophorone	440	U
88-75-5	2-Nitrophenol	440	U
105-67-9	2,4-Dimethylphenol	440	U
111-91-1	bis(2-Chloroethoxy)methane	440	U
120-83-2	2,4-Dichlorophenol	440	U
120-82-1	1,2,4-Trichlorobenzene	440	U
91-20-3	Naphthalene	440	U
106-47-8	4-Chloroaniline	440	U
87-68-3	Hexachlorobutadiene	440	U
59-50-7	4-Chloro-3-methylphenol	440	U
91-57-6	2-Methylnaphthalene	440	U
77-47-4	Hexachlorocyclopentadiene	440	U
88-06-2	2,4,6-Trichlorophenol	440	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	440	U
88-74-4	2-Nitroaniline	1100	U
208-96-8	Acenaphthylene	440	U
131-11-3	Dimethyl phthalate	440	U
606-20-2	2,6-Dinitrotoluene	440	U
83-32-9	Acenaphthene	440	U
99-09-2	3-Nitroaniline	1100	U
51-28-5	2,4-Dinitrophenol	1100	U
132-64-9	Dibenzofuran	440	U
121-14-2	2,4-Dinitrotoluene	440	U
100-02-7	4-Nitrophenol	1100	U
86-73-7	Fluorene	440	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4547

Lab Name: OBG Laboratories Contract: Zeneca Sta

Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458

Matrix: (soil/water) SOIL Lab Sample ID: NPTP-17

Sample wt/vol: 30 (g/ml) G Lab File ID: S7304.D

Level: (low/med) LOW Date Received: 07/25/97

% Moisture: 23.6 decanted:(Y/N) N Date Extracted: 07/28/97

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
7005-72-3	4-Chlorophenyl phenyl ether	440		U
84-66-2	Diethyl phthalate	440		U
100-01-6	4-Nitroaniline	1100		U
534-52-1	4,6-Dinitro-2-methylphenol	1100		U
86-30-6	n-Nitrosodiphenylamine	440		U
101-55-3	4-Bromophenyl phenyl ether	440		U
118-74-1	Hexachlorobenzene	440		U
87-86-5	Pentachlorophenol	1100		U
85-01-8	Phenanthrene	440		U
120-12-7	Anthracene	440		U
84-74-2	Di-n-butyl phthalate	440		U
206-44-0	Fluoranthene	440		U
129-00-0	Pyrene	440		U
85-68-7	Butyl benzyl phthalate	440		U
91-94-1	3,3'-Dichlorobenzidine	440		U
56-55-3	Benzo[a]anthracene	440		U
218-01-9	Chrysene	440		U
117-81-7	bis(2-Ethylhexyl)phthalate	76		J
117-84-0	Di-n-octyl phthalate	440		U
205-99-2	Benzo[b]fluoranthene	440		U
207-08-9	Benzo[k]fluoranthene	440		U
50-32-8	Benzo[a]pyrene	440		U
193-39-5	Indeno[1,2,3-cd]pyrene	440		U
53-70-3	Dibenz[a,h]anthracene	440		U
191-24-2	Benzo[g,h,i]perylene	440		U
108-60-1	2,2'-oxybis(1-Chloropropane)	440		U
86-74-8	Carbazole	440		U
118-90-1	o-Toluic Acid	54		J
99-94-5	p-Toluic Acid	440		U
99-04-7	m-Toluic Acid	440		U
65-85-0	Benzoic Acid	65		J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4548

Lab Name: OBG Laboratories Contract: Zeneca Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix: (soil/water) SOIL Lab Sample ID: Field Duplicate
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7296.D
 Level: (low/med) LOW Date Received: 07/25/97
 % Moisture: 17.7 decanted:(Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

111-44-4	bis(2-Chloroethyl)ether	410	U
108-95-2	Phenol	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
95-48-7	2-Methylphenol	410	U
67-72-1	Hexachloroethane	410	U
621-64-7	N-Nitroso-di-n-propylamine	410	U
106-44-5	4-Methylphenol	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	bis(2-Chloroethoxy)methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	410	U
106-47-8	4-Chloroaniline	55	J
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	1000	U
208-96-8	Acenaphthylene	410	U
131-11-3	Dimethyl phthalate	410	U
606-20-2	2,6-Dinitrotoluene	410	U
83-32-9	Acenaphthene	410	U
99-09-2	3-Nitroaniline	1000	U
51-28-5	2,4-Dinitrophenol	1000	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
100-02-7	4-Nitrophenol	1000	U
86-73-7	Fluorene	410	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC Sample

F4548

Lab Name: OBG Laboratories Contract: Zeneca Sta
 Lab Code: OBG Case No.: 5618.9.51 SAS No.: _____ SDG No.: 4568, 458
 Matrix: (soil/water) SOIL Lab Sample ID: Field Duplicate
 Sample wt/vol: 30 (g/ml) G Lab File ID: S7296.D
 Level: (low/med) LOW Date Received: 07/25/97
 % Moisture: 17.7 decanted: (Y/N) N Date Extracted: 07/28/97
 Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/07/97
 Injection Volume: 2.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) Y pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

7005-72-3	4-Chlorophenyl phenyl ether	410	U
84-66-2	Diethyl phthalate	410	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	n-Nitrosodiphenylamine	410	U
101-55-3	4-Bromophenyl phenyl ether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	410	U
120-12-7	Anthracene	410	U
84-74-2	Di-n-butyl phthalate	410	U
206-44-0	Fluoranthene	410	U
129-00-0	Pyrene	410	U
85-68-7	Butyl benzyl phthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	410	U
56-55-3	Benzo[a]anthracene	410	U
218-01-9	Chrysene	410	U
117-81-7	bis(2-Ethylhexyl)phthalate	410	U
117-84-0	Di-n-octyl phthalate	410	U
205-99-2	Benzo[b]fluoranthene	410	U
207-08-9	Benzo[k]fluoranthene	410	U
50-32-8	Benzo[a]pyrene	410	U
193-39-5	Indeno[1,2,3-cd]pyrene	410	U
53-70-3	Dibenz[a,h]anthracene	410	U
191-24-2	Benzo[g,h,i]perylene	410	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410	U
86-74-8	Carbazole	410	U
118-90-1	o-Toluic Acid	410	U
99-94-5	p-Toluic Acid	410	U
99-04-7	m-Toluic Acid	410	U
65-85-0	Benzoic Acid	410	U

O'Brien & Gere Laboratories, Inc.

Analytical Results Wet Chemistry

Client: Zeneca-Stauffer Management Company
Project:
Proj. Desc: Skaneateles Falls, NY

Job No.: 5618.009.517
Certification NY No.: 10155

Sample: F4542
Samp. Description: NPTP-13-1

Collected: 07/24/97
Received: 07/25/97 07:00
Matrix: Solid

Parameter	Result Units	Method	Prepared Analyzed	QC Batch	Note
% Total Solids	67.2 %	2540-G	07/30/97	073097S13	

Notes:

Sample: F4543
Samp. Description: NPTP-13-2

Collected: 07/24/97
Received: 07/25/97 07:00
Matrix: Solid

Parameter	Result Units	Method	Prepared Analyzed	QC Batch	Note
% Total Solids	83.0 %	2540-G	07/30/97	073097S13	

Notes:

Sample: F4544
Samp. Description: NPTP-14

Collected: 07/24/97
Received: 07/25/97 07:00
Matrix: Solid

Parameter	Result Units	Method	Prepared Analyzed	QC Batch	Note
% Total Solids	90.7 %	2540-G	07/30/97	073097S13	

Notes:

Estimated value

Authorized: Monika Santucci
Date: August 5, 1997
Monika Santucci

O'Brien & Gere Laboratories, Inc.

Analytical Results Wet Chemistry

Client: Zeneca-Stauffer Management Company
Project:
Proj. Desc: Skaneateles Falls, NY

Job No.: 5618.009.517
Certification NY No.: 10155

Sample: F4545
Sample Description: NPTP-15

Collected: 07/24/97
Received: 07/25/97 07:00
Matrix: Solid

Parameter	Result Units	Method	Prepared Analyzed	QC Batch	Note
% Total Solids	88.7 %	2540-G	07/30/97	073097S13	

Notes:

Sample: F4546
Sample Description: NPTP-16

Collected: 07/24/97
Received: 07/25/97 07:00
Matrix: Solid

Parameter	Result Units	Method	Prepared Analyzed	QC Batch	Note
% Total Solids	88.0 %	2540-G	07/30/97	073097S13	

Notes:

Sample: F4547
Sample Description: NPTP-17

Collected: 07/24/97
Received: 07/25/97 07:00
Matrix: Solid

Parameter	Result Units	Method	Prepared Analyzed	QC Batch	Note
% Total Solids	76.4 %	2540-G	07/30/97	073097S13	

Notes:

Estimated value

Authorized: Monika Santucci
Date: August 5, 1997
Monika Santucci

**O'Brien & Gere
Laboratories, Inc.**

**Analytical Results
Wet Chemistry**

Client: Zeneca-Stauffer Management Company
Project:
Proj. Desc: Skaneateles Falls, NY

Job No.: 5618.009.517
Certification NY No.: 10155

Sample: F4548
Samp. Description: Field Duplicate

Collected: 07/24/97 Matrix: Solid
Received: 07/25/97 07:00

Parameter	Result Units	Method	Prepared Analyzed	QC Batch	Note
% Total Solids	82.3 %	2540-G	07/30/97	073097S13	

Notes:

Estimated value

Authorized: Monika Santucci

Date: August 5, 1997

Monika Santucci



O'BRIEN & GERE
LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

4568

SURVEY: SMC

SAMPLED BY: David J. Carnevale

LOCATION: Skanecteles Falls

ORGANIZATION: Engineers

STATION NUMBER	SAMPLE LOCATION	DATE COLLECTED	TIME COLLECTED	SAMPLE MATRIX	COMP. OR GRAB	NO. OF CONTAINERS	ANALYSIS REQUIRED
	<u>NPTP-7-1</u>	<u>7/22/97</u>					<u>VOC (91-1), SVOC (91-2) (CLP) (Notes)</u>
	<u>NPTP-7-2</u>	<u> </u>					<u>and Toluic Acid</u>
	<u>NPTP-8-1</u>	<u> </u>					
	<u>NPTP-8-2</u>	<u> </u>					
	<u>NPTP-8-2 MS</u>	<u> </u>					
	<u>NPTP-8-2 MSD</u>	<u>↓</u>					
	<u>NPTP-9-1</u>	<u>7/23/97</u>					
	<u>NPTP-9-2</u>	<u> </u>					
	<u>NPTP-10-1</u>	<u> </u>					
	<u>NPTP-11-1</u>	<u> </u>					
	<u>NPTP-9 (*)</u>	<u> </u>	<u>1430</u>	<u>Water</u>			<u>VOC (8010/8020), SVOC (8270) + Toluic Acid</u>
	<u>NPTP-11-2</u>	<u>↓</u>					<u>VOC (91-1) SVOC (91-2) + Toluic Acid</u>
Relinquished By:	<u>David J. Carnevale</u>	DATE	TIME	Received By:		DATE	TIME
		<u>7/23/97</u>	<u>1635</u>				
Relinquished By:		DATE	TIME	Received By:		DATE	TIME
Relinquished By:		DATE	TIME	Received by Laboratory:		DATE	TIME
				<u>Monika Jankovic</u>		<u>7/23/97</u>	<u>16:35</u>

COMMENTS:

(*) Only 1 vial, contains likely product, potentially highly contaminated

Found in walk-in cooler - Cooler contained ice cooler

METHOD OF SHIPMENT:

Temperature - 4°C



SURVEY: SMC

SAMPLED BY: David J Camerale

LOCATION: Skaneateles Falls

ORGANIZATION: Engineers

Relinquished By: <i>David J. Cernale</i>	DATE: <i>7/23/97</i>	TIME: <i>1635</i>	Received By:	DATE:	TIME:
Relinquished By:	DATE:	TIME:	Received By:	DATE:	TIME:
Relinquished By:	DATE:	TIME:	Received by Laboratory <i>Monika J. Sridharan</i>	DATE: <i>7/23/97</i>	TIME: <i>16:30</i>

COMMENTS:

O'BRIEN & GERE LABORATORIES, INC. an O'Brien & Gere Company
5000 Brittonfield Parkway / P.O. Box 4942 / Syracuse, NY 13221 / (315) 437-0200 FAX (315) 463-7554



O'BRIEN & GERE
LABORATORIES, INC.

CASE FILE FORM

PROGRAM INFORMATION

Client: Zevca Stauffer Div. 01 Job No. 5618-009-517

Program: _____

Custody Seal: _____ Intact _____ Not Intact X NA

AFTER HOURS CUSTODY

RELINQUISHED BY:	DATE	TIME	RECEIVED BY SECURITY GUARD:	DATE	TIME
RELINQUISHED BY SECURITY GUARD TO COOLER:	DATE	TIME	RECEIVED BY SAMPLE CUSTODIAN:	DATE	TIME

COMMENTS/DISCREPANCY:

Cooler was found intact in a secured walk-in cooler.

Cooler Temp 40°C

No metal analysis required per Tim F. City on 7/24/97.
Results report only - Dr. Deborah Wright on 7/21/97.

Dr. Deborah Wright - stated 4/21/97 - that we
must present update of methods - is 95-1 (ns)

RESOLUTION/CLIENT COMMENT:

Signed: Mark F. O'Brien

Date: 7/24/97

QA/QC Approval: Mark F. O'Brien

Signed: Mark F. O'Brien

Date: 8/18/97

O'Brien & Gere Laboratories, Inc.

Analytical Results Method: 8270

Client: Zeneca-Stauffer Management Company
Project:
Proj. Desc: Skaneateles Falls, NY

Job No.: 5618.009.517
Certification NY No.: 10155

Sample: F4397
Samp. Description: NPTP-9
Instrument: HP5972 GC/MS#6
Units: ug/L
Number of analytes: 71

Collected: 07/23/97
Received: 07/23/97
Prepared: 07/28/97
Matrix: Water
QC Batch: 072897W2
%Solids:
Sample Size: .99 L

Parameter	Result	Surrog		Notes
		Limits	Dilution	
bis(2-Chloroethyl) ether	<100.		10	08/08/97
Phenol	J 89.		10	08/08/97
2-Chlorophenol	<100.		10	08/08/97
1,3-Dichlorobenzene	<100.		10	08/08/97
1,4-Dichlorobenzene	<100.		10	08/08/97
Benzyl alcohol	<100.		10	08/08/97
1,2-Dichlorobenzene	<100.		10	08/08/97
2-Methylphenol	J 21.		10	08/08/97
bis(2-Chloroisopropyl) ether	<100.		10	08/08/97
4-Methylphenol	J 35.		10	08/08/97
N-Nitroso-di-n-propylamine	<100.		10	08/08/97
Hexachloroethane	<100.		10	08/08/97
Nitrobenzene	<100.		10	08/08/97
Isophorone	<100.		10	08/08/97
2-Nitrophenol	<100.		10	08/08/97
2,4-Dimethylphenol	<100.		10	08/08/97
bis(2-Chloroethoxy) methane	<100.		10	08/08/97
Benzoic acid	J 150.		10	08/08/97
2,4-Dichlorophenol	<100.		10	08/08/97
1,2,4-Trichlorobenzene	<100.		10	08/08/97
Naphthalene	230.		10	08/08/97
4-Chloroaniline	<100.		10	08/08/97
Hexachlorobutadiene	<100.		10	08/08/97
4-Chloro-3-methylphenol	<100.		10	08/08/97
2-Methylnaphthalene	J 79.		10	08/08/97
Hexachlorocyclopentadiene	<100.		10	08/08/97
2,4,6-Trichlorophenol	<100.		10	08/08/97
2,4,5-Trichlorophenol	<510.		10	08/08/97
2-Chloronaphthalene	<100.		10	08/08/97

- Outside control limits J-Estimated value

Authorized: *Monika Santucci*
Date: August 13, 1997

Monika Santucci

O'Brien & Gere Laboratories, Inc.

Analytical Results Method: 8010/8020

Client: Zeneca-Stauffer Management Company
Project:
Project Desc: Skaneateles Falls, NY

Job No.: 5618.009.517
Certification NY No.: 10155

Sample: F4397
Sample Description: NPTP-9
Primary column: Y
Units: ug/L
Column: RTX502.2 105m x 0.53mm I.D.
Injection: 200 Instrument: Tracor540#4

Collected: 07/23/97 Matrix: Water
Received: 07/23/97 QC Batch: 073197W4
Prepared: % Solids:
Analyzed: 08/01/97 Purge volume: 5 ml

Number of analytes: 37

Parameter	Result	Col	Surrog Limits	Notes
Benzene	<200.	1		
Bromodichloromethane	<200.	1		
Bromoform	<2000.	1		
Bromomethane	<2000.	1		
Carbon tetrachloride	<200.	1		
Chlorobenzene	<200.	1		
Chloroethane	<200.	1		
2-Chloroethylvinyl ether	<2000.	1		
Chloroform	<200.	1		
Chloromethane	<2000.	1		
Dibromochloromethane	<200.	1		
1,2-Dichlorobenzene	<1000.	1		
1,3-Dichlorobenzene	<1000.	1		
1,4-Dichlorobenzene	<1000.	1		
Dichlorodifluoromethane	<2000.	1		
1,1-Dichloroethane	<200.	1		
1,2-Dichloroethane	<200.	1		
1,1-Dichloroethylene	<200.	1		
cis-1,2-Dichloroethylene	<200.	1		
trans-1,2-Dichloroethylene	<200.	1		
Dichloromethane	<200.	1		
1,2-Dichloropropane	<200.	1		
cis-1,3-Dichloropropylene	<200.	1		
trans-1,3-Dichloropropylene	<200.	1		
Ethylbenzene	<200.	1		
1,1,2,2-Tetrachloroethane	<200.	1		
Tetrachloroethylene	<200.	1		
Toluene	<200.	1		

- Outside control limits J-Estimated value

Authorized: *Monika Santucci*
Date: August 1, 1997 Monika Santucci

**O'Brien & Gere
Laboratories, Inc.**

**Analytical Results
Method: 8010/8020**

Client: Zeneca-Stauffer Management Company
Project:
Proj. Desc: Skaneateles Falls, NY

Job No.: 5618.009.517
Certification NY No.: 10155

Sample: F4397
Samp. Description: NPTP-9
Primary column: Y
Units: ug/L
Column: RTX502.2 105m x 0.53mm I.D.
Dilution: 200 Instrument: Tracor540#4

Collected: 07/23/97 Matrix: Water
Received: 07/23/97 QC Batch: 073197W4
Prepared: %Solids:
Analyzed: 08/01/97 Purge volume: 5 ml

Number of analytes: 37

<u>Parameter</u>	<u>Result</u>	<u>Col</u>	<u>Surrog Limits</u>	<u>Notes</u>
1,1,1-Trichloroethane	<200.	1		
1,1,2-Trichloroethane	<200.	1		
Trichloroethylene	<200.	1		
Trichlorofluoromethane	<200.	1		
Vinyl Chloride	<200.	1		
Xylenes (total)	6700.	1		
Bromochloromethane (surrogate)	101.%	1	61-119	
1,4-Difluorobenzene (surrogate)	100.%	1	70-114	
Trifluorotoluene (surrogate)	97.%	1	64-118	

Notes:

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: August 1, 1997 Monika Santucci



O'BRIEN & GERE
ENGINEERS, INC.

Job No. 5618.010

Sheet 1 of 1

Office: Syracuse
Address: _____
Phone: _____

CHAIN OF CUSTODY

4588

CLIENT: <u>SMC</u>			COLLECTED BY: <u>David J Carnevale</u>			
LOCATION: <u>Skaneateles Falls</u>			(Signature) <u>David J Carnevale</u>			
SAMPLE DESCRIPTION	Date	Time	Sample Matrix ¹	Sample Type ²	No. of Containers	ANALYSIS REQUESTED
<u>PTP-13 -1</u>	<u>7/24/97</u>	<u>0800</u>	<u>Soil</u>	<u>Grab</u>	<u>2</u>	<u>VOC(91-1) SVOC(91-2)</u>
<u>PTP-13 -2</u>		<u>0920</u>				
<u>PTP-14</u>		<u>1140</u>				
<u>PTP-15</u>		<u>1315</u>				
<u>VPTP-16</u>		<u>1500</u>				
<u>VPTP-17</u>		<u>1600</u>				
<u>Tripp Blank</u>	<u>7/24/97</u>		<u>Water</u>	<u>Grab</u>	<u>1</u>	<u>VOC(91-1)</u>
<u>Field Duplicate</u>	<u>7/24/97</u>	<u>—</u>	<u>Soil</u>	<u>Grab</u>	<u>2</u>	<u>VOC(91-1) SVOC(91-2)</u>
<u>Use methods 95-1 and 95-2 per test weight. (m)</u>						

Held for analysis until notified

¹ Matrix = water, wastewater, air, sludge, sediment, etc.
² Type = grab, composite

Relinquished by: <u>David J Carnevale</u>	Date	Time	Received by: _____	Date	Time
<u>Engineers</u>	<u>7/25/97</u>	<u>0700</u>	of: _____		
Relinquished by: _____	Date	Time	Received by: _____	Date	Time
			of: _____		
Relinquished by: _____	Date	Time	Received by: _____	Date	Time
			of: _____		
Use this space if shipped via courier (e.g., Fed Ex)	Date	Time	Courier Name: _____	Date	Time
Relinquished by: _____					
			*Attach delivery/courier receipt to Chain of Custody		
Relinquished by: _____	Date	Time	Received by: <u>David F. [unclear]</u>	Date	Time
			of: <u>O'Brien & Gere Laboratories</u>	<u>7/25/97</u>	<u>27:00</u>

wpC

Cooler temp 40°C

Wetland delineation report

REPORT

**Wetland Delineation Report
Skaneateles Falls, New York**

**Stauffer Management Company
Wilmington, Delaware**

October 1997

REPORT

**Wetland Delineation Report
Skaneateles Falls, New York**

*Stauffer Management Company
Wilmington, Delaware*

James R. Heckathorne, P.E.
Vice President

October 1997



5000 Brittonfield Parkway
Syracuse, New York 13221

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1. Introduction

1.1. Methodology

This report presents the results of a wetland delineation performed by O'Brien & Gere Engineers, Inc. on July 16, 17, and 18, 1997 at the Stauffer Management Company (SMC) Site located in Skaneateles Falls, New York (Figure 1-1). The purpose of the wetland delineation was to locate the boundaries of federally regulated wetlands on the property to evaluate whether wetlands could be impacted by remedial activities at the site. The wetland/upland boundaries were identified in accordance with the *Army Corps of Engineers Wetlands Delineation Manual* (ACOE Manual)(ACOE, 1987), the currently accepted federal methodology. The federal methodology requires three criteria to be met for an area to be identified as a wetland: a dominance of hydrophytic vegetation, the presence of hydric soils, and the presence of wetland hydrology. Descriptions of the three federal criteria are presented in the following subsections.

1.2. Hydrophytic vegetation criterion

Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present (ACOE, 1987). The U.S. Fish and Wildlife Service (USFWS) has published the *National List of Plant Species That Occur in Wetlands* (USFWS, 1988) which separates vascular plants into five categories based on their wetland indicator status:

Table 1-1. Vascular plant categories based on wetland indicator status.

Category	Probability of Occurrence in Wetland
Obligate Wetland (OBL)	>99%
Facultative Wetland (FACW)	67% - 99%
Facultative (FAC)	34% - 66%
Facultative Upland (FACU)	1% - 33%
Upland (UPL)	<1%
Source: USFWS (1988)	

A plant species is considered hydrophytic if it is classified as either OBL, FACW, or FAC. A dominance of hydrophytic vegetation requires more than 50% of the vegetation in an area be hydrophytic.

In accordance with the ACOE Manual, observations on vegetation focused on dominant plant species in four categories: trees (≥ 3 " diameter at breast height), saplings/shrubs (< 3 " diameter and $> 3.2'$ tall), herbs, and woody vines.

1.3. Hydric soil criterion

A hydric soil is defined by the National Technical Committee for Hydric Soils as a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation (ACOE, 1987). In general, hydric soils are flooded, ponded, or saturated for usually one week or more during the period when soil temperatures are above biologic zero (41° F). These soils usually support hydrophytic vegetation.

The U.S. Department of Agriculture Natural Resource Conservation Service (NRCS)(formerly the Soil Conservation Service [SCS]) maps soil types throughout the United States and develops county specific lists of hydric soils within each state. The mapping provides regional indications of soil types and may not have sufficient resolution to identify small areas of differing soil types in a larger region. Therefore, soil characteristics must be evaluated on site to evaluate whether or not the soils on site are

as mapped, and whether or not the site soil exhibits hydric characteristics which qualify it as a hydric soil.

1.4. Hydrology criterion

Wetland hydrology consists of permanent or periodic inundation, or soil saturation to the surface, at some time during the growing season where the presence of water has an overriding influence on characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively (ACOE, 1987). The presence of water for a week or more during the growing season typically creates anaerobic conditions in the soil that affects the types of plants that can grow and the types of soils that develop. Factors that influence the wetness of an area include precipitation, stratigraphy, topography, soil permeability, and plant cover. All wetlands usually have at least a seasonal abundance of water resulting from direct precipitation, overbank flooding, surface water runoff, ground water discharge, ground water levels, or tidal flooding. Wetland hydrology is often the least exact of the wetland criteria and is the most difficult to establish in the field due to annual, seasonal, and daily fluctuations.

Wetland Delineation Report

2. Wetland delineation

2.1. Methodology

Site characteristics were evaluated for indicators of the three federal wetland criteria using Level 3 of the Routine Determination Method outlined in the ACOE Manual. Routine determinations involve simple, rapidly applied methods that result in sufficient qualitative data for determining wetland and upland areas. Level 3 of the Routine Determination Method is a combination of off-site data review and on-site inspection. Off-site activities were conducted to gather and evaluate available regional environmental information for the site. On-site activities consisted of collecting field data regarding vegetation, soils and hydrology to identify and delineate wetland boundaries. Field data were gathered in sample plots representing potential wetland areas and corresponding adjacent upland areas. Results of wetland delineation efforts are presented in the following sections.

2.2. Off-site investigation

2.2.1. Information sources

The off-site determination procedure consisted of reviewing background site information obtained from the USFWS and the NRCS. The USFWS has prepared National Wetland Inventory (NWI) Maps for the majority of the United States. The NWI maps present classifications of wetlands using alphabetical and numerical designations developed by Lewis M. Cowardin (Cowardin *et al.*, 1979) for the USFWS which describe hydrologic and vegetative characteristics of the wetland. The NWI maps present wetland boundaries on topographic maps based on USFWS wetland criteria established as an indicator of waterfowl production areas. NWI wetlands are not intended for federal regulatory purposes, but do provide an indication of potential federal wetland locations.

2.2.2. National wetland inventory map review

Figure 2-1 presents the locations of NWI wetlands in relation to the site. As shown, the NWI Map indicates three potential wetland areas on the site. These wetlands are classified as follows:

- PSS1E - palustrine, scrub-shrub, broad-leaved deciduous,
- PFO1A - palustrine, forested, broad-leaved deciduous, temporarily flooded
- PEM1E - palustrine, emergent, persistent, seasonally flooded/saturated

2.2.3. Onondaga County soil survey review

Potential soil series designations for site soils were identified from the Soil Survey for Onondaga County, NY (SCS, 1973). The mapped soils of the consisted of Aurora silt loam (AwC); Aurora-Farmington-Rock outcrop association (AXE); Cazenovia silt loam (CfB, CfC); fluvaquents (FL); Honeoye, Lansing and Ontario (THE); Made Land (M.L.); Mohawk silt loam (MwB); Ovid silt loam (OvA); and Teel silt loam (TE)(Figure 2-2). Of these soils, only the fluvaquents is listed as a hydric soil in New York State (SCS, 1989).

2.3. On-site evaluation

2.3.1. Methodology

The wetland/upland boundary of site wetlands were identified by evaluating the observed physical site characteristics against the federal wetland criteria. Discussions of the site characteristics that were used to identify the wetland boundaries are presented below.

2.3.2. Hydrophytic vegetation evaluation

Dominant vegetation of the plant communities in the wetland areas was identified and evaluated for national wetland indicator status. Areas that contained a dominance (greater than 50%) of hydrophytic vegetation met the federal vegetation criterion for wetlands. Several areas on the site were found to be dominated by hydrophytic vegetation, including the area designated on the NWI Map as PFO1A (Figure 2-1). The areas dominated by hydrophytic vegetation were further evaluated for hydric soils and wetland hydrology for wetland determinations.

The area designated on the NWI Map as PEM1E was found not to be dominated by hydrophytic vegetation. This area is currently dominated by *Urtica procera* (Tall Nettle), which is not a hydrophytic plant species. This area had been flooded in the past as a result of a dam on Skaneateles Creek. Once the dam was removed (date unknown), the wetland hydrology was eliminated and the current vegetation is the result of the drier conditions. Therefore, under current conditions, this area was concluded not to be a wetland because of the absence of hydrophytic vegetation.

2.3.3. Hydric soil evaluation

The presence of hydric soils was evaluated by observing soil characteristics within 12-inches of the surface in areas dominated by hydrophytic vegetation or mapped as having fluvaquent soils. Soil characteristics were evaluated from bore holes excavated with a Dutch auger. Characteristics of soil texture and colors, mottle presence and colors, soil saturation depth, and depth to the water table were evaluated. Areas that were dominated by hydrophytic vegetation and contained hydric soils were further evaluated for wetland hydrology characteristics for wetland determinations.

2.3.4. Wetland hydrology evaluation

The site areas dominated by hydrophytic vegetation and containing hydric soils were examined for field indicators of wetland hydrology. Indicators used to evaluate hydrology included evidence of ground surface inundation, evidence of soil saturation within twelve inches of the ground surface, and/or standing water within the borehole. The lack of rainfall in the summer of 1997, which lowered the water table elevation and did not replenish perched water, was taken into account during the evaluation of site hydrology characteristics. Two areas of the site that met the

vegetation and soil criteria were found to have indicators of wetland hydrology. These areas are discussed in the following section.

2.4. Wetland boundary determination

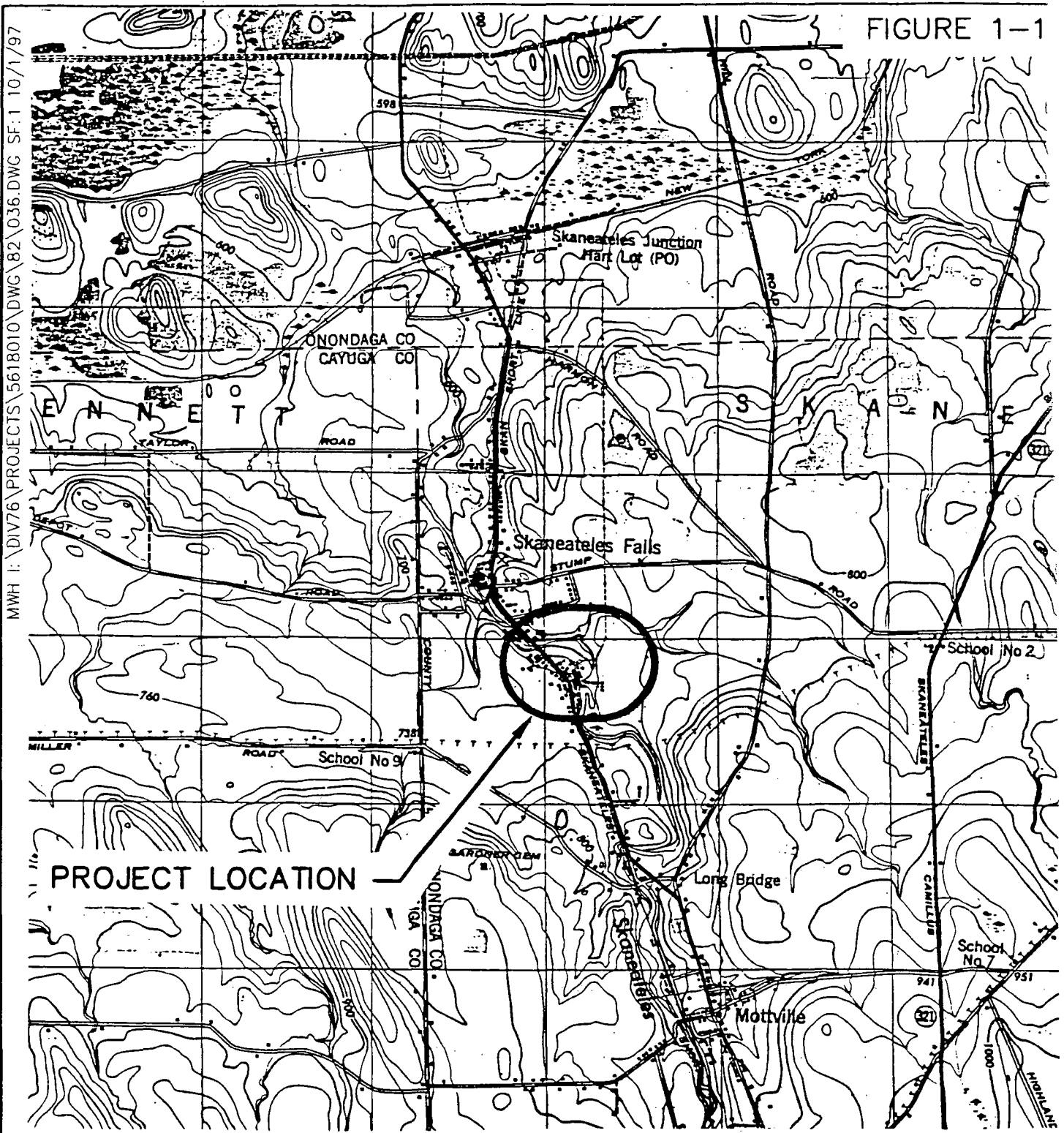
The data collected from the site sample plots regarding the vegetation, soil, and hydrology were evaluated to identify site wetlands. Vegetation, soil characteristics, and hydrology indicators were documented at the wetland/upland boundary and additional evaluations were performed, as required, to refine the boundary location during its identification. Field data sheets documenting observed characteristics are presented in Appendix A. The approximate locations of the evaluation sites that were used to document the site characteristics resulting in wetland determinations are presented on Figure 2-3. The identified wetland boundaries were flagged with surveyor's tape at the time of the delineation and were surveyed by C.T. Male Associates P.C., a New York State licensed surveyor. Surveyed locations of delineated wetlands are shown on Figure 2-3.

The first wetland is located off the southwestern corner of the landfill. This area is supplied water from landfill runoff through a drainage ditch and also drains other surrounding areas due to its lower elevation than the surrounding areas. Vegetation was dominated by hydrophytic species and soil colors indicated hydric characteristics. Although no inundation or soil saturation was observed within 12 inches of the ground surface at the time of the delineation, sufficient indicators were observed to conclude the presence of wetland hydrology. A photograph of this wetland is presented in Figure 2-4.

The second wetland area is located north of the main plant building, adjacent to the western bank of Skaneateles Creek. Vegetation and soil characteristics of this area met the federal criteria. Hydrology to this wetland was supplied by a culvert under Jordan Road. A berm between the wetland and Skaneateles Creek prevented connection of the wetland to the Creek. A photograph of this wetland is presented in Figure 2-5.

References

- Cowardin, Lewis, M., Virginia Carter, Francis C. Golet, and Edward T. LaRoe. 1980. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service. Office of Biological Services, Washington D.C.
- Soil Conservation Service (SCS) 1971. Soil Survey of Onondaga County, New York. U.S. Department of Agriculture, Washington, D.C. October 1971.
- Soil Conservation Service (SCS) 1989. Onondaga County, New York List of Hydric Soil Map Units. U.S. Department of Agriculture, Washington, D.C.
- U.S. Army Corps of Engineers (ACOE) 1987. "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, MS.
- U.S. Fish and Wildlife Service (USFWS) 1988. National List of Plant Species That Occur in Wetlands. U.S. Department of the Interior, Fish and Wildlife Service. Biological Report May 1988.

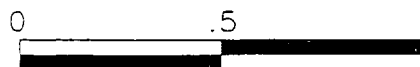


ADAPTED FROM 7.5 MIN. U.S.G.S. SKANEATELES QUAD MAP, SKANEATELES, NEW YORK



STAUFFER MANAGEMENT COMPANY
SKANEATELES FALLS, NEW YORK
WETLAND DELINEATION REPORT

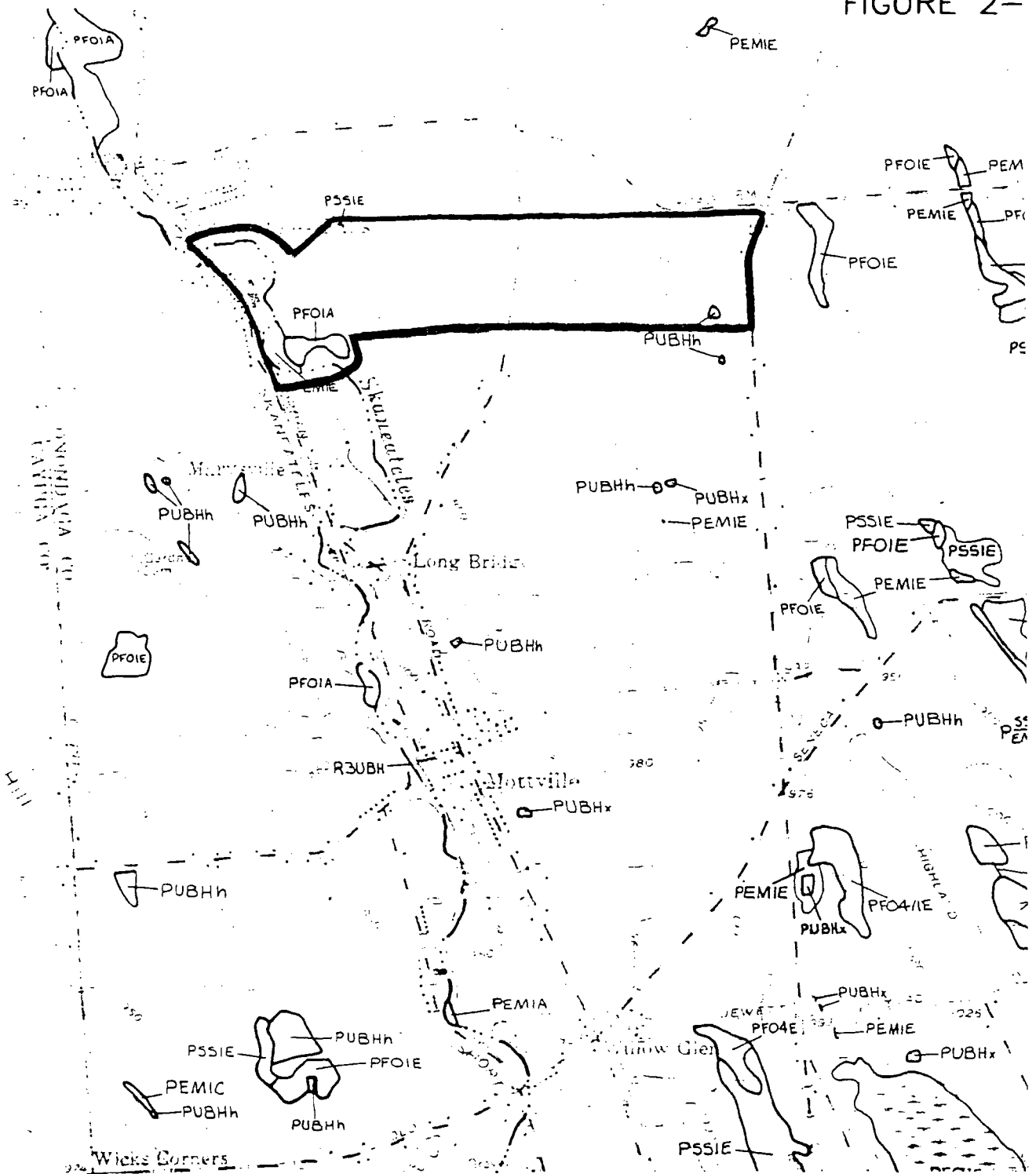
PROJECT LOCATION MAP



SCALE IN MILES

FIGURE 2-

MWH I:\DIV76\PROJECTS\5618010\DWG\82\037.DWG SF:1 10/1/97



SOURCE: USFWS NWI SKANEATELES, NY.

STAUFFER MANAGEMENT COMPANY
SKANEATELES FALLS, NEW YORK
WETLAND DELINEATION REPORT

NATIONAL WETLAND INVENTORY MAP

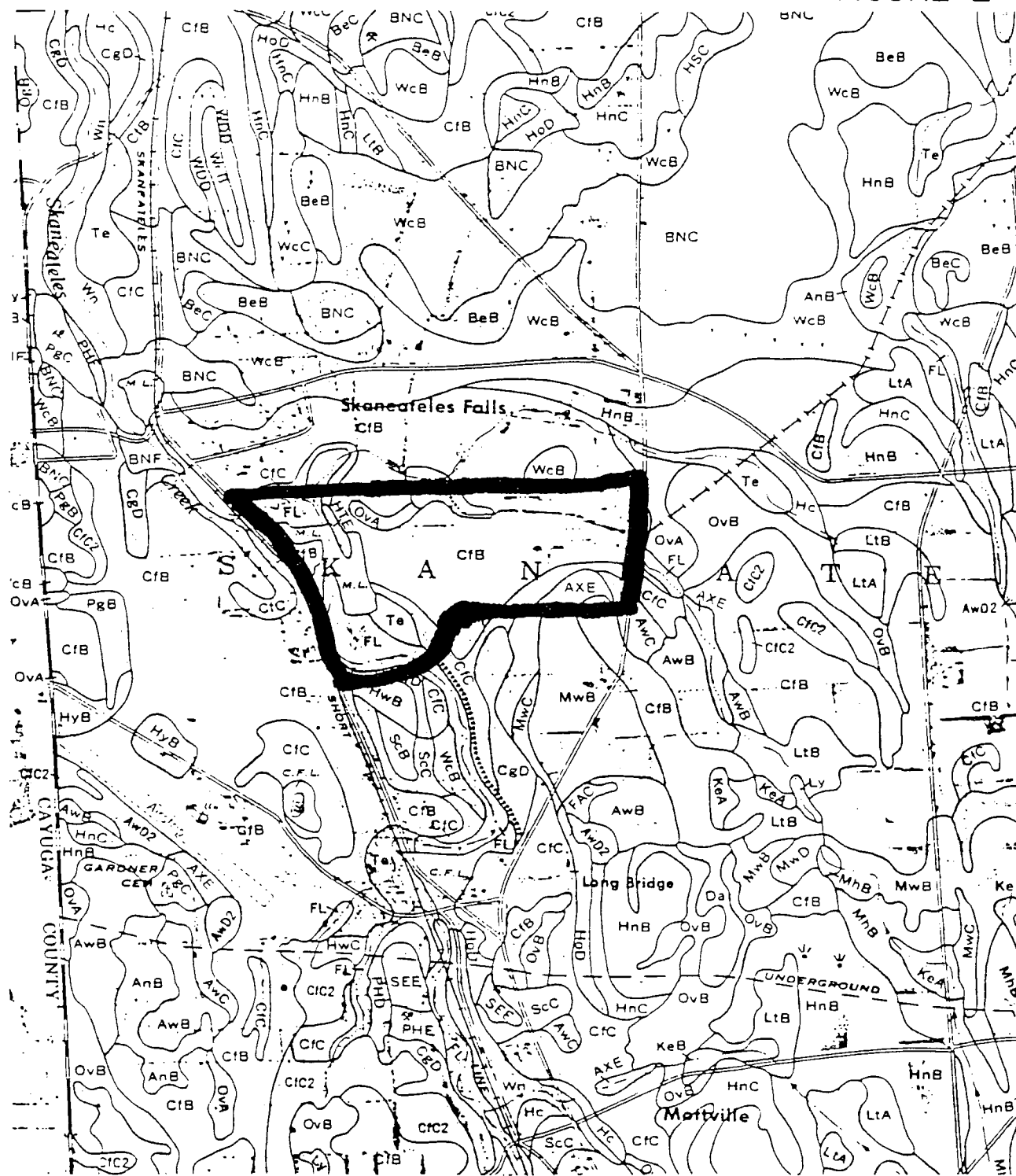
0 2000 4000

APPROX. SCALE IN FEET

FILE NO. 5618.010-037

O'BRIEN & GORE
ENGINEERS

FIGURE 2-



SOURCE: USDA SCS SOIL SURVEY OF ONONDAGA COUNTY, NY 1973

STAUFFER MANAGEMENT COMPANY
SKANEATELES FALLS, NEW YORK
WETLAND DELINEATION REPORT

SOIL SURVEY MAP

0 2000 4000



APPROX. SCALE IN FEET

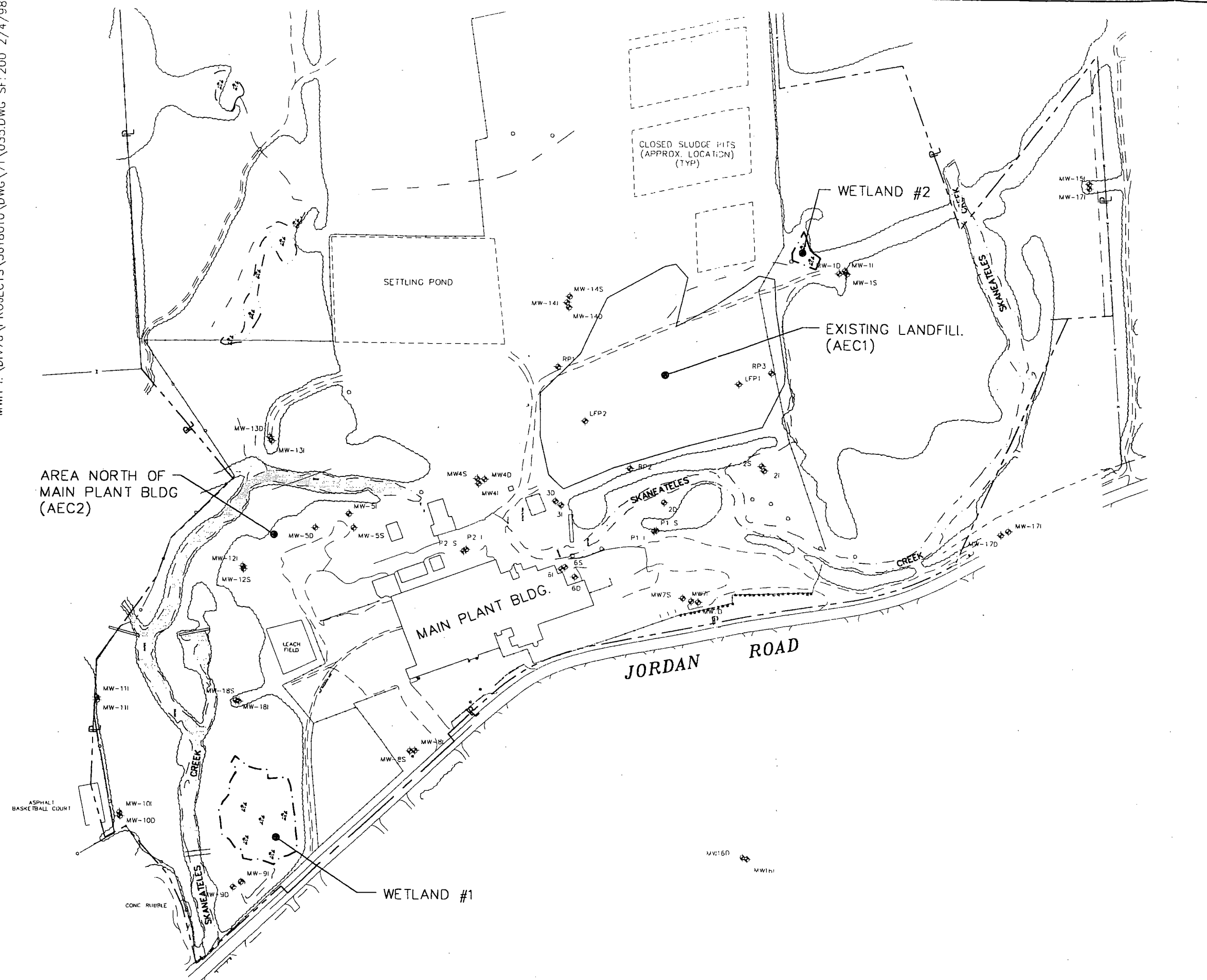


FIGURE 2-3

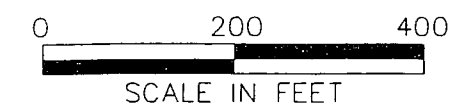


LEGEND

-
- MW- 151
 MONITORING WELL
 — P —
 PROPERTY LINE
 — — —
 LIMITS OF CREEK
 — — —
 SWALE
 * — * — *
 FENCE
 = = = =
 GRAVEL ROAD
 (*)
 WETLAND AREA

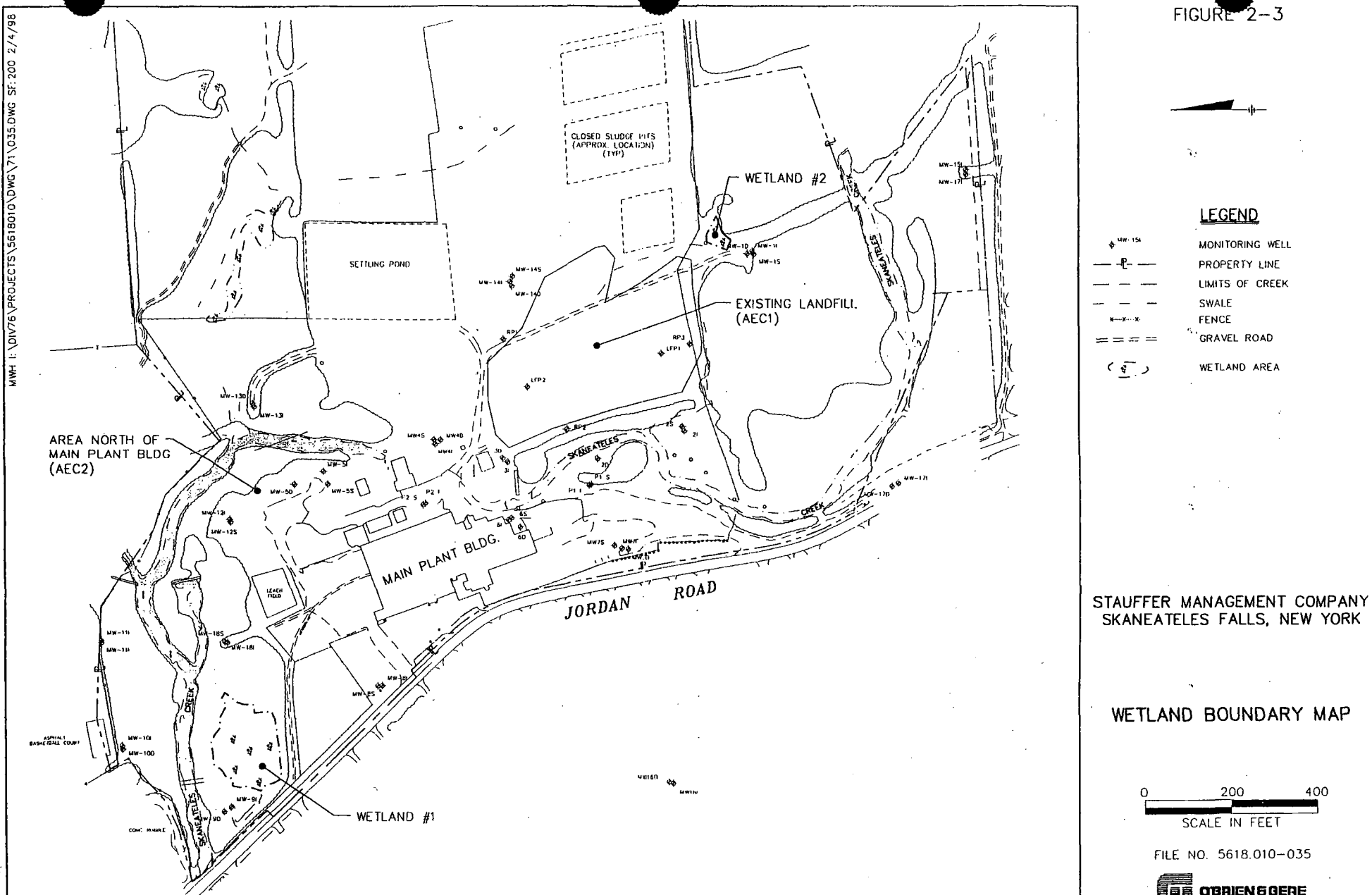
STAUFFER MANAGEMENT COMPANY
SKANEATELES FALLS, NEW YORK

WETLAND BOUNDARY MAP



FILE NO. 5618.010-035

FIGURE 2-3





STAUFFER MANAGEMENT COMPANY SITE
SKANEATELES FALLS, NEW YORK
WETLAND DELINEATION REPORT

WETLAND #1 PHOTOGRAPH



STAUFFER MANAGEMENT COMPANY SITE
SKANEATELES FALLS, NEW YORK
WETLAND DELINEATION REPORT

WETLAND #2 PHOTOGRAPH

Appendix A

Completed wetland determination data forms

DATA FORM 1
WETLAND DETERMINATION

Applicant: Stauffer Management Co Application Number: _____ Project Name: Stauffer
State: NY County: Oran Legal Description: _____ Township: _____ Range: _____
Date: 7/16/97 Plot No.: 1W Section: _____

Vegetation [list the three dominant species in each vegetation layer (5 if only 1 or 2 layers)]. Indicate species with observed morphological or known physiological adaptations with an asterisk.

<u>Species</u>	<u>Indicator Status</u>	<u>Species</u>	<u>Indicator Status</u>
<u>Trees</u>		<u>Herbs</u>	
1. <u>Green Ash</u>	<u>FACW</u>	7. <u>Reed Canary Grass</u>	<u>FACW+</u>
2. _____		8. _____	
3. _____		9. _____	
<u>Saplings/shrubs</u>		<u>Woody vines</u>	
4. _____		10. _____	
5. _____		11. _____	
6. _____		12. _____	

% of species that are OBL, FACW, and/or FAC: 100%. Other indicators: none.
Hydrophytic vegetation: Yes ☒ No ☐ Basis: 100%

Soil

Series and phase: Fluvaquents On hydric soils list? Yes ☒; No ☐
Mottled: Yes ☒; No ☐. Mottle color: 10YR 4/4; Matrix color: 10YR 3/2.
Gleyed: Yes ☐ No ☒ Other indicators: _____
Hydric soils: Yes ☒ No ☐; Basis: low chroma with mottles

Hydrology

Inundated: Yes ☐; No ☒. Depth of standing water: 0.
Saturated soils: Yes ☐; No ☒. Depth to saturated soil: >12".
Other indicators: flood plain, water stained leaves, drainage patterns.
Wetland hydrology: Yes ☒; No ☐. Basis: indicators.
Typical situation: Yes ☐; No ☒.
Normal Circumstances? Yes ☒ No ☐.
Wetland Determination: Wetland ☒; Nonwetland ☐.

Comments:

DATA FORM 1
WETLAND DETERMINATION

Applicant Name: Staffer Management Co Application Number: _____ Project Name: Skaneateles Falls
State: NY County: Oran Legal Description: _____ Township: _____ Range: _____
Date: 7/16/97 Plot No.: 1D Section: _____

Vegetation [list the three dominant species in each vegetation layer (5 if only 1 or 2 layers)]. Indicate species with observed morphological or known physiological adaptations with an asterisk.

<u>Species</u>	<u>Indicator Status</u>	<u>Species</u>	<u>Indicator Status</u>
<u>Trees</u>			
• Sugar Maple	FACU	<u>Herbs</u>	
• Basswood	FACU	7. Poison Ivy	FAC
• Alternate leaf dogwood		8. Cinquefoil	FACU
		9. Enchanters nightshade	FACU
<u>Saplings/shrubs</u>			
• Alternate leaf dogwood	NI	<u>Woody vines</u>	
• Unknown shrub		10.	
		11.	
		12.	

of species that are OBL, FACW, and/or FAC: 29. Other indicators: None.
Hydrophytic vegetation: Yes _____ No ✓. Basis: < 50%.

Soil
Series and phase: Fluvaquents On hydric soils list? Yes ✓; No _____.
Mottled: Yes _____; No ✓. Mottle color: _____; Matrix color: 10YR 2/2.
Layered: Yes _____ No ✓ Other indicators: None.
Hydric soils: Yes _____ No ✓; Basis: no mottles with low chroma.

Hydrology
Flooded: Yes _____; No ✓. Depth of standing water: 0.
Saturated soils: Yes _____; No ✓. Depth to saturated soil: > 12".
Other indicators: none.
Wetland hydrology: Yes _____; No ✓. Basis: no indicators.
Typical situation: Yes _____; No ✓.
Normal Circumstances? Yes ✓ No _____.
Wetland Determination: Wetland _____; Nonwetland ✓.
Comments: _____

DATA FORM 1
WETLAND DETERMINATION

Applicant: Stauffer Management Co. Application Number: _____ Project Name: Skaneateles Falls
State: NY County: Onen Legal Description: _____ Township: _____ Range: _____
Date: 7/16/97 Plot No.: 1112-W Section: _____

Vegetation [list the three dominant species in each vegetation layer (5 if only 1 or 2 layers)]. Indicate species with observed morphological or known physiological adaptations with an asterisk.

<u>Species</u>	<u>Indicator Status</u>	<u>Species</u>	<u>Indicator Status</u>
<u>Trees</u>		<u>Herbs</u>	
1. Willow sp	FAC-OBL	7. Reed Canary Grass	FACW+
2.		8. Goldenrod spp.	OBL-FACU
3.		9.	
<u>Saplings/shrubs</u>		<u>Woody vines</u>	
4. Quaking Aspen	FACU	10.	
Willow	FAC-OBL	11.	
5. Box elder	FAC+	12.	
Ash, green	FACW		
2 of species that are OBL, FACW, and/or FAC: <u>86</u> . Other indicators: _____.			
Hydrophytic vegetation: Yes ☒ No ☐ Basis: <u>750%</u>			

Soil

Series and phase: Teal silt loam On hydric soils list? Yes _____; No ☒.
Mottled: Yes _____; No ☒. Mottle color: _____; Matrix color: 10YR 3/2
Gleyed: Yes _____ No ☒ Other indicators: fluviogyps, low chroma
Hydric soils: Yes _____ No _____; Basis: _____

Hydrology

Inundated: Yes _____; No ☒. Depth of standing water: _____.
Saturated soils: Yes _____; No ☒. Depth to saturated soil: 7/2"
Other indicators: drainage patterns, previous observations of inundation
Wetland hydrology: Yes ☒; No _____. Basis: see above
Typical situation: Yes _____; No ☒.
Normal Circumstances? Yes ☒ No _____.
Wetland Determination: Wetland ☒; Nonwetland _____.

Comments:

DATA FORM 1
WETLAND DETERMINATION

Applicant: Stauffer Management Company Application Number: _____ Project Name: Skaneateles Falls Stauffer
 State: NY County: Onondaga Legal Description: _____ Township: _____ Range: _____
 Date: 7/16/97 Plot No.: W2-D Section: _____

Vegetation [list the three dominant species in each vegetation layer (5 if only 1 or 2 layers)]. Indicate species with observed morphological or known physiological adaptations with an asterisk.

<u>Species</u>	<u>Indicator Status</u>	<u>Species</u>	<u>Indicator Status</u>
<u>Trees</u>		<u>Herbs</u>	
.		7. Blackberries, common	FACU-
.		8. Poison Ivy	FAC
.		9. Goldenrod	OBL-FACU
		Thistle	
<u>Saplings/shrubs</u>		<u>Woody vines</u>	
. Dogwood, gray	NI	10. Wild Grapes, summer	FACU
. Box elder	FAC+	11. Northern bedstraw	FACU
.		12.	

Percent of species that are OBL, FACW, and/or FAC: 43%. Other indicators: _____
 Hydrophytic vegetation: Yes _____ No ✓. Basis: < 50%

Soil
 Series and phase: Teel silt loam On hydric soils list? Yes _____; No ✓.
 Bottled: Yes _____; No ✓. Mottle color: _____; Matrix color: 10YR 4/4
 Layered: Yes _____ No ✓ Other indicators: None
 Hydric soils: Yes _____ No ✓; Basis: high chroma, not on list

Hydrology
 Flooded: Yes _____; No ✓. Depth of standing water: 0"
 Saturated soils: Yes _____; No ✓. Depth to saturated soil: > 18"
 Other indicators: None
 Wetland hydrology: Yes _____; No ✓. Basis: No hydrology indicators
 Typical situation: Yes _____; No ✓.
 Normal Circumstances? Yes ✓ No _____
 Wetland Determination: Wetland _____; Nonwetland X
 Comments: _____

DATA FORM 1
WETLAND DETERMINATION

Applicant: Stauffer Management Co Application Number: _____ Project Name: Skawatch Falls
State: NY County: Oneida Legal Description: _____ Township: _____ Range: _____
Date: 8/19/97 Plot No.: 3 Section: PFO1

Vegetation [list the three dominant species in each vegetation layer (5 if only 1 or 2 layers)]. Indicate species with observed morphological or known physiological adaptations with an asterisk.

<u>Species</u>	<u>Indicator Status</u>	<u>Species</u>	<u>Indicator Status</u>
<u>Trees</u>		<u>Herbs</u>	
1. Green Ash	FACW	7. poison ivy	FAC
2. Black cherry	FACU	8. tall nettle	FACU
3. American Elm	FACW-	9. moneywort	OBL
<u>Saplings/shrubs</u>		<u>Woody vines</u>	
4. Buckthorn	FAC	10. Virginia creeper	FACU
5. Red Raspberry	FAC-	11. Indian Strawberry	FACU-
6. Green Ash	FACW	12.	

% of species that are OBL, FACW, and/or FAC: 64. Other indicators: _____
Hydrophytic vegetation: Yes ☒ No ☐ Basis: >50%

2.5Y 3/2 0-4" some clay no mottle

Soil
Series and phase: Fluvaquents On hydric soils list? Yes ☒; No ☐
Mottled: Yes ☐; No ☒. Mottle color: 10YR 4/6; Matrix color: 5Y 4/4
Gleyed: Yes ☐ No ☒ Other indicators: _____
Hydric soils: Yes ☐ No ☒; Basis: bright chroma, unsaturated
brown silt beneath 4" clay layer

Hydrology
Inundated: Yes ☐; No ☒. Depth of standing water: 0
Saturated soils: Yes ☐; No ☒. Depth to saturated soil: >18"
Other indicators: none
Wetland hydrology: Yes ☐; No ☒. Basis: no indicators
Typical situation: Yes ☐; No ☒
Normal Circumstances? Yes ☒ No ☐

Wetland Determination: Wetland _____; Nonwetland ☒

Comments:

DATA FORM 1
WETLAND DETERMINATION

Applicant Name: Stauffer Management Co Application Number: _____ Project Name: Skaneateles Falls
 State: NY County: Oran Legal Description: _____ Township: _____ Range: _____
 Date: 8/19/97 Plot No.: 4 Section: PEMIE

Vegetation [list the three dominant species in each vegetation layer (5 if only 1 or 2 layers)]. Indicate species with observed morphological or known physiological adaptations with an asterisk.

<u>Species</u>	<u>Indicator Status</u>	<u>Species</u>	<u>Indicator Status</u>
<u>Trees</u>		<u>Herbs</u>	
1. <u>Aspen</u>	<u>FACU</u>	7. <u>Poison ivy</u>	<u>FAC</u>
2. _____		8. <u>Virginia Creeper</u>	<u>FACU</u>
3. _____		9. _____	
<u>Saplings/shrubs</u>		<u>Woody vines</u>	
4. <u>Hawthorn</u>	<u>FACU</u>	10. <u>Grape</u>	<u>FACU</u>
5. <u>Buckthorn</u>	<u>FAC</u>	11. _____	
6. <u>Green Ash</u>	<u>FACW</u>	12. _____	

of species that are OBL, FACW, and/or FAC: 43. Other indicators: _____
 hydrophytic vegetation: Yes _____ No ✓. Basis: <50%

Soil
 Series and phase: Fluvaquents On hydric soils list? Yes ✓; No _____
 Mottled: Yes _____; No ✓. Mottle color: No; Matrix color: 7.5YR 3/2
 Layered: Yes _____ No ✓ Other indicators: None
 Hydric soils: Yes _____ No ✓; Basis: No indicators

Hydrology
 Flooded: Yes _____; No ✓. Depth of standing water: 0
 Saturated soils: Yes _____; No ✓. Depth to saturated soil: >18"
 Other indicators: None
 Wetland hydrology: Yes _____; No ✓. Basis: No indicators
 Typical situation: Yes _____; No ✓
 Normal Circumstances? Yes ✓ No _____
 Wetland Determination: Wetland _____; Nonwetland ✓
 Comments: _____

DATA FORM 1
WETLAND DETERMINATION

Applicant: Stauffer Management Co Application Number: _____ Project Name: Skaneateles Lake
State: NY County: Onondaga Legal Description: _____ Township: _____ Range: _____
Date: 7/16/97 Plot No.: Floodplain Area Section: _____

Vegetation [list the three dominant species in each vegetation layer (5 if only 1 or 2 layers)]. Indicate species with observed morphological or known physiological adaptations with an asterisk.

<u>Species</u>	<u>Indicator Status</u>	<u>Species</u>	<u>Indicator Status</u>
<u>Trees</u>		<u>Herbs</u>	
1. <u>Tall Nettle</u>	<u>FACU</u>	7. <u>Tall Nettle</u>	<u>FACU</u>
2. _____		8. <u>reed Canary Grass</u>	<u>FACW</u>
3. _____		9. _____	
<u>Saplings/shrubs</u>		<u>Woody vines</u>	
4. _____		10. _____	
5. _____		11. _____	
6. _____		12. _____	

% of species that are OBL, FACW, and/or FAC: 33%. Other indicators: None.
Hydrophytic vegetation: Yes _____ No ✓. Basis: <50%.

Soil

Series and phase: Fluvaquents On hydric soils list? Yes ✓; No _____.
Mottled: Yes ✓; No _____. Mottle color: 2.5Y 6/8; Matrix color: 2.5Y 3/2.
Gleyed: Yes _____ No ✓ Other indicators: _____.
Hydric soils: Yes ✓ No _____. Basis: low chroma w/ mottles.

Hydrology

Inundated: Yes _____; No ✓. Depth of standing water: 0.
Saturated soils: Yes _____; No ✓. Depth to saturated soil: >18".
Other indicators: none.
Wetland hydrology: Yes _____; No ✓. Basis: no indicators.
Typical situation: Yes _____; No ✓.
Normal Circumstances? Yes ✓ No _____.
Wetland Determination: Wetland _____; Nonwetland ✓.

Comments:

Emissions evaluation

1 ISCS3 - (DATED 97363)

IBM-PC (16 BIT) VERSION (3.14) ISCS3R
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Run Began on 9/17/1998 at 14:25:27

-- BREEZE AIR SUITE (ISCS3) - C:\TEMP\SKAN2-88.DAT
-- Trinity Consultants Incorporated, Dallas, TX

CO STARTING
CO TITLEONE Skaneateles Falls - Impacts During Construction Activities
CO TITLETWO Landfill Area
CO MODELOPT DFAULT CONC RURAL
CO AVERTIME 1
CO POLLUTID OTHER
CO TERRHGT5 FLAT
CO RUNORNOT RUN
CO FINISHED

SO STARTING
SO ELEVUNIT METERS
SO LOCATION A1 AREA -235.6 -177.5 0
SO SRCPARAM A1 1.000000E-03 0 165.2 44.96 63 0
SO SRCGROUP ALL
SO FINISHED

RE STARTING
-- BOUNDARY
RE DISCCART 863.0 918.0
RE DISCCART 480.0 872.0
RE DISCCART 18.0 821.0
RE DISCCART -198.0 618.0
RE DISCCART -332.0 738.0
RE DISCCART -415.0 884.0
RE DISCCART -591.0 879.0
RE DISCCART -858.0 884.0
RE DISCCART -969.0 853.0
RE DISCCART -951.0 800.0
RE DISCCART -1041.0 715.0
RE DISCCART -1243.0 618.0
RE DISCCART -1205.0 582.0
RE DISCCART -1158.0 577.0
RE DISCCART -1071.0 467.0
RE DISCCART -734.0 150.0
RE DISCCART -545.0 -60.0
RE DISCCART -508.0 -210.0
RE DISCCART -480.0 -328.0
RE DISCCART -451.0 -464.0
RE DISCCART -428.0 -582.0
RE DISCCART -406.0 -692.0
RE DISCCART -328.0 -877.0
RE DISCCART -151.0 -942.0
RE DISCCART -115.0 -997.0
RE DISCCART 194.0 -1036.0
RE DISCCART 203.0 -1172.0
RE DISCCART 738.0 -1117.0
RE DISCCART 369.0 -849.0
RE DISCCART 710.0 -714.0
RE DISCCART 654.0 -462.0
RE DISCCART 914.0 -439.0
RE FINISHED

ME STARTING
ME INPUTFIL C:\METDATA\NYSYRBUF88.BIN UNFORM
ME ANEMHGHT 10.0 METERS
ME SURFDATA 14771 1988
ME UAIRDATA 14733 1988
ME STARTEND 1988 01 01 1 1988 12 31 24
ME FINISHED

OU STARTING
OU RECTABLE 1 FIRST
OU MAXTABLE 1 365
OU FINISHED

*** SETUP Finishes Successfully ***

*** ISCST3 - VERSION 97363 *** *** Skaneateles Falls - Impacts During Construction Activities *** 09/17/98
*** Landfill Area *** 14:25:27

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**MODELOPTs: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

**Model Is Setup For Calculation of Average CONCentration Values

-- SCAVENGING/DEPOSITION LOGIC --

**Model Uses NO DRY DEPLETION: DDPLETE = F

**Model Uses NO WET DEPLETION: WDPLETE = F

**NO WET SCAVENGING Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:

1. Final Plume Rise
2. Slack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 1 Short Term Average(s) of: 1-HR

**Thus Run Includes: 1 Source(s); 1 Source Group(s); and 32 Receptor(s)

**The Model Assumes A Pollutant Type of: OTHER

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:

Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)

Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours

m for Missing Hours

b for Both Calm and Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = .0000 ; Rot. Angle = .0

Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = .10000E+07

Output Units = MICROGRAMS/M**3

**Input Runstream File: C:\TEMP\SKAN2-88.DAT ; **Output Print File: C:\TEMP\SKAN2-88.LST

***ISCST3 - VERSION 97363 *** *** Skaneateles Falls - Impacts During Construction Activities *** 09/17/98
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**MODELOPTs CONC RURAL FLAT DFAULT

*** AREA SOURCE DATA ***

NUMBER EMISSION RATE COORD (SW CORNER) BASE RELEASE X-DIM Y-DIM ORIENT INIT. EMISSION RATE
SOURCE PART (GRAMS/SEC X Y ELEV HEIGHT OF AREA OF AREA OF AREA SZ SCALAR VARY
ID CATS /METER**2) (METERS)(METERS)(METERS)(METERS)(METERS) (DEG.) (METERS) BY

A1 0 10000E-02 -235.6 -177.5 0 .00 165.20 44.96 63.00 00

*** ISCST3 - VERSION 97363 *** *** Skaneateles Falls - Impacts During Construction Activities *** 09/17/98
*** Landfill Area *** 14.25.27

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**MODELOPTs CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

ALL AI

**MODELOPTs CONC RURAL FLAT DFAULT

*** DISCRETE CARTESIAN RECEPTORS ***
 (X-COORD, Y-COORD, ZELEV, ZFLAG)
 (METERS)

(863.0, 918.0, .0, .0);	(480.0, 872.0, .0, .0);
(18.0, 821.0, .0, .0);	(-198.0, 618.0, .0, .0);
(-332.0, 738.0, .0, .0);	(-415.0, 884.0, .0, .0);
(-591.0, 879.0, .0, .0);	(-858.0, 884.0, .0, .0);
(-969.0, 853.0, .0, .0);	(-951.0, 800.0, .0, .0);
(-1041.0, 715.0, .0, .0);	(-1243.0, 618.0, .0, .0);
(-1205.0, 582.0, .0, .0);	(-1158.0, 577.0, .0, .0);
(-1071.0, 467.0, .0, .0);	(-734.0, 150.0, .0, .0);
(-545.0, -60.0, .0, .0);	(-508.0, -210.0, .0, .0);
(-480.0, -328.0, .0, .0);	(-451.0, -464.0, .0, .0);
(-428.0, -582.0, .0, .0);	(-406.0, -692.0, .0, .0);
(-328.0, -877.0, .0, .0);	(-151.0, -942.0, .0, .0);
(-115.0, -997.0, .0, .0);	(194.0, -1036.0, .0, .0);
(203.0, -1172.0, .0, .0);	(738.0, -1117.0, .0, .0);
(369.0, -849.0, .0, .0);	(710.0, -714.0, .0, .0);
(654.0, -462.0, .0, .0);	(914.0, -439.0, .0, .0);

*** ISCST3 - VERSION 97363 *** *** Skaneateles Falls - Impacts During Construction Activities *** 09/17/98

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**MODELOPTs CONC RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE C:\METDATA\NY\SYRBUF88.BIN

FORMAT: UNIFORM

SURFACE STATION NO: 14771

UPPER AIR STATION NO: 14733

NAME: UNKNOWN

NAME: UNKNOWN

YEAR: 1988

YEAR: 1988

FLOW SPEED TEMP STAB MIXING HEIGHT (M) USTAR M-O LENGTH Z-0 IPCODE PRATE
YR MN DY HR VECTOR (M/S) (K) CLASS RURAL URBAN (M/S) (M) (M) (mm/HR)

88	1	1	1	51.0	2.57	277.0	4	676.7	676.7	.0000	.0	.0000	0	.00
88	1	1	2	58.0	2.57	277.0	4	693.3	693.3	.0000	.0	.0000	0	.00
88	1	1	3	74.0	2.57	277.0	4	709.8	709.8	.0000	.0	.0000	0	.00
88	1	1	4	103.0	4.12	276.5	4	726.4	726.4	.0000	.0	.0000	0	.00
88	1	1	5	103.0	2.06	275.9	4	743.0	743.0	.0000	.0	.0000	0	.00
88	1	1	6	112.0	4.12	275.4	4	759.5	759.5	.0000	.0	.0000	0	.00
88	1	1	7	115.0	4.12	274.8	4	776.1	776.1	.0000	.0	.0000	0	.00
88	1	1	8	113.0	5.66	274.3	4	792.6	792.6	.0000	.0	.0000	0	.00
88	1	1	9	77.0	6.69	273.7	4	809.2	809.2	.0000	.0	.0000	0	.00
88	1	1	10	81.0	5.14	273.1	4	825.8	825.8	.0000	.0	.0000	0	.00
88	1	1	11	84.0	5.14	272.6	4	842.3	842.3	.0000	.0	.0000	0	.00
88	1	1	12	86.0	4.12	272.0	4	858.9	858.9	.0000	.0	.0000	0	.00
88	1	1	13	93.0	4.63	272.0	4	875.4	875.4	.0000	.0	.0000	0	.00
88	1	1	14	89.0	5.14	274.8	4	892.0	892.0	.0000	.0	.0000	0	.00
88	1	1	15	82.0	6.69	272.0	4	892.0	892.0	.0000	.0	.0000	0	.00
88	1	1	16	74.0	6.69	272.6	4	892.0	892.0	.0000	.0	.0000	0	.00
88	1	1	17	91.0	11.32	270.4	4	899.2	899.2	.0000	.0	.0000	0	.00
88	1	1	18	77.0	10.80	270.4	4	915.8	915.8	.0000	.0	.0000	0	.00
88	1	1	19	94.0	10.80	269.8	4	932.4	932.4	.0000	.0	.0000	0	.00
88	1	1	20	97.0	7.72	268.7	4	948.9	948.9	.0000	.0	.0000	0	.00
88	1	1	21	100.0	6.69	268.1	4	965.5	965.5	.0000	.0	.0000	0	.00
88	1	1	22	92.0	8.75	267.6	4	982.0	982.0	.0000	.0	.0000	0	.00
88	1	1	23	90.0	7.72	267.0	4	998.6	998.6	.0000	.0	.0000	0	.00
88	1	1	24	90.0	7.20	266.5	4	1015.2	1015.2	.0000	.0	.0000	0	.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.

FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

**MODELOPTS: CONC RURAL FLAT DFAULT
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*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): A1

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC (YYYYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC (YYYYMMDDHH)
863.00	918.00	1172.62200 (1988080705)	480.00	872.00	1460.57400 (1988061524)
18.00	821.00	6562.10700 (1988110607)	-198.00	618.00	3154.18700 (1988071201)
-332.00	738.00	2841.25400 (1988121906)	-415.00	884.00	2047.19100 (1988012403)
-591.00	879.00	2312.09600 (1988090222)	-858.00	884.00	2024.66000 (1988012402)
-969.00	853.00	1933.10400 (1988081703)	-951.00	800.00	2511.85900 (1988050905)
-1041.00	715.00	13803.33000 (1988050905)	-1243.00	618.00	2719.56700 (1988050905)
-1205.00	582.00	2621.26400 (1988050905)	-1158.00	577.00	4501.37800 (1988050905)
-1071.00	467.00	2758.81400 (1988050905)	-734.00	150.00	3997.25300 (1988040102)
-545.00	-60.00	5387.05500 (1988010402)	-508.00	-210.00	4564.30300 (1988032902)
-480.00	-328.00	4085.16100 (1988042222)	-451.00	-464.00	3746.41500 (1988082123)
-428.00	-582.00	3551.28900 (1988082620)	-406.00	-692.00	3374.74100 (1988121120)
-328.00	-877.00	3144.54200 (1988100423)	-151.00	-942.00	3817.17500 (1988031202)
-115.00	-997.00	3798.78700 (1988101923)	194.00	-1036.00	3657.03000 (1988050804)
203.00	-1172.00	2968.23400 (1988050324)	738.00	-1117.00	2002.73400 (1988043003)
369.00	-849.00	3779.11000 (1988050323)	710.00	-714.00	2362.57000 (1988062622)
654.00	-462.00	2361.19200 (1988062103)	914.00	-439.00	1792.19900 (1988060103)

*** ISCST3 - VERSION 97363 *** *** Skaneateles Falls - Impacts During Construction Activities *** 09/17/98
*** Landfill Area *** 14:25:27

*** MODEL OPTS CONC RURAL FLAT DFAULT PAGE 8

*** THE MAXIMUM 365 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP ALL ***
INCLUDING SOURCE(S) A1

*** CONC OF OTHER IN MICROGRAMS/M ***

RANK	CONC (YYYYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC (YYYYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
1	13803.33000 (1988050905) AT (-1041.00, 715.00) DC		41	4982.36500 (1988040103) AT (-545.00, -60.00) DC	
2	6562.10700 (1988110607) AT (-18.00, 821.00) DC		42	4982.36500 (1988070501) AT (-545.00, -60.00) DC	
3	5387.05500 (1988010402) AT (-545.00, -60.00) DC		43	4982.36500 (1988070922) AT (-545.00, -60.00) DC	
4	5387.05500 (1988041322) AT (-545.00, -60.00) DC		44	4982.36500 (1988090821) AT (-545.00, -60.00) DC	
5	5387.05500 (1988051423) AT (-545.00, -60.00) DC		45	4982.36500 (1988100702) AT (-545.00, -60.00) DC	
6	5387.05500 (1988070703) AT (-545.00, -60.00) DC		46	4946.08500 (1988030602) AT (-545.00, -60.00) DC	
7	5387.05500 (1988081903) AT (-545.00, -60.00) DC		47	4946.08500 (1988080822) AT (-545.00, -60.00) DC	
8	5387.05500 (1988082101) AT (-545.00, -60.00) DC		48	4946.08500 (1988082221) AT (-545.00, -60.00) DC	
9	5387.05500 (1988090101) AT (-545.00, -60.00) DC		49	4946.08500 (1988083123) AT (-545.00, -60.00) DC	
10	5366.78500 (1988012219) AT (-545.00, -60.00) DC		50	4946.08500 (1988090302) AT (-545.00, -60.00) DC	
11	5366.78500 (1988041222) AT (-545.00, -60.00) DC		51	4946.08500 (1988090303) AT (-545.00, -60.00) DC	
12	5366.78500 (1988072301) AT (-545.00, -60.00) DC		52	4946.08500 (1988102102) AT (-545.00, -60.00) DC	
13	5366.78500 (1988072823) AT (-545.00, -60.00) DC		53	4946.08500 (1988102103) AT (-545.00, -60.00) DC	
14	5366.78500 (1988082302) AT (-545.00, -60.00) DC		54	4564.30300 (1988032902) AT (-508.00, -210.00) DC	
15	5366.78500 (1988090901) AT (-545.00, -60.00) DC		55	4564.30300 (1988051422) AT (-508.00, -210.00) DC	
16	5366.78500 (1988110318) AT (-545.00, -60.00) DC		56	4564.30300 (1988060301) AT (-508.00, -210.00) DC	
17	5359.63600 (1988051124) AT (-545.00, -60.00) DC		57	4564.30300 (1988061505) AT (-508.00, -210.00) DC	
18	5359.63600 (1988070604) AT (-545.00, -60.00) DC		58	4564.30300 (1988062805) AT (-508.00, -210.00) DC	
19	5359.63600 (1988080221) AT (-545.00, -60.00) DC		59	4564.30300 (1988071522) AT (-508.00, -210.00) DC	
20	5359.63600 (1988081401) AT (-545.00, -60.00) DC		60	4564.30300 (1988081901) AT (-508.00, -210.00) DC	
21	5359.63600 (1988100723) AT (-545.00, -60.00) DC		61	4564.30300 (1988082002) AT (-508.00, -210.00) DC	
22	5359.63600 (1988120824) AT (-545.00, -60.00) DC		62	4564.30300 (1988090801) AT (-508.00, -210.00) DC	
23	5359.63600 (1988121204) AT (-545.00, -60.00) DC		63	4564.30300 (1988090802) AT (-508.00, -210.00) DC	
24	5302.47400 (1988020902) AT (-545.00, -60.00) DC		64	4564.30300 (1988111905) AT (-508.00, -210.00) DC	
25	5302.47400 (1988030601) AT (-545.00, -60.00) DC		65	4560.16800 (1988042303) AT (-545.00, -60.00) DC	
26	5302.47400 (1988051324) AT (-545.00, -60.00) DC		66	4560.16800 (1988051404) AT (-545.00, -60.00) DC	
27	5302.47400 (1988051502) AT (-545.00, -60.00) DC		67	4560.16800 (1988061904) AT (-545.00, -60.00) DC	
28	5302.47400 (1988052224) AT (-545.00, -60.00) DC		68	4560.16800 (1988070324) AT (-545.00, -60.00) DC	
29	5302.47400 (1988070605) AT (-545.00, -60.00) DC		69	4560.16800 (1988090321) AT (-545.00, -60.00) DC	
30	5302.47400 (1988090105) AT (-545.00, -60.00) DC		70	4560.16800 (1988091920) AT (-545.00, -60.00) DC	
31	5302.47400 (1988092223) AT (-545.00, -60.00) DC		71	4560.16800 (1988100624) AT (-545.00, -60.00) DC	
32	5302.47400 (1988100722) AT (-545.00, -60.00) DC		72	4560.16800 (1988100821) AT (-545.00, -60.00) DC	
33	5245.15100 (1988062724) AT (-545.00, -60.00) DC		73	4559.69900 (1988032222) AT (-508.00, -210.00) DC	
34	5245.15100 (1988070722) AT (-545.00, -60.00) DC		74	4559.69900 (1988050524) AT (-508.00, -210.00) DC	
35	5245.15100 (1988071623) AT (-545.00, -60.00) DC		75	4559.69900 (1988081704) AT (-508.00, -210.00) DC	
36	5245.15100 (1988080824) AT (-545.00, -60.00) DC		76	4559.69900 (1988102720) AT (-508.00, -210.00) DC	
37	5245.15100 (1988081304) AT (-545.00, -60.00) DC		77	4552.38700 (1988072304) AT (-508.00, -210.00) DC	
38	5179.09600 (1988012224) AT (-545.00, -60.00) DC		78	4552.38700 (1988073005) AT (-508.00, -210.00) DC	
39	5179.09600 (1988040601) AT (-545.00, -60.00) DC		79	4552.38700 (1988090824) AT (-508.00, -210.00) DC	
40	5179.09600 (1988091824) AT (-545.00, -60.00) DC		80	4552.38700 (1988100421) AT (-508.00, -210.00) DC	

**MODELOPTs CONC RURAL FLAT DEFAULT

*** THE MAXIMUM 365 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP ALL ***
INCLUDING SOURCE(S): AI

** CONC OF OTHER IN MICROGRAMS/M**3 **

RANK	CONC (YYYYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC (YYYYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
81.	4552.38700 (1988101507) AT (-508.00, -210.00) DC		121.	4507.26200 (1988092519) AT (-508.00, -210.00) DC	
82.	4550.23200 (1988020904) AT (-508.00, -210.00) DC		122.	4507.26200 (1988092705) AT (-508.00, -210.00) DC	
83.	4550.23200 (1988030605) AT (-508.00, -210.00) DC		123.	4507.26200 (1988101503) AT (-508.00, -210.00) DC	
84.	4550.23200 (1988032301) AT (-508.00, -210.00) DC		124.	4501.37800 (1988050905) AT (-1158.00, 577.00) DC	
85.	4550.23200 (1988050503) AT (-508.00, -210.00) DC		125.	4497.67600 (1988030806) AT (-508.00, -210.00) DC	
86.	4550.23200 (1988070405) AT (-508.00, -210.00) DC		126.	4497.67600 (1988070404) AT (-508.00, -210.00) DC	
87.	4550.23200 (1988081402) AT (-508.00, -210.00) DC		127.	4497.67600 (1988081122) AT (-508.00, -210.00) DC	
88.	4550.23200 (1988082706) AT (-508.00, -210.00) DC		128.	4497.67600 (1988090723) AT (-508.00, -210.00) DC	
89.	4538.66100 (1988030604) AT (-508.00, -210.00) DC		129.	4496.81500 (1988070504) AT (-508.00, -210.00) DC	
90.	4538.66100 (1988051101) AT (-508.00, -210.00) DC		130.	4496.81500 (1988071605) AT (-508.00, -210.00) DC	
91.	4538.66100 (1988061924) AT (-508.00, -210.00) DC		131.	4496.81500 (1988080123) AT (-508.00, -210.00) DC	
92.	4538.66100 (1988083124) AT (-508.00, -210.00) DC		132.	4496.81500 (1988081705) AT (-508.00, -210.00) DC	
93.	4538.66100 (1988090201) AT (-508.00, -210.00) DC		133.	4496.81500 (1988081905) AT (-508.00, -210.00) DC	
94.	4538.66100 (1988092221) AT (-508.00, -210.00) DC		134.	4496.81500 (1988090304) AT (-508.00, -210.00) DC	
95.	4538.66100 (1988100801) AT (-508.00, -210.00) DC		135.	4496.81500 (1988100724) AT (-508.00, -210.00) DC	
96.	4538.66100 (1988111906) AT (-508.00, -210.00) DC		136.	4488.36600 (1988020905) AT (-508.00, -210.00) DC	
97.	4527.74500 (1988042705) AT (-508.00, -210.00) DC		137.	4488.36600 (1988030603) AT (-508.00, -210.00) DC	
98.	4527.74500 (1988050802) AT (-508.00, -210.00) DC		138.	4488.36600 (1988030606) AT (-508.00, -210.00) DC	
99.	4527.74500 (1988071523) AT (-508.00, -210.00) DC		139.	4488.36600 (1988032904) AT (-508.00, -210.00) DC	
100.	4527.74500 (1988081302) AT (-508.00, -210.00) DC		140.	4488.36600 (1988041221) AT (-508.00, -210.00) DC	
101.	4527.74500 (1988082224) AT (-508.00, -210.00) DC		141.	4488.36600 (1988090205) AT (-508.00, -210.00) DC	
102.	4527.74500 (1988100420) AT (-508.00, -210.00) DC		142.	4488.36600 (1988092301) AT (-508.00, -210.00) DC	
103.	4517.27800 (1988030122) AT (-508.00, -210.00) DC		143.	4488.36600 (1988092422) AT (-508.00, -210.00) DC	
104.	4517.27800 (1988040604) AT (-508.00, -210.00) DC		144.	4488.36600 (1988092704) AT (-508.00, -210.00) DC	
105.	4517.27800 (1988070822) AT (-508.00, -210.00) DC		145.	4488.36600 (1988102104) AT (-508.00, -210.00) DC	
106.	4517.27800 (1988081902) AT (-508.00, -210.00) DC		146.	4488.36600 (1988122323) AT (-508.00, -210.00) DC	
107.	4517.27800 (1988090305) AT (-508.00, -210.00) DC		147.	4479.05400 (1988061724) AT (-508.00, -210.00) DC	
108.	4517.27800 (1988100824) AT (-508.00, -210.00) DC		148.	4479.05400 (1988101506) AT (-508.00, -210.00) DC	
109.	4517.27800 (1988101504) AT (-508.00, -210.00) DC		149.	4467.77900 (1988072302) AT (-508.00, -210.00) DC	
110.	4516.63000 (1988051203) AT (-545.00, -60.00) DC		150.	4448.93600 (1988020906) AT (-508.00, -210.00) DC	
111.	4516.63000 (1988051401) AT (-545.00, -60.00) DC		151.	4448.93600 (1988040520) AT (-508.00, -210.00) DC	
112.	4516.63000 (1988070823) AT (-545.00, -60.00) DC		152.	4448.93600 (1988062901) AT (-508.00, -210.00) DC	
113.	4516.63000 (1988071324) AT (-545.00, -60.00) DC		153.	4448.93600 (1988072902) AT (-508.00, -210.00) DC	
114.	4516.63000 (1988072822) AT (-545.00, -60.00) DC		154.	4448.93600 (1988072903) AT (-508.00, -210.00) DC	
115.	4516.63000 (1988100703) AT (-545.00, -60.00) DC		155.	4448.93600 (1988082720) AT (-508.00, -210.00) DC	
116.	4507.26200 (1988032223) AT (-508.00, -210.00) DC		156.	4448.93600 (1988092220) AT (-508.00, -210.00) DC	
117.	4507.26200 (1988040523) AT (-508.00, -210.00) DC		157.	4406.16400 (1988030822) AT (-508.00, -210.00) DC	
118.	4507.26200 (1988070402) AT (-508.00, -210.00) DC		158.	4406.16400 (1988030823) AT (-508.00, -210.00) DC	
119.	4507.26200 (1988071101) AT (-508.00, -210.00) DC		159.	4406.16400 (1988091902) AT (-508.00, -210.00) DC	
120.	4507.26200 (1988082501) AT (-508.00, -210.00) DC		160.	4406.16400 (1988091921) AT (-508.00, -210.00) DC	

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**MODELOPTs CONC RURAL FLAT DFAULT PAGE 10

*** THE MAXIMUM 365 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S) A1

** CONC OF OTHER IN MICROGRAMS/M**3 **

RANK	CONC (YYYYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC (YYYYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
161	4406.16400 (1988092421) AT (-508.00, -210.00) DC		201	4049.21800 (1988060224) AT (-480.00, -328.00) DC	
162	4353.66800 (1988062202) AT (-508.00, -210.00) DC		202	4049.21800 (1988061305) AT (-480.00, -328.00) DC	
163	4353.66800 (1988071702) AT (-508.00, -210.00) DC		203	4047.20600 (1988072103) AT (-480.00, -328.00) DC	
164	4353.66800 (1988072901) AT (-508.00, -210.00) DC		204	4041.17200 (1988032901) AT (-480.00, -328.00) DC	
165	4353.66800 (1988072905) AT (-508.00, -210.00) DC		205	4040.29100 (1988011118) AT (-545.00, -60.00) DC	
166	4353.66800 (1988092824) AT (-508.00, -210.00) DC		206	4040.29100 (1988011421) AT (-545.00, -60.00) DC	
167	4353.66800 (1988112224) AT (-508.00, -210.00) DC		207	4040.29100 (1988022124) AT (-545.00, -60.00) DC	
168	4305.15600 (1988020903) AT (-508.00, -210.00) DC		208	4040.29100 (1988082005) AT (-545.00, -60.00) DC	
169	4305.15600 (1988020907) AT (-508.00, -210.00) DC		209	4025.08800 (1988021824) AT (-545.00, -60.00) DC	
170	4305.15600 (1988030607) AT (-508.00, -210.00) DC		210	4024.02400 (1988021102) AT (-480.00, -328.00) DC	
171	4305.15600 (1988061923) AT (-508.00, -210.00) DC		211	4020.28800 (1988092506) AT (-480.00, -328.00) DC	
172	4305.15600 (1988072904) AT (-508.00, -210.00) DC		212	4019.72700 (1988061322) AT (-545.00, -60.00) DC	
173	4305.15600 (1988112303) AT (-508.00, -210.00) DC		213	4002.20100 (1988040521) AT (-545.00, -60.00) DC	
174	4090.86800 (1988070321) AT (-508.00, -210.00) DC		214	4002.20100 (1988061022) AT (-545.00, -60.00) DC	
175	4090.86800 (1988100422) AT (-508.00, -210.00) DC		215	4002.20100 (1988070701) AT (-545.00, -60.00) DC	
176	4085.16100 (1988042222) AT (-480.00, -328.00) DC		216	4002.20100 (1988072824) AT (-545.00, -60.00) DC	
177	4085.16100 (1988072305) AT (-480.00, -328.00) DC		217	4002.20100 (1988090103) AT (-545.00, -60.00) DC	
178	4085.16100 (1988091205) AT (-480.00, -328.00) DC		218	4002.20100 (1988090106) AT (-545.00, -60.00) DC	
179	4085.07000 (1988092504) AT (-480.00, -328.00) DC		219	4002.20100 (1988102022) AT (-545.00, -60.00) DC	
180	4074.68000 (1988011105) AT (-508.00, -210.00) DC		220	4002.20100 (1988102723) AT (-545.00, -60.00) DC	
181	4074.68000 (1988090206) AT (-508.00, -210.00) DC		221	4002.20100 (1988103103) AT (-545.00, -60.00) DC	
182	4074.68000 (1988092903) AT (-508.00, -210.00) DC		222	4002.20100 (1988103105) AT (-545.00, -60.00) DC	
183	4071.86300 (1988042706) AT (-480.00, -328.00) DC		223	3997.25300 (1988040102) AT (-734.00, 150.00) DC	
184	4071.86300 (1988080306) AT (-480.00, -328.00) DC		224	3997.25300 (1988041302) AT (-734.00, 150.00) DC	
185	4069.96900 (1988021904) AT (-480.00, -328.00) DC		225	3997.25300 (1988052621) AT (-734.00, 150.00) DC	
186	4069.96900 (1988100823) AT (-480.00, -328.00) DC		226	3997.25300 (1988062201) AT (-734.00, 150.00) DC	
187	4066.57100 (1988011419) AT (-480.00, -328.00) DC		227	3997.25300 (1988070301) AT (-734.00, 150.00) DC	
188	4066.57100 (1988092904) AT (-480.00, -328.00) DC		228	3997.25300 (1988081324) AT (-734.00, 150.00) DC	
189	4063.45400 (1988011104) AT (-480.00, -328.00) DC		229	3997.25300 (1988090322) AT (-734.00, 150.00) DC	
190	4060.62000 (1988011103) AT (-480.00, -328.00) DC		230	3997.25300 (1988100623) AT (-734.00, 150.00) DC	
191	4058.05500 (1988041203) AT (-480.00, -328.00) DC		231	3976.85500 (1988010718) AT (-545.00, -60.00) DC	
192	4055.76800 (1988011922) AT (-480.00, -328.00) DC		232	3976.85500 (1988091524) AT (-545.00, -60.00) DC	
193	4053.77400 (1988011424) AT (-480.00, -328.00) DC		233	3976.85500 (1988102105) AT (-545.00, -60.00) DC	
194	4053.77400 (1988021907) AT (-480.00, -328.00) DC		234	3956.37300 (1988050803) AT (-480.00, -328.00) DC	
195	4051.95900 (1988011119) AT (-480.00, -328.00) DC		235	3956.37300 (1988100802) AT (-480.00, -328.00) DC	
196	4051.95900 (1988031205) AT (-480.00, -328.00) DC		236	3933.86300 (1988011023) AT (-545.00, -60.00) DC	
197	4051.95900 (1988062404) AT (-480.00, -328.00) DC		237	3933.86300 (1988021821) AT (-545.00, -60.00) DC	
198	4051.95900 (1988072102) AT (-480.00, -328.00) DC		238	3933.86300 (1988061824) AT (-545.00, -60.00) DC	
199	4050.55400 (1988031204) AT (-480.00, -328.00) DC		239	3898.20400 (1988021022) AT (-480.00, -328.00) DC	
200	4050.55400 (1988092505) AT (-480.00, -328.00) DC		240	3898.20400 (1988021103) AT (-480.00, -328.00) DC	

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**MODELOPTs, CONC RURAL FLAT DEFAULT

*** THE MAXIMUM 365 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): A1

** CONC OF OTHER IN MICROGRAMS/M**3 **

RANK	CONC (YYYYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC (YYYYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
241	3898.20400 (1988072623) AT (-480.00, -328.00) DC	281.	3731.10700 (1988032205) AT (-115.00, -997.00) DC		
242	3898.20400 (1988082124) AT (-480.00, -328.00) DC	282.	3731.10700 (1988101920) AT (-115.00, -997.00) DC		
243	3884.32200 (1988112520) AT (-545.00, -60.00) DC	283.	3726.55900 (1988082104) AT (-451.00, -464.00) DC		
244	3849.45000 (1988041323) AT (-734.00, 150.00) DC	284.	3723.96300 (1988021501) AT (-451.00, -464.00) DC		
245	3849.45000 (1988061805) AT (-734.00, 150.00) DC	285.	3721.60600 (1988050601) AT (-451.00, -464.00) DC		
246	3849.45000 (1988062123) AT (-734.00, 150.00) DC	286.	3721.60600 (1988052221) AT (-451.00, -464.00) DC		
247	3849.45000 (1988070403) AT (-734.00, 150.00) DC	287.	3721.60600 (1988082301) AT (-451.00, -464.00) DC		
248	3849.45000 (1988070424) AT (-734.00, 150.00) DC	288.	3719.51000 (1988121122) AT (-451.00, -464.00) DC		
249	3849.45000 (1988070601) AT (-734.00, 150.00) DC	289.	3715.13400 (1988101505) AT (-451.00, -464.00) DC		
250	3849.45000 (1988070904) AT (-734.00, 150.00) DC	290.	3715.13400 (1988112304) AT (-451.00, -464.00) DC		
251	3849.45000 (1988080823) AT (-734.00, 150.00) DC	291.	3709.56300 (1988042223) AT (-545.00, -60.00) DC		
252	3849.45000 (1988082103) AT (-734.00, 150.00) DC	292.	3709.56300 (1988051005) AT (-545.00, -60.00) DC		
253	3849.45000 (1988102722) AT (-734.00, 150.00) DC	293.	3709.29300 (1988040222) AT (-451.00, -464.00) DC		
254	3842.33000 (1988012223) AT (-545.00, -60.00) DC	294.	3709.29300 (1988062402) AT (-451.00, -464.00) DC		
255	3842.33000 (1988061901) AT (-545.00, -60.00) DC	295.	3707.04400 (1988021022) AT (-508.00, -210.00) DC		
256	3842.33000 (1988082703) AT (-545.00, -60.00) DC	296.	3707.04400 (1988021103) AT (-508.00, -210.00) DC		
257	3842.33000 (1988091823) AT (-545.00, -60.00) DC	297.	3707.04400 (1988072623) AT (-508.00, -210.00) DC		
258	3842.33000 (1988092623) AT (-545.00, -60.00) DC	298.	3707.04400 (1988082124) AT (-508.00, -210.00) DC		
259	3842.33000 (1988103106) AT (-545.00, -60.00) DC	299.	3690.29600 (1988070505) AT (-451.00, -464.00) DC		
260	3817.17500 (1988031202) AT (-151.00, -942.00) DC	300.	3690.29600 (1988092905) AT (-451.00, -464.00) DC		
261	3817.17500 (1988041720) AT (-151.00, -942.00) DC	301.	3657.03000 (1988050804) AT (194.00, -1036.00) DC		
262	3817.17500 (1988060321) AT (-151.00, -942.00) DC	302.	3657.03000 (1988061621) AT (194.00, -1036.00) DC		
263	3817.17500 (1988082202) AT (-151.00, -942.00) DC	303.	3657.03000 (1988071921) AT (194.00, -1036.00) DC		
264	3817.17500 (1988100321) AT (-151.00, -942.00) DC	304.	3657.03000 (1988091423) AT (194.00, -1036.00) DC		
265	3798.78700 (1988101923) AT (-115.00, -997.00) DC	305.	3639.21400 (1988070321) AT (-480.00, -328.00) DC		
266	3796.20300 (1988031206) AT (-480.00, -328.00) DC	306.	3639.21400 (1988100422) AT (-480.00, -328.00) DC		
267	3779.11000 (1988050323) AT (369.00, -849.00) DC	307.	3632.65200 (1988061304) AT (-451.00, -464.00) DC		
268	3779.11000 (1988061604) AT (369.00, -849.00) DC	308.	3632.65200 (1988101906) AT (-451.00, -464.00) DC		
269	3779.11000 (1988061721) AT (369.00, -849.00) DC	309.	3622.24700 (1988011106) AT (-508.00, -210.00) DC		
270	3775.48600 (1988010401) AT (-734.00, 150.00) DC	310.	3622.24700 (1988040105) AT (-508.00, -210.00) DC		
271	3775.48600 (1988011121) AT (-734.00, 150.00) DC	311.	3622.24700 (1988052304) AT (-508.00, -210.00) DC		
272	3775.48600 (1988021101) AT (-734.00, 150.00) DC	312.	3622.24700 (1988070322) AT (-508.00, -210.00) DC		
273	3775.48600 (1988052724) AT (-734.00, 150.00) DC	313.	3561.38500 (1988092901) AT (-451.00, -464.00) DC		
274	3746.41500 (1988082123) AT (-451.00, -464.00) DC	314.	3551.28900 (1988082620) AT (-428.00, -582.00) DC		
275	3743.35100 (1988062203) AT (-451.00, -464.00) DC	315.	3547.14800 (1988030623) AT (-428.00, -582.00) DC		
276	3743.35100 (1988072624) AT (-451.00, -464.00) DC	316.	3540.52800 (1988050121) AT (-428.00, -582.00) DC		
277	3743.35100 (1988123020) AT (-451.00, -464.00) DC	317.	3540.52800 (1988050122) AT (-428.00, -582.00) DC		
278	3739.53500 (1988051024) AT (-451.00, -464.00) DC	318.	3540.52800 (1988100822) AT (-428.00, -582.00) DC		
279	3736.77400 (1988121206) AT (-545.00, -60.00) DC	319.	3534.13700 (1988082023) AT (-428.00, -582.00) DC		
280.	3731.10700 (1988030519) AT (-115.00, -997.00) DC	320.	3527.79600 (1988030120) AT (-428.00, -582.00) DC		

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***MODELOPTs CONC RURAL FLAT DFAULT

*** THE MAXIMUM 365 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): A1

*** CONC OF OTHER IN MICROGRAMS/M**3 ***

RANK	CONC (YYYYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC (YYYYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
321	3527.79600 (1988050120) AT (-428.00, -582.00) DC		344	3387.47300 (1988022820) AT (-545.00, -60.00) DC	
322	3527.79600 (1988061905) AT (-428.00, -582.00) DC		345	3387.47300 (1988042602) AT (-545.00, -60.00) DC	
323	3521.36200 (1988010707) AT (-428.00, -582.00) DC		346	3387.47300 (1988042604) AT (-545.00, -60.00) DC	
324	3517.44900 (1988020308) AT (-428.00, -582.00) DC		347	3387.47300 (1988122403) AT (-545.00, -60.00) DC	
325	3501.12900 (1988081924) AT (-428.00, -582.00) DC		348	3387.47300 (1988122404) AT (-545.00, -60.00) DC	
326	3470.12900 (1988092901) AT (-428.00, -582.00) DC		349	3380.44600 (1988040602) AT (-508.00, -210.00) DC	
327	3428.06400 (1988082024) AT (-428.00, -582.00) DC		350	3374.74100 (1988121120) AT (-406.00, -692.00) DC	
328	3423.22700 (1988011202) AT (-508.00, -210.00) DC		351	3373.25700 (1988011107) AT (-508.00, -210.00) DC	
329	3420.12600 (1988070304) AT (-545.00, -60.00) DC		352	3373.25700 (1988032305) AT (-508.00, -210.00) DC	
330	3420.12600 (1988112521) AT (-545.00, -60.00) DC		353	3372.61100 (1988082004) AT (-508.00, -210.00) DC	
331	3419.77400 (1988030202) AT (-508.00, -210.00) DC		354	3372.20900 (1988021822) AT (-734.00, 150.00) DC	
332	3419.77400 (1988030821) AT (-508.00, -210.00) DC		355	3372.20900 (1988071102) AT (-734.00, 150.00) DC	
333	3419.77400 (1988032306) AT (-508.00, -210.00) DC		356	3372.20900 (1988082102) AT (-734.00, 150.00) DC	
334	3417.60700 (1988020505) AT (-369.00, -849.00) DC		357	3372.20900 (1988091602) AT (-734.00, 150.00) DC	
335	3417.60700 (1988042624) AT (-369.00, -849.00) DC		358	3372.20900 (1988102319) AT (-734.00, 150.00) DC	
336	3414.29000 (1988011501) AT (-508.00, -210.00) DC		359	3368.39000 (1988090207) AT (-545.00, -60.00) DC	
337	3412.67400 (1988011422) AT (-508.00, -210.00) DC		360	3361.89700 (1988050304) AT (-115.00, -997.00) DC	
338	3412.67400 (1988082304) AT (-508.00, -210.00) DC		361	3361.89700 (1988060124) AT (-115.00, -997.00) DC	
339	3412.67400 (1988092706) AT (-508.00, -210.00) DC		362	3359.29000 (1988030123) AT (-508.00, -210.00) DC	
340	3403.99600 (1988011204) AT (-508.00, -210.00) DC		363	3359.29000 (1988030805) AT (-508.00, -210.00) DC	
341	3403.99600 (1988051503) AT (-508.00, -210.00) DC		364	3350.83400 (1988030201) AT (-508.00, -210.00) DC	
342	3387.47300 (1988011101) AT (-545.00, -60.00) DC		365	3350.83400 (1988030203) AT (-508.00, -210.00) DC	
343	3387.47300 (1988011620) AT (-545.00, -60.00) DC				

*** RECEPTOR TYPES: GC = GRIDCART

GP = GRIDPOLR

DC = DISCCART

DP = DISCPOLR

BD = BOUNDARY

*** ISCST3 - VERSION 97363 *** *** Skaneateles Falls - Impacts During Construction Activities *** 09/17/98
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**MODELOPTS: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID	DATE AVERAGE CONC (YYYYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE GRID-ID
----------	-----------------------------------	--	-----------------

ALL HIGH 1ST HIGH VALUE IS 13803.33000 ON 1988050905 AT(-1041.00, 715.00, .00, 00) DC NA

*** RECEPTOR TYPES: GC = GRIDCART

GP = GRIDPOLR

DC = DISCCART

DP = DISCPOLR

BD = BOUNDARY

*** ISCST3 - VERSION 97363 *** *** Skaneateles Falls - Impacts During Construction Activities *** 09/17/98
*** Landfill Area *** 14:25:27
PAGE 14

**MODELOPTs CONC RURAL FLAT DFAULT

*** Message Summary - ISCST3 Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 780 Informational Message(s)
A Total of 780 Calm Hours Identified

----- FATAL ERROR MESSAGES -----
*** NONE ***

----- WARNING MESSAGES -----
*** NONE ***

*** ISCST3 Finishes Successfully ***

SUBJECT

Coordinates of Landfill Area

SHEET

BY

DATE

JOB NO.

origin (0,0) → TPG LOF

~ Feet, Feet

Property Line Receptors

<u>Marker</u>	<u>Coordinates (x,y)</u>	<u>Marker</u>	<u>Coordinates (x,y)</u>
1	(86, -75)	A	914, -439
2	(205, -125)	B	654, -462
3	(282, -263)	C	710, -714
4	(252, -290)	D	369, -849
5	(153, -270)	E	738, -1117
6	(198, -352)	F	203, -1172
7	(262, -438)	G	194, -1036
8	(254, -473)	H	-115, -997
9	(191, -478)	I	-151, -942
10	(127, -484)	J	-328, -878 -877
11	(37, -500)	K	-406, -690 -692
12	(-54, -460 -462)	L	-545, -60
13	(-92, -344)	M	-734, 150
14	(-121, -247)	N	-1071, 467
15	(-150, -155)	O	-1158, 577
16	(-197, -55)	P	-1205, 582
17	(-168, -26)	Q	-1243, 618
18	(-90, -5)	R	-1041, 715
		S	-951, 800
		T	-969, 853
		U	-858, 884
		V	-591, 879
		W	-415, 763
		X	-332, 738
		Y	-198, 618
		Z	18, 821
		AA	863, 918
		BB	-508, -210
		CC	-480, -328
		DD	-451, -464
		EE	-428, -582

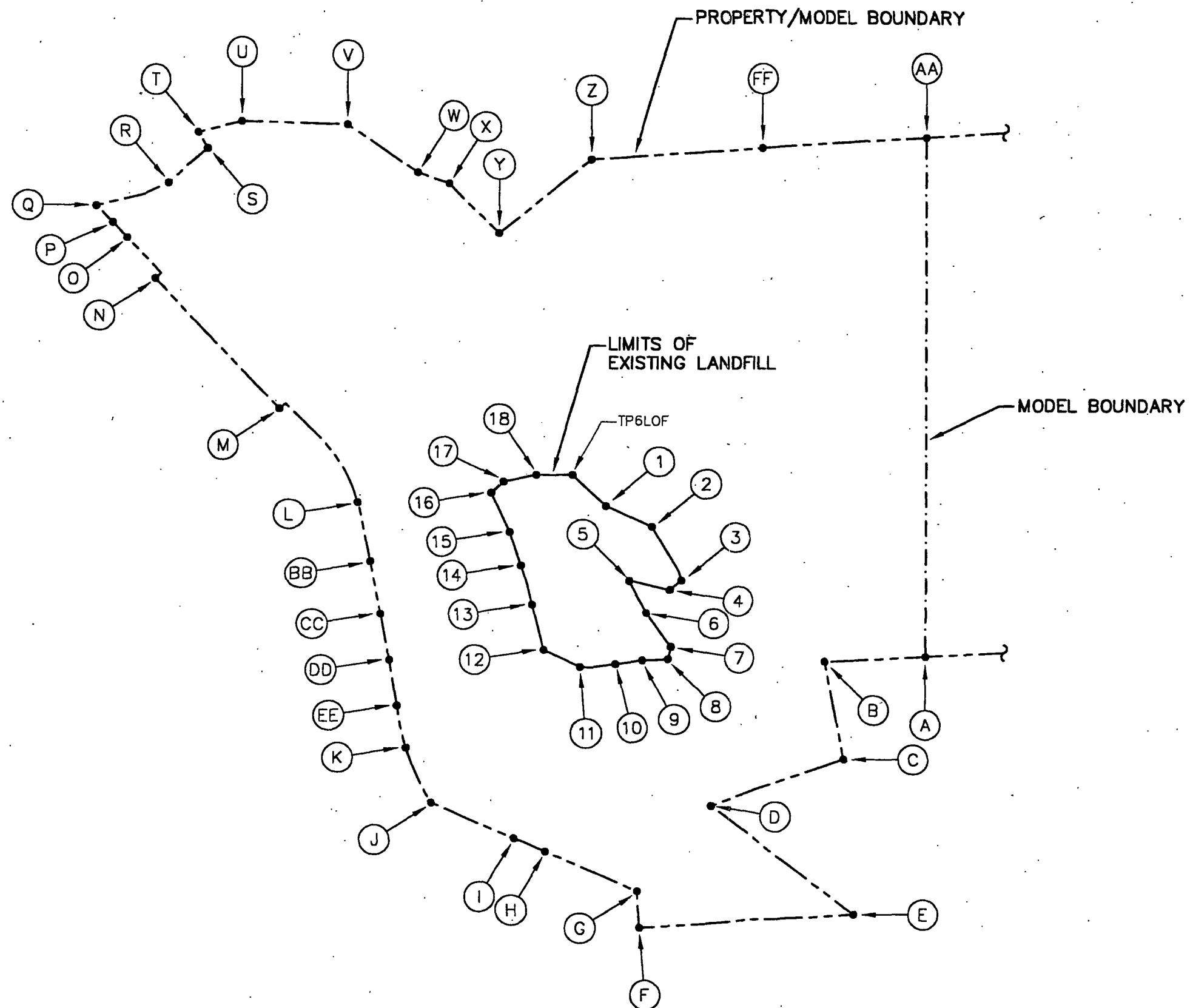


FIGURE 1

LEGEND

- (A) PROPERTY LINE RECEPTOR LOCATIONS
- (1) LANDFILL LIMITS

STAUFFER MANAGEMENT COMPANY
SKANEATELES FALLS, NEW YORK
SOIL REMEDIATION PROJECT

**AIR EMISSIONS
MODELING PLAN**



DATE: SEPTEMBER 18, 1998
FILE NO. 5618.010.105



REV DATE: 9/18/98

**Area north of the Main Plant
Building HELP model results**

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*****
*****
**
**
HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE
HELP MODEL VERSION 3.01 (14 OCTOBER 1994)
DEVELOPED BY ENVIRONMENTAL LABORATORY
USAE WATERWAYS EXPERIMENT STATION
FOR USEPA RISK REDUCTION ENGINEERING LABORATORY
**
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*****

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PRECIPITATION DATA FILE: J:\DOS_APPS\HELP3\skan\SKANPREC.D4
TEMPERATURE DATA FILE: J:\DOS_APPS\HELP3\skan\SKANTEMP.D7
SOLAR RADIATION DATA FILE: J:\DOS_APPS\HELP3\skan\SKANSOLR.D13
EVAPOTRANSPIRATION DATA: J:\DOS_APPS\HELP3\skan\SKANEVAP.D11
SOIL AND DESIGN DATA FILE: J:\DOS_APPS\HELP3\skan\SKNORTH.D10
OUTPUT DATA FILE: J:\DOS_APPS\HELP3\skan\SKNOOUT.OUT

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TIME: 14:50 DATE: 12/29/1997

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*****
TITLE: Skaneateles Falls - Area North of the Main Plant Building
*****

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NOTE: INITIAL MOISTURE CONTENT OF THE LAYERS AND SNOW WATER WERE
COMPUTED AS NEARLY STEADY-STATE VALUES BY THE PROGRAM.

LAYER 1

TYPE 1 - VERTICAL PERCOLATION LAYER
MATERIAL TEXTURE NUMBER 6

THICKNESS	=	6.00	INCHES
POROSITY	=	0.4530	VOL/VOL
FIELD CAPACITY	=	0.1900	VOL/VOL
WILTING POINT	=	0.0850	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.4455	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.720000011000E-03	CM/SEC

NOTE: SATURATED HYDRAULIC CONDUCTIVITY IS MULTIPLIED BY 4.63
FOR ROOT CHANNELS IN TOP HALF OF EVAPORATIVE ZONE.

LAYER 2

TYPE 2 - LATERAL DRAINAGE LAYER

MATERIAL TEXTURE NUMBER 7

THICKNESS	=	18.00	INCHES
POROSITY	=	0.4730	VOL/VOL
FIELD CAPACITY	=	0.2220	VOL/VOL
WILTING POINT	=	0.1040	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.4673	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.520000001000E-03	CM/SEC
SLOPE	=	1.30	PERCENT
DRAINAGE LENGTH	=	500.0	FEET

LAYER 3

TYPE 4 - FLEXIBLE MEMBRANE LINER

MATERIAL TEXTURE NUMBER 36

THICKNESS	=	0.04	INCHES
POROSITY	=	0.0000	VOL/VOL
FIELD CAPACITY	=	0.0000	VOL/VOL
WILTING POINT	=	0.0000	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.399999993000E-12	CM/SEC
FML PINHOLE DENSITY	=	1.00	HOLES/ACRE
FML INSTALLATION DEFECTS	=	1.00	HOLES/ACRE
FML PLACEMENT QUALITY	=	3	- GOOD

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS COMPUTED FROM DEFAULT
SOIL DATA BASE USING SOIL TEXTURE # 6 WITH A
GOOD STAND OF GRASS, A SURFACE SLOPE OF 1.0%
AND A SLOPE LENGTH OF 500. FEET.

SCS RUNOFF CURVE NUMBER	=	58.50	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	5.000	ACRES
EVAPORATIVE ZONE DEPTH	=	24.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	11.084	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	11.232	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	2.382	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	11.084	INCHES
TOTAL INITIAL WATER	=	11.084	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
SYRACUSE NEW YORK

MAXIMUM LEAF AREA INDEX = 3.50
 START OF GROWING SEASON (JULIAN DATE) = 124
 END OF GROWING SEASON (JULIAN DATE) = 284
 AVERAGE ANNUAL WIND SPEED = 9.70 MPH
 AVERAGE 1ST QUARTER RELATIVE HUMIDITY = 72.00 %
 AVERAGE 2ND QUARTER RELATIVE HUMIDITY = 68.00 %
 AVERAGE 3RD QUARTER RELATIVE HUMIDITY = 75.00 %
 AVERAGE 4TH QUARTER RELATIVE HUMIDITY = 76.00 %

NOTE: PRECIPITATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR SYRACUSE NEW YORK

NORMAL MEAN MONTHLY PRECIPITATION (INCHES)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
2.61	2.65	3.11	3.34	3.16	3.63
3.76	3.77	3.29	3.14	3.45	3.20

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR SYRACUSE NEW YORK

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
22.80	24.00	33.30	46.10	57.00	66.30
70.90	69.30	62.10	51.30	40.60	28.30

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR SYRACUSE NEW YORK

STATION LATITUDE = 43.07 DEGREES

ANNUAL TOTALS FOR YEAR 1

	INCHES	CU. FEET	PERCENT
PRECIPITATION	41.50	753224.562	100.00
RUNOFF	10.006	181607.172	24.11
EVAPOTRANSPIRATION	30.595	555307.125	73.72

DRAINAGE COLLECTED FROM LAYER 2	0.1596	2897.377	0.38
PERC./LEAKAGE THROUGH LAYER 3	0.742118	13469.435	1.79
AVG. HEAD ON TOP OF LAYER 3	8.0586		
CHANGE IN WATER STORAGE	-0.003	-56.359	-0.01
SOIL WATER AT START OF YEAR	11.972	217293.187	
SOIL WATER AT END OF YEAR	11.969	217236.828	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.176	0.00

ANNUAL TOTALS FOR YEAR 2

	INCHES	CU. FEET	PERCENT
PRECIPITATION	43.53	790069.312	100.00
RUNOFF	10.967	199053.281	25.19
EVAPOTRANSPIRATION	29.444	534407.062	67.64
DRAINAGE COLLECTED FROM LAYER 2	0.2330	4229.187	0.54
PERC./LEAKAGE THROUGH LAYER 3	1.046961	19002.346	2.41
AVG. HEAD ON TOP OF LAYER 3	11.5635		
CHANGE IN WATER STORAGE	1.839	33377.480	4.22
SOIL WATER AT START OF YEAR	11.969	217236.828	
SOIL WATER AT END OF YEAR	12.103	219674.797	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	1.705	30939.516	3.92
ANNUAL WATER BUDGET BALANCE	0.0000	-0.004	0.00

ANNUAL TOTALS FOR YEAR 3

	INCHES	CU. FEET	PERCENT
PRECIPITATION	36.53	663019.750	100.00
RUNOFF	10.375	188308.062	28.40
EVAPOTRANSPIRATION	29.758	540098.750	81.46
DRAINAGE COLLECTED FROM LAYER 2	0.1052	1908.892	0.29
PERC./LEAKAGE THROUGH LAYER 3	0.594293	10786.421	1.63
AVG. HEAD ON TOP OF LAYER 3	6.4138		
CHANGE IN WATER STORAGE	-4.302	-78082.500	-11.78
SOIL WATER AT START OF YEAR	12.103	219674.797	
SOIL WATER AT END OF YEAR	9.364	169947.812	
SNOW WATER AT START OF YEAR	1.705	30939.516	4.67
SNOW WATER AT END OF YEAR	0.142	2583.989	0.39
ANNUAL WATER BUDGET BALANCE	0.0000	0.157	0.00

ANNUAL TOTALS FOR YEAR 4

	INCHES	CU. FEET	PERCENT
PRECIPITATION	40.62	737252.812	100.00
RUNOFF	6.355	115334.914	15.64
EVAPOTRANSPIRATION	30.393	551633.000	74.82
DRAINAGE COLLECTED FROM LAYER 2	0.0808	1466.077	0.20
PERC./LEAKAGE THROUGH LAYER 3	0.467013	8476.292	1.15
AVG. HEAD ON TOP OF LAYER 3	5.0360		
CHANGE IN WATER STORAGE	3.325	60342.914	8.18
SOIL WATER AT START OF YEAR	9.364	169947.812	
SOIL WATER AT END OF YEAR	11.865	215351.125	
SNOW WATER AT START OF YEAR	0.142	2583.989	0.35

SNOW WATER AT END OF YEAR	0.965	17523.588	2.38
ANNUAL WATER BUDGET BALANCE	0.0000	-0.337	0.00

ANNUAL TOTALS FOR YEAR 5

	INCHES	CU. FEET	PERCENT
PRECIPITATION	40.87	741790.437	100.00
RUNOFF	9.090	164978.609	22.24
EVAPOTRANSPIRATION	31.265	567466.562	76.50
DRAINAGE COLLECTED FROM LAYER 2	0.2264	4109.784	0.55
PERC./LEAKAGE THROUGH LAYER 3	1.003239	18208.793	2.45
AVG. HEAD ON TOP OF LAYER 3	11.0185		
CHANGE IN WATER STORAGE	-0.715	-12973.001	-1.75
SOIL WATER AT START OF YEAR	11.865	215351.125	
SOIL WATER AT END OF YEAR	12.116	219901.719	
SNOW WATER AT START OF YEAR	0.965	17523.588	2.36
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.327	0.00

ANNUAL TOTALS FOR YEAR 6

	INCHES	CU. FEET	PERCENT
PRECIPITATION	39.66	719829.062	100.00
RUNOFF	6.663	120935.969	16.80
EVAPOTRANSPIRATION	31.023	563066.125	78.22
DRAINAGE COLLECTED FROM LAYER 2	0.1707	3098.426	0.43
PERC./LEAKAGE THROUGH LAYER 3	0.838752	15223.349	2.11

AVG. HEAD ON TOP OF LAYER 3	9.2260		
CHANGE IN WATER STORAGE	0.964	17505.311	2.43
SOIL WATER AT START OF YEAR	12.116	219901.719	
SOIL WATER AT END OF YEAR	12.030	218339.141	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	1.051	19067.881	2.65
ANNUAL WATER BUDGET BALANCE	0.0000	-0.136	0.00

ANNUAL TOTALS FOR YEAR 7

	INCHES	CU. FEET	PERCENT
PRECIPITATION	39.34	714021.000	100.00
RUNOFF	9.924	180123.672	25.23
EVAPOTRANSPIRATION	29.382	533280.187	74.69
DRAINAGE COLLECTED FROM LAYER 2	0.1728	3135.598	0.44
PERC./LEAKAGE THROUGH LAYER 3	0.808100	14667.011	2.05
AVG. HEAD ON TOP OF LAYER 3	8.7960		
CHANGE IN WATER STORAGE	-0.947	-17185.609	-2.41
SOIL WATER AT START OF YEAR	12.030	218339.141	
SOIL WATER AT END OF YEAR	12.116	219901.719	
SNOW WATER AT START OF YEAR	1.051	19067.881	2.67
SNOW WATER AT END OF YEAR	0.018	319.701	0.04
ANNUAL WATER BUDGET BALANCE	0.0000	0.143	0.00

ANNUAL TOTALS FOR YEAR 8

INCHES	CU. FEET	PERCENT
--------	----------	---------

PRECIPITATION	33.75	612562.562	100.00
RUNOFF	6.752	122542.094	20.00
EVAPOTRANSPIRATION	27.289	495302.562	80.86
DRAINAGE COLLECTED FROM LAYER 2	0.0977	1772.938	0.29
PERC./LEAKAGE THROUGH LAYER 3	0.552678	10031.114	1.64
AVG. HEAD ON TOP OF LAYER 3	6.0514		
CHANGE IN WATER STORAGE	-0.941	-17086.268	-2.79
SOIL WATER AT START OF YEAR	12.116	219901.719	
SOIL WATER AT END OF YEAR	9.771	177351.891	
SNOW WATER AT START OF YEAR	0.018	319.701	0.05
SNOW WATER AT END OF YEAR	1.421	25783.264	4.21
ANNUAL WATER BUDGET BALANCE	0.0000	0.117	0.00

ANNUAL TOTALS FOR YEAR 9

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	38.63	701134.437	100.00
RUNOFF	7.121	129243.828	18.43
EVAPOTRANSPIRATION	31.652	574479.000	81.94
DRAINAGE COLLECTED FROM LAYER 2	0.1048	1901.590	0.27
PERC./LEAKAGE THROUGH LAYER 3	0.653117	11854.067	1.69
AVG. HEAD ON TOP OF LAYER 3	7.1340		
CHANGE IN WATER STORAGE	-0.900	-16343.839	-2.33
SOIL WATER AT START OF YEAR	9.771	177351.891	
SOIL WATER AT END OF YEAR	9.316	169088.516	
SNOW WATER AT START OF YEAR	1.421	25783.264	3.68
SNOW WATER AT END OF YEAR	0.975	17702.797	2.52
ANNUAL WATER BUDGET BALANCE	0.0000	-0.225	0.00

ANNUAL TOTALS FOR YEAR 10

	INCHES	CU. FEET	PERCENT
PRECIPITATION	28.47	516730.594	100.00
RUNOFF	4.278	77646.922	15.03
EVAPOTRANSPIRATION	23.586	428081.656	82.84
DRAINAGE COLLECTED FROM LAYER 2	0.0819	1485.953	0.29
PERC./LEAKAGE THROUGH LAYER 3	0.477244	8661.981	1.68
AVG. HEAD ON TOP OF LAYER 3	5.2565		
CHANGE IN WATER STORAGE	0.047	854.022	0.17
SOIL WATER AT START OF YEAR	9.316	169088.516	
SOIL WATER AT END OF YEAR	8.403	152522.094	
SNOW WATER AT START OF YEAR	0.975	17702.795	3.43
SNOW WATER AT END OF YEAR	1.935	35123.234	6.80
ANNUAL WATER BUDGET BALANCE	0.0000	0.066	0.00

AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1 THROUGH 10

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	2.67 3.53	2.48 4.13	3.17 3.18	2.65 3.33	3.00 3.43	3.21 3.52
STD. DEVIATIONS	0.84 1.36	0.76 2.37	1.13 1.17	0.53 0.96	1.00 1.03	0.99 0.78
RUNOFF						
TOTALS	1.893 0.000	1.737 0.000	2.495 0.000	0.785 0.000	0.007 0.045	0.000 1.191

STD. DEVIATIONS	1.525	1.200	1.684	0.640	0.021	0.000
	0.000	0.000	0.000	0.000	0.143	0.895

EVAPOTRANSPIRATION

TOTALS	0.624	0.677	1.528	2.484	3.006	5.445
	6.107	3.458	3.082	1.635	0.866	0.527

STD. DEVIATIONS	0.084	0.174	0.215	0.485	0.838	0.683
	1.221	0.822	0.506	0.163	0.153	0.101

LATERAL DRAINAGE COLLECTED FROM LAYER 2

TOTALS	0.0048	0.0042	0.0050	0.0165	0.0276	0.0174
	0.0078	0.0036	0.0045	0.0072	0.0160	0.0286

STD. DEVIATIONS	0.0001	0.0000	0.0016	0.0080	0.0067	0.0032
	0.0042	0.0034	0.0052	0.0097	0.0164	0.0223

PERCOLATION/LEAKAGE THROUGH LAYER 3

TOTALS	0.0318	0.0277	0.0320	0.0794	0.1335	0.1050
	0.0519	0.0239	0.0287	0.0412	0.0691	0.0941

STD. DEVIATIONS	0.0005	0.0002	0.0072	0.0328	0.0137	0.0133
	0.0279	0.0228	0.0337	0.0502	0.0565	0.0518

AVERAGES OF MONTHLY AVERAGED DAILY HEADS (INCHES)

DAILY AVERAGE HEAD ACROSS LAYER 3

AVERAGES	3.8622	3.7279	3.9050	10.6223	17.5841	14.4007
	6.8248	3.0142	3.7524	5.3025	9.2138	12.0552

STD. DEVIATIONS	0.0282	0.0284	0.9760	4.5608	1.7169	1.8119
	3.7374	3.0268	4.6798	6.7028	7.7093	6.6946

AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1 THROUGH 10

	INCHES		CU. FEET	PERCENT
RECIPITATION	38.29 (4.385)		694963.5	100.00
UNOFF	8.153 (2.2061)		147977.47	21.293
VAPOTRANSPIRATION	29.439 (2.4031)		534312.19	76.883
LATERAL DRAINAGE COLLECTED FROM LAYER 2	0.14328 (0.05730)		2600.582	0.37420

PERCOLATION/LEAKAGE THROUGH FROM LAYER 3	0.71835 (0.20566)	13038.080	1.87608
WATER HEAD ACROSS TOP OF LAYER 3	7.855 (2.288)		
CHANGE IN WATER STORAGE	-0.163 (2.0197)	-2964.78	-0.427

PEAK DAILY VALUES FOR YEARS 1 THROUGH 10

	(INCHES)	(CU. FT.)
-----	-----	-----
PRECIPITATION	2.37	43015.496
RUNOFF	3.094	56153.4102
DRAINAGE COLLECTED FROM LAYER 2	0.00233	42.28931
PERCOLATION/LEAKAGE THROUGH LAYER 3	0.006039	109.61400
AVERAGE HEAD ACROSS LAYER 3	24.000	
SNOW WATER	4.03	73109.6172
MAXIMUM VEG. SOIL WATER (VOL/VOL)		0.4680
MINIMUM VEG. SOIL WATER (VOL/VOL)		0.0922

$$109.61 \frac{\text{ft}^3}{\text{day}} \times 7.481 \frac{\text{gal}}{\text{ft}^3} = 820 \text{ gpd}$$

FINAL WATER STORAGE AT END OF YEAR 10

LAYER	(INCHES)	(VOL/VOL)
1	2.2013	0.3669
2	5.3141	0.2952
3	0.0000	0.0000
SNOW WATER	0.000	

**Area north of the Main Plant
Building sliding stability results**

Staneateles Falls	PAGE: 1	BY: EMK	DATE: 12/31/97	JOB NUMBER: 5618.010
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Sliding Stability

Assumed Cap System Components:

6" Topsoil

18" Barrier Protection Layer

40 mil LLDPE geomembrane (smooth)

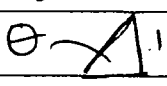
Typical interface friction angles:

VLDPPE vs. sand 3 psi $\sigma_v = 28^\circ$ (Koutsourais et al 1991)

VLDPPE vs. sand $21^\circ - 28^\circ$ (Sharma & Lewis 1994)

HDPE vs. sandy clay 18° (Gundle Literature)

* assume 18° (limited data available for LLDPE)

<u>Location</u>	<u>Proposed Slopes</u>	<u>Factor of Safety</u>
Area north of Main Plant Building	20% $\rightarrow 1/5'$  $\tan \theta = 1/5$ 5 $\theta = 11.3^\circ$	$FS = \frac{\tan 18^\circ}{\tan 11.3^\circ} = 1.6$ <u>OK</u>

**Area north of the Main Plant
Building material quantities**

Skaneateles Falls

PAGE:

1/1

BY:

JLS

DATE:

8/30/98

JOB NUMBER:

5618,010

Area north of the Main Plant Building

Cutoff wall:

Length = 660 ft

Depth = ± 15 ft (average)Width = 3 ft

$$29,700 \text{ ft}^3 = \underline{\underline{1,100 \text{ cy}}}$$

Trench:

Length = 355 ft

Depth = ± 15 ft (average)Width = 3 ft

$$15,975 \text{ ft}^3 = \underline{\underline{592 \text{ cy}}} \quad \text{say } \underline{\underline{595 \text{ cy}}}$$

$$\text{Total} = 1692 \text{ cy} \quad \text{say } 1695 \text{ cy}$$

$$\text{Capacity as shown} = \underline{\underline{2100 \text{ cy}}}$$

$$\text{Remaining} = 405 \text{ cy}$$

**Area north of the Main Plant
Building USLE calculations**

Skaneateles Falls

PAGE:

1/2

BY:

JLS

DATE:

9/29/97

JOB NUMBER:

5618.010

Anticipated Soil loss from the proposed cover for the area north of the Main Plant Building

Universal Soil Loss Equation - USLE

$$A = RKLSCP$$

where: A = average soil loss, in tons per acre, annually R = rainfall and runoff erosivity index K = Soil erodibility factor L = Slope - Length factor S = Slope - Steepness Factor C = cover/management factor P = practice factor

$$R = 100 \quad (\text{Figure 1})$$

$$K = 0.27 \quad (\text{Figure 2})$$

$$LS = 0.70 \quad (\text{Table 1}) - \% \text{ Slope} = 4\%$$

$$\text{Slope Length} = 400 \text{ ft}$$

$$C = 1 \quad (\text{Table 2}) - \text{Freshly covered landfills without vegetation or erosion control}$$

$$C = 0.01 \quad (\text{Table 2}) - \text{After vegetation is established}$$

$$P = 1 \quad - \text{No support practice}$$

ECT: Skaneateles Falls	PAGE: 2/2	BY: KMK	DATE: 12/24/92	JOB NUMBER: 5619.010
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Area north of the Main Plant Building

After construction (no vegetation or erosion control)

$A = RKLSCP$

$$A = (100)(0.27)(0.70)(1)(1) = 18.9 \frac{\text{tons}}{\text{acre}} \times 5.03 \text{ acres} = 95.3 \frac{\text{tons}}{\text{yr}}$$

After cap is vegetated

$A = RKLSCP$

$$A = (100)(0.27)(0.70)(0.01)(1) = 0.189 \frac{\text{tons}}{\text{acre}} \times 5.03 \text{ acres} = 0.95 \frac{\text{tons}}{\text{yr}}$$

Exhibit A

Geotechnical testing results (SJB Services, Inc., 1997)



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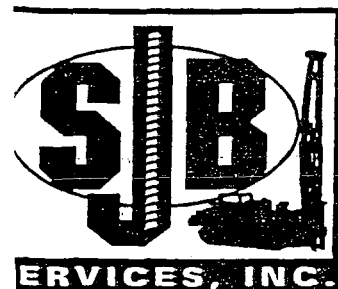
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**SJB SERVICES, INC.
LABORATORY TEST REPORT
STAUFFER MANAGEMENT CO.,
SKANEATELLES
O'BRIEN & GERE ENGINEERS
PROJECT NO. SJB-D1034**



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Laboratory Test Report

PROJECT : STAUFFER MANAGEMENT CO. - SKANEATELES, N.Y.

CLIENT : OBRIEN & GERE ENGINEERS

DATE : OCTOBER 29, 1997

PROJECT NO.: SJB-d1034

=====

Attached are the results of laboratory testing conducted on various samples from the Stauffer Management Co. Project in Skaneateles, New York (client project #5618.010). Samples contained in this report were chosen for testing by Timothy Eddy and Jenny Smith, representing Obrien & Gere Engineers.

The testing conducted was as follows :

Part I : LTR-1

ASTM D-422 : Particle Size Analysis of Soils
- conducted on twenty three composite samples

Part II : LTR-2

ASTM D-422 : Particle Size Analysis of Soils
- conducted on nine split spoon samples from various borings

Part III : LTR-3

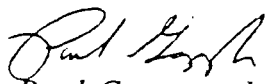
ASTM D4318 : Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- conducted on eight split spoon samples from various borings

Specimens were obtained and identified by a SJB Services, Inc. Drill Crew in September of 1997. The samples were received at our laboratory on September 26, 1997 where they were processed for testing.

If the reviewer should have any questions concerning this report, please do not hesitate to contact our office at any time.

=====

SJB Services, Inc.


Paul Gregorczyk
Laboratory Manager


Ray J. Kron
Testing Services Manager

PART I



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CLIENT : OBRIEN & GERE ENGINEERS

DATE : OCTOBER 29, 1997

PART I LTR-1 PAGE 1 OF 12

SJB SAMPLE NUMBER : 97-523

IDENTIFICATION : composite sample for boring SWB-1

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1"	100.0
3/4"	92.0
1/2"	84.7
3/8"	81.7
1/4"	74.8
#4	71.1
#10	60.5
#20	54.7
#40	49.1
#100	38.8
#200	34.6

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
28.9%	36.5%	24.2%	10.4%

JB SAMPLE NUMBER : 97-524

IDENTIFICATION : composite sample for boring SWB-2

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1"	100.0
3/4"	95.1
1/2"	85.5
3/8"	81.7
1/4"	74.4
#4	70.9
#10	61.8
#20	58.4
#40	54.2
#100	42.6
#200	32.7

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
29.1%	38.2%	26.3%	6.4%





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PART I LTR-1 PAGE 2 OF 12

SJB SAMPLE NUMBER : 97-525

IDENTIFICATION : composite sample for boring SWB-3

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1"	100.0
3/4"	89.3
1/2"	89.3
3/8"	89.3
1/4"	86.3
#4	83.7
#10	73.0
#20	71.0
#40	66.7
#100	54.6
#200	38.0

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
16.3%	45.7%	35.2%	2.8%

SJB SAMPLE NUMBER : 97-525A

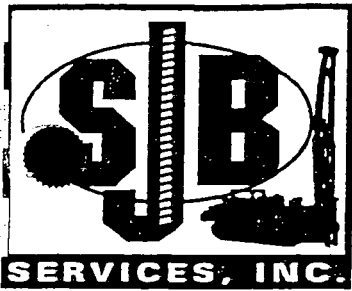
IDENTIFICATION : composite sample for boring SWB-4

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1"	100.0
3/4"	96.7
1/2"	82.9
3/8"	77.2
1/4"	67.4
#4	63.2
#10	52.4
#20	46.3
#40	40.9
#100	27.3
#200	20.7

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
36.8%	42.5%	16.1%	4.6%



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PART I LTR-1 PAGE 3 OF 12

SJB SAMPLE NUMBER : 97-526

IDENTIFICATION : composite sample for boring SWB-5

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1"	100.0
3/4"	93.0
1/2"	86.6
3/8"	81.2
1/4"	71.4
#4	65.2
#10	49.4
#20	43.6
#40	38.6
#100	29.7
#200	26.2

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
34.8%	39.0%	17.6%	8.6%

SJB SAMPLE NUMBER : 97-527

IDENTIFICATION : composite sample for boring SWB-6

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1/2"	100.0
3/8"	94.1
1/4"	84.0
#4	78.0
#10	60.7
#20	49.5
#40	40.9
#100	28.8
#200	23.2

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
22.1%	54.7%	19.2%	4.1%





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SJB SAMPLE NUMBER : 97-528

IDENTIFICATION : composite sample for boring SWB-7

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
3/4"	100.0
1/2"	89.8
3/8"	87.9
1/4"	77.6
#4	73.8
#10	59.5
#20	55.1
#40	51.7
#100	46.3
#200	42.9

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
26.2%	30.9%	30.3%	12.6%

SJB SAMPLE NUMBER : 97-529

IDENTIFICATION : composite sample for boring SWB-8

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1 1/2"	100.0
1"	86.1
3/4"	70.4
1/2"	68.5
3/8"	64.8
1/4"	56.7
#4	50.6
#10	35.1
#20	29.2
#40	25.5
#100	21.1
#200	18.8

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
49.4%	31.8%	15.3%	3.5%





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SJB SAMPLE NUMBER : 97-530

IDENTIFICATION : composite sample for boring SWB-9

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1"	100.0
3/4"	98.0
1/2"	97.1
3/8"	96.2
1/4"	93.5
#4	91.5
#10	83.4
#20	78.9
#40	74.3
#100	60.9
#200	52.7

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
8.5%	38.8%	35.4%	17.3%

SJB SAMPLE NUMBER : 97-531

IDENTIFICATION : composite sample for boring SWB-10

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
3/4"	100.0
1/2"	98.5
3/8"	96.4
1/4"	94.2
#4	89.4
#10	76.2
#20	73.1
#40	69.8
#100	60.3
#200	54.4

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
10.6%	34.9%	36.8%	17.7%





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SJB SAMPLE NUMBER : 97-532

IDENTIFICATION : composite sample for boring SWB-11

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1 1/2"	100.0
1"	81.6
3/4"	81.6
1/2"	80.5
3/8"	78.7
1/4"	74.2
#4	70.8
#10	68.5
#20	66.8
#40	65.4
#100	61.2
#200	57.5

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
29.2%	13.2%	26.7%	30.9%

SJB SAMPLE NUMBER : 97-533

IDENTIFICATION : composite sample for boring SWB-12

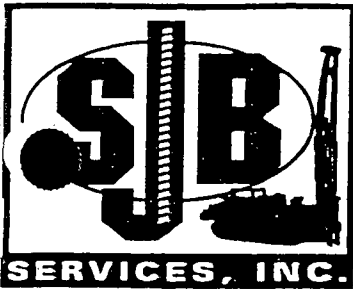
ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
3/4"	100.0
1/2"	98.3
3/8"	96.6
1/4"	94.8
#4	92.9
#10	87.7
#20	84.1
#40	81.0
#100	74.2
#200	70.0

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
7.1%	22.9%	45.2%	24.8%





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SJB SAMPLE NUMBER : 97-534

IDENTIFICATION : composite sample for boring SWB-13

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
3/4"	100.0
1/2"	91.4
3/8"	85.3
1/4"	78.0
#4	73.3
#10	60.2
#20	54.8
#40	50.5
#100	44.3
#200	40.4

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
26.7%	32.9%	29.9%	10.5%

SJB SAMPLE NUMBER : 97-535

IDENTIFICATION : composite sample for boring SWB-14

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1 1/2"	100.0
1"	92.8
3/4"	92.8
1/2"	90.1
3/8"	88.6
1/4"	82.8
#4	79.4
#10	69.1
#20	65.0
#40	62.2
#100	56.8
#200	53.1

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
20.6%	26.3%	37.3%	15.8%





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SJB SAMPLE NUMBER : 97-536

IDENTIFICATION : composite sample for boring SWB-15

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1 1/2"	100.0
1"	93.3
3/4"	86.1
1/2"	76.2
3/8"	73.5
1/4"	69.1
#4	64.7
#10	50.0
#20	43.3
#40	38.4
#100	31.8
#200	29.1

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
35.3%	35.5%	22.0%	7.2%

SJB SAMPLE NUMBER : 97-537

IDENTIFICATION : composite sample for boring SWB-16

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1 1/2"	100.0
1"	96.7
3/4"	93.5
1/2"	86.3
3/8"	82.1
1/4"	77.4
#4	74.3
#10	64.3
#20	57.5
#40	52.0
#100	43.3
#200	39.1

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
25.7%	35.2%	31.7%	7.4%





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SJB SAMPLE NUMBER : 97-538

IDENTIFICATION : composite sample for boring SWB-17

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1"	100.0
3/4"	98.2
1/2"	94.0
3/8"	90.6
1/4"	83.6
#4	78.9
#10	66.2
#20	59.9
#40	54.8
#100	46.2
#200	41.6

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
21.1%	37.3%	31.2%	10.4%

SJB SAMPLE NUMBER : 97-539

IDENTIFICATION : composite sample for boring SWB-18

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1"	100.0
3/4"	96.4
1/2"	96.4
3/8"	94.8
1/4"	93.3
#4	88.2
#10	81.2
#20	78.9
#40	77.1
#100	73.8
#200	71.4

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
11.8%	16.8%	46.4%	25.0%





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SJB SAMPLE NUMBER : 97-540

IDENTIFICATION : composite sample for boring SWB-19

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
3/4"	100.0
1/2"	94.6
3/8"	89.9
1/4"	83.9
#4	78.1
#10	67.0
#20	61.7
#40	58.7
#100	51.6
#200	36.7

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
21.9%	41.4%	27.9%	8.8%

SJB SAMPLE NUMBER : 97-541

IDENTIFICATION : composite sample for boring SWB-20

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1"	100.0
3/4"	93.6
1/2"	81.0
3/8"	69.6
1/4"	58.5
#4	53.0
#10	38.0
#20	30.9
#40	26.3
#100	20.2
#200	16.4

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
47.0%	36.6%	13.5%	2.9%





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SJB SAMPLE NUMBER : 97-542

IDENTIFICATION : composite sample for boring TB-1

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
3/4"	100.0
1/2"	93.0
3/8"	88.6
1/4"	82.0
#4	77.7
#10	61.5
#20	55.5
#40	50.3
#100	41.3
#200	36.7

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
22.3%	41.0%	24.6%	12.1%

SJB SAMPLE NUMBER : 97-543

IDENTIFICATION : composite sample for boring TB-2

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1 1/2"	100.0
1"	94.9
3/4"	86.7
1/2"	74.9
3/8"	68.3
1/4"	60.9
#4	55.9
#10	44.2
#20	36.9
#40	31.0
#100	21.1
#200	16.7

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
44.1%	39.2%	13.6%	3.1%





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Fax: (518) 238-1249

P.O. Box 416 • 208 Le Fevre Road
Stockertown, PA 18083

Phone: (610) 746-2670
Fax: (610) 746-2669

TOLL FREE: 1-800-821-5911

PROJECT : STAUFFER MANAGEMENT CO. - SKANEATELES, N.Y.
CLIENT : OBRIEN & GERE ENGINEERS
DATE : OCTOBER 29, 1997

PART I LTR-1 PAGE 12 OF 12

SJB SAMPLE NUMBER : 97-544
IDENTIFICATION : composite sample for boring TB-3

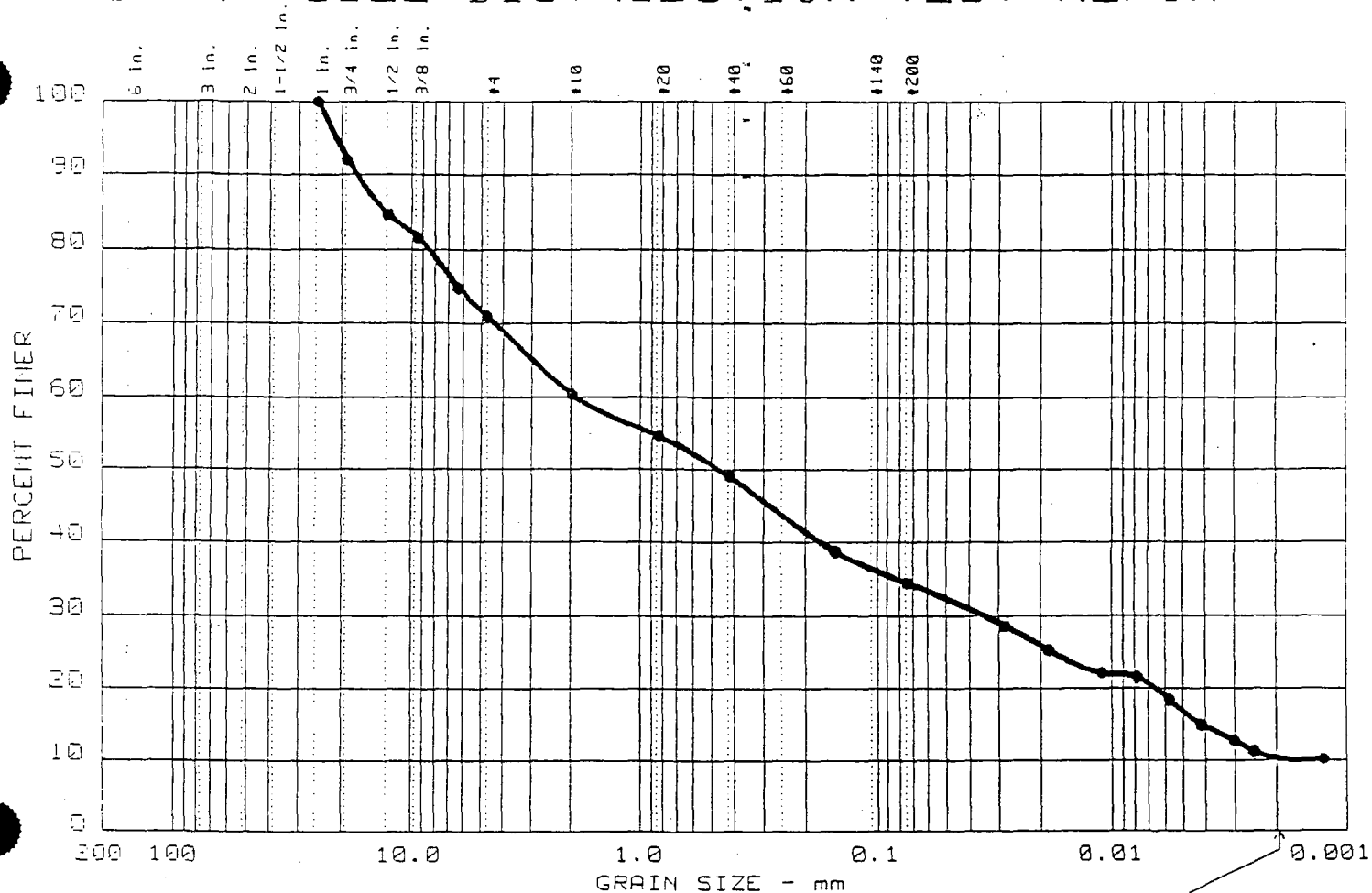
ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
3/4"	100.0
1/2"	99.1
3/8"	96.0
1/4"	90.5
#4	84.6
#10	69.0
#20	61.8
#40	52.5
#100	41.0
#200	35.2

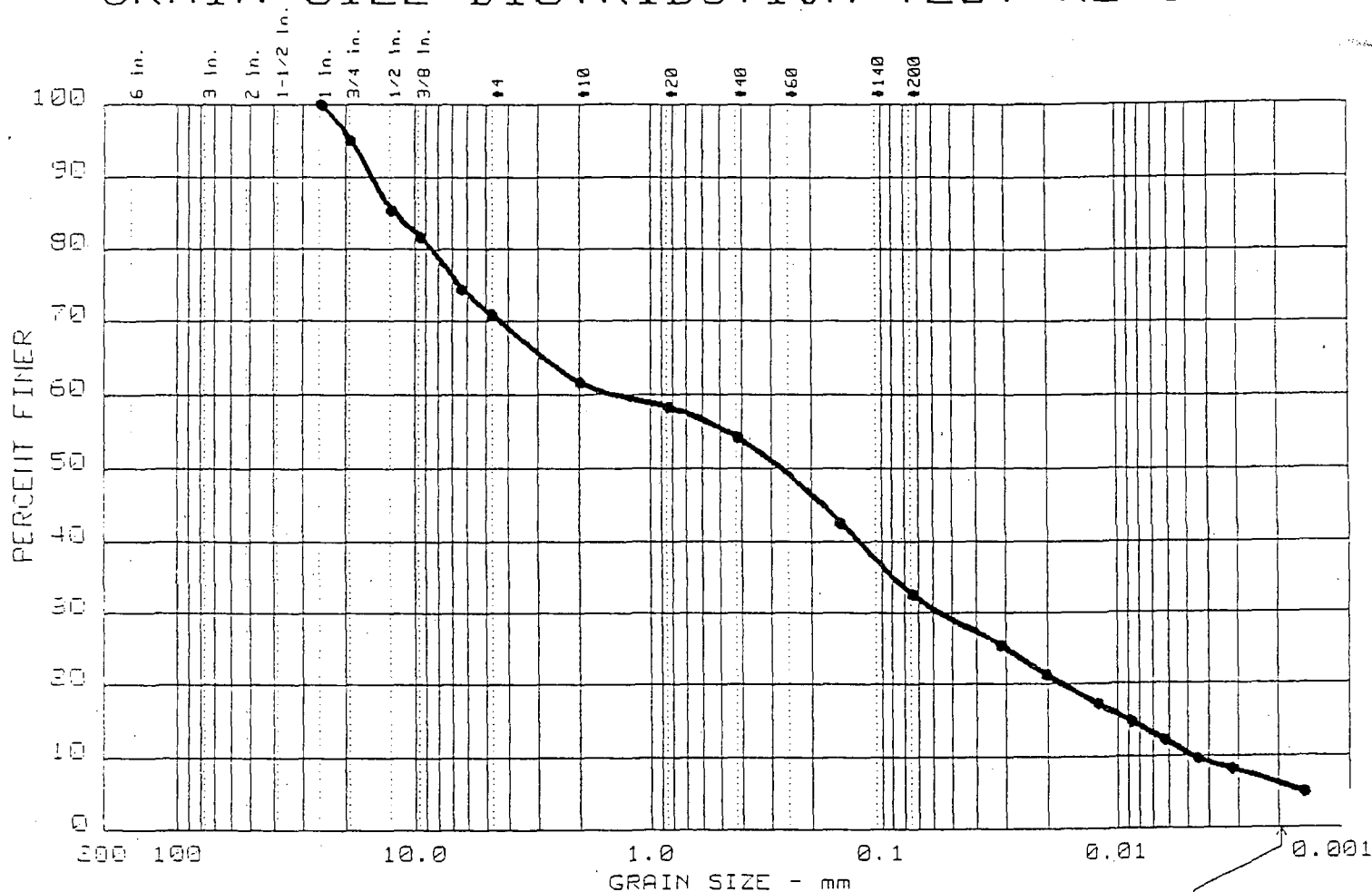
PERCENT COMPONENTS			
GRAVEL	SAND	SILT	CLAY
15.4%	49.4%	27.2%	8.0%



GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST REPORT



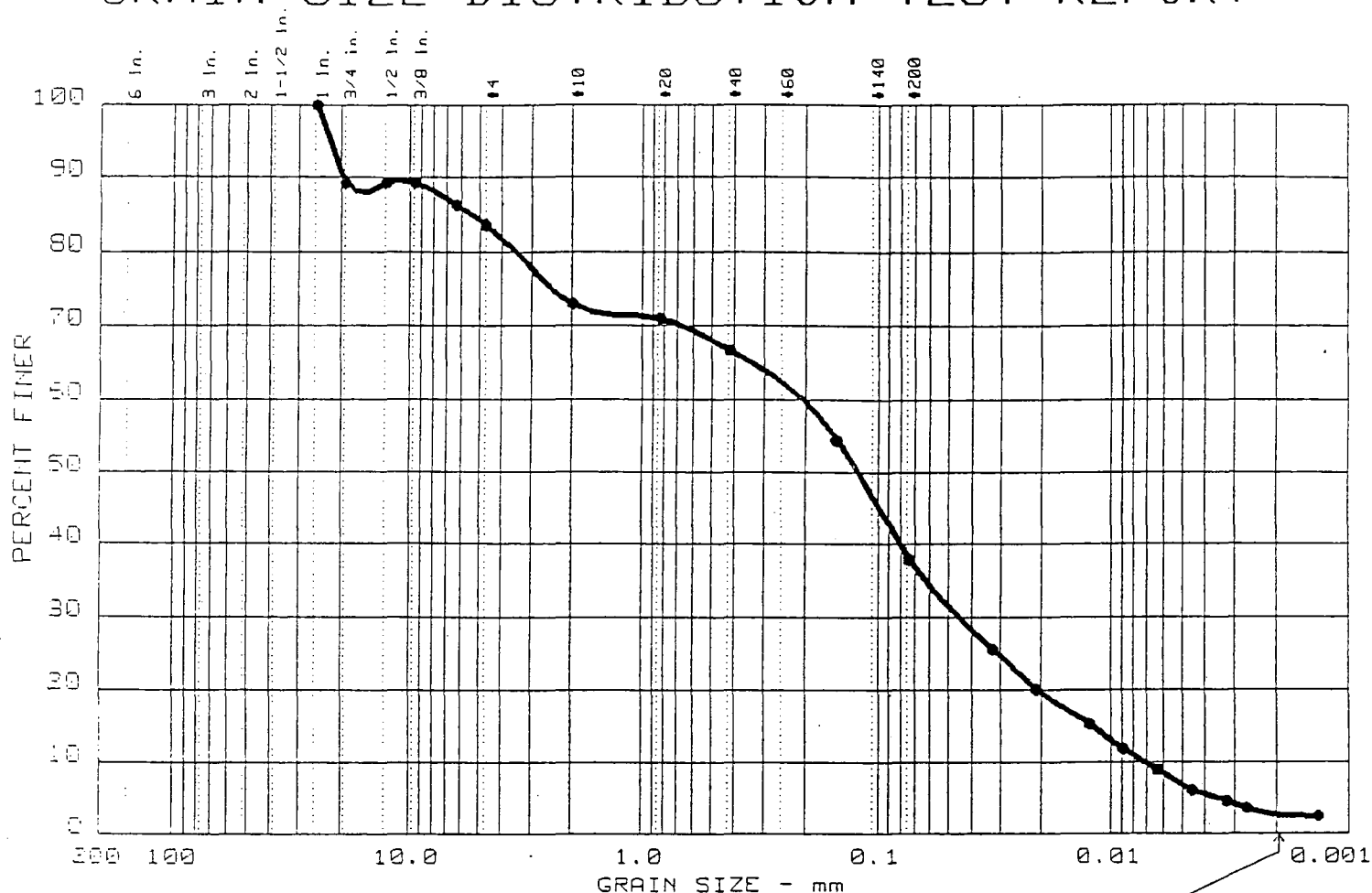
Test No.	% GRAVEL	% SAND	% SILT	% CLAY
18	29.1	38.2	26.3	6.4

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		12.30	1.41	0.27	0.056	0.0088	0.0046	0.47	305.5

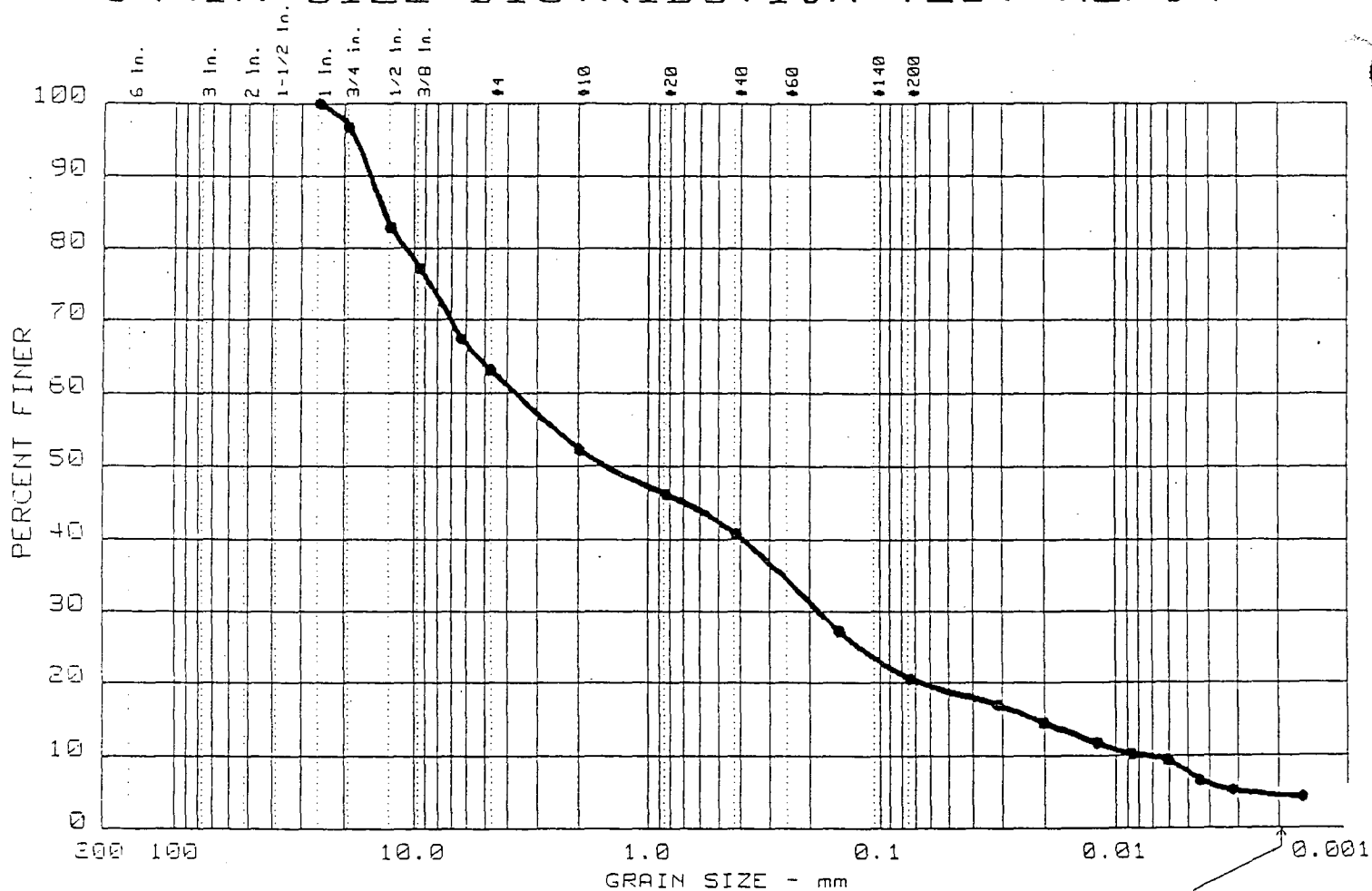
MATERIAL DESCRIPTION	USCS	AASHTO
SAND, SOME GRAVEL & SILT, TRACE CLAY	SM	A-2-4(0.0)

Project No.: SJB-d1034 : LTR-1 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY Location: COMPOSITE SAMPLE FOR BORING SWB-2 Date: OCTOBER 23, 1997	Remarks: Collected by a SJB Drill Crew from the project site in September 1997. SJB Sample ID# is 97-524 Figure No. _____
GRAIN SIZE DISTRIBUTION TEST REPORT SJB Services, Inc.	

GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
1	0.0	36.8	42.5	16.1	4.6

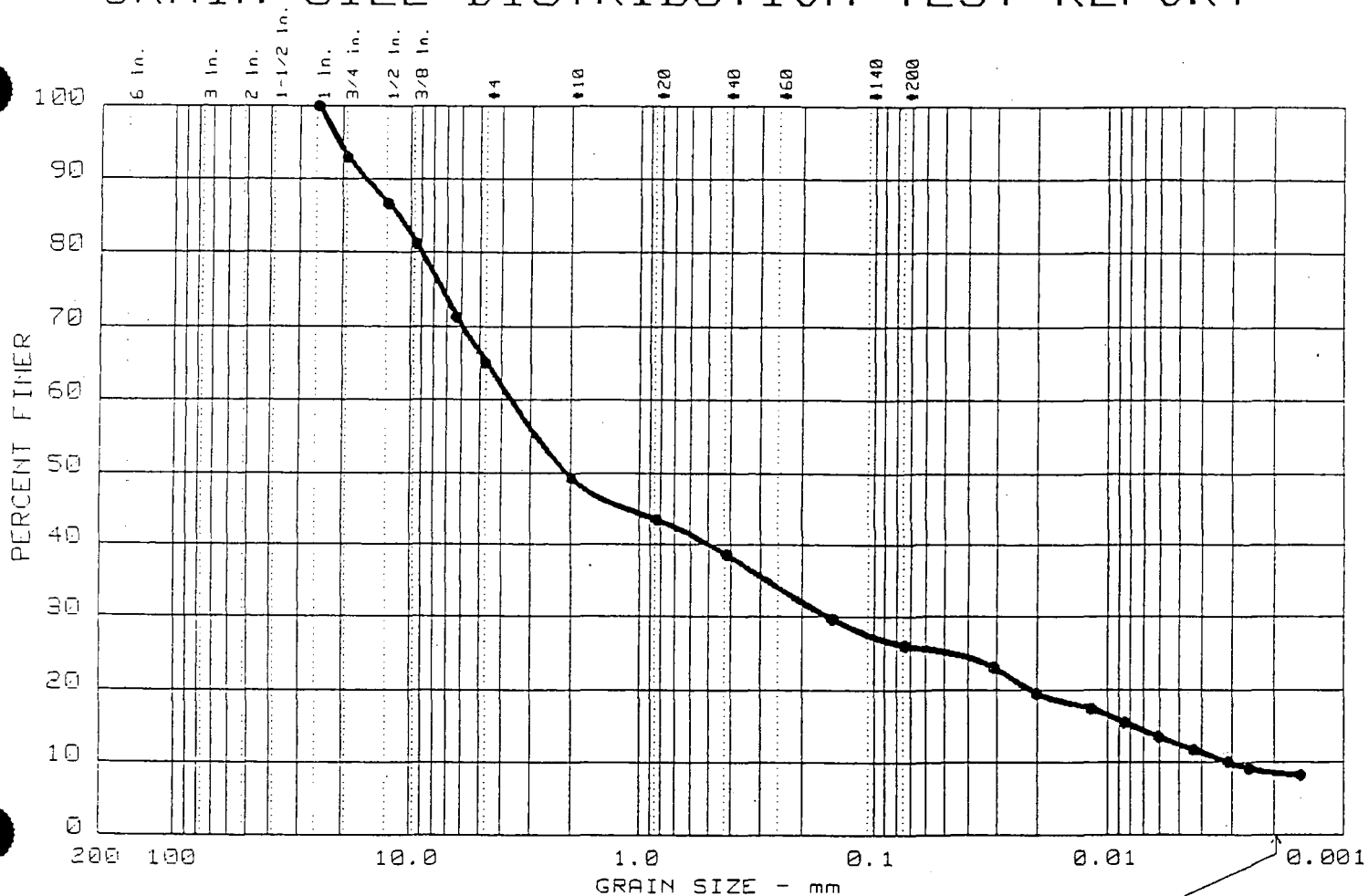
LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		13.49	3.67	1.51	0.182	0.0214	0.0068	1.33	543.3

MATERIAL DESCRIPTION	USCS	AASHTO
SAND & GRAVEL, LITTLE SILT, TRACE CLAY	SM	A-1-b

Project No.: SJB-d1034 : LTR-1
 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY
 Location: COMPOSITE SAMPLE FOR BORING SWB-4
 Date: OCTOBER 23, 1997
 GRAIN SIZE DISTRIBUTION TEST REPORT
 SJB Services, Inc.

Remarks:
 Collected by a SJB Drill Crew from the project site in September 1997.
 SJB Sample ID is 97-525A
 Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 2	0.0	34.8	39.0	17.6	8.6

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		11.48	3.67	2.09	0.153	0.0076	0.0030	2.11	1216.2

MATERIAL DESCRIPTION	USCS	AASHTO
• SAND, SOME GRAVEL, LITTLE SILT, TRACE CLAY	SM	A-2-4(0.0)

Project No.: SJB-d1034 : LTR-1
 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY
 • Location: COMPOSITE SAMPLE FOR BORING SWB-5

Date: OCTOBER 23, 1997

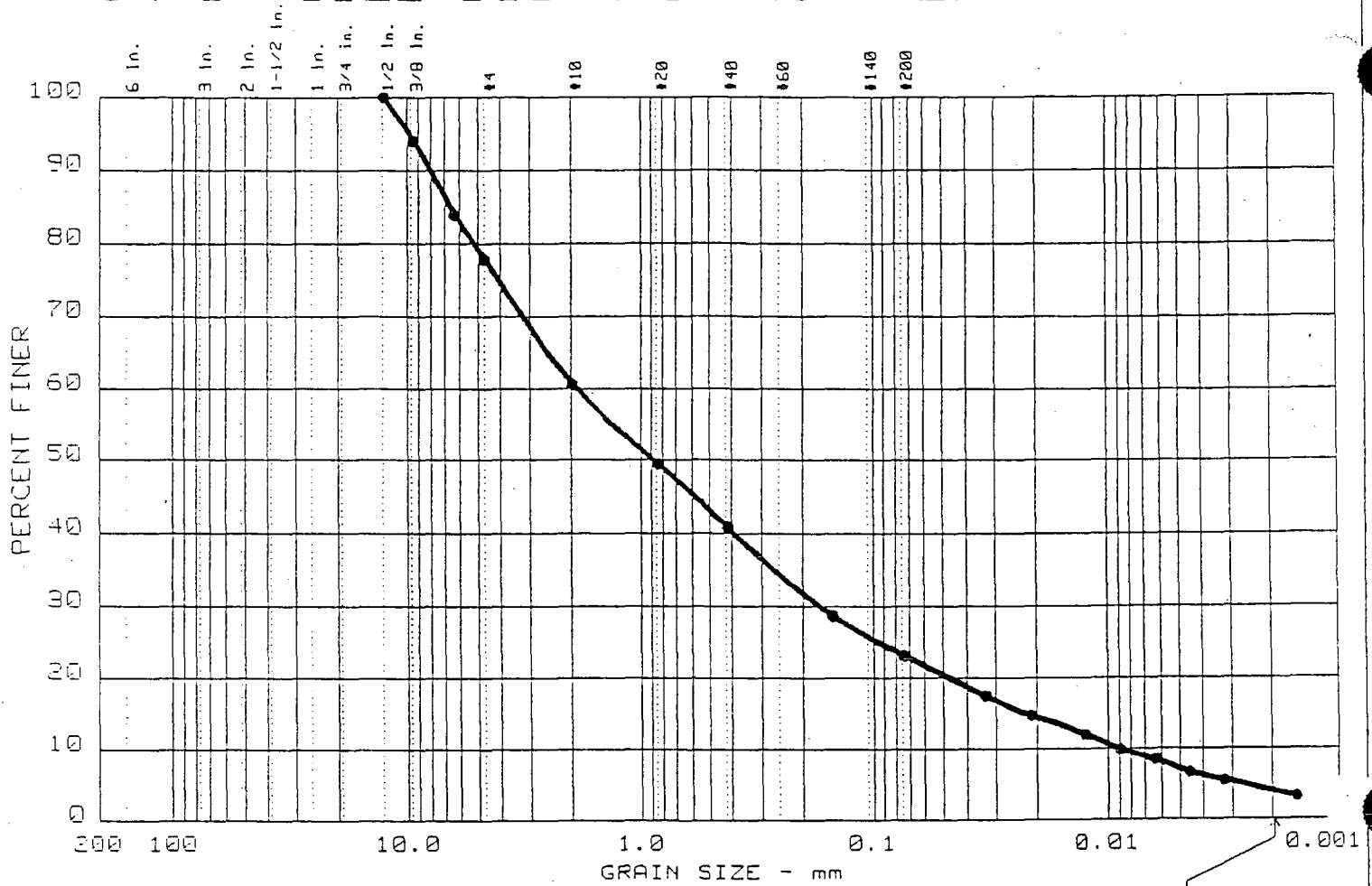
GRAIN SIZE DISTRIBUTION TEST REPORT
SJB Services, Inc.

Remarks:

Collected by a SJB Drill
 Crew from the project
 site in September 1997.
 SJB Sample ID# is 97-526

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
● 3	0.0	22.0	54.7	19.2	4.1

[illegible]

MATERIAL DESCRIPTION	USCS	AASHTO
• SAND, SOME GRAVEL, LITTLE SILT, TRACE CLAY	SM	A-1-b

Project No.: SJB-d1034 : LTR-1
Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY
● Location: COMPOSITE SAMPLE FOR BORING SWB-6

Date: OCTOBER 23, 1997

GRAIN SIZE DISTRIBUTION TEST REPORT

SJB Services, Inc.

Remarks:

Collected by a SJB Drill.

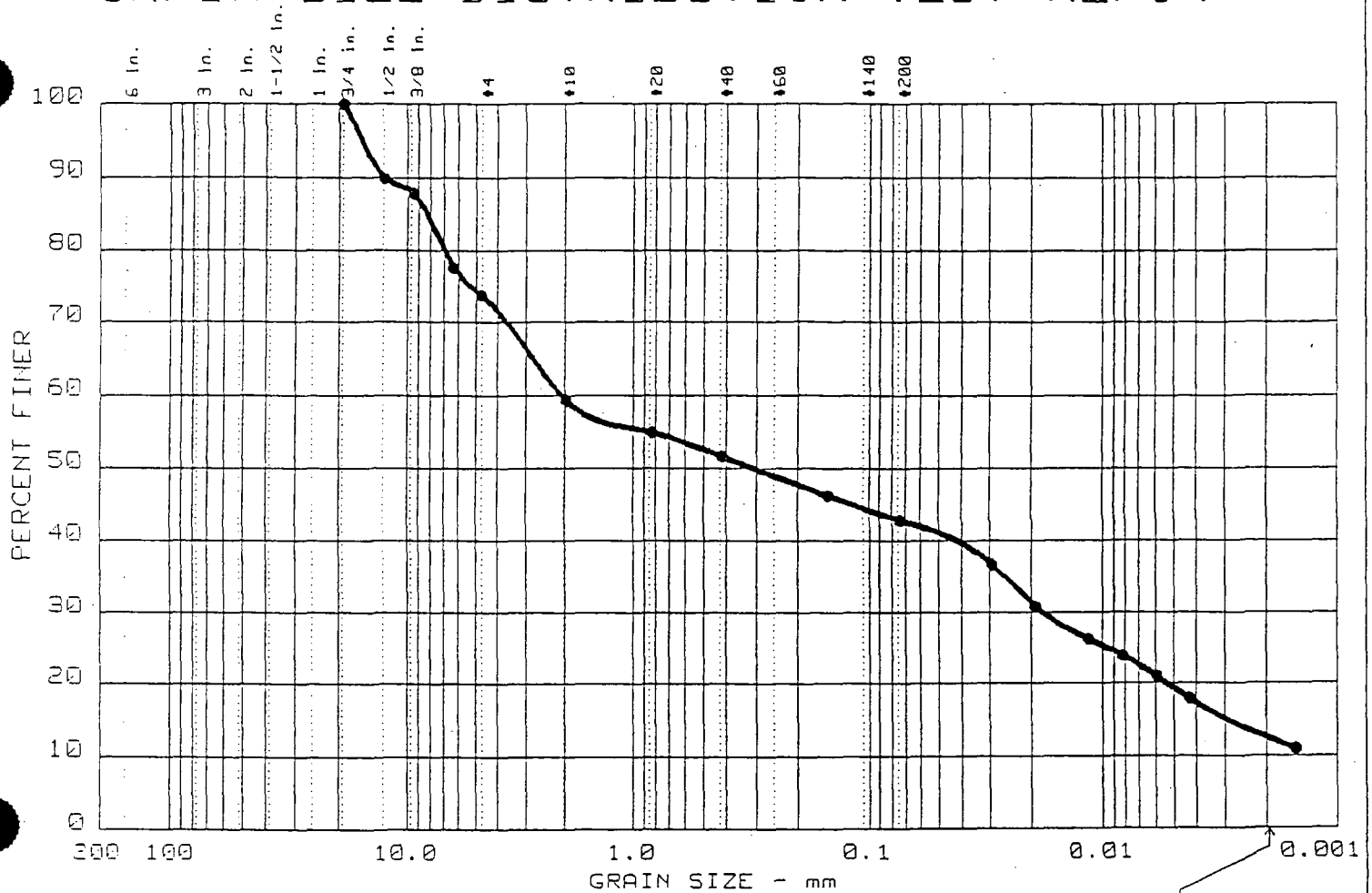
Crew from the project

site in September 1997.

SJB Sample ID# is 97-527

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 4	0.0	26.2	30.9	30.3	12.6

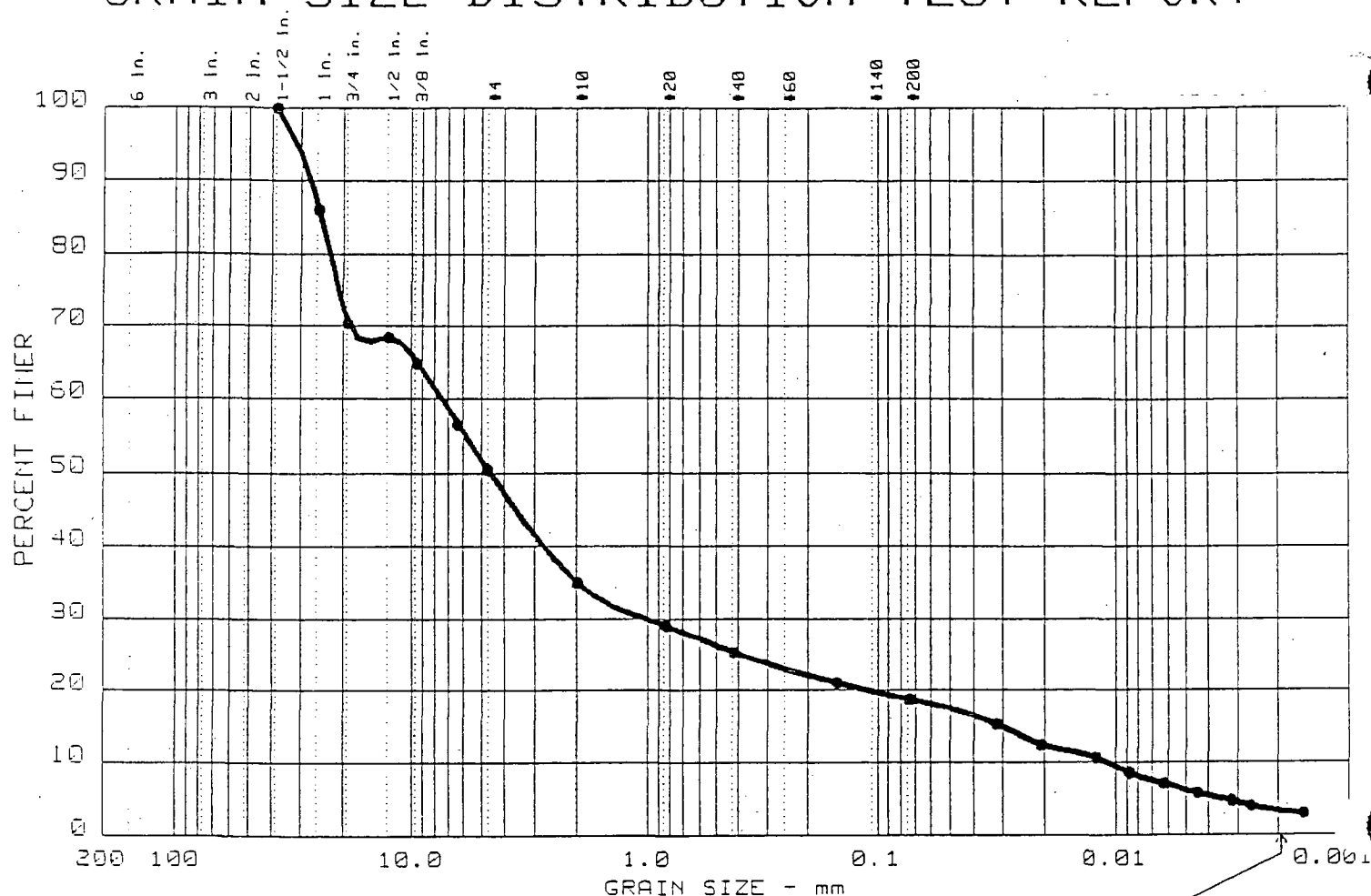
LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		8.30	2.08	0.30	0.018	0.0029			

MATERIAL DESCRIPTION	USCS	AASHTO
• SOME SAND, SILT AND GRAVEL, LITTLE CLAY	SM	A-4(0.0)

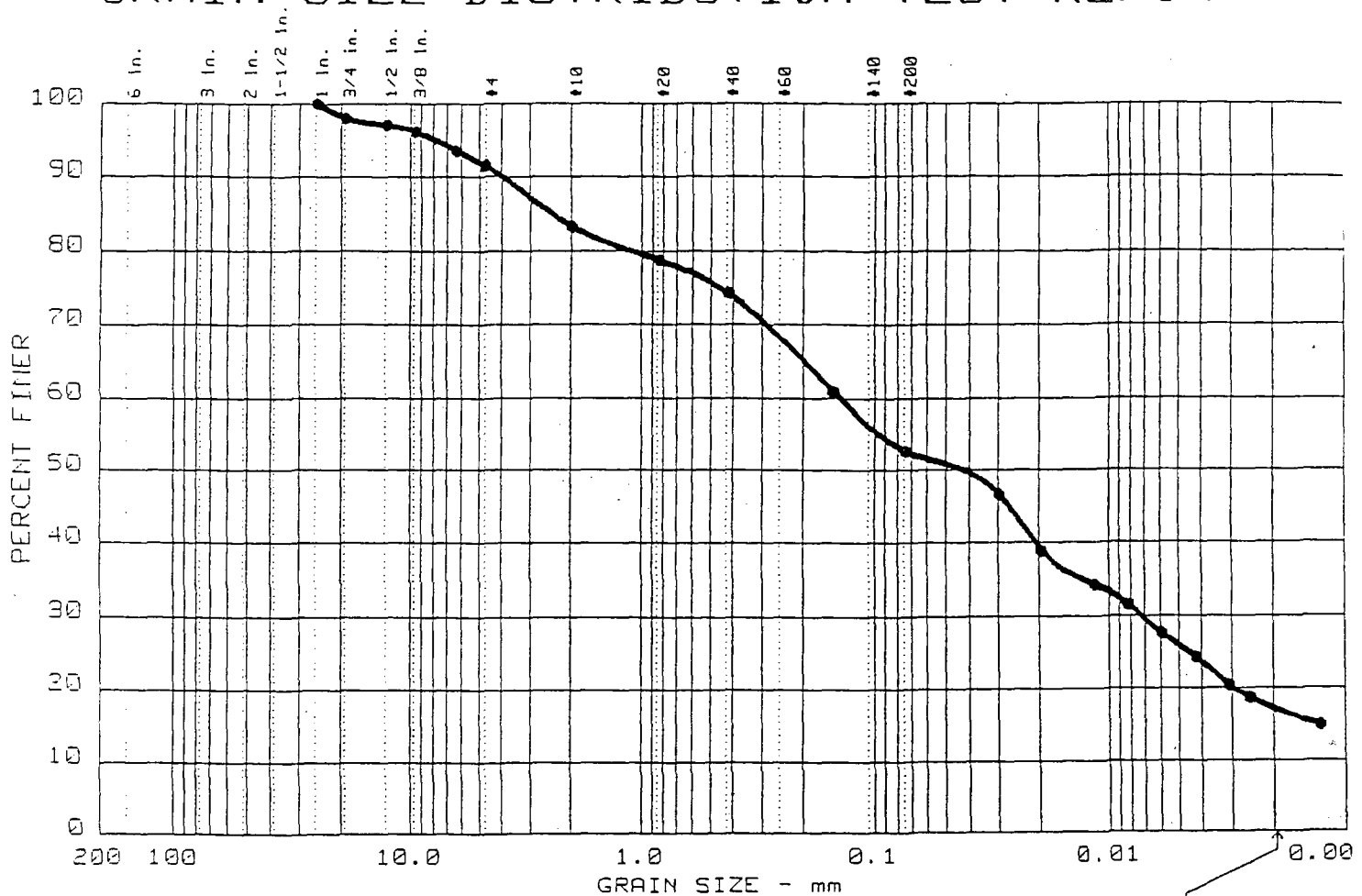
Project No.: SJB-d1034 : LTR-1
 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY
 • Location: COMPOSITE SAMPLE FOR BORING SWB-7
 Date: OCTOBER 23, 1997
 GRAIN SIZE DISTRIBUTION TEST REPORT
SJB Services, Inc.

Remarks:
 Collected by a SJB Drill Crew from the project site in September 1997.
 SJB Sample ID# is 97-528
 Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST REPORT



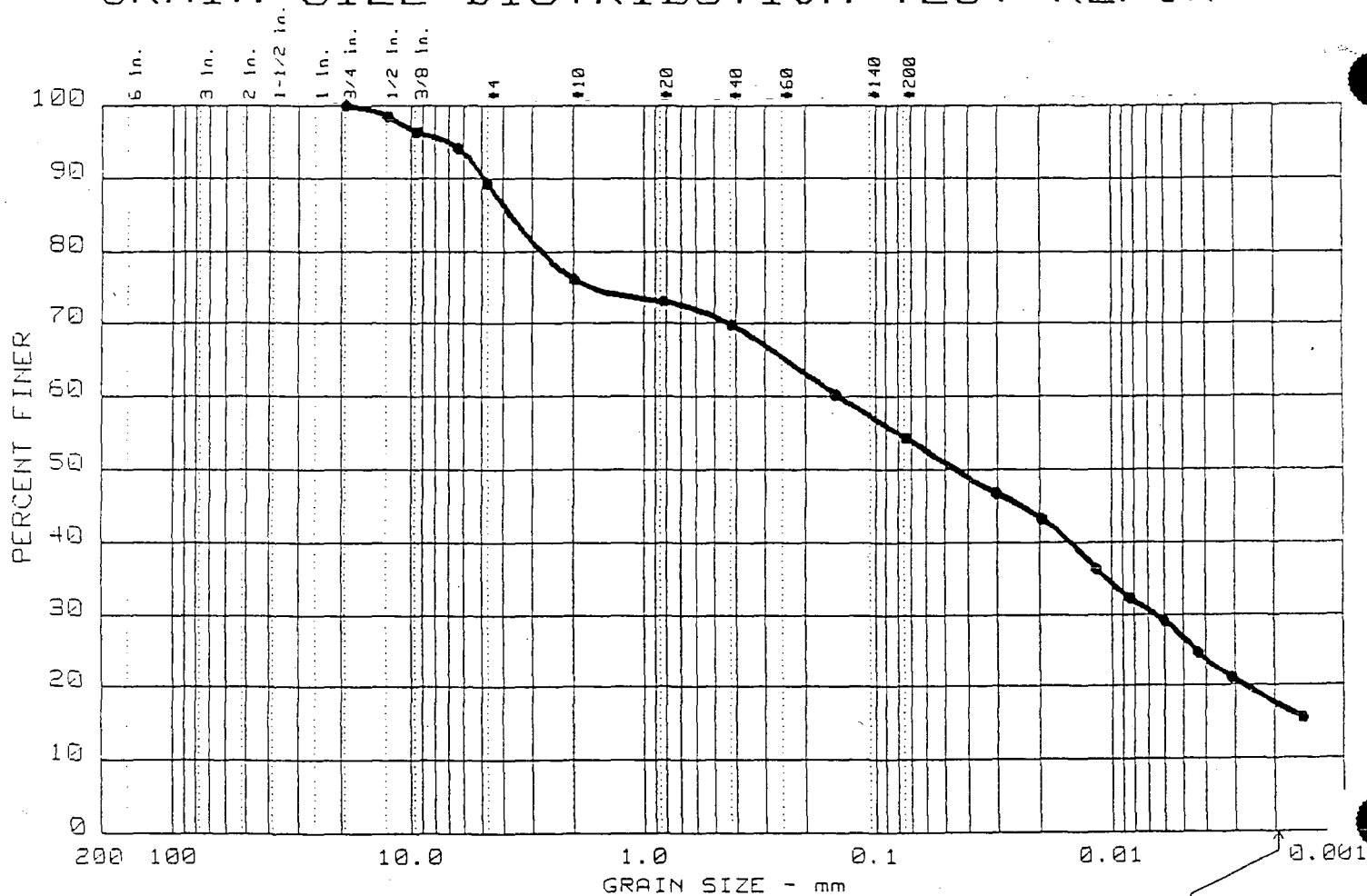
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 6	0.0	8.5	38.8	35.4	17.3

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		2.37	0.14	0.04	0.007				

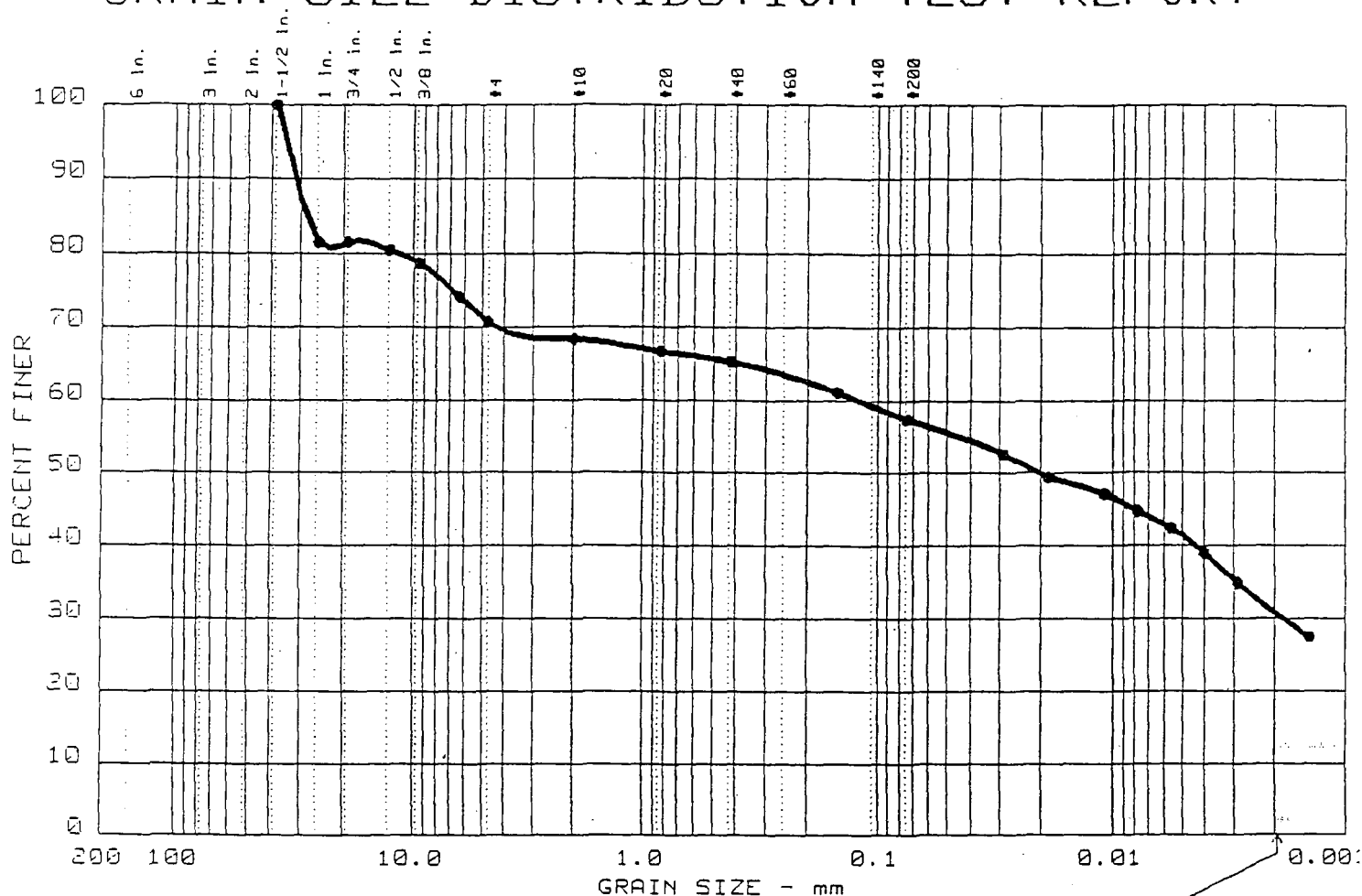
MATERIAL DESCRIPTION	USCS	AASHTO
• SAND & SILT, LITTLE CLAY, TRACE GRAVEL	ML	A-4(0.0)

Project No.: SJB-d1034 : LTR-1 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY • Location: COMPOSITE SAMPLE FOR BORING SWB-9 Date: OCTOBER 23, 1997	Remarks: Collected by a SJB Drill Crew from the project site in September 1997. SJB Sample ID# is 97-530 Figure No. _____
GRAIN SIZE DISTRIBUTION TEST REPORT SJB Services, Inc.	

GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 8	0.0	29.2	13.2	26.7	30.9

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		28.51	0.12	0.02	0.002				

MATERIAL DESCRIPTION	USCS	AASHTO
• SOME CLAY, GRAVEL & SILT, LITTLE SAND	ML	A-4(0.0)

Project No.: SJB-d1034 : LTR-1
 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY
 • Location: COMPOSITE SAMPLE FOR BORING SWB-11

Date: OCTOBER 23, 1997

GRAIN SIZE DISTRIBUTION TEST REPORT

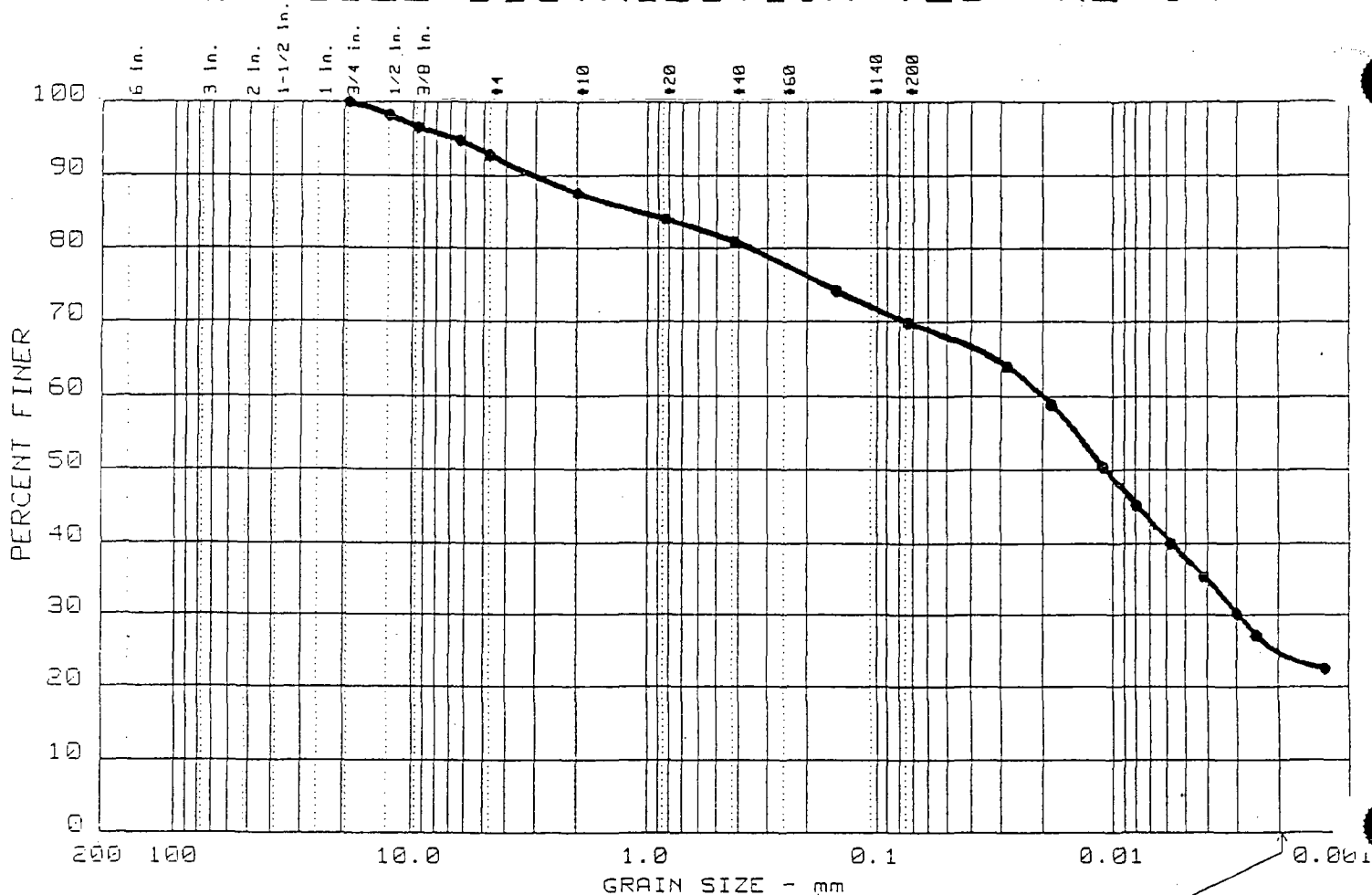
SJB Services, Inc.

Remarks:

Collected by a SJB Drill Crew from the project site in September 1997.
 SJB Sample ID# is 97-532

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



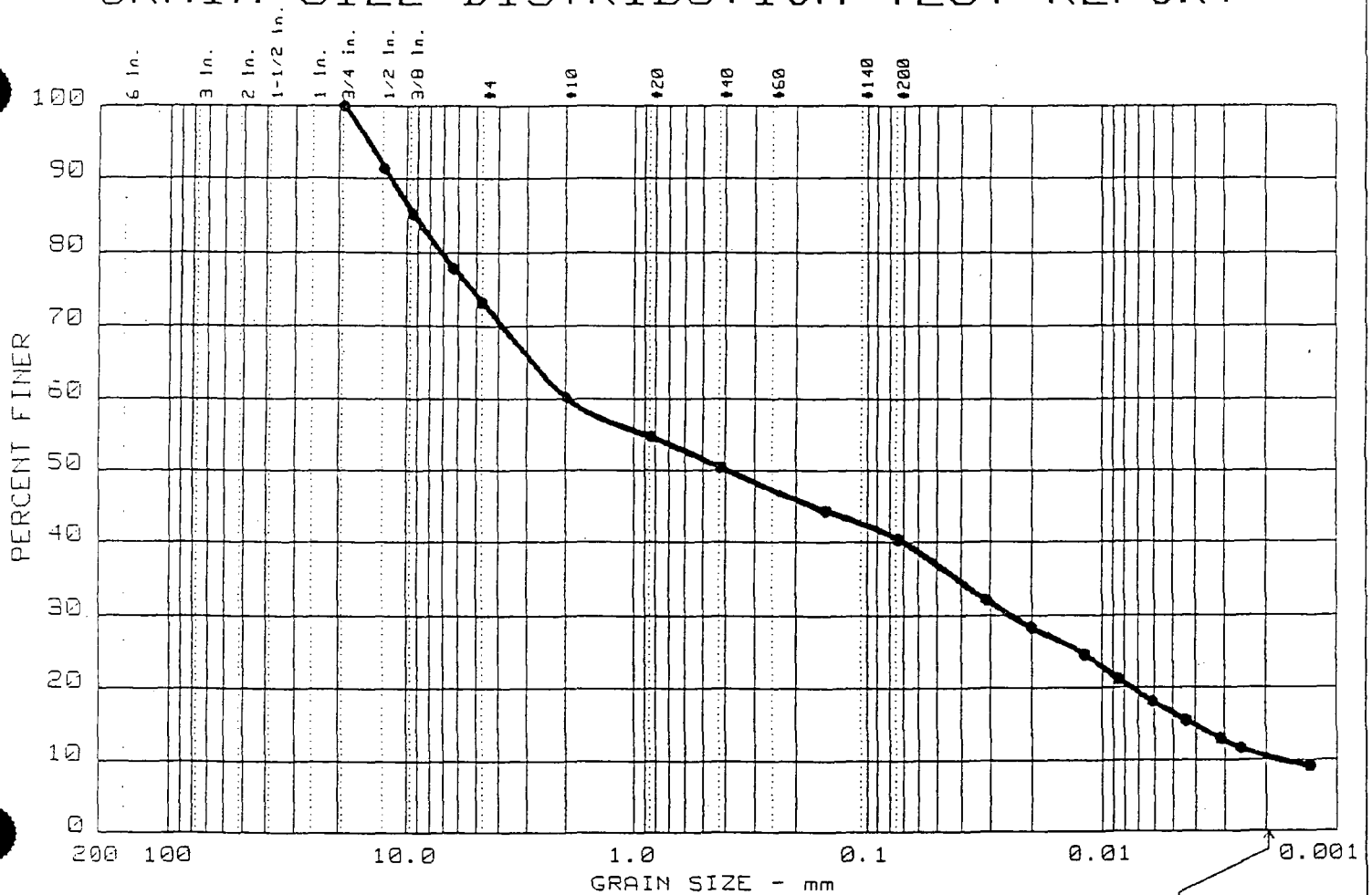
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 9	0.0	7.1	22.9	45.2	24.8

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		1.06		0.01	0.003				

MATERIAL DESCRIPTION	USCS	AASHTO
• SILT, SOME CLAY & SAND, TRACE GRAVEL	ML	A-4(0.0)

Project No.: SJB-d1034 : LTR-1 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY • Location: COMPOSITE SAMPLE FOR BORING SWB-12 Date: OCTOBER 23, 1997	Remarks: Collected by a SJB Drill Crew from the project site in September 1997. SJB Sample ID# is 97-533 Figure No. _____
GRAIN SIZE DISTRIBUTION TEST REPORT SJB Services, Inc.	

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 10	0.0	26.7	32.9	29.9	10.5

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		9.33	1.95	0.38	0.025	0.0041	0.0016	0.19	1202.3

MATERIAL DESCRIPTION	USCS	AASHTO
• SOME SAND, SILT & GRAVEL, LITTLE CLAY	SM	A-4(0.0)

Project No.: SJB-d1034 : LTR-1
 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY
 • Location: COMPOSITE SAMPLE FOR BORING SWB-13

Date: OCTOBER 23, 1997

GRAIN SIZE DISTRIBUTION TEST REPORT

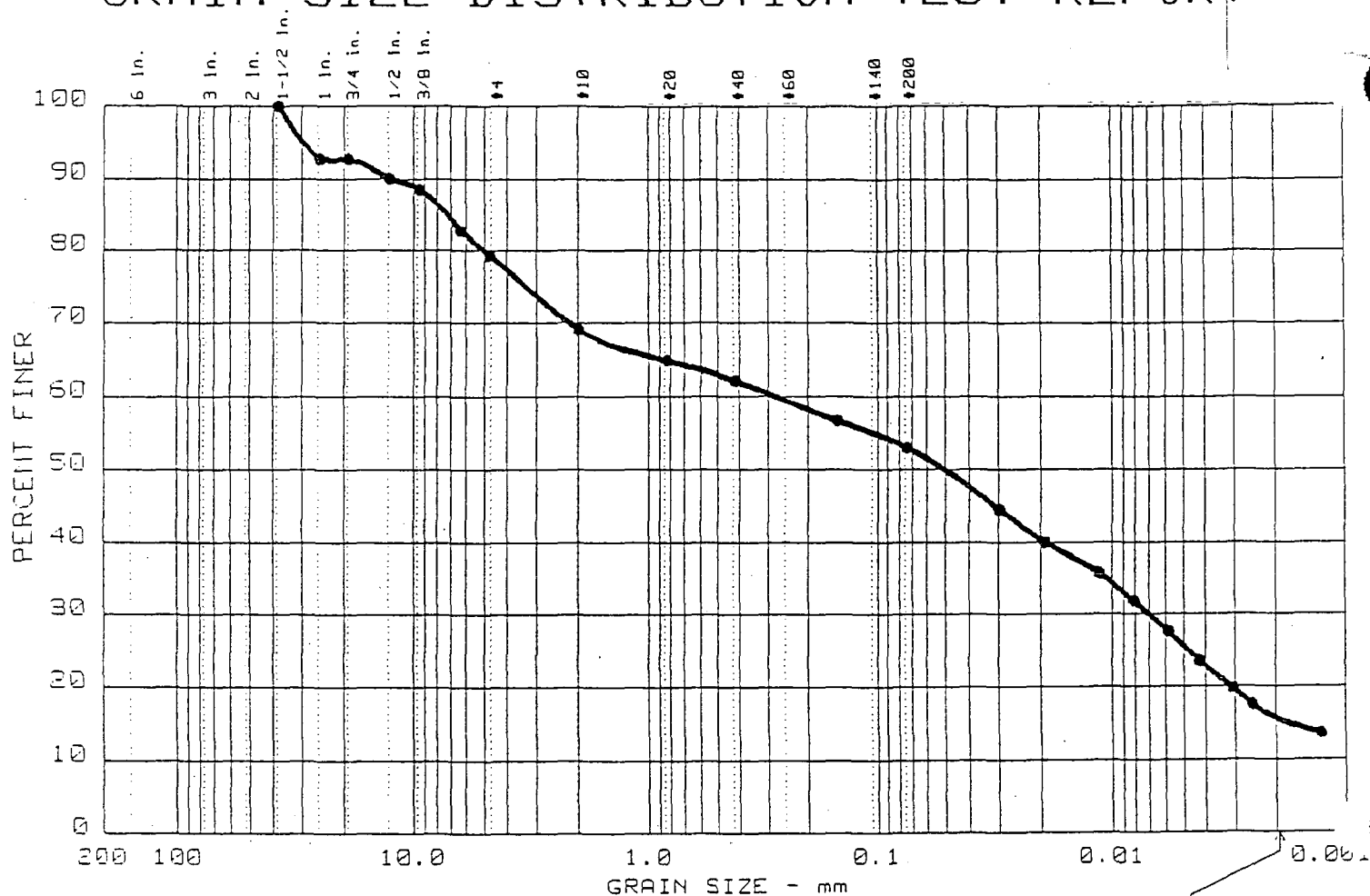
SJB Services, Inc.

Remarks:

Collected by a SJB Drill Crew from the project site in September 1997.
 SJB Sample ID# is 97-534

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



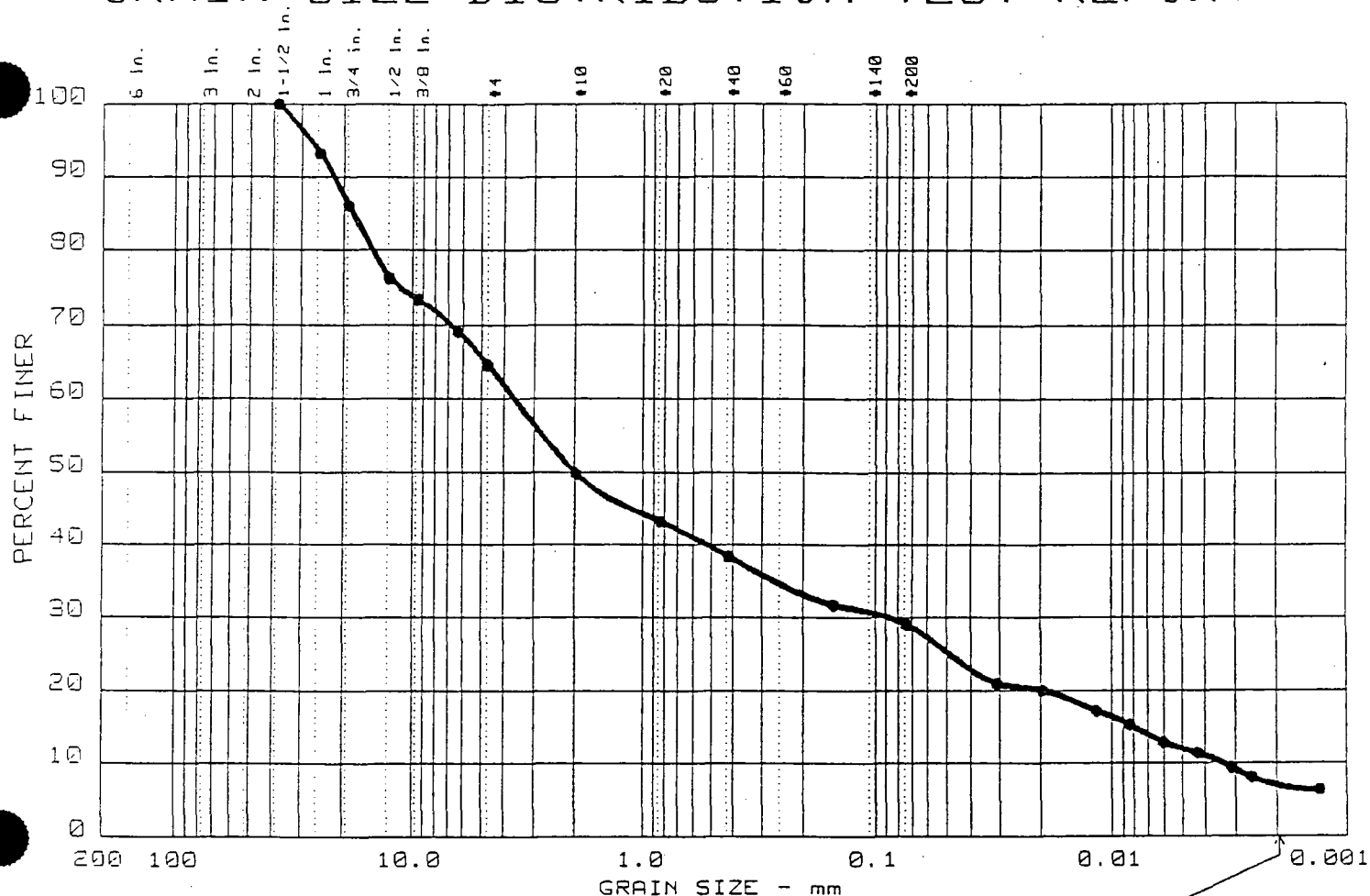
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 11	0.0	20.6	26.3	37.3	15.8

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		7.24	0.27	0.05	0.007	0.0017			

MATERIAL DESCRIPTION	USCS	AASHTO
• SILT, SOME SAND & GRAVEL, LITTLE CLAY	ML	A-4(0.0)

Project No.: SJB-d1034 : LTR-1 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY • Location: COMPOSITE SAMPLE FOR BORING SWB-14 Date: OCTOBER 23, 1997	Remarks: Collected by a SJB Drill Crew from the project site in September 1997. SJB Sample ID# is 97-535 Figure No. _____
GRAIN SIZE DISTRIBUTION TEST REPORT SJB Services, Inc.	

GRAIN SIZE DISTRIBUTION TEST REPORT



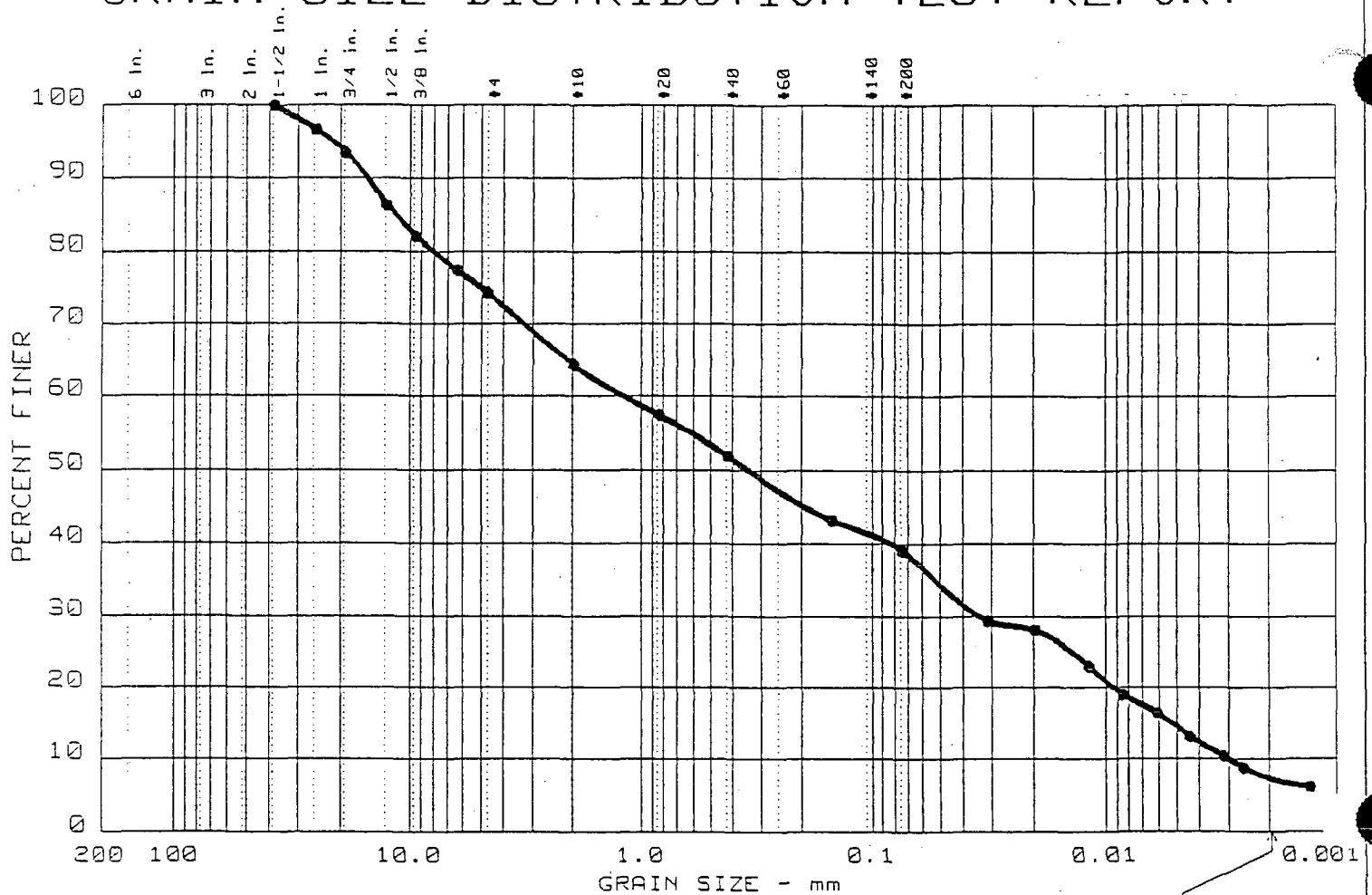
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 12	0.0	35.3	35.5	22.0	7.2

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		18.20	3.63	2.00	0.083	0.0079	0.0033	0.58	1096.5

MATERIAL DESCRIPTION	USCS	AASHTO
• GRAVEL & SAND, SOME SILT, TRACE CLAY	SM	A-2-4(0.0)

Project No.: SJB-d1034 : LTR-1 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY • Location: COMPOSITE SAMPLE FOR BORING SWB-15 Date: OCTOBER 23, 1997	Remarks: Collected by a SJB Drill Crew from the project site in September 1997. SJB Sample ID# is 97-536 Figure No. _____
GRAIN SIZE DISTRIBUTION TEST REPORT SJB Services, Inc.	

GRAIN SIZE DISTRIBUTION TEST REPORT



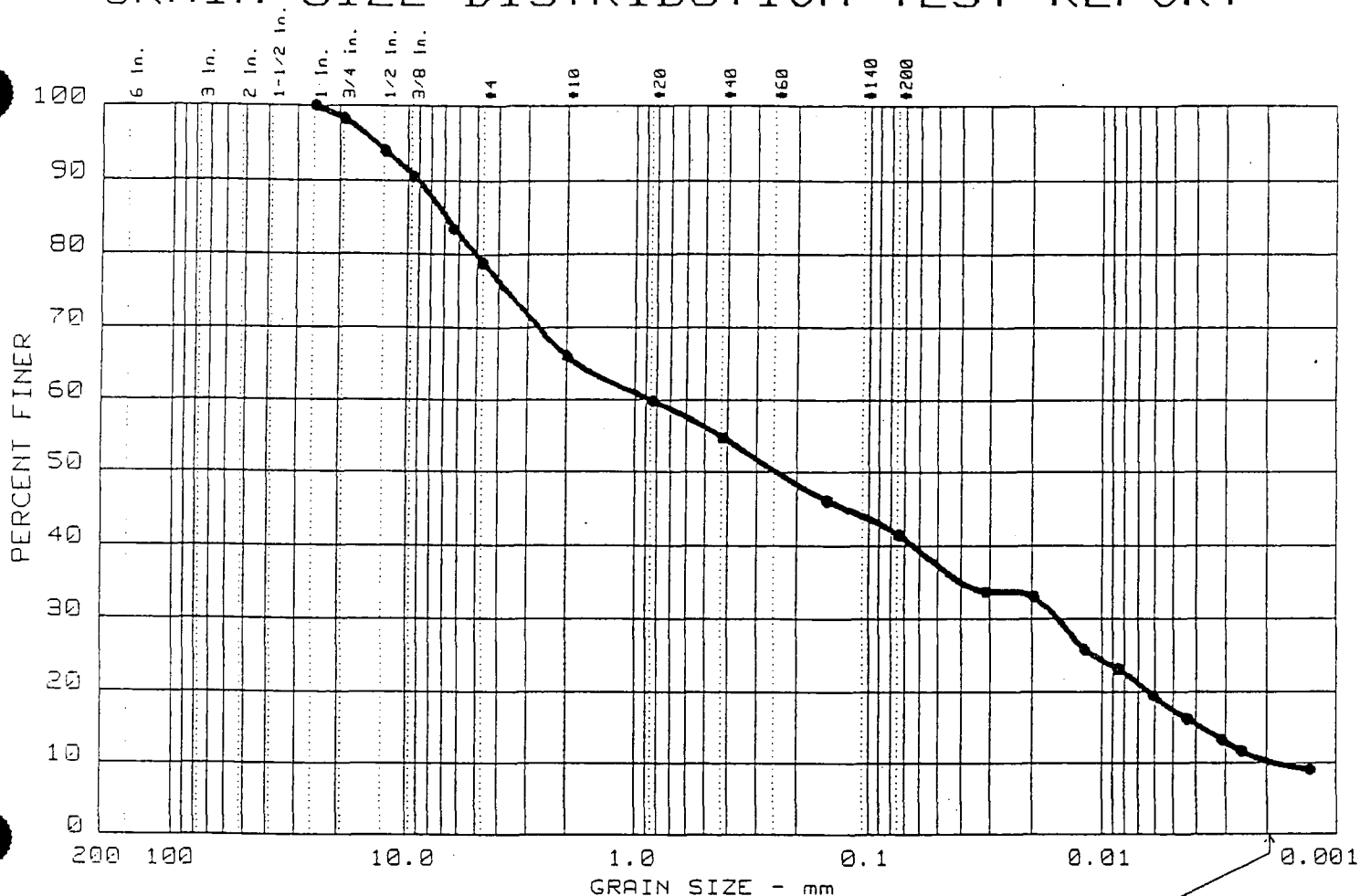
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 13	0.0	25.7	35.2	31.7	7.4

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		11.75	1.19	0.33	0.033	0.0052	0.0030	0.31	402.7

MATERIAL DESCRIPTION	USCS	AASHTO
• SAND & SILT, SOME GRAVEL, TRACE CLAY	SM	A-4(0.0)

Project No.: SJB-d1034 : LTR-1 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY • Location: COMPOSITE SAMPLE FOR BORING SWB-16 Date: OCTOBER 23, 1997	Remarks: Collected by a SJB Drill Crew from the project site in September 1997. SJB Sample ID# is 97-537 Figure No. _____
GRAIN SIZE DISTRIBUTION TEST REPORT SJB Services, Inc.	

GRAIN SIZE DISTRIBUTION TEST REPORT



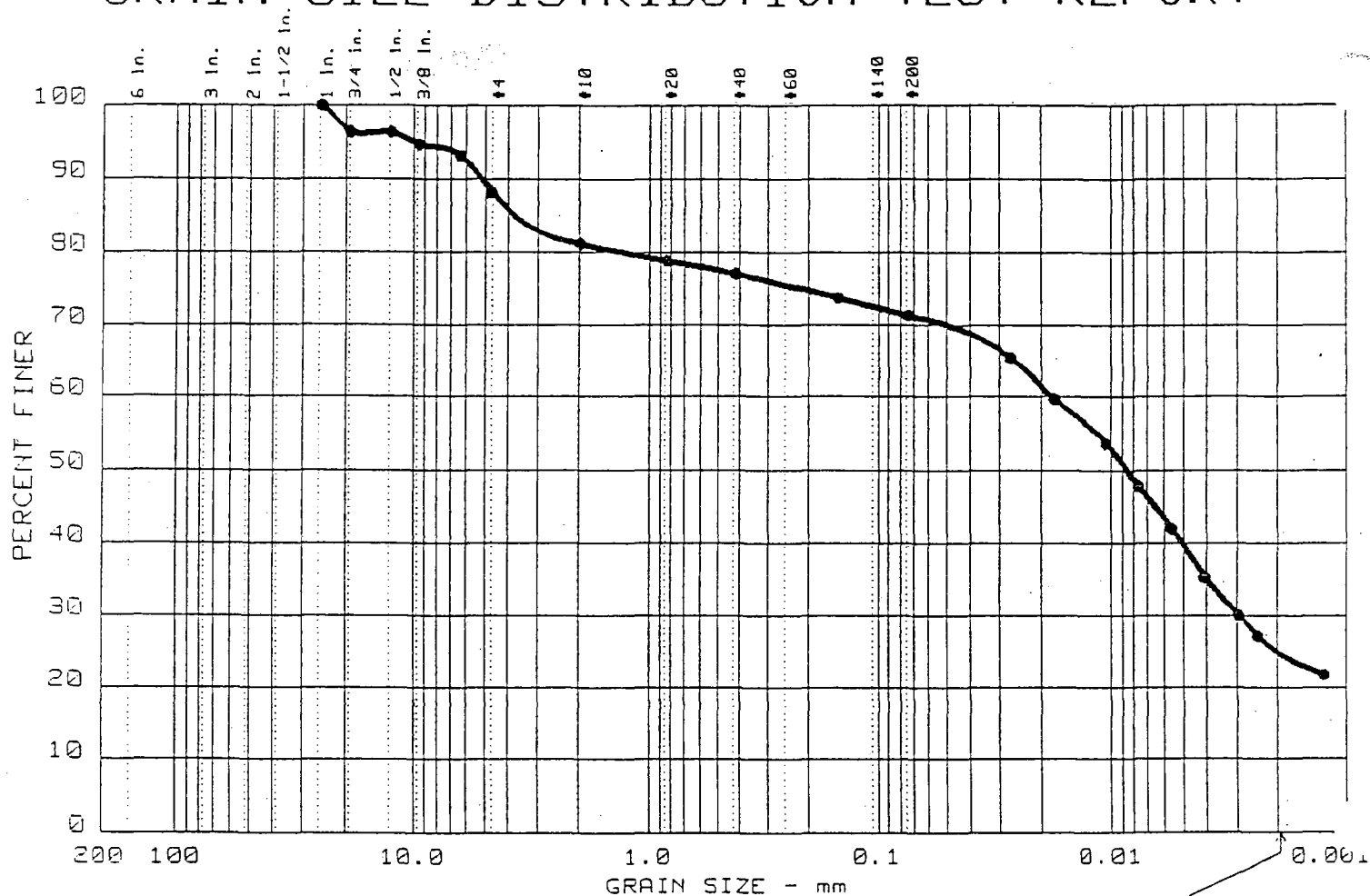
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 14	0.0	21.1	37.3	31.2	10.4

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		6.84	0.84	0.24	0.015	0.0037	0.0018	0.16	467.7

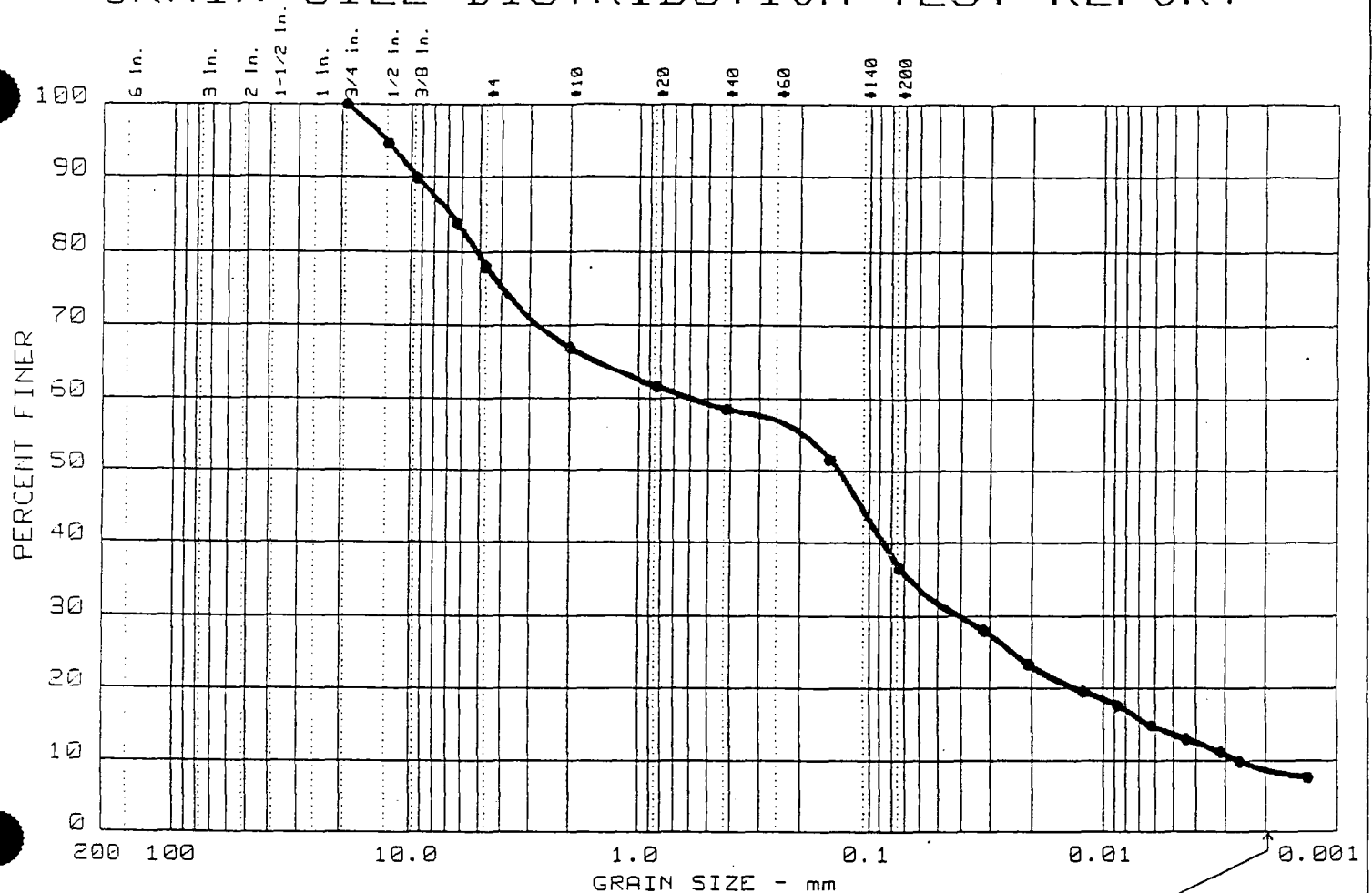
MATERIAL DESCRIPTION	USCS	AASHTO
• SAND, SOME SILT & GRAVEL, LITTLE CLAY	SM	A-4(0.0)

Project No.: SJB-d1034 : LTR-1 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY • Location: COMPOSITE SAMPLE FOR BORING SWB-17 Date: OCTOBER 23, 1997	Remarks: Collected by a SJB Drill Crew from the project site in September 1997. SJB Sample ID# is 97-538 Figure No. _____
GRAIN SIZE DISTRIBUTION TEST REPORT SJB Services, Inc.	

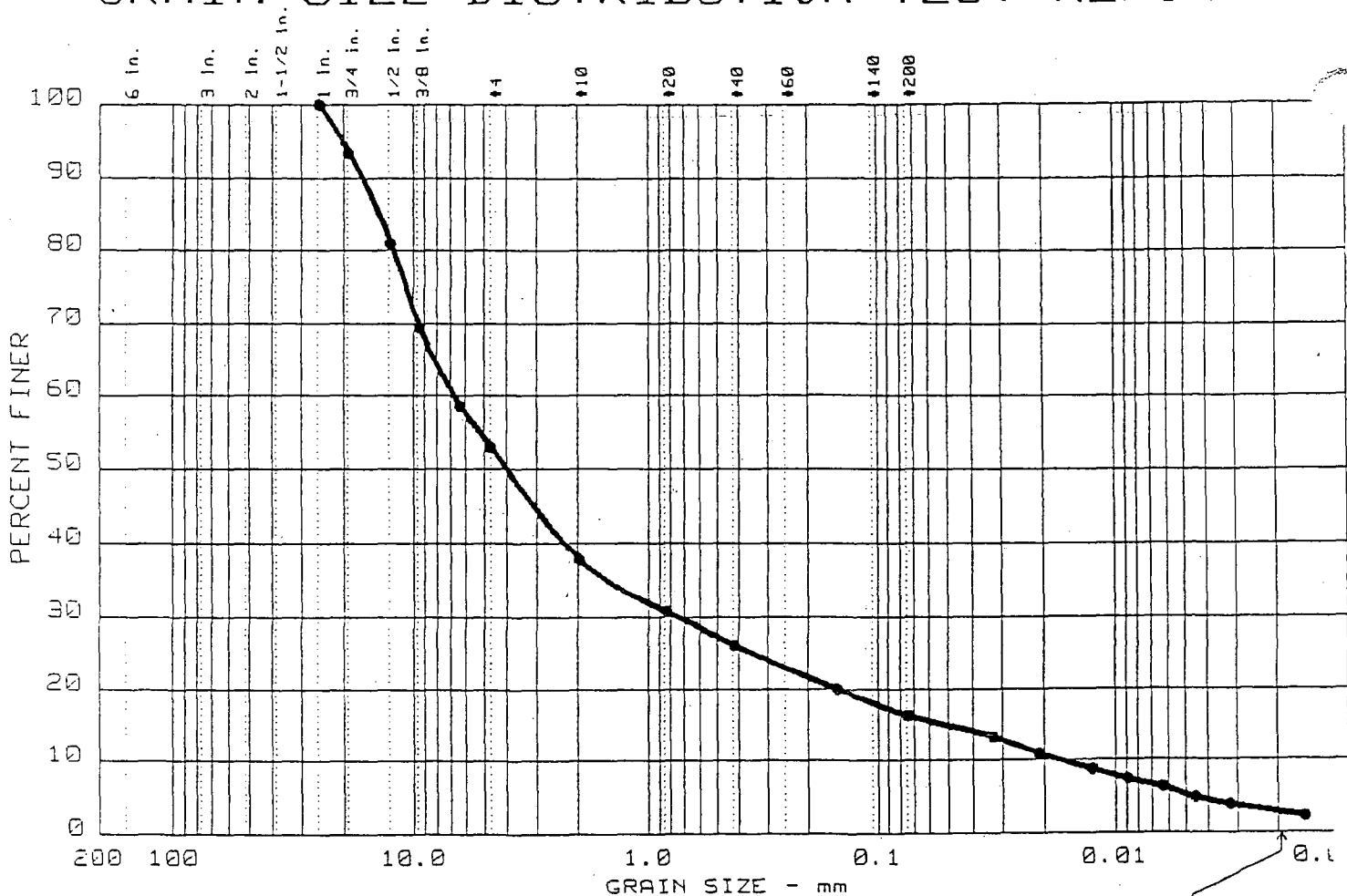
GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
17	0.0	47.0	36.6	13.5	2.9

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		14.13	6.76	4.03	0.733	0.0495	0.0168	4.73	402.7

MATERIAL DESCRIPTION

GRAVEL & SAND, LITTLE SILT, TRACE CLAY

USCS

GM

AASHTO

A-1-b

Project No.: SJB-d1034 : LTR-1

Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY

Location: COMPOSITE SAMPLE FOR BORING SWB-20

Date: OCTOBER 23, 1997

GRAIN SIZE DISTRIBUTION TEST REPORT

SJB Services, Inc.

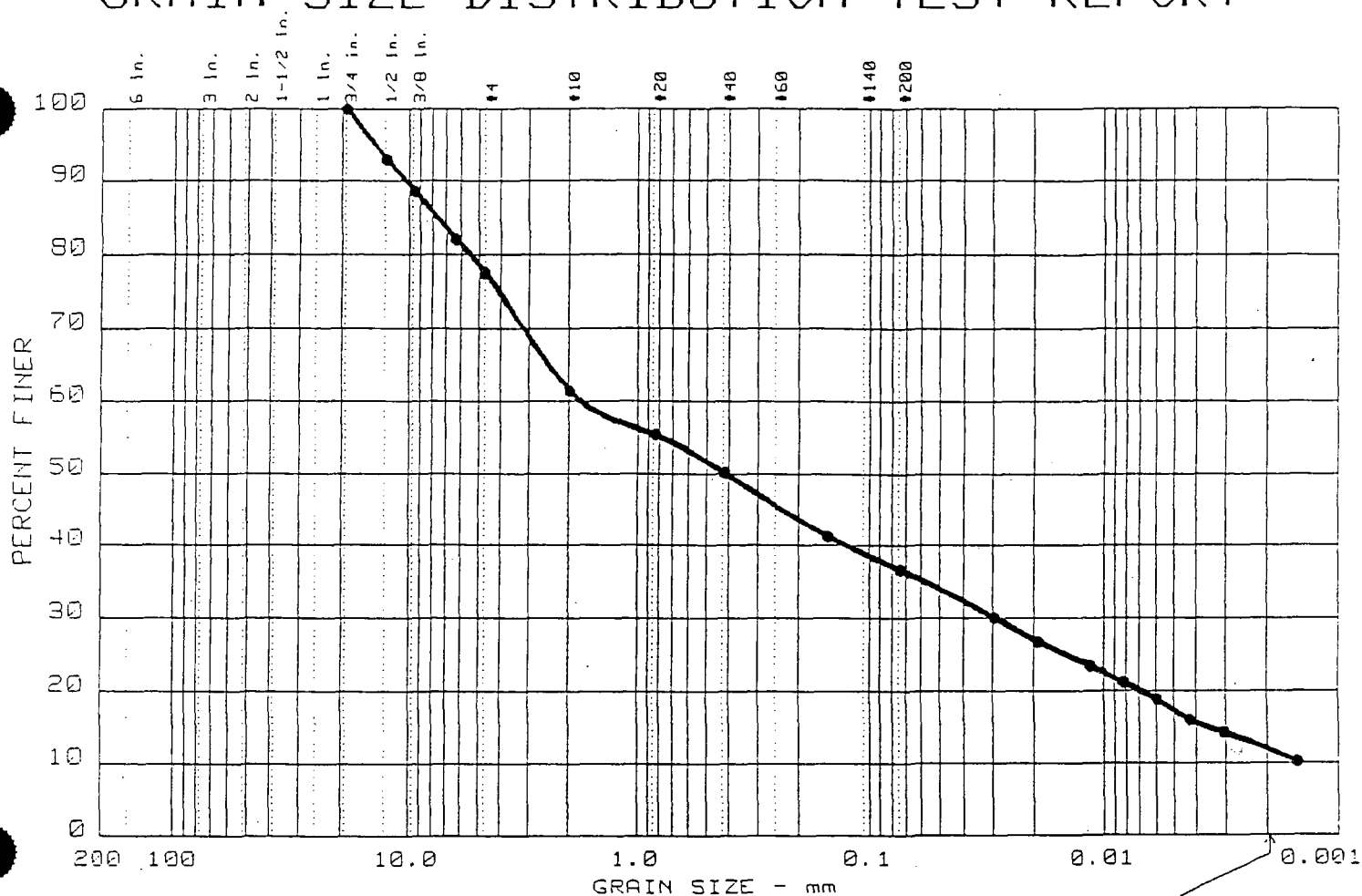
Remarks:

Collected by a SJB Drill Crew from the project site in September 1997.

SJB Sample ID# is 97-541

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



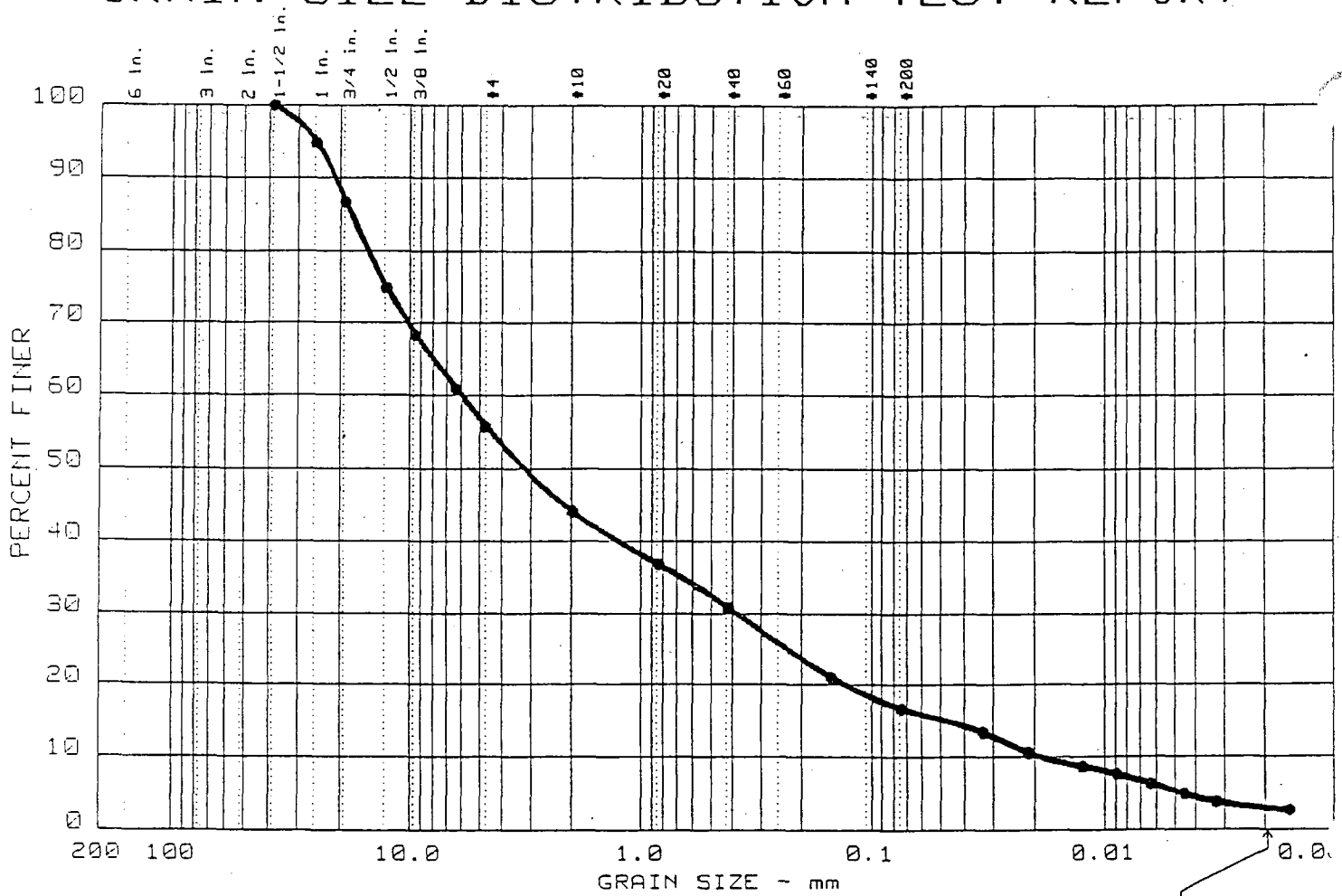
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 12	0.0	22.3	41.0	24.6	12.1

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		7.59	1.76	0.40	0.029	0.0035			

MATERIAL DESCRIPTION	USCS	AASHTO
• SAND, SOME SILT & GRAVEL, LITTLE CLAY	SM	A-4(0.0)

Project No.: SJB-d1034 : LTR-1 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY • Location: COMPOSITE SAMPLE FOR BORING TB-1 Date: OCTOBER 23, 1997	Remarks: Collected by a SJB Drill Crew from the project site in September 1997. SJB Sample ID# is 97-542 Figure No. _____
GRAIN SIZE DISTRIBUTION TEST REPORT SJB Services, Inc.	

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
19	0.0	44.1	39.2	13.6	3.1

[illegible]

MATERIAL DESCRIPTION	USCS	AASHTO
● GRAVEL & SAND, LITTLE SILT, TRACE CLAY	GM	A-1-b

Project No.: SJB-d1034 : LTR-1
Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY
• Location: COMPOSITE SAMPLE FOR BORING TB-2

Date: OCTOBER 23, 1997

GRAIN SIZE DISTRIBUTION TEST REPORT

SJB Services, Inc.

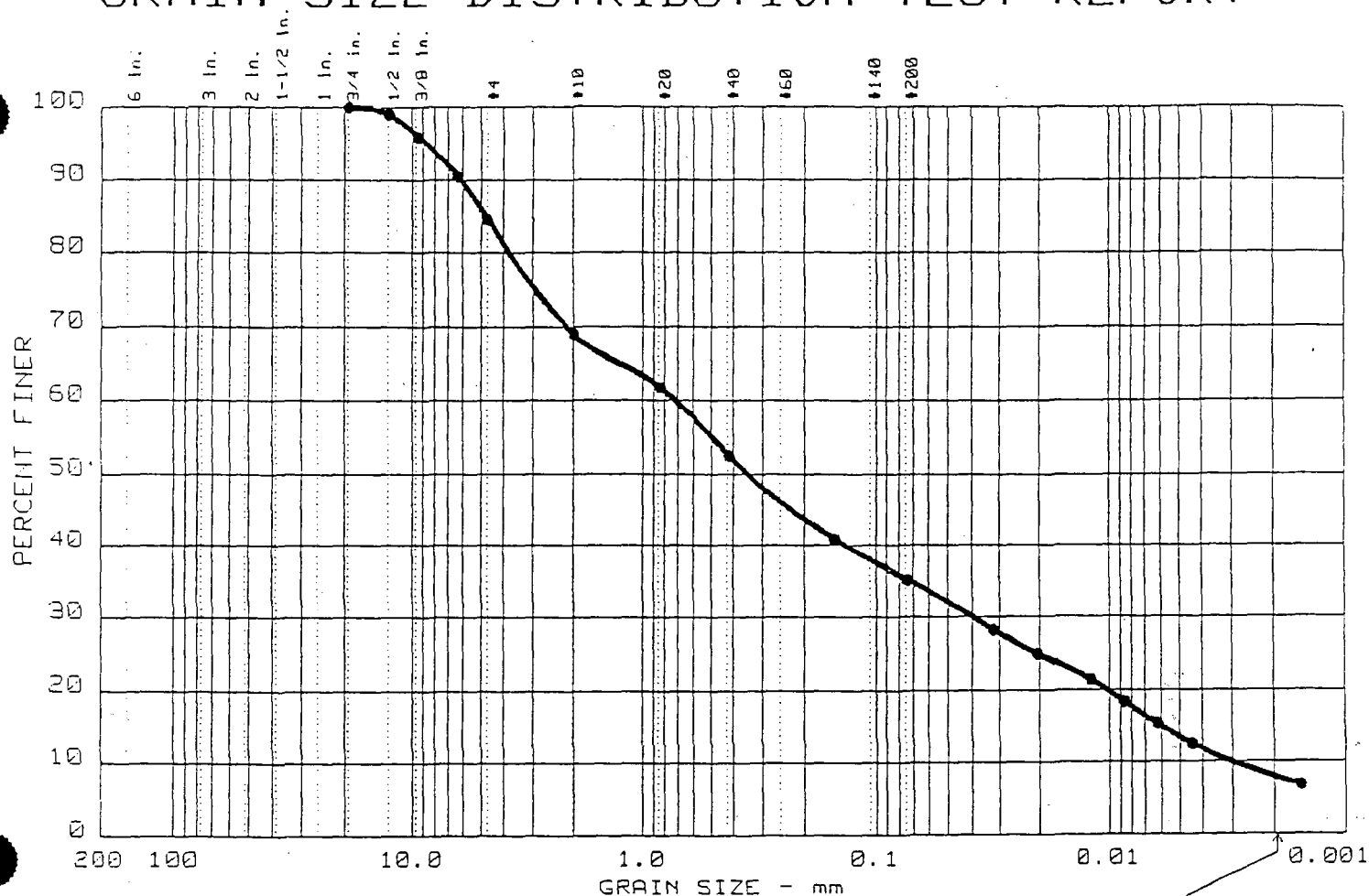
Remarks:

Collected by a SJB Drill
Crew from the project
site in September 1997.

SJB Sample ID# is 97-543

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 20	0.0	15.4	49.4	27.2	8.0

LL	PI	D ₉₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		4.84	0.72	0.35	0.039	0.0059	0.0030	0.72	242.7

MATERIAL DESCRIPTION	USCS	AASHTO
• SAND, SOME SILT, LITTLE GRAVEL, TRACE CLAY	SM	A-2-4(0.0)

Project No.: SJB-d1034 : LTR-1
 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY
 • Location: COMPOSITE SAMPLE FOR BORING TB-3

Date: OCTOBER 23, 1997

GRAIN SIZE DISTRIBUTION TEST REPORT

SJB Services, Inc.

Remarks:

Collected by a SJB Drill
 Crew from the project
 site in September 1997.
 SJB Sample ID# is 97-544

Figure No. _____

PART II



Contract Drilling and Testing

1951-1 Hamburg Turnpike
Buffalo, NY 14218

Phone: (716) 821-5911
Fax: (716) 821-0163

55 Oliver Street
Cohoes, New York 12047

Phone: (518) 238-1145
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P.O. Box 416 • 208 Le Fevre Road
Stockertown, PA 18083

Phone: (610) 746-2670
Fax: (610) 746-2669

TOLL FREE: 1-800-821-5911

PROJECT : STAUFFER MANAGEMENT CO. - SKANEATELES, N.Y.

CLIENT : OBRIEN & GERE ENGINEERS

DATE : OCTOBER 29, 1997

PART II LTR-2 PAGE 1 OF 5

SJB SAMPLE NUMBER : 97-545

IDENTIFICATION : boring SWB-1 : 6' - 8'

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1"	100.0
3/4"	86.2
1/2"	80.5
3/8"	78.2
1/4"	72.9
#4	69.7
#10	61.1
#20	53.8
#40	46.5
#100	39.7
#200	37.4

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
30.3%	32.3%	23.6%	13.8%

SJB SAMPLE NUMBER : 97-546

IDENTIFICATION : boring SWB-2 : 4' - 6'

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
#10	100.0
#20	99.3
#40	97.3
#100	91.9
#200	80.9

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
0.0%	19.1%	74.3%	6.6%



"QUALITY & SERVICE THE WAY IT USED TO BE"





Contract Drilling and Testing

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Buffalo, NY 14218

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Cohoes, New York 12047

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PROJECT : STAUFFER MANAGEMENT CO. - SKANEATELES, N.Y.

CLIENT : OBRIEN & GERE ENGINEERS

DATE : OCTOBER 29, 1997

PART II LTR-2 PAGE 2 OF 5

SJB SAMPLE NUMBER : 97-547 2
IDENTIFICATION : boring SWB-2 : 14' - 16'

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
---------------	--------------------

1 1/2"	100.0
1"	87.2
3/4"	72.9
1/2"	67.3
3/8"	64.3
1/4"	58.9
#4	55.2
#10	47.5
#20	40.3
#40	36.8
#100	31.5
#200	27.5

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
44.8%	27.7%	23.3%	4.2%

SJB SAMPLE NUMBER : 97-548
IDENTIFICATION : boring SWB-9 : 8' - 10'

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
---------------	--------------------

3/8"	100.0
1/4"	99.5
#4	99.0
#10	96.2
#20	92.3
#40	89.0
#100	80.2
#200	63.3

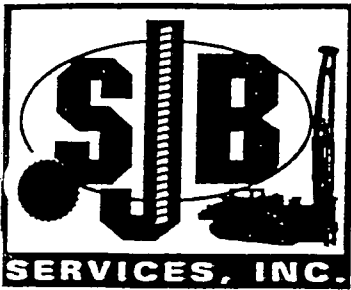
PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
1.0%	35.7%	44.8%	18.5%



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PROJECT : STAUFFER MANAGEMENT CO. - SKANEATELES, N.Y.

CLIENT : OBRIEN & GERE ENGINEERS

DATE : OCTOBER 29, 1997

PART II LTR-2 PAGE 3 OF 5

SJB SAMPLE NUMBER : 97-549

IDENTIFICATION : boring SWB-12 : 2' - 4'

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
#10	100.0
#20	98.0
#40	96.2
#100	91.7
#200	88.6

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
0.0%	11.4%	45.7%	42.9%

SJB SAMPLE NUMBER : 97-550

IDENTIFICATION : boring SWB-14 : 14' - 16'

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
3/4"	100.0
1/2"	95.2
3/8"	89.5
1/4"	84.6
#4	81.6
#10	71.9
#20	63.1
#40	58.5
#100	48.6
#200	42.8

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
18.4%	38.8%	32.1%	10.7%



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PROJECT : STAUFFER MANAGEMENT CO. - SKANEATELES, N.Y.

CLIENT : OBRIEN & GERE ENGINEERS

DATE : OCTOBER 29, 1997

PART II LTR-2 PAGE 4 OF 5

SJB SAMPLE NUMBER : 97-551

IDENTIFICATION : boring SWB-16 : 4' - 6'

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
3/4"	100.0
1/2"	89.6
3/8"	85.4
1/4"	80.7
#4	78.2
#10	67.5
#20	58.9
#40	53.6
#100	43.9
#200	38.3

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
21.8%	39.9%	30.6%	7.7%

SJB SAMPLE NUMBER : 97-552

IDENTIFICATION : boring SWB-16 : 6' - 8'

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
3/8"	100.0
1/4"	99.8
#4	98.7
#10	97.1
#20	96.7
#40	96.5
#100	96.2
#200	95.8

PERCENT COMPONENTS

GRAVEL	SAND	SILT	CLAY
1.3%	2.9%	58.0%	37.8%



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PROJECT : STAUFFER MANAGEMENT CO. - SKANEATELES, N.Y.

CLIENT : OBRIEN & GERE ENGINEERS

DATE : OCTOBER 29, 1997

PART II LTR-2 PAGE 2 OF 5

SJB SAMPLE NUMBER : 97-553

IDENTIFICATION : boring SWB-16 : 12' - 14'

ASTM D-422 : Particle Size Analysis of Soils

Sieve Size	Percent Passing
1 1/2"	100.0
1"	87.1
3/4"	70.2
1/2"	60.2
3/8"	58.9
1/4"	57.4
#4	54.2
#10	47.4
#20	39.4
#40	32.6
#100	21.0
#200	17.6

PERCENT COMPONENTS

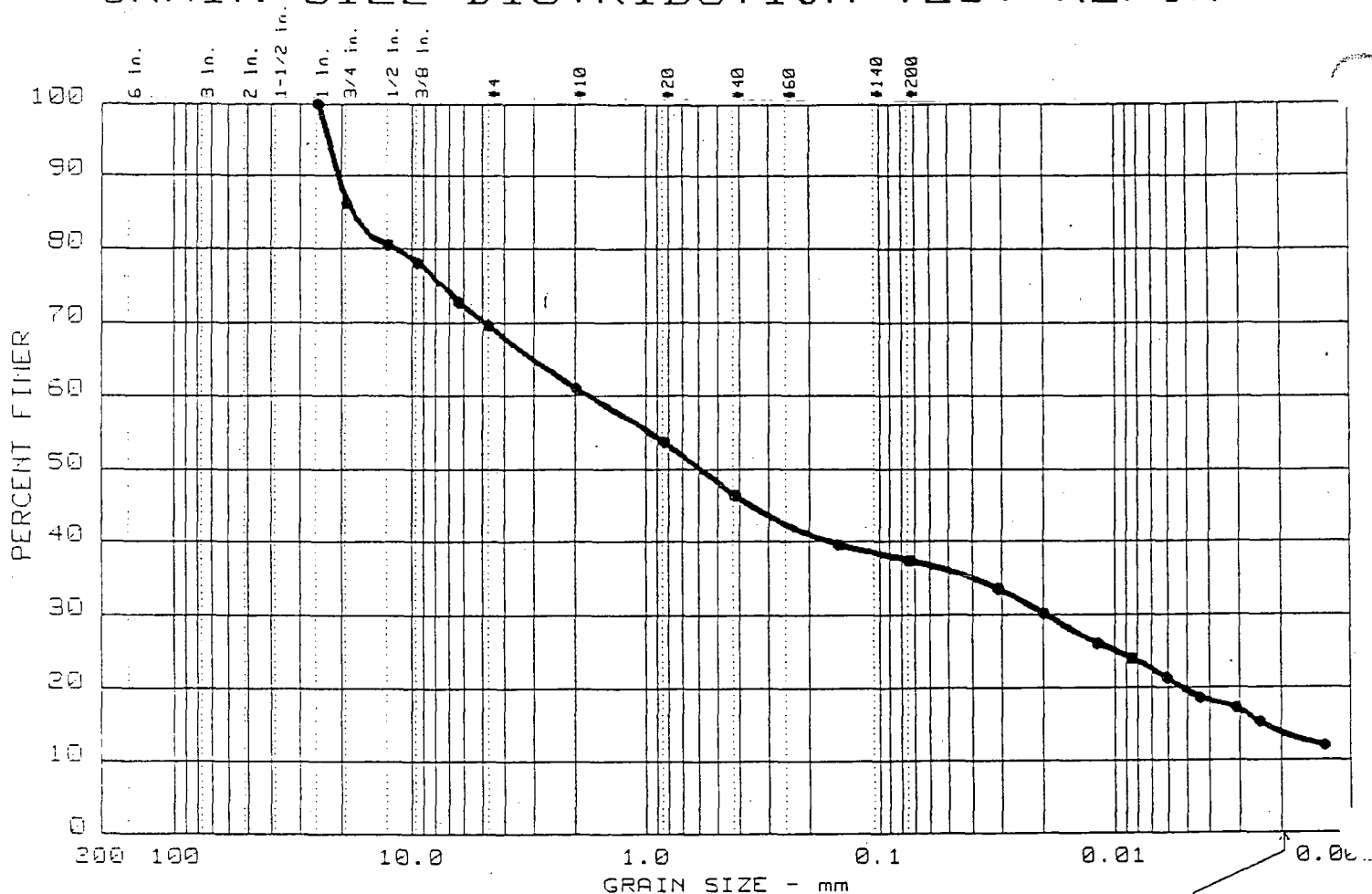
GRAVEL	SAND	SILT	CLAY
45.8%	36.6%	14.6%	3.0%



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GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
1	0.0	30.3	32.3	23.6	13.8

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		18.20	1.76	0.58	0.019	0.0023			

MATERIAL DESCRIPTION

USCS

AASHTO

• SOME SAND, GRAVEL & SILT, LITTLE CLAY

SM

A-4(0.0)

Project No.: SJB-d1034 : LTR-2
 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY
 • Location: BORING SWB-1 : 6'-8'

Remarks:

Collected by a SJB Drill Crew from the project site in September 1997.
 SJB Sample ID# is 97-545

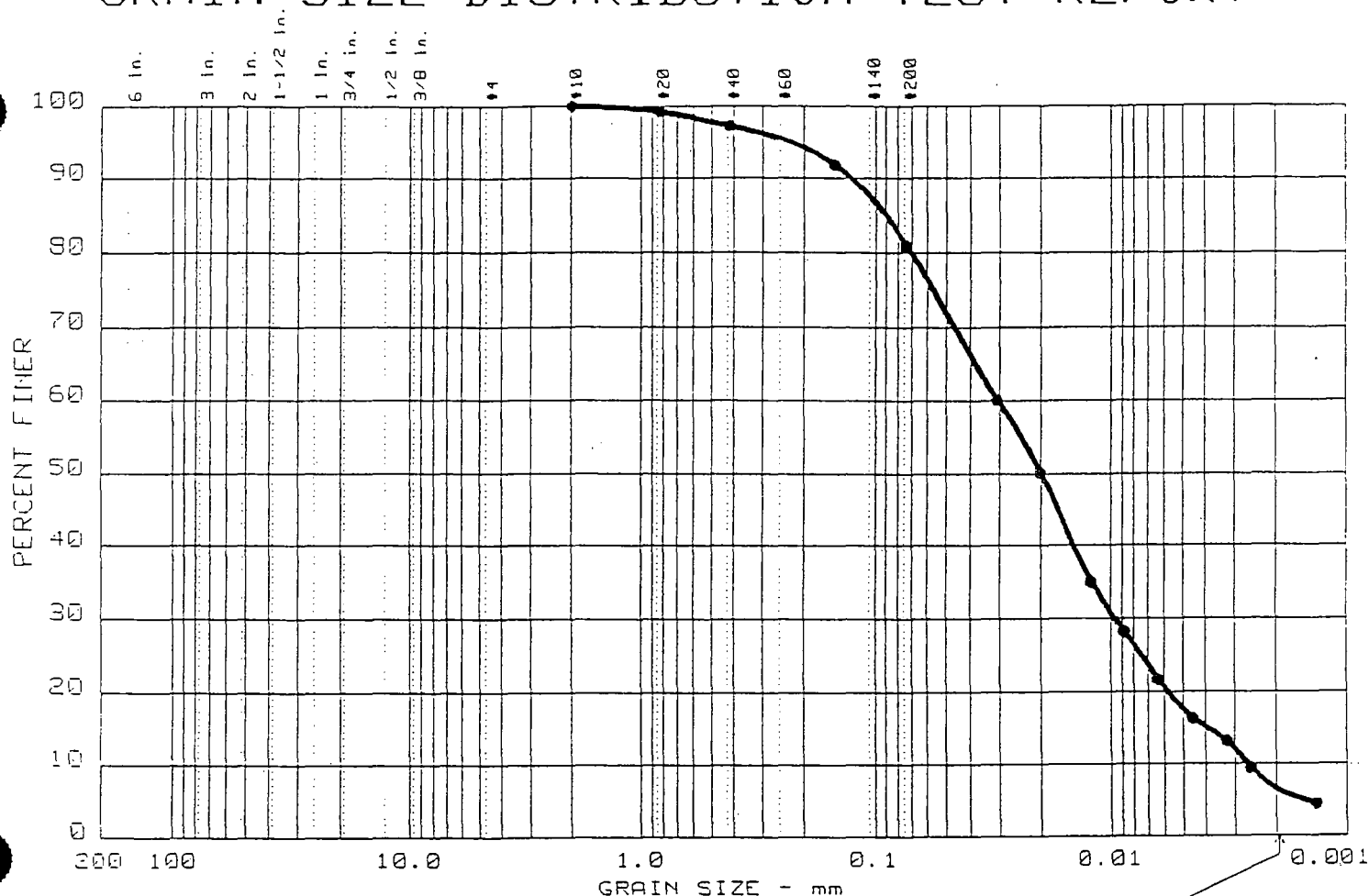
Date: OCTOBER 23, 1997

GRAIN SIZE DISTRIBUTION TEST REPORT

SJB Services, Inc.

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 2	0.0	0.0	19.1	74.3	6.6

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.09		0.02	0.010	0.0039	0.0026	1.16	11.6

MATERIAL DESCRIPTION	USCS	AASHTO
• SILT, LITTLE SAND, TRACE CLAY	ML	A-4(0.0)

Project No.: SJB-d1034 : LTR-2
 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY
 • Location: BORING SWB-2 : 4'-6'

Date: OCTOBER 23, 1997

GRAIN SIZE DISTRIBUTION TEST REPORT

SJB Services, Inc.

Remarks:

Collected by a SJB Drill Crew from the project site in September 1997.

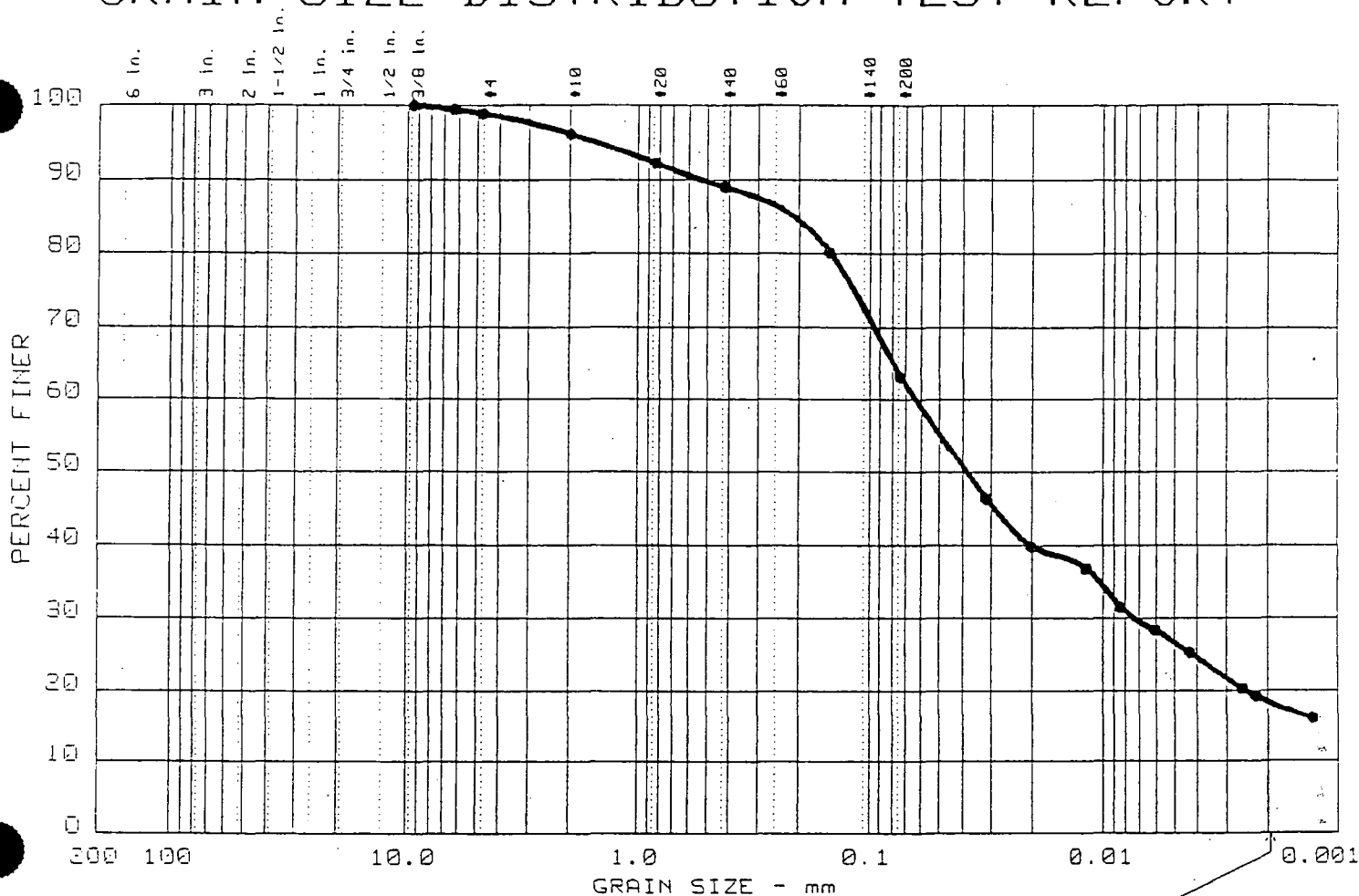
SJB Sample ID# is 97-546

Figure No. _____

[illegible][illegible]

Project No.: SJB-d1034 : LTR-2 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY • Location: BORING SWB-2 : 14'-16' Date: OCTOBER 23, 1997	Remarks: Collected by a SJB Drill Crew from the project site in September 1997. SJB Sample ID# is 97-547 Figure No. _____
GRAIN SIZE DISTRIBUTION TEST REPORT SJB Services, Inc.	

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 4	0.0	1.0	35.7	44.8	18.5

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.21		0.04	0.007				

MATERIAL DESCRIPTION	USCS	AASHTO
• SILT & SAND, LITTLE CLAY, TRACE GRAVEL	ML	A-4(0.0)

Project No.: SJB-d1034 : LTR-2
 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY
 • Location: BORING SWB-9 : 8'-10'

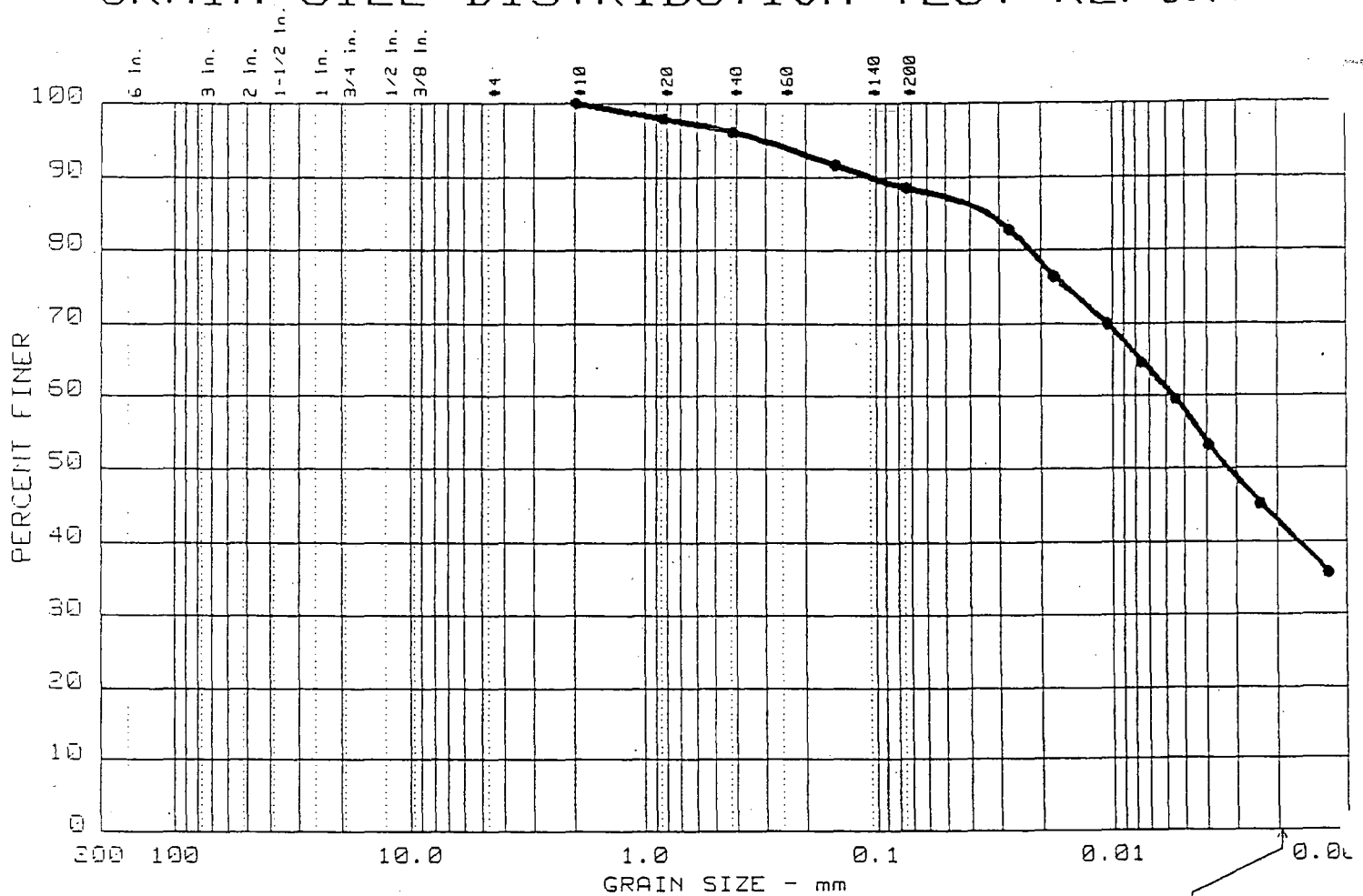
Remarks:
 Collected by a SJB Drill
 Crew from the project
 site in September 1997.
 SJB Sample ID# is 97-548

Date: OCTOBER 23, 1997

GRAIN SIZE DISTRIBUTION TEST REPORT
 SJB Services, Inc.

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



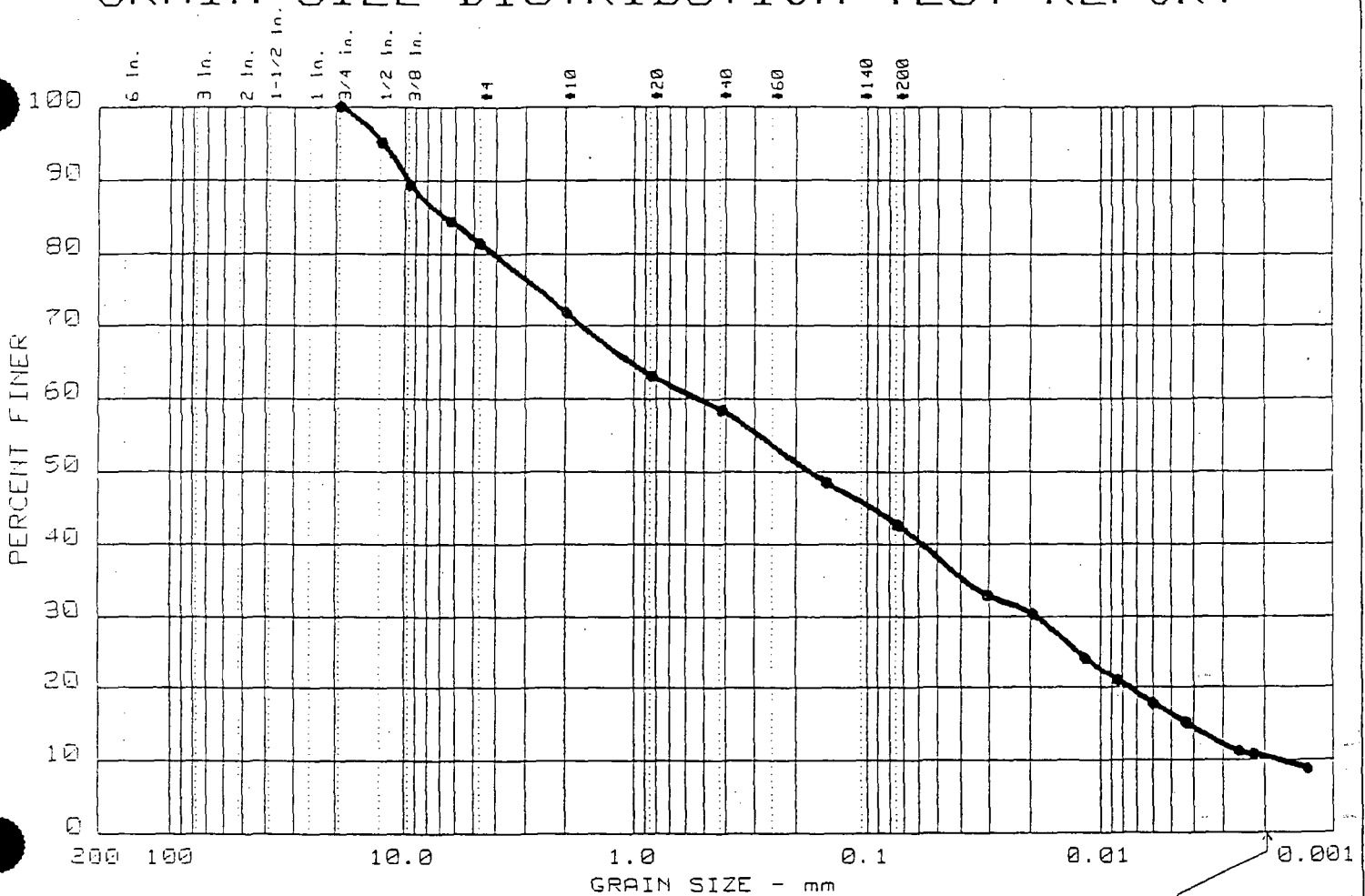
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• S	0.0	0.0	11.4	45.7	42.9

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•				0.00					

MATERIAL DESCRIPTION	USCS	AASHTO
• SILT & CLAY, LITTLE SAND	ML	A-4(0.0)

Project No.: SJB-d1034 : LTR-2 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY • Location: BORING SWB-12 : 2'-4' Date: OCTOBER 23, 1997	Remarks: Collected by a SJB Drill Crew from the project site in September 1997. SJB Sample ID# is 97-549 Figure No. _____
GRAIN SIZE DISTRIBUTION TEST REPORT SJB Services, Inc.	

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 6	0.0	18.4	38.8	32.1	10.7

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		6.61	0.52	0.17	0.019	0.0042	0.0017	0.40	309.0

MATERIAL DESCRIPTION	USCS	AASHTO
• SAND, SOME SILT, LITTLE GRAVEL & CLAY	SM	A-4(0.0)

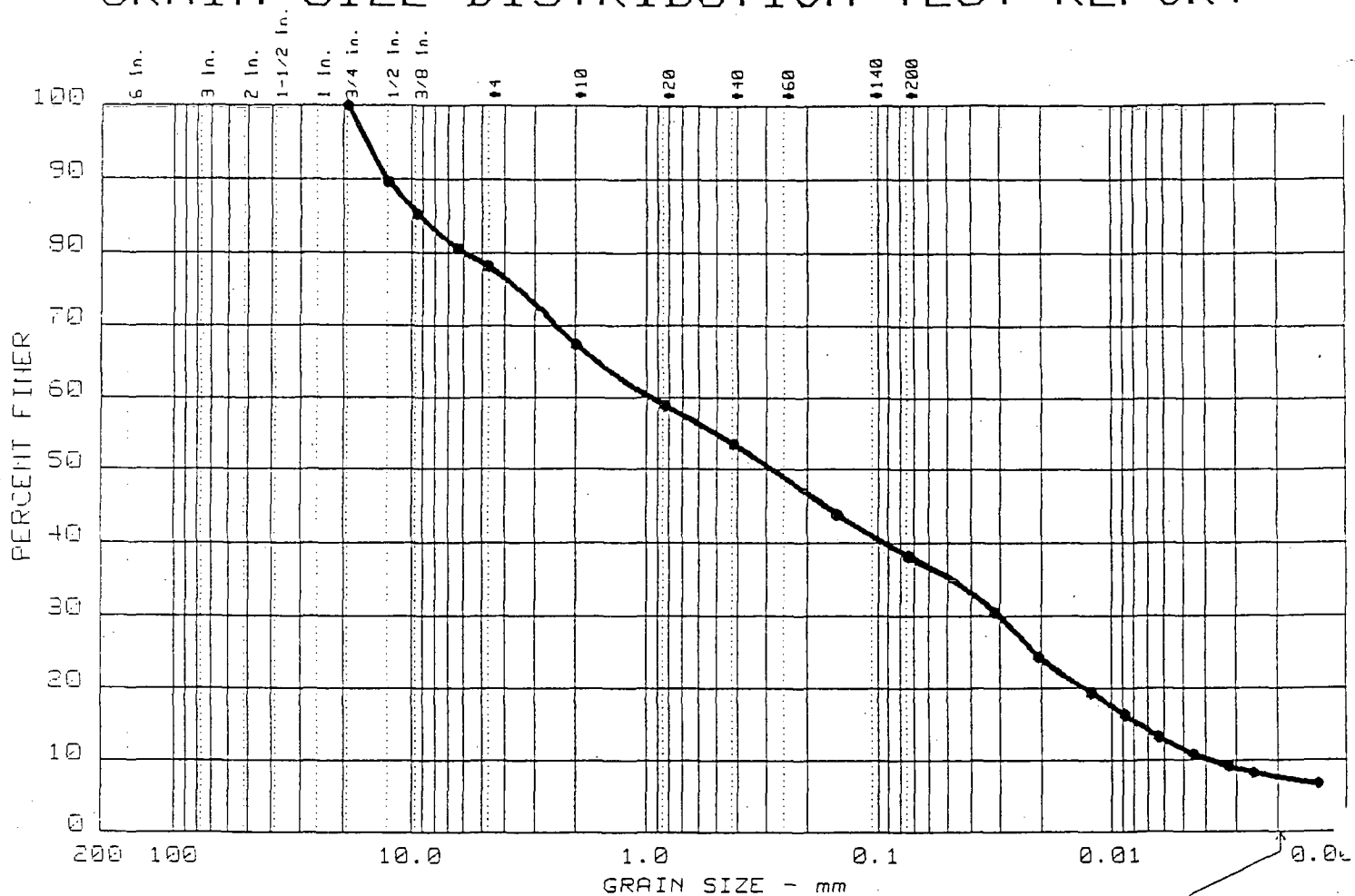
Project No.: SJB-d1034 : LTR-2
 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY
 • Location: BORING SWB-14 : 14'-16'
 Date: OCTOBER 23, 1997

Remarks:
 Collected by a SJB Drill Crew from the project site in September 1997.
 SJB Sample ID# is 97-550

GRAIN SIZE DISTRIBUTION TEST REPORT
 SJB Services, Inc.

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
7	0.0	21.8	39.9	30.6	7.7

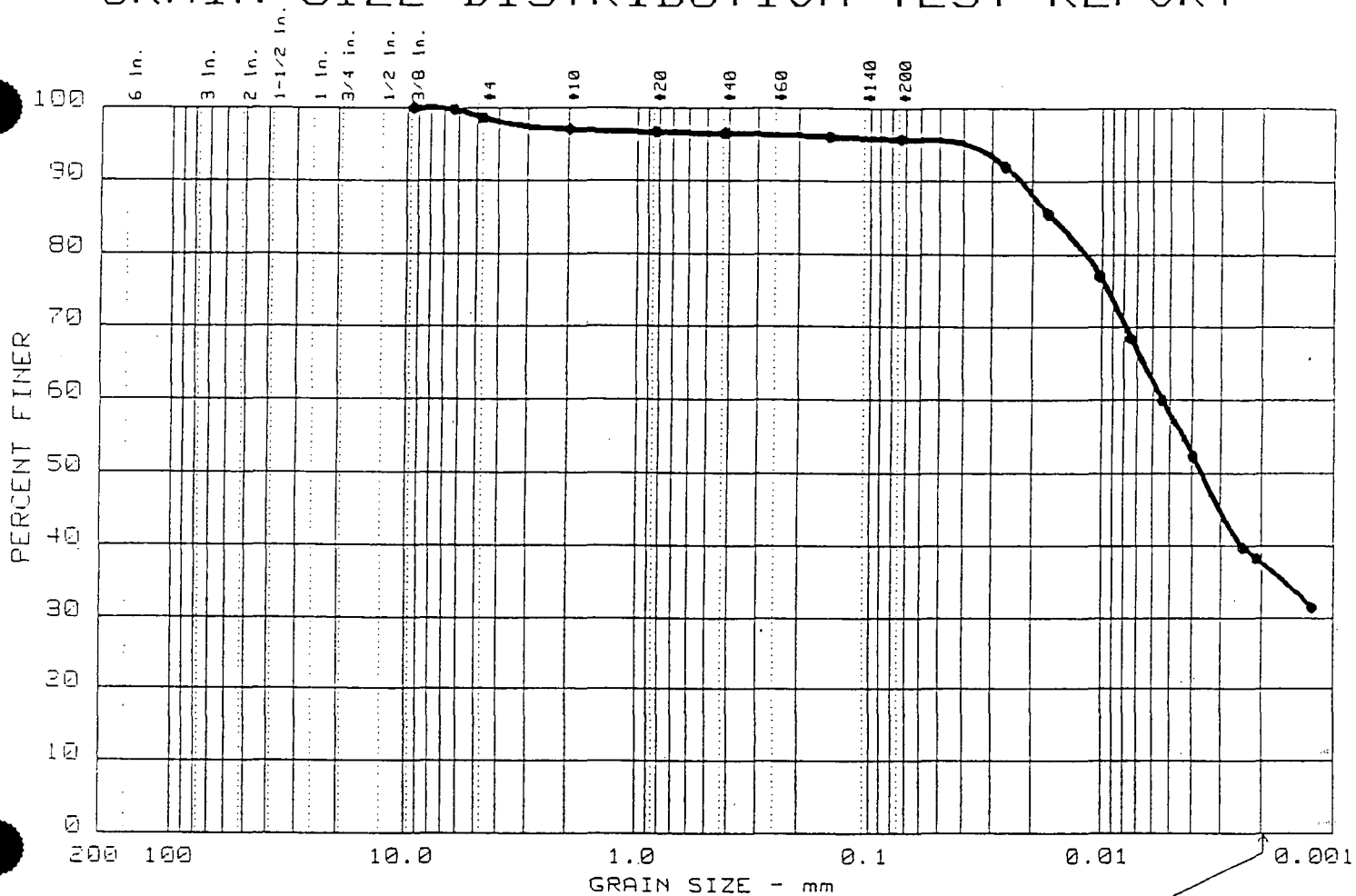
LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		9.23	0.95	0.28	0.030	0.0075	0.0038	0.25	254.1

MATERIAL DESCRIPTION	USCS	AASHTO
SAND, SOME SILT & GRAVEL, TRACE CLAY	SM	A-4(0.0)

Project No.: SJB-d1034 : LTR-2
 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY
 Location: BORING SWB-16 : 4'-6'
 Date: OCTOBER 23, 1997
 GRAIN SIZE DISTRIBUTION TEST REPORT
 SJB Services, Inc.

Remarks:
 Collected by a SJB Drill
 Crew from the project
 site in September 1997.
 SJB Sample ID# is 97-551
 Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 8	0.0	1.3	2.9	58.0	37.8

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•				0.00					

MATERIAL DESCRIPTION	USCS	AASHTO
• SILT & CLAY, TRACE SAND & GRAVEL	ML	A-4(0.0)

Project No.: SJB-d1034 : LTR-2
 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY
 • Location: BORING SWB-16 : 6'-8'

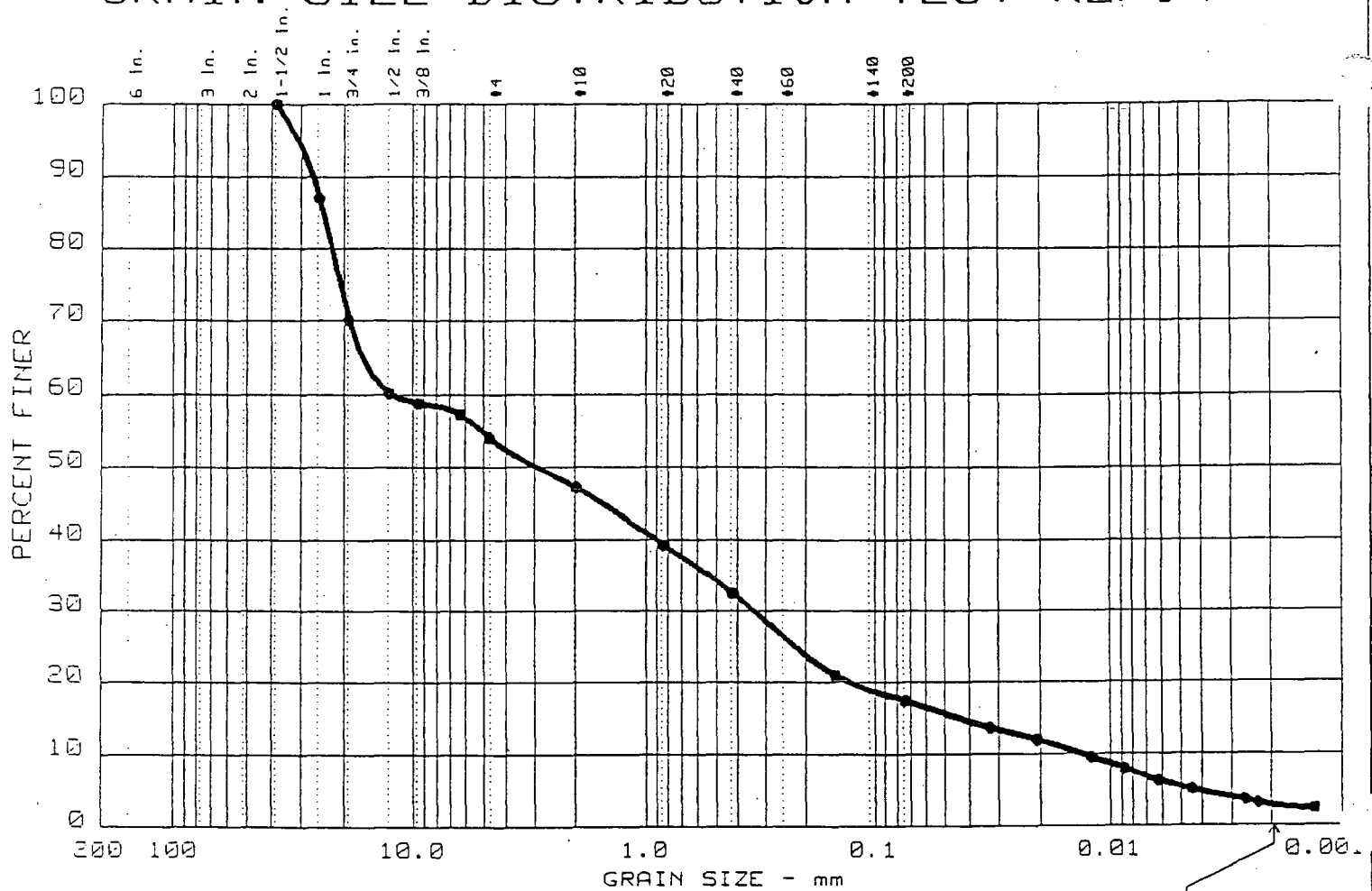
Remarks:
 Collected by a SJB Drill Crew from the project site in September 1997.
 SJB Sample ID# is 97-552

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT
SJB Services, Inc.

Date: OCTOBER 23, 1997

GRAIN SIZE DISTRIBUTION TEST REPORT



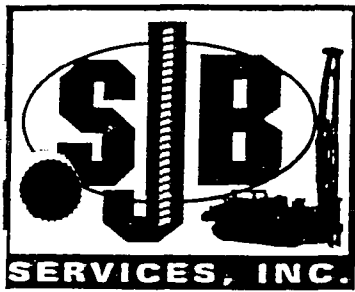
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
9	0.0	45.8	36.6	14.6	3.0

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		24.43	12.25	2.90	0.333	0.0415	0.0130	0.70	944.1

MATERIAL DESCRIPTION	USCS	AASHTO
GRAVEL & SAND, LITTLE SILT, TRACE CLAY	GM	A-1-b

Project No.: SJB-d1034 : LTR-2 Project: STAUFFER MANAGEMENT CO. - SKANEATELES NY Location: BORING SWB-16 : 12'-14' Date: OCTOBER 23, 1997	Remarks: Collected by a SJB Drill Crew from the project site in September 1997. SJB Sample ID# is 97-553 Figure No. _____
GRAIN SIZE DISTRIBUTION TEST REPORT SJB Services, Inc.	

PART III



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CLIENT : OBRIEN & GERE ENGINEERS

DATE : OCTOBER 29, 1997

PART III LTR-3 PAGE 1 OF 1

*ASTM D-4318 : Liquid Limit, Plastic Limit, and
Plasticity Index of Soils*

Sample Number	Boring	Depth	Liquid Limit	Plastic Limit	Plasticity Index
97-554	SWB-2	10'-12'	31	18	13
97-555	SWB-4	16'-18'	43	24	19
97-556	SWB-9	10'-12'	34	22	12
97-557	SWB-15	10'-12'	15	14	1
97-558	SWB-16	10'-12'	21	15	6
97-559	SWB-17	12'-14'	23	17	6
97-560	SWB-18	10'-12'	28	18	10
97-561	TB-1	10'-12'	33	19	14



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Laboratory Test Report

PROJECT : STAUFFER MANAGEMENT CO. - SKANEATELES, N.Y.

CLIENT : OBRIEN & GERE ENGINEERS

DATE : NOVEMBER 17, 1997

PROJECT NO.: SJB-d1034

=====

Attached are the results of laboratory testing conducted on various samples from the Stauffer Management Co. Project in Skaneateles, New York (client project #5618.010). Samples contained in this report were chosen for testing by Timothy Eddy and Jenny Smith, representing Obrien & Gere Engineers.

The testing conducted was as follows :

Part IV : LTR-4

ASTM D-422 : Particle Size Analysis of Soils

ASTM D-2850 : Unconsolidated, Undrained Compressive Strength of Cohesive Soils in Triaxial Compression

ASTM D4318 : Liquid Limit, Plastic Limit, and Plasticity Index of Soils

ASTM D-5084 : Hydraulic Conductivity of Saturated Porous Materials using a Flexible Wall Permeameter
- conducted on two shelly tubes

Two Shelby Tubes were obtained and identified by a SJB Services, Inc. Drill Crew in September of 1997. The samples were received at our laboratory on September 26, 1997 where they were transferred to the GeoTesting Express Laboratory for testing purposes. The results of these tests are indicated on the attached report forms.

If the reviewer should have any questions concerning this report, please do not hesitate to contact our office at any time.

=====

SJB Services, Inc.

Paul Gregorczyk
Laboratory Manager

Ray J. Kron
Testing Services Manager



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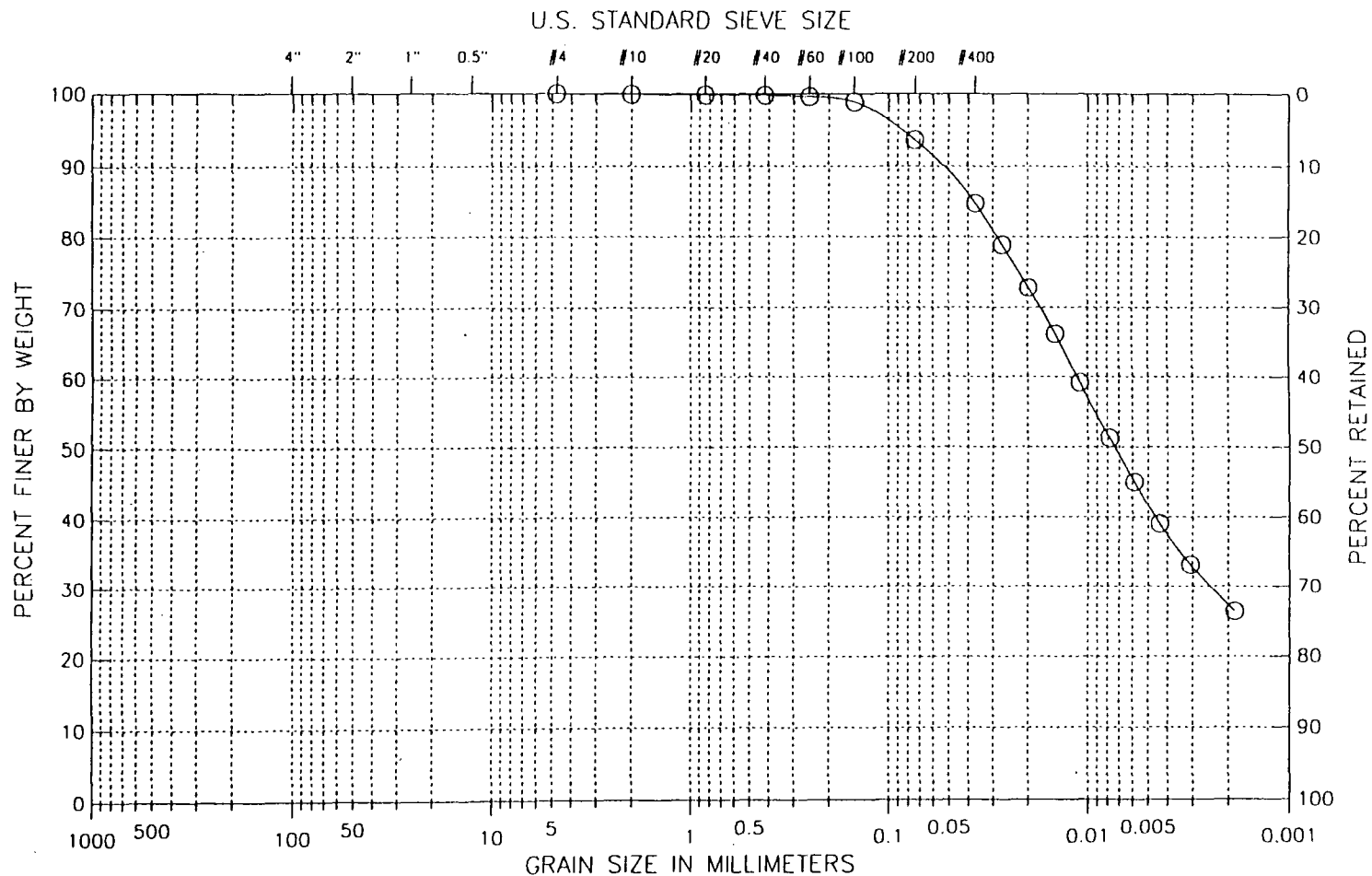
**SJB SERVICES, INC.
LABORATORY TEST REPORT
STAUFFER MANAGEMENT CO.,
SKANEATELLES
O'BRIEN & GERE ENGINEERS
PROJECT NO. SJB-D1034**



PART IV

Boring No.: ---
 Sample No.: SWB-13 (10-12)
 Test Method ASTM D 422
 Filename : 13

Project : Skoneateles Falls
 Project No.: GTX-1609
 Location: Skoneateles, NY
 Date : Tue Nov 11 1997



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Classification :
 (CL) lean clay
 Visual Description :
 Moist, strong brown silty clay

Remarks :

Figure 1

GEOTECHNICAL LABORATORY TEST DATA

Project : Skaneateles Falls
Project No. : GTX-1609
Boring No. : ---
Sample No. : SWB-13 (10-12)
Location : Skaneateles, NY
Soil Description : Moist, strong brown silty clay
Remarks : ---

Depth : 10-12 ft
Test Date : 11/07/97
Test Method : ASTM D 422

Filename : 13
Elevation : ---
Tested by : swj
Checked by : gtt

HYDROMETER

Hydrometer ID : dist125
Weight of air-dried soil = 59.08 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	54.00	21.10	50.08	0.037	85	0.037
2.00	50.50	21.10	46.58	0.027	79	0.027
4.00	46.90	21.10	42.98	0.020	73	0.020
8.00	43.00	21.00	39.06	0.015	66	0.015
15.00	38.90	21.00	34.96	0.011	59	0.011
32.00	34.20	21.00	30.26	0.008	51	0.008
60.00	30.50	21.00	26.56	0.006	45	0.006
112.00	27.00	21.00	23.06	0.004	39	0.004
240.00	23.50	21.00	19.56	0.003	33	0.003
687.00	19.50	21.00	15.56	0.002	26	0.002

FINE SIEVE SET					
Sieve Mesh	Sieve Openings		Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
	Inches	Millimeters			
4	0.187	4.75	0.00	0.00	100
10	0.079	2.00	0.06	0.06	100
20	0.033	0.84	0.04	0.10	100
40	0.017	0.42	0.04	0.14	100
60	0.010	0.25	0.09	0.23	100
100	0.006	0.15	0.44	0.67	99
200	0.003	0.07	3.08	3.75	94
pan			55.39	59.14	0

Total Dry Weight of Sample = 68.02

D85 : 0.0374 mm
D60 : 0.0113 mm
D50 : 0.0074 mm
D30 : 0.0024 mm
D15 : N/A
D10 : N/A

Soil Classification
ASTM Group Symbol : CL
ASTM Group Name : lean clay
AASHTO Group Symbol : A-4(6)
AASHTO Group Name : Silty Soils

ATTERBERG LIMITS

PROJECT Skaneateles Falls	PROJECT NUMBER GTX-1609	TESTED BY swj	BORING NUMBER ---
LOCATION Skaneateles, NY	CHECKED BY glt		SAMPLE NUMBER SWB-13 (10-12)
SAMPLE DESCRIPTION Moist, strong brown silty clay	DATE Tue Nov 11 1997		FILENAME 13

LIQUID LIMIT DETERMINATIONS

CONTAINER NUMBER	bk109	bk126	bk86		
WT. WET SOIL + TARE	32.56	31.59	33.46		
WT. DRY SOIL + TARE	32.02	30.93	32.87		
WT. WATER	0.54	0.66	0.59		
TARE WT.	29.82	28.11	30.29		
WT. DRY SOIL	2.2	2.82	2.58		
WATER CONTENT, w_N (%)	24.55	23.40	22.87		
NUMBER OF BLOWS, N	13	22	34		
ONE-POINT LIQUID LIMIT, LL	22.68	23.05	23.74		

PLASTIC LIMIT DETERMINATIONS

CONTAINER NUMBER	bk142	bk24			
WT. WET SOIL + TARE	33.62	34.83			
WT. DRY SOIL + TARE	33.12	34.26			
WT. WATER	0.5	0.57			
TARE WT.	29.64	30.27			
WT. DRY SOIL	3.48	3.99			
WATER CONTENT (%)	14.37	14.29			

SUMMARY OF RESULTS

NATURAL WATER CONTENT, w (%)	15.2
LIQUID LIMIT, LL	23.3
PLASTIC LIMIT, PL	14.3
PLASTICITY INDEX, PI	9.0
LIQUIDITY INDEX, LI^*	0.10

$$*LI = (w - PL)/PI$$

PLASTICITY CHART

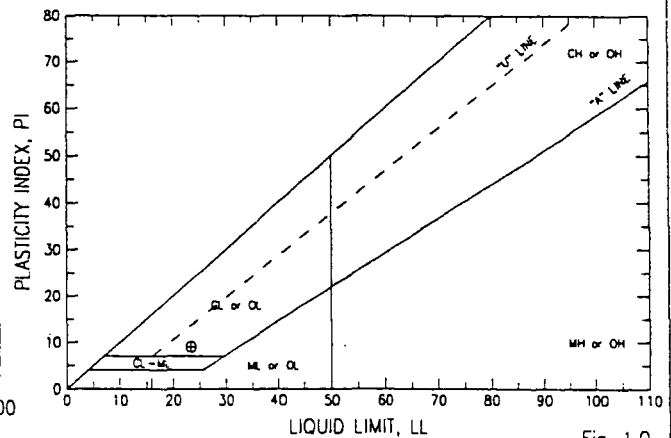
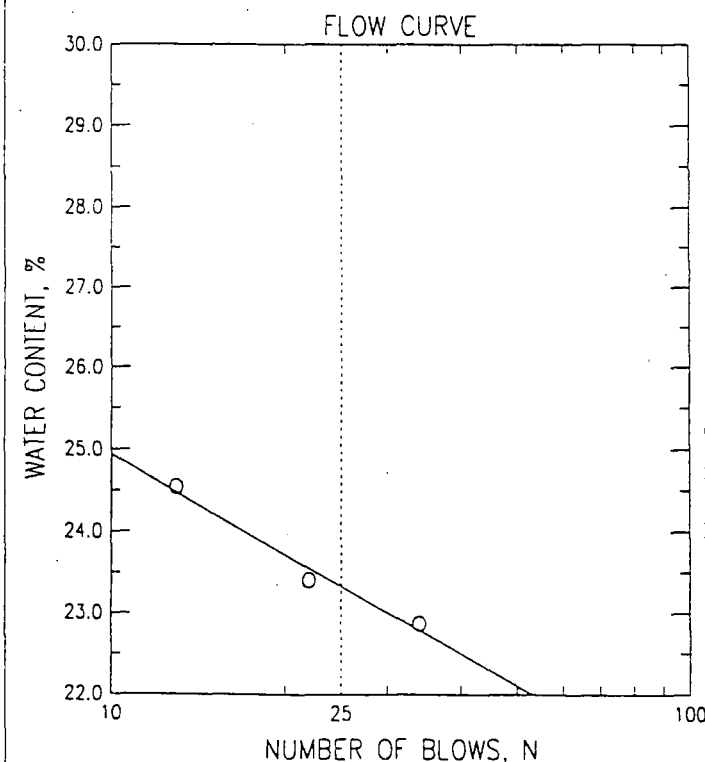
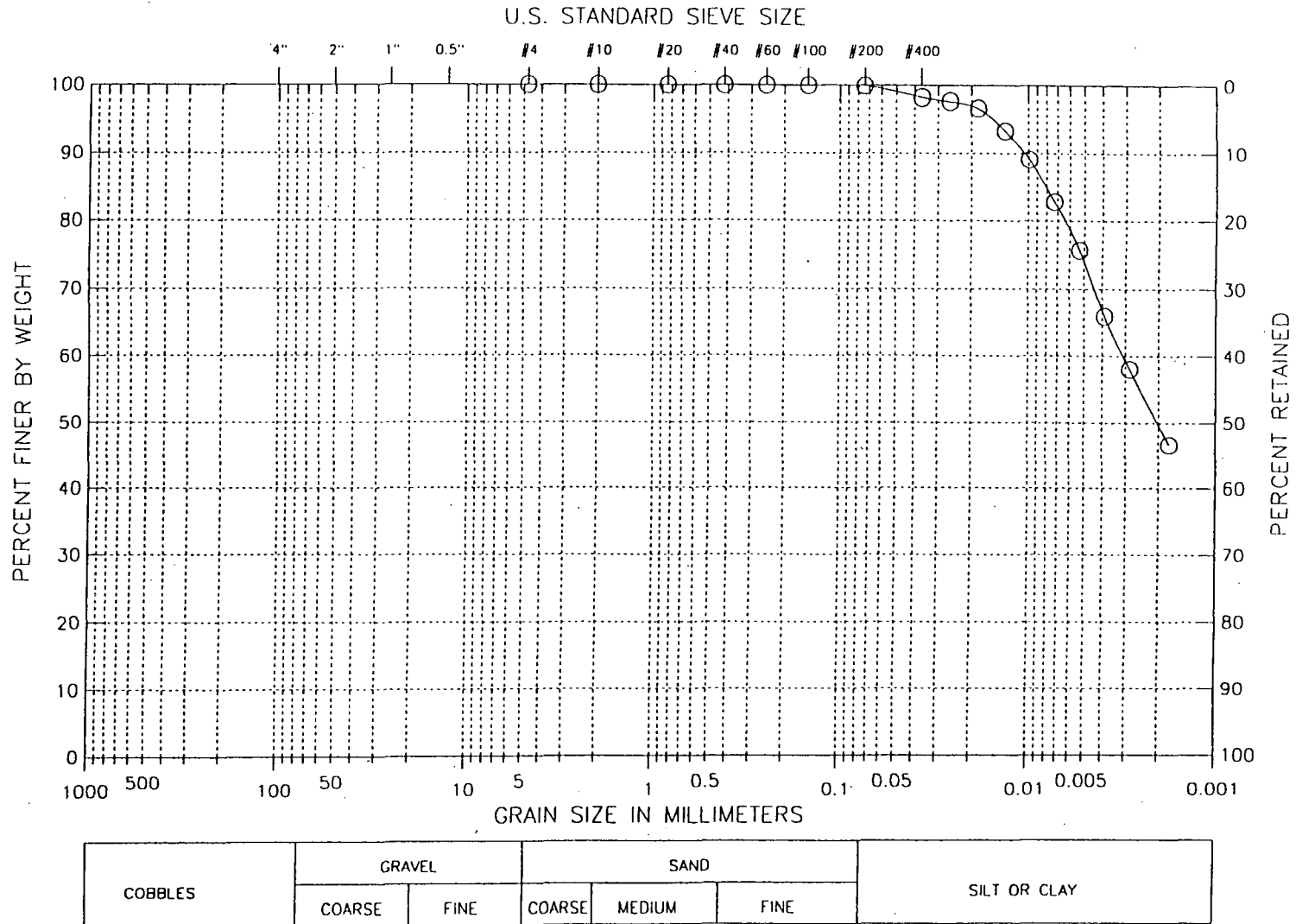


Fig. 1.0

Boring No. : ---
 Sample No.: SWB-17 (8-10)
 Test Method ASTM D 422
 Filename : 17

Project : Skaneateles Falls
 Project No.: GTX-1609
 Location: Skaneateles, NY
 Date : Tue Nov 11 1997



Classification :
 (CL) lean clay
 Visual Description :
 Moist, strong brown silty clay

Remarks :

Figure 2

GEOTECHNICAL LABORATORY TEST DATA

Project : Skaneateles Falls
 Project No. : GTX-1609
 Boring No. : ---
 Sample No. : SWB-17 (8-10)
 Location : Skaneateles, NY
 Soil Description : Moist, strong brown silty clay
 Remarks : ---

Depth : 8-10 ft
 Test Date : 11/07/97
 Test Method : ASTM D 422

Filename : 17
 Elevation : ---
 Tested by : swj
 Checked by : gtc

HYDROMETER

Hydrometer ID : dist125
 Weight of air-dried soil = 51.69 gm
 Specific Gravity = 2.65

Hydroscopic Moisture Content :

Weight of Wet Soil = 0 gm
 Weight of Dry Soil = 0 gm
 Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	54.70	20.80	50.72	0.037	98	0.037
2.00	54.40	20.80	50.42	0.026	98	0.026
4.00	53.90	20.80	49.92	0.018	97	0.018
8.00	52.10	21.00	48.16	0.013	93	0.013
15.00	49.90	21.10	45.98	0.010	89	0.010
30.00	46.70	20.90	42.74	0.007	83	0.007
60.00	43.00	21.00	39.06	0.005	76	0.005
121.00	38.00	21.00	34.06	0.004	66	0.004
240.00	33.90	21.00	29.96	0.003	58	0.003
692.00	28.00	21.00	24.06	0.002	47	0.002

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
#4	0.187	4.75	0.00	0.00	100
#10	0.079	2.00	0.01	0.01	100
#20	0.033	0.84	0.00	0.01	100
#40	0.017	0.42	0.01	0.02	100
#60	0.010	0.25	0.00	0.02	100
#100	0.006	0.15	0.02	0.04	100
#200	0.003	0.07	0.02	0.06	100
Pan			49.64	49.70	0

Total Dry Weight of Sample = 58.67

D85 : 0.0081 mm
 D60 : 0.0031 mm
 D50 : 0.0020 mm
 D30 : N/A
 D15 : N/A
 D10 : N/A

Soil Classification

ASTM Group Symbol : CL
 ASTM Group Name : lean clay
 AASHTO Group Symbol : A-6(21)
 AASHTO Group Name : Clayey Soils

ATTERBERG LIMITS

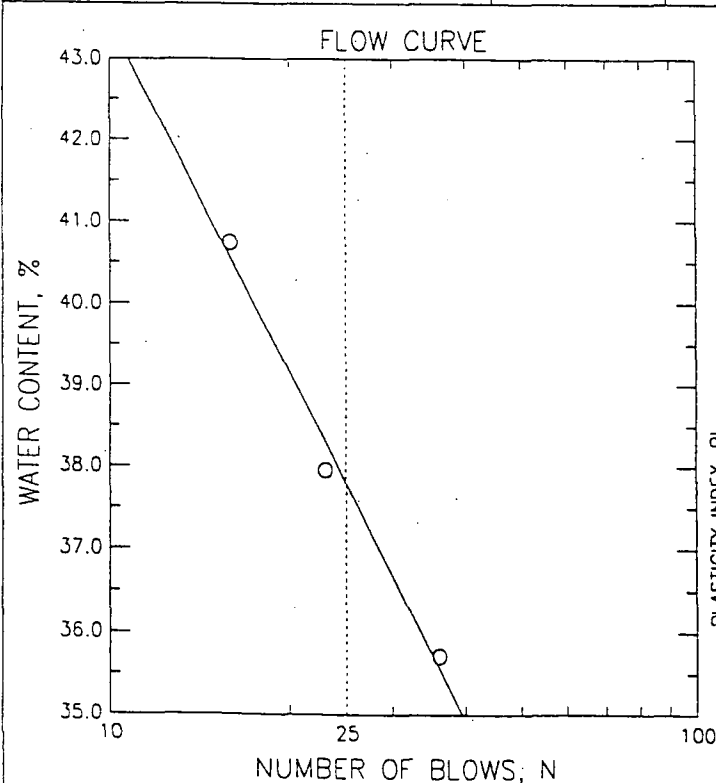
PROJECT Skaneateles Falls	PROJECT NUMBER GTX-1609	TESTED BY swj	BORING NUMBER ---
LOCATION Skaneateles, NY	CHECKED BY glt		SAMPLE NUMBER SWB-17 (8-10)
SAMPLE DESCRIPTION Moist, strong brown silty clay	DATE Tue Nov 11 1997		FILENAME 17

LIQUID LIMIT DETERMINATIONS

CONTAINER NUMBER	bk60	bk33	bk26		
WT. WET SOIL + TARE	33.13	33.08	32.1		
WT. DRY SOIL + TARE	32.38	32.26	31.22		
WT. WATER	0.75	0.82	0.88		
TARE WT.	30.28	30.1	29.06		
WT. DRY SOIL	2.1	2.16	2.16		
WATER CONTENT, w_N (%)	35.71	37.96	40.74		
NUMBER OF BLOWS, N	36	23	16		
ONE-POINT LIQUID LIMIT, LL	37.33	37.58	38.60		

PLASTIC LIMIT DETERMINATIONS

CONTAINER NUMBER	bk116	bk44			
WT. WET SOIL + TARE	32.84	33.96			
WT. DRY SOIL + TARE	32.37	33.35			
WT. WATER	0.47	0.61			
TARE WT.	29.9	30.17			
WT. DRY SOIL	2.47	3.18			
WATER CONTENT (%)	19.03	19.18			



SUMMARY OF RESULTS

NATURAL WATER CONTENT, w (%)	21.2
LIQUID LIMIT, LL	37.8
PLASTIC LIMIT, PL	19.1
PLASTICITY INDEX, PI	18.7
LIQUIDITY INDEX, LI^*	0.11

$$*LI = (w - PL)/PI$$

PLASTICITY CHART

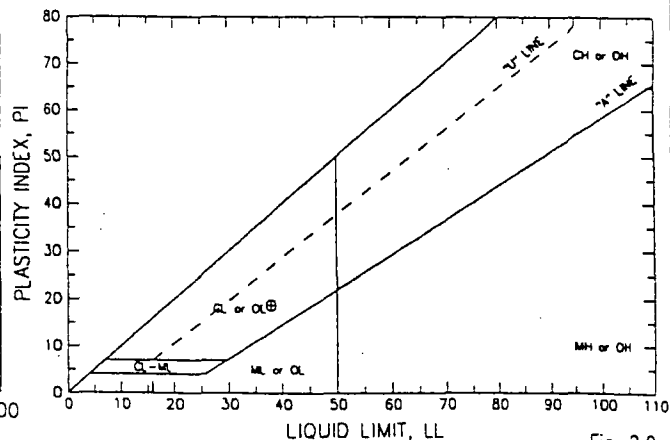


Fig. 2.0

Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter by ASTM D 5084 Constant Volume

Client:	SJB Services, Inc.	Start Date:	11/7/97
Project Name:	Skaneateles Falls	End Date:	11/8/97
Project Location:	Skaneateles, NY	Tested By:	swj
BTX #:	1609	Checked By:	gtt
Well #:	—	Sample Type:	Undisturbed/Tube
Sample #:	SWB-13	Orientation:	Vertical
Depth:	10-12 ft		
Visual Description:	Moist, strong brown silty clay		
Sample Preparation:	Extruded from tube, cut, trimmed and placed into permeameter at as received conditions; Trimming Moisture Content = 15.2 %		
Permeant Fluid:	de-aired tap water	Cell #:	0

Parameter	Initial	Final
Height, in	1.76	1.74
Diameter, in	2.87	2.86
Area, in ²	6.47	6.42
Volume, in ³	11.39	11.18
Mass, g	410	410
Bulk Density, pcf	136.9	139.4
Moisture Content, %	15.27	15.27
Dry Density, pcf	118.8	121.0

COEFFICIENT DETERMINATION

Cell Pressure, psi:	110	Pressure Increment, psi:	5
Sample Pressure, psi:	105	B Coefficient:	0.95 assumed

FLOW DATA

Date	Trial #	Cell Pressure, psi	Sample Pressure, psi	Manometer Readings			Elapsed Time sec	Gradient	K, cm/sec	Temp, °C	R _i	Permeability K @ 20 °C, cm/sec
				Z ₁	Z ₂	Z ₁ -Z ₂						
11/08	1	110	105	9.6	8.8	0.8	328	27.4	7.07E-08	21	0.976	6.90E-08
11/08	2	110	105	9.7	8.2	1.5	691	27.7	6.49E-08	21	0.976	6.33E-08
11/08	3	110	105	9.6	8.3	1.3	607	27.4	6.39E-08	21	0.976	6.24E-08

PERMEABILITY AT 20 °C: 6.5 x 10⁻⁸ cm/sec

note: These results apply only to the sample tested for the specific test conditions. The test procedures employed follow accepted industry practice and the indicated test method. GeoTesting Express has no specific knowledge as to conditioning, origin, sampling procedure or intended use of the material.

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Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter by ASTM D 5084 Constant Volume

Client: SJB Services, Inc.
Project Name: Skaneateles Falls
Project Location: Skaneateles, NY
Project #: 1609

Start Date: 11/7/97
End Date: 11/8/97
Tested By: swj
Checked By: gtt

Sample #: —
Sample #: SWB-17
Depth: 8-10 ft
Soil Description: Moist, strong brown silty clay

Sample Type: Undisturbed/Tube
Orientation: Vertical

Sample Preparation: Extruded from tube, cut, trimmed and placed into permeameter at as received conditions;
Trimming Moisture Content = 21.2 %

Seepage Fluid: de-aired tap water

Cell #: 5

Parameter	Initial	Final
Height, in	2.31	2.33
Diameter, in	2.86	2.86
Area, in ²	6.42	6.40
Volume, in ³	14.84	14.92
Mass, g	511	514
Bulk Density, pcf	130.9	131.0
Moisture Content, %	21.19	21.90
Dry Density, pcf	108.0	107.5

COEFFICIENT DETERMINATION

Cell Pressure, psi: 110
Sample Pressure, psi: 105

Pressure Increment, psi: 5
B Coefficient: 0.95 assumed

TEST DATA

Date	Trial #	Cell Pressure, psi	Sample Pressure, psi	Manometer Readings			Elapsed Time sec	Gradient	K, cm/sec	Temp, °C	R _i	Permeability K @ 20 °C, cm/sec
				Z ₁	Z ₂	Z ₁ -Z ₂						
1/08	1	110	105	10.5	9.9	0.6	521	22.4	4.04E-08	21	0.976	3.94E-08
1/08	2	110	105	10.9	10.3	0.6	569	23.2	3.56E-08	21	0.976	3.47E-08
1/08	3	110	105	10.3	9.9	0.4	415	21.9	3.41E-08	21	0.976	3.33E-08

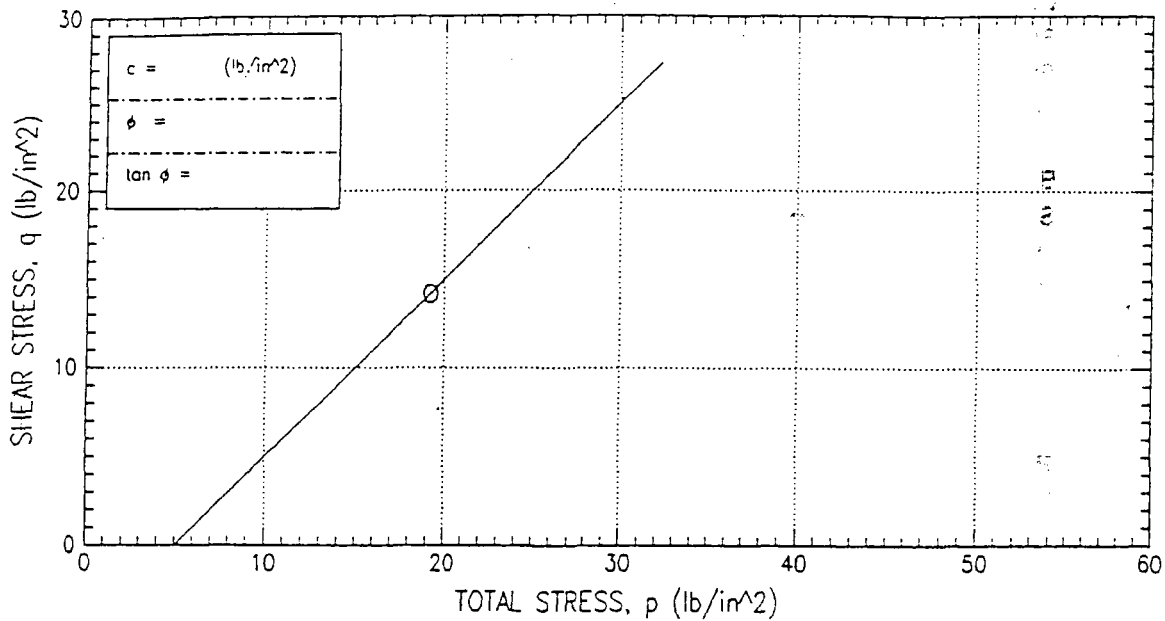
PERMEABILITY AT 20 °C: 3.6×10^{-8} cm/sec

These results apply only to the sample tested for the specific test conditions. The test procedures employed follow accepted industry practice and the indicated test method. GeoTesting Express has no specific knowledge as to conditioning, origin, sampling procedure or intended use of the material.

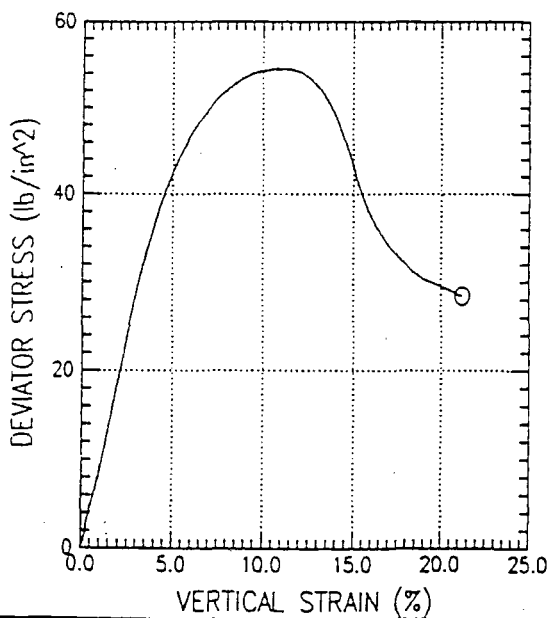
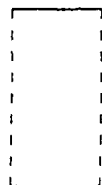
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UU Triaxial Test by ASTM D 2850

FAILURE SKETCHES



UU1



SYMBOL	O			
TEST NO.	UU1			
INITIAL	WATER CONTENT (%)	14.92		
	DRY DENSITY (lb/ft ³)	118.38		
	SATURATION (%)	99.61		
	VOID RATIO	0.397	3	
BEFORE SHEAR	WATER CONTENT (%)	14.92		
	DRY DENSITY (lb/ft ³)	118.38		
	SATURATION (%)	99.61		
	VOID RATIO	0.397		
	BACK PRESS. (lb/in ²)	0.00		
	MINOR PRIN. STRESS (lb/in ²)	5.00		
	MAX. DEV. STRESS (lb/in ²)	54.55		
	TIME TO FAILURE (min)	11.40		
	RATE OF STRAIN INCR (%/min)	1.00		
	INITIAL DIAMETER (in)	2.87		
	INITIAL HEIGHT (in)	5.90		
	B-VALUE	0.00		

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

1) Moist, strong brown silty clay

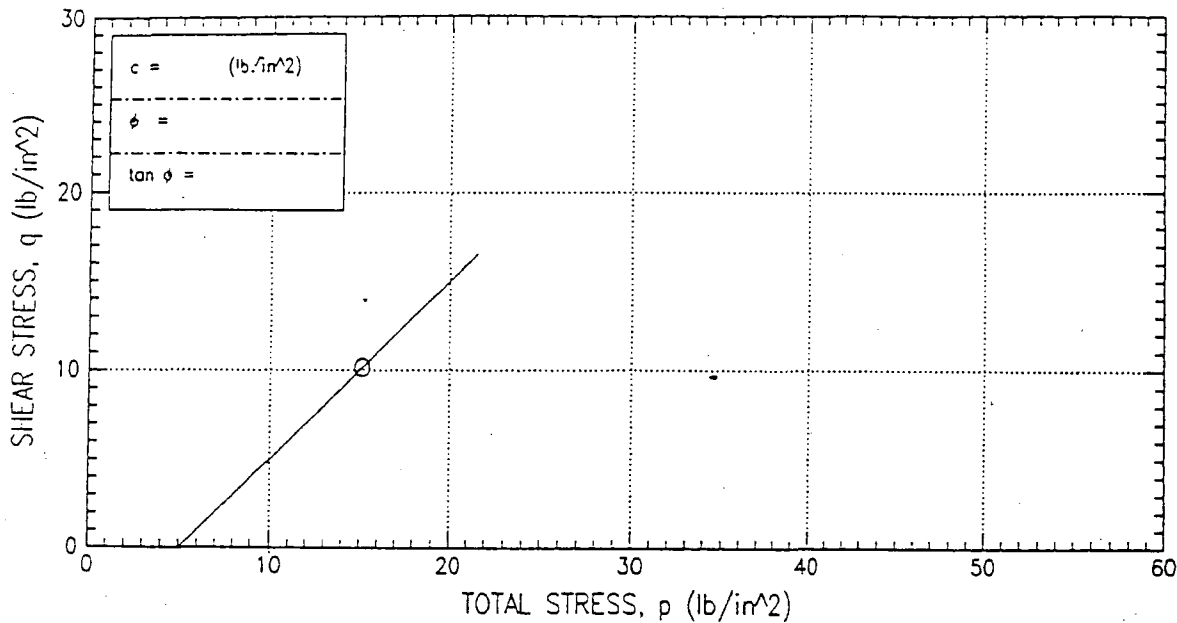
LL	PL	PI	GS 2.65	TYPE OF SPECIMEN	Tube	TYPE OF TEST	UU (Q)
REMARKS:				PROJECT Skaneateles Falls			
1) ---				PROJECT NO. GTX-1609			
BORING NO. ---		SAMPLE NO.		SWB-13			
TECH. jdt		DEPTH/ELEV		10-12 feet			
LABORATORY		DATE		10/16/97			

TRIAXIAL COMPRESSION TEST REPORT

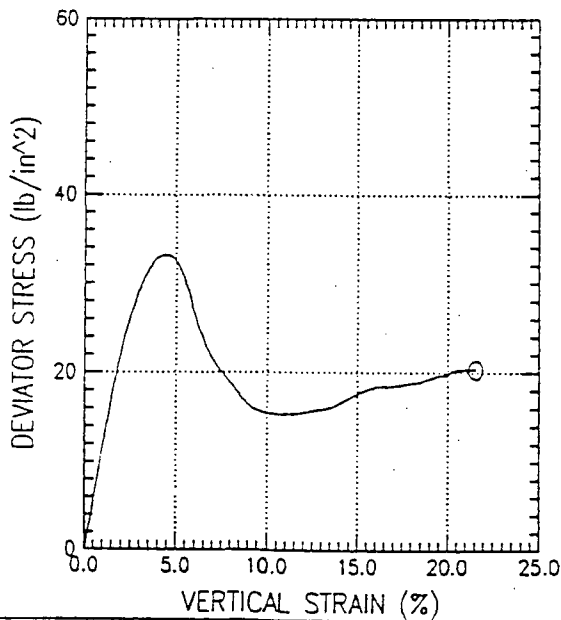
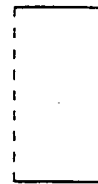
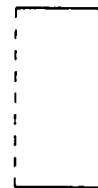
Mod. 11-17-96, 09/29/96

UU Triaxial Test by ASTM D 2850

FAILURE SKETCHES



UU2



SYMBOL	O		
TEST NO.	UU2		
INITIAL	WATER CONTENT (%)	19.67	
	DRY DENSITY (lb/ft ³)	108.40	
	SATURATION (%)	99.17	
	VOID RATIO	0.525	
BEFORE SHEAR	WATER CONTENT (%)	19.67	
	DRY DENSITY (lb/ft ³)	108.40	
	SATURATION (%)	99.17	
	VOID RATIO	0.525	
	BACK PRESS. (lb/in ²)	0.00	
MINOR PRIN. STRESS (lb/in ²)		5.00	
MAX. DEV. STRESS (lb/in ²)		33.10	
TIME TO FAILURE (min)		5.35	
RATE OF STRAIN INCR (%/min)		1.00	
INITIAL DIAMETER (in)		2.87	
INITIAL HEIGHT (in)		5.77	
B-VALUE		0.00	

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

1) Moist, strong brown silty clay

LL	PL	PI	GS 2.65	TYPE OF SPECIMEN	Tube	TYPE OF TEST	UU (Q)
REMARKS:				PROJECT Skaneateles Falls			
1) ---				PROJECT NO. GTX-1609			
BORING NO. ---		SAMPLE NO.		SWB-17			
TECH jdt		DEPTH/ELEV		8-10 feet			
LABORATORY		DATE		10/17/97			

TRIAXIAL COMPRESSION TEST REPORT