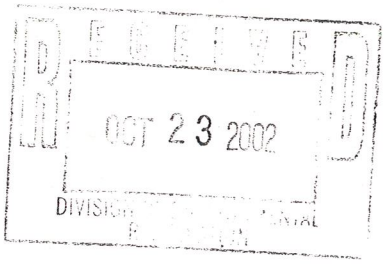
Niagara Mohawk
A **National Grid** Company

JAH mailed Copy

October 18, 2002

Mr. John A. Helmeset, P.E.
Bureau of Western Remedial Action
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7017



RE: Sediment Sampling Report
OU-2 Hudson River
Glens Falls (Mohican St.) Site

Dear Mr. Helmeset:

Niagara Mohawk, A National Grid Company (Niagara Mohawk) has completed the additional sediment sampling in the Hudson River associated with the Niagara Mohawk Glens Falls (Mohican Street) Site. The sediment sampling was recommended in the Supplemental Remedial Investigation (SRI) Report dated December 2001. Based on the agreement between Niagara Mohawk and NYSDEC, the Hudson River sediment is being addressed as a separate operable unit (OU-2), distinguished from the upland areas (former MGP Site) and the Glens Falls Feeder Canal, which make up OU-1.

The Sampling Plan for this field effort was presented to the New York State Department of Environmental Conservation (NYSDEC) in a letter dated December 3, 2001. The NYSDEC commented on the Sampling Plan in a February 12, 2002 letter to Niagara Mohawk. Niagara Mohawk's February 28, 2002 letter responded to the NYSDEC's comments. In the NYSDEC's letter dated March 27, 2002, the Department accepted the scope and requested that a Work Plan for these activities be submitted for their review and approval. On April 15, 2002, Niagara Mohawk forwarded a Revised Hudson River Sediment (OU-2) Sampling Work Plan to the NYSDEC. The Sampling Work Plan was approved by the NYSDEC in their April 24, 2002 letter to Niagara Mohawk.

Field Activities

On May 2, 2002, sediment sampling was undertaken at OU-2 in accordance with the approved Sampling Work Plan, and attempts to collect sediment at each of the 13 proposed sample locations (CS-15 through CS-27) were made. The NYSDEC-approved Work Plan proposed the use of a Vibracore sampler to collect the sediment samples. Based on previous knowledge regarding limited sediment availability gained during December 2000 sediment sampling at locations CS-11 through CS-14, the need for adjusting or modifying sample locations and sampling equipment in the field was

anticipated. Conseque ', in addition to the Vibracore sam, r, a petite ponar dredge sampler was deployed on the sampling vessel as a contingency. Due to limited sediment availability, confirmed through the use of lead lines prior to sampler deployment, the petite ponar dredge sampler was utilized for sample collection rather than the Vibracore sampler.

A total of ten surface (0 to 0.5 feet below the sediment surface) grab sediment samples were collected. River water depths ranged from 13 feet (CS-17 and CS-19A) to 20 feet (CS-19B). Sample locations also required adjustments and repeated sampling attempts before samples could be collected. Sediment samples were successfully collected from only three of the originally proposed sampling locations (CS-17, CS-18, and CS-22). Sediment was not encountered despite numerous attempts (up to 20) to collect sediment in the vicinity (within an approximate 10 foot radius) of the proposed sample location, at ten of the thirteen proposed sample locations, CS-15, CS-16, CS-19, CS-20, CS-21, CS-23, CS-24, CS-25, CS-26 and CS-27 (Figure 1). Lead line soundings and the sampler response indicated the presence of bedrock/hard bottom with negligible sediment present in each of these areas. Sampling locations were recorded using an on-board geographical position system (GPS). Sample CS-26A was collected upstream of OU-2, approximately 30-40 feet from proposed sample locations CS-26 and CS-27.

Additional samples (CS-19A and CS-19B) were successfully collected in the vicinity of CS-19 and CT-1. Step-out sampling locations were also established, in consultation with Niagara Mohawk, in the vicinity of CS-20 and CT-2, and samples were successfully collected at CS-20A, CS-20B, CS-20C and CS-20D (Figure 1). Samples were collected from an estimated depth interval of approximately 0 to 4 inches, the approximate maximum depth of penetration of the sampler.

During the sampling activities, a clump of viscous tar-like material was observed on the anchor when it was pulled from a bottom location near CS-19 (Figure 1). A sample of this material (CT-1) was collected for PAH and gas chromatograph (GC) fingerprint analyses. Tar-like material was also encountered in the deployment of the sampler (at the sediment/water interface) near sample location CS-20 located approximately 150 feet east of the discharge pipe from the Feeder Canal to the Hudson River. A sample of this material (CT-2) was collected for PAH and fingerprint analyses.

Samples collected at each location, through one or multiple deployments of the sampler, were transferred into a decontaminated stainless steel container until the appropriate sample volume was obtained. Due to space limitations on the sampling vessel and weather conditions, samples were collected one location at a time and transported to shore for processing. Onshore, the dredge sampler was decontaminated, and each sediment sample was initially classified. Samples were transferred into laboratory-supplied sample containers appropriate for the analyses requested. Sample containers were labeled, sealed in ziplock-type bags and placed into a cooler with ice. Upon completion of sampling activities, samples were transported via courier to Severn Trent Laboratory (STL) in Edison, New Jersey for chemical and geotechnical analyses.

Samples CS-18, CS-81 (duplicate of CS-18), CS-19B, CS-20A, CS-20B, CS-20C, CS-20D, CS-22, and CS-26A were analyzed for PAHs, TOC, and grain size by sieve analysis and hydrometer. Samples CT-1 and CT-2 were analyzed for PAHs and GC fingerprint. Sample CS-17 was analyzed for only PAHs and TOC because of the limited amount of sediment recovered by the sampling device. Sample CS-19A was analyzed

for TCL VOA +10, TCL 'A +20, TCL Pesticides/PCBs, TAL etals, Cyanide, TOC, and grain size by sieve analysis and hydrometer.

Analytical Results

The sediments generally consisted of fine- to coarse-grained sand with varying amounts of gravel. Organic materials including freshwater mussels, crustaceans, wood fragments, and leaves were also observed in the sediment samples. Field screening of the sediment samples with a PID did not exceed background (0 ppm). Geotechnical data are presented in Appendix B.

Four volatile organic compounds were detected at CS-19A (see Appendix A). Sample CS-19A was the only sample analyzed for TCL VOCs. Carbon disulfide was detected at a concentration of 0.0025J mg/kg, cis-1,2-Dichloroethene was detected at a concentration of 0.0029J mg/kg, 1,1,1-Trichloroethane was detected at a concentration of 0.0008J mg/kg, and trichloroethene was detected at a concentration of 0.012 mg/kg.

Various concentrations of PAHs were detected in 11 of the 13 samples (see Appendix A). The highest concentrations of Total PAHs, 3,876 mg/kg and 6,318 mg/kg, were detected at CT-1 and CT-2 respectively. CT-1 is located approximately forty feet south of sample location CS-19A (see Figure 2), and the elevated concentrations of Total PAHs appear to be of limited extent. At surrounding locations, Total PAH concentration was more than an order of magnitude lower than the Total PAH concentration detected at CT-1 (CS-14, CS-17, and CS-19A) or there was no sediment (CS-19). CT-2 is located 150 feet east of the discharge pipe from the Feeder Canal to the Hudson River (see Figure 2). At surrounding locations (CS-20A, CS-20B, and CS-20C) where sediment was present, the Total PAH concentration ranged from below method detection limits (ND) to 0.025 mg/kg. Total PAH concentrations detected in both sampling events are presented on Figure 2. The GC fingerprint results for CT-1 and CT-2 are attached in Appendix A.

CS-26A, located upstream of the Site (see Figure 2), reported a Total PAH value of 6.899 mg/kg.

CS-19A was the only sample analyzed for pesticides, PCBs and metals. Five pesticide compounds were detected at that sample location (see Appendix A). 4-4'-DDD reported a concentration of 0.015 mg/kg, 4,4'-DDE reported a concentration of 0.0087 mg/kg, 4,4'-DDT reported a concentration of 0.010 mg/kg, endrin ketone reported a concentration of 0.025 mg/kg, and methoxyclor reported a concentration of 0.230 mg/kg. Neither PCBs nor total cyanide were detected in the sample. Seventeen metals were detected in OU-2 sediment. Analytical results for the sampling effort are presented in Appendix A.

Conclusions

Based on the initial sediment sampling activities in 2000 (SB-10, OF-SED, and CS-10 to CS-14) and the recent sediment sampling event (CS-15 to CS-27), generally low concentrations of Total PAHs are present in the Hudson River sediments. These sampling events also indicate that much of the river bottom in the OU-2 area is devoid of sediment. Field observations with lead lines and sampler response indicate bedrock or hard bottom was exposed in the vicinity of over 75% of the proposed sample locations.

At those areas where s iment was found, sediment depth. were generally limited as evidenced by limited penetration of the sampler.

Due to the limited volume and localized distribution of sediment on the river bottom, the horizontal and vertical extent of potential MGP impacts appears to be limited. Further sampling of the river to the north (downstream) would be within close proximity to the Glens Falls hydroelectric facility and the intakes for the Finch Pruyn paper mill, and would pose a significant safety issue to personnel performing sampling activities. Niagara Mohawk proposes no further investigation of OU-2 at this time.

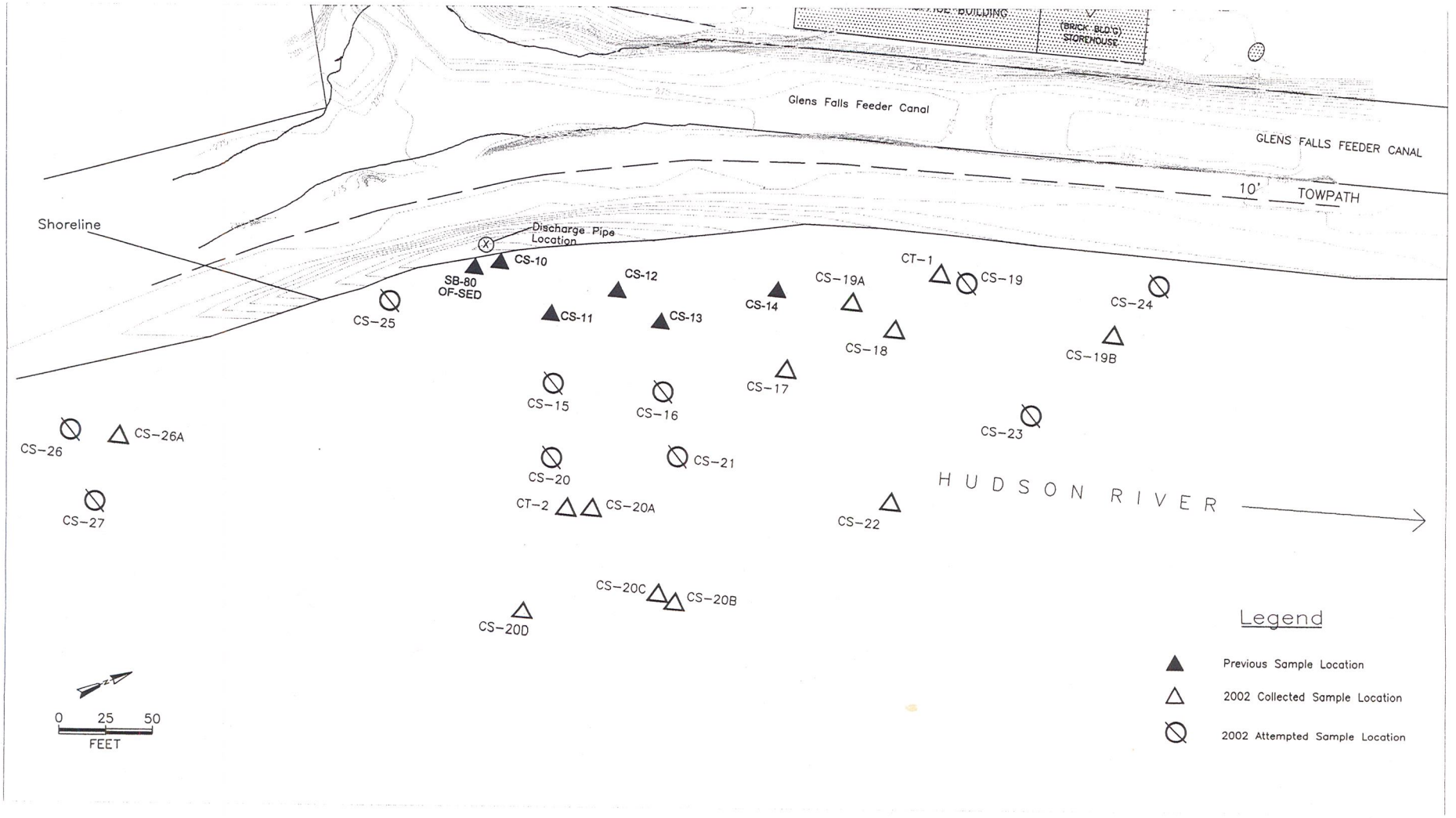
As you are aware, Niagara Mohawk has prepared and submitted to the Department a draft Feasibility Study for OU-1 that addresses potential sources of PAHs to OU-2. Niagara Mohawk recommends post remedial monitoring of the OU-2 sediments to be initiated following implementation of the selected remedy at OU-1.

If there are any questions regarding this Report, please contact me.

Sincerely,

Steven P. Stucker
Project Manager

Cc: M. Sherman-Niagara Mohawk
J. Parkinson- Niagara Mohawk
A. Donahoe-National Grid Service Company
K. Thomas-Foster Wheeler Environmental

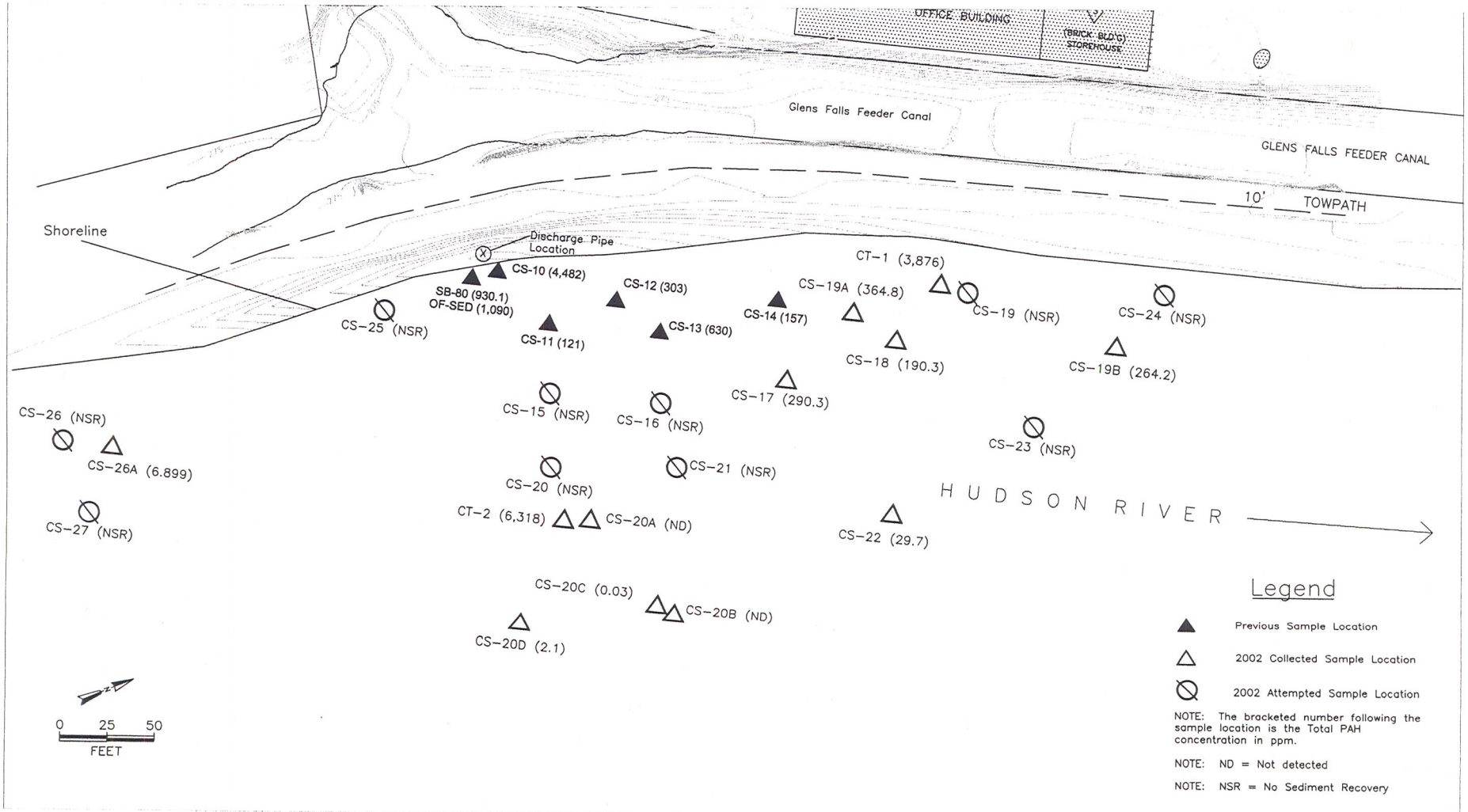


FOSTER WHEELER ENVIRONMENTAL CORPORATION

TITLE:
Sediment Sampling Locations
Operable Unit No. 2
Glens Falls (Mohican Street) Site

Niagara Mohawk
A National Grid Company

DWN.:	DATE:	PROJECT NO.:
MK	9/30/02	5362.0000
CHKD:	REV.:	
DES.:	APPD:	FIGURE NO.: 1



FOSTER WHEELER ENVIRONMENTAL CORPORATION

TITLE:
Sediment Sampling Locations with Total PAHs
Operable Unit No. 2
Glens Falls (Mohican Street) Site

Niagara Mohawk
A National Grid Company

DWN.:	DATE:	PROJECT NO.:
MK	9/30/02	5362.0000
CHKD:	REV.:	
DES.:	APPD:	FIGURE NO.: 2

APPENDIX A

Analytical Data

Table 1 TCL VOCs

Sample ID Lab Sample Number Sampling Date Depth	New York State Sediment Guidance Number ug/gOC	Sediment Guidance Normalized to Concentration of TOC in CS-19A	CS-19A 348295 05/02/02 0-0.5'
Chloromethane	NA	NA	6.3 U
Bromomethane	NA	NA	6.3 U
VinylChloride	0.07	0.938	6.3 U
Chloroethane	NA	NA	6.3 U
MethyleneChloride	NA	NA	3.8 U
Acetone	NA	NA	6.3 U
CarbonDisulfide	NA	NA	2.5 J
1,1-Dichloroethene	NA	NA	2.5 U
1,1-Dichloroethane	NA	NA	6.3 U
trans-1,2-Dichloroethene	NA	NA	6.3 U
cis-1,2-Dichloroethene	NA	NA	2.9 J
Chloroform	NA	NA	6.3 U
1,2-Dichloroethane	0.7	9.38	2.5 U
2-Butanone	NA	NA	6.3 U
1,1,1-Trichloroethane	NA	NA	0.8 J
CarbonTetrachloride	0.6	8.04	2.5 U
Bromodichloromethane	NA	NA	1.2 U
1,2-Dichloropropane	NA	NA	1.2 U
cis-1,3-Dichloropropene	NA	NA	6.3 U
Trichloroethene	NA	NA	12
Dibromochloromethane	NA	NA	6.3 U
1,1,2-Trichloroethane	0.6	8.04	3.8 U
Benzene	0.6	8.04	1.2 U
trans-1,3-Dichloropropene	NA	NA	6.3 U
Bromoform	NA	NA	5.0 U
4-Methyl-2-Pentanone	NA	NA	6.3 U
2-Hexanone	NA	NA	6.3 U
Tetrachloroethene	NA	NA	1.2 U
1,1,2,2-Tetrachloroethane	0.3	4.02	1.2 U
Toluene	49	656.6	6.3 U
Chlorobenzene	NA	NA	6.3 U
Ethylbenzene	24	321.6	5.0 U
Styrene	NA	NA	6.3 U
Xylene(Total)	92	1232.8	6.3 U
Total Estimated Conc. VOA TICs (s)	NA	NA	0

See appendix introduction for abbreviations and data qualifiers.
Sediment results are presented in ug/kg (ppb).

Table 2 TCL SVOCs

Sample ID Lab Sample Number Sampling Date Depth	New York State Sediment Guidance Number ug/gOC	CT-1 348293 05/02/02 0-0.5'	CT-2 348299 05/02/02 0-0.5'	Sediment Guidance Normalized to Concentration of TOC in CS-17	CS-17 348296 05/02/02 0-0.5'	Sediment Guidance Normalized to Concentration of TOC in CS-18	CS-18 348292 05/02/02 0-0.5'
Phenol	NA	NR	NR	NA	NR	NA	NR
2-Chlorophenol	NA	NR	NR	NA	NR	NA	NR
2-Methylphenol	NA	NR	NR	NA	NR	NA	NR
4-Methylphenol	NA	NR	NR	NA	NR	NA	NR
2-Nitrophenol	NA	NR	NR	NA	NR	NA	NR
2,4-Dimethylphenol	NA	NR	NR	NA	NR	NA	NR
2,4-Dichlorophenol	NA	NR	NR	NA	NR	NA	NR
4-Chloro-3-methylphenol	NA	NR	NR	NA	NR	NA	NR
2,4,6-Trichlorophenol	NA	NR	NR	NA	NR	NA	NR
2,4,5-Trichlorophenol	NA	NR	NR	NA	NR	NA	NR
2,4-Dinitrophenol	NA	NR	NR	NA	NR	NA	NR
4-Nitrophenol	NA	NR	NR	NA	NR	NA	NR
4,6-Dinitro-2-methylphenol	NA	NR	NR	NA	NR	NA	NR
Pentachlorophenol	40	NR	NR	227.2	NR	436.0	NR
bis(2-Chloroethyl)ether	0.03	NR	NR	0.2	NR	0.3	NR
1,3-Dichlorobenzene	NA	NR	NR	NA	NR	NA	NR
1,4-Dichlorobenzene	NA	NR	NR	NA	NR	NA	NR
1,2-Dichlorobenzene	NA	NR	NR	NA	NR	NA	NR
bis(2-chloroisopropyl)ether	NA	NR	NR	NA	NR	NA	NR
N-Nitroso-di-n-propylamine	NA	NR	NR	NA	NR	NA	NR
Hexachloroethane	NA	NR	NR	NA	NR	NA	NR
Nitrobenzene	NA	NR	NR	NA	NR	NA	NR
Isophorone	NA	NR	NR	NA	NR	NA	NR
bis(2-Chloroethoxy)methane	NA	NR	NR	NA	NR	NA	NR
1,2,4-Trichlorobenzene	3400	NR	NR	19,312.0	NR	37,060.0	NR
Naphthalene	30	590000	640000	170.4	1300 J	327.0	1000 J
4-Chloroaniline	NA	NR	NR	NA	NR	NA	NR
Hexachlorobutadiene	0.3	NR	NR	1.7	NR	3.3	NR
2-Methylnaphthalene	34	NR	NR	193.1	NR	370.6	NR
Hexachlorocyclopentadiene	4.4	NR	NR	25.0	NR	48.0	NR
2-Chloronaphthalene	NA	NR	NR	NA	NR	NA	NR
2-Nitroaniline	NA	NR	NR	NA	NR	NA	NR
Dimethylphthalate	NA	NR	NR	NA	NR	NA	NR
Acenaphthylene	NA	130000	300000	NA	5700	NA	3400
2,6-Dinitrotoluene	NA	NR	NR	NA	NR	NA	NR
3-Nitroaniline	NA	NR	NR	NA	NR	NA	NR
Acenaphthene	140	120000	95000	795.2	2700 J	1,526.0	2900
Dibenzofuran	NA	NR	NR	NA	NR	NA	NR
2,4-Dinitrotoluene	NA	NR	NR	NA	NR	NA	NR
Diethylphthalate	NA	NR	NR	NA	NR	NA	NR

See appendix introduction for abbreviations and data qualifiers.
Sediment results are presented in ug/kg (ppb); field blank results are presented in ug/L (ppb).

Table 2 TCL SVOCs

Sample ID Lab Sample Number Sampling Date Depth	New York State Sediment Guidance Number ug/gOC	CT-1 348293 05/02/02 0-0.5'	CT-2 348299 05/02/02 0-0.5'	Sediment Guidance Normalized to Concentration of TOC in CS-17	CS-17 348296 05/02/02 0-0.5'	Sediment Guidance Normalized to Concentration of TOC in CS-18	CS-18 348292 05/02/02 0-0.5'
4-Chlorophenyl-phenylether	NA	NR	NR	NA	NR	NA	NR
Fluorene	8	140000	250000	45.4	5500	87.2	2500
4-Nitroaniline	NA	NR	NR	NA	NR	NA	NR
N-Nitrosodiphenylamine	NA	NR	NR	NA	NR	NA	NR
4-Bromophenyl-phenylether	NA	NR	NR	NA	NR	NA	NR
Hexachlorobenzene	0.15	NR	NR	0.9	NR	1.6	NR
Phenanthrene	120	880000	1600000	681.6	41000	1,308.0	23000
Anthracene	107	160000	370000	607.8	16000	1,166.3	8100
Carbazole	NA	NR	NR	NA	NR	NA	NR
Di-n-butylphthalate	NA	NR	NR	NA	NR	NA	NR
Fluoranthene	1020	540000	880000	5,793.6	50000	11,118.0	35000
Pyrene	961	430000	730000	5,458.5	45000	10,474.9	30000
Butylbenzylphthalate	NA	NR	NR	NA	NR	NA	NR
3,3'-Dichlorobenzidine	NA	NR	NR	NA	NR	NA	NR
Benzo(a)anthracene	12	170000	290000	68.2	23000	130.8	14000
Chrysene	NA	140000	260000	NA	21000	NA	14000
bis(2-Ethylhexyl)phthalate	199.5	NR	NR	1,133.2	NR	2,174.6	NR
Di-n-octylphthalate	NA	NR	NR	NA	NR	NA	NR
Benzo(b)fluoranthene	NA	160000	260000	NA	22000	NA	17000
Benzo(k)fluoranthene	NA	64000	99000	NA	9100	NA	6200
Benzo(a)pyrene	1.3	150000	240000	7.4	20000	14.2	15000
Indeno(1,2,3-cd)pyrene	NA	90000	130000	NA	13000	NA	8600
Dibenz(a,h)anthracene	NA	19000	34000	NA	3000	NA	1900
Benzo(g,h,i)perylene	NA	93000	140000	NA	12000	NA	7700
Total Estimated Conc. BNA TICs (s)		NA	NA		NA		NA
Total PAHs		3876000	6318000		290300		190300

See appendix introduction for abbreviations and data qualifiers.
Sediment results are presented in ug/kg (ppb); field blank results are presented in ug/L (ppb).

Table 2 TCL SVOCs

Sample ID Lab Sample Number Sampling Date Units	Sediment Guidance Normalized to Concentration of TOC in CS-19A	CS-19A 348295 05/02/02 0-0.5'	Sediment Guidance Normalized to Concentration of TOC in CS-19B	CS-19B 348303 05/02/02 0-0.5'	Sediment Guidance Normalized to Concentration of TOC in CS-20A	CS-20A 348298 05/02/02 0-0.5'	Sediment Guidance Normalized to Concentration of TOC in CS-20B	CS-20B 348300 05/02/02 0-0.5'
Phenol	NA	4200 U	NA	NR	NA	NR	NA	NR
2-Chlorophenol	NA	4200 U	NA	NR	NA	NR	NA	NR
2-Methylphenol	NA	4200 U	NA	NR	NA	NR	NA	NR
4-Methylphenol	NA	4200 U	NA	NR	NA	NR	NA	NR
2-Nitrophenol	NA	4200 U	NA	NR	NA	NR	NA	NR
2,4-Dimethylphenol	NA	4200 U	NA	NR	NA	NR	NA	NR
2,4-Dichlorophenol	NA	4200 U	NA	NR	NA	NR	NA	NR
4-Chloro-3-methylphenol	NA	4200 U	NA	NR	NA	NR	NA	NR
2,4,6-Trichlorophenol	NA	4200 U	NA	NR	NA	NR	NA	NR
2,4,5-Trichlorophenol	NA	4200 U	NA	NR	NA	NR	NA	NR
2,4-Dinitrophenol	NA	17000 U	NA	NR	NA	NR	NA	NR
4-Nitrophenol	NA	17000 U	NA	NR	NA	NR	NA	NR
4,6-Dinitro-2-methylphenol	NA	17000 U	NA	NR	NA	NR	NA	NR
Pentachlorophenol	536.0	17000 U	197.2	NR	78.4	NR	62.4	NR
bis(2-Chloroethyl)ether	0.4	420 U	0.1	NR	0.1	NR	0.1	NR
1,3-Dichlorobenzene	NA	4200 U	NA	NR	NA	NR	NA	NR
1,4-Dichlorobenzene	NA	4200 U	NA	NR	NA	NR	NA	NR
1,2-Dichlorobenzene	NA	4200 U	NA	NR	NA	NR	NA	NR
bis(2-chloroisopropyl)ether	NA	4200 U	NA	NR	NA	NR	NA	NR
N-Nitroso-di-n-propylamine	NA	420 U	NA	NR	NA	NR	NA	NR
Hexachloroethane	NA	420 U	NA	NR	NA	NR	NA	NR
Nitrobenzene	NA	420 U	NA	NR	NA	NR	NA	NR
Isophorone	NA	4200 U	NA	NR	NA	NR	NA	NR
bis(2-Chloroethoxy)methane	NA	4200 U	NA	NR	NA	NR	NA	NR
1,2,4-Trichlorobenzene	45560	420 U	16,762.0	NR	6,664.0	NR	5,304.0	NR
Naphthalene	402	2500 J	147.9	890 J	58.8	440 U	46.8	410 U
4-Chloroaniline	NA	4200 U	NA	NR	NA	NR	NA	NR
Hexachlorobutadiene	4.02	840 U	1.5	NR	0.6	NR	0.5	NR
2-Methylnaphthalene	455.6	920 J	167.6	NR	66.6	NR	53.0	NR
Hexachlorocyclopentadiene	58.96	4200 U	21.7	NR	8.6	NR	6.9	NR
2-Chloronaphthalene	NA	4200 U	NA	NR	NA	NR	NA	NR
2-Nitroaniline	NA	8400 U	NA	NR	NA	NR	NA	NR
Dimethylphthalate	NA	4200 U	NA	NR	NA	NR	NA	NR
Acenaphthylene	NA	7400	NA	4200 J	NA	440 U	NA	410 U
2,6-Dinitrotoluene	NA	840 U	NA	NR	NA	NR	NA	NR
3-Nitroaniline	NA	8400 U	NA	NR	NA	NR	NA	NR
Acenaphthene	1876	5100	690.2	930 J	274.4	440 U	218.4	410 U
Dibenzofuran	NA	2400 J	NA	NR	NA	NR	NA	NR
2,4-Dinitrotoluene	NA	840 U	NA	NR	NA	NR	NA	NR
Diethylphthalate	NA	4200 U	NA	NR	NA	NR	NA	NR

See appendix introduction for abbreviations and data qualifiers.
Sediment results are presented in ug/kg (ppb); field blank results are presented in ug/L (ppb).

Table 2 TCL SVOCs

Sample ID Lab Sample Number Sampling Date Units	Sediment Guidance Normalized to Concentration of TOC in CS-19A	CS-19A 348295 05/02/02 0-0.5'	Sediment Guidance Normalized to Concentration of TOC in CS-19B	CS-19B 348303 05/02/02 0-0.5'	Sediment Guidance Normalized to Concentration of TOC in CS-20A	CS-20A 348298 05/02/02 0-0.5'	Sediment Guidance Normalized to Concentration of TOC in CS-20B	CS-20B 348300 05/02/02 0-0.5'
4-Chlorophenyl-phenylether	NA	4200 U	NA	NR	NA	NR	NA	NR
Fluorene	107.2	5100	39.4	1300 J	15.7	440 U	12.5	410 U
4-Nitroaniline	NA	8400 U	NA	NR	NA	NR	NA	NR
N-Nitrosodiphenylamine	NA	4200 U	NA	NR	NA	NR	NA	NR
4-Bromophenyl-phenylether	NA	4200 U	NA	NR	NA	NR	NA	NR
Hexachlorobenzene	2.01	420 U	0.7	NR	0.3	NR	0.2	NR
Phenanthrene	1608	44000	591.6	12000	235.2	440 U	187.2	410 U
Anthracene	1433.8	16000	527.5	6400	209.7	440 U	166.9	410 U
Carbazole	NA	680 J	NA	NR	NA	NR	NA	NR
Di-n-butylphthalate	NA	4200 U	NA	NR	NA	NR	NA	NR
Fluoranthene	13668	73000	5,028.6	47000	1,999.2	440 U	1,591.2	410 U
Pyrene	12877.4	72000	4,737.7	46000	1,883.6	440 U	1,499.2	410 U
Butylbenzylphthalate	NA	4200 U	NA	NR	NA	NR	NA	NR
3,3'-Dichlorobenzidine	NA	8400 U	NA	NR	NA	NR	NA	NR
Benzo(a)anthracene	160.8	25000	59.2	24000	23.5	44 U	18.7	41 U
Chrysene	NA	26000	NA	24000	NA	440 U	NA	410 U
bis(2-Ethylhexyl)phthalate	2673.3	4200 U	983.5	NR	391.0	NR	311.2	NR
Di-n-octylphthalate	NA	4200 U	NA	NR	NA	NR	NA	NR
Benzo(b)fluoranthene	NA	25000	NA	28000	NA	44 U	NA	41 U
Benzo(k)fluoranthene	NA	9000	NA	11000	NA	44 U	NA	41 U
Benzo(a)pyrene	17.42	24000	6.4	25000	2.5	44 U	2.0	41 U
Indeno(1,2,3-cd)pyrene	NA	12000	NA	16000	NA	44 U	NA	41 U
Dibenz(a,h)anthracene	NA	2700	NA	3500	NA	44 U	NA	41 U
Benzo(g,h,i)perylene	NA	16000	NA	14000	NA	440 U	NA	410 U
Total Estimated Conc. BNA TICs (s)		100400		NA		NA		NA
Total PAHs		364800		264220		ND		ND

See appendix introduction for abbreviations and data qualifiers.
Sediment results are presented in ug/kg (ppb); field blank results are presented in ug/L (ppb).

Table 2 TCL SVOCs

Sample ID Lab Sample Number Sampling Date Depth	Sediment Guidance Normalized to Concentration of TOC in CS-20C	CS-20C 348301 05/02/02 0-0.5'	Sediment Guidance Normalized to Concentration of TOC in CS-20D	CS-20D 348302 05/02/02 0-0.5'	Sediment Guidance Normalized to Concentration of TOC in CS-22	CS-22 348291 05/02/02 0-0.5'	Sediment Guidance Normalized to Concentration of TOC in CS-26A	CS-26A 348297 05/02/02 0-0.5'
Phenol	NA	NR	NA	NR	NA	NR	NA	NR
2-Chlorophenol	NA	NR	NA	NR	NA	NR	NA	NR
2-Methylphenol	NA	NR	NA	NR	NA	NR	NA	NR
4-Methylphenol	NA	NR	NA	NR	NA	NR	NA	NR
2-Nitrophenol	NA	NR	NA	NR	NA	NR	NA	NR
2,4-Dimethylphenol	NA	NR	NA	NR	NA	NR	NA	NR
2,4-Dichlorophenol	NA	NR	NA	NR	NA	NR	NA	NR
4-Chloro-3-methylphenol	NA	NR	NA	NR	NA	NR	NA	NR
2,4,6-Trichlorophenol	NA	NR	NA	NR	NA	NR	NA	NR
2,4,5-Trichlorophenol	NA	NR	NA	NR	NA	NR	NA	NR
2,4-Dinitrophenol	NA	NR	NA	NR	NA	NR	NA	NR
4-Nitrophenol	NA	NR	NA	NR	NA	NR	NA	NR
4,6-Dinitro-2-methylphenol	NA	NR	NA	NR	NA	NR	NA	NR
Pentachlorophenol	118.8	NR	67.2	NR	152.0	NR	166.8	NR
bis(2-Chloroethyl)ether	0.1	NR	0.1	NR	0.1	NR	0.1	NR
1,3-Dichlorobenzene	NA	NR	NA	NR	NA	NR	NA	NR
1,4-Dichlorobenzene	NA	NR	NA	NR	NA	NR	NA	NR
1,2-Dichlorobenzene	NA	NR	NA	NR	NA	NR	NA	NR
bis(2-chloroisopropyl)ether	NA	NR	NA	NR	NA	NR	NA	NR
N-Nitroso-di-n-propylamine	NA	NR	NA	NR	NA	NR	NA	NR
Hexachloroethane	NA	NR	NA	NR	NA	NR	NA	NR
Nitrobenzene	NA	NR	NA	NR	NA	NR	NA	NR
Isophorone	NA	NR	NA	NR	NA	NR	NA	NR
bis(2-Chloroethoxy)methane	NA	NR	NA	NR	NA	NR	NA	NR
1,2,4-Trichlorobenzene	10,098.0	NR	5,712.0	NR	12,920.0	NR	14,178.0	NR
Naphthalene	89.1	440 U	50.4	150 J	114.0	320 J	125.1	27 J
4-Chloroaniline	NA	NR	NA	NR	NA	NR	NA	NR
Hexachlorobutadiene	0.9	NR	0.5	NR	1.1	NR	1.3	NR
2-Methylnaphthalene	101.0	NR	57.1	NR	129.2	NR	141.8	NR
Hexachlorocyclopentadiene	13.1	NR	7.4	NR	16.7	NR	18.3	NR
2-Chloronaphthalene	NA	NR	NA	NR	NA	NR	NA	NR
2-Nitroaniline	NA	NR	NA	NR	NA	NR	NA	NR
Dimethylphthalate	NA	NR	NA	NR	NA	NR	NA	NR
Acenaphthylene	NA	440 U	NA	100 J	NA	530	NA	280 J
2,6-Dinitrotoluene	NA	NR	NA	NR	NA	NR	NA	NR
3-Nitroaniline	NA	NR	NA	NR	NA	NR	NA	NR
Acenaphthene	415.8	440 U	235.2	30 J	532.0	260 J	583.8	26 J
Dibenzofuran	NA	NR	NA	NR	NA	NR	NA	NR
2,4-Dinitrotoluene	NA	NR	NA	NR	NA	NR	NA	NR
Diethylphthalate	NA	NR	NA	NR	NA	NR	NA	NR

See appendix introduction for abbreviations and data qualifiers.
Sediment results are presented in ug/kg (ppb); field blank results are presented in ug/L (ppb).

Table 2 TCL SVOCs

Sample ID Lab Sample Number Sampling Date Depth	Sediment Guidance Normalized to Concentration of TOC in CS-20C	CS-20C 348301 05/02/02 0-0.5'	Sediment Guidance Normalized to Concentration of TOC in CS-20D	CS-20D 348302 05/02/02 0-0.5'	Sediment Guidance Normalized to Concentration of TOC in CS-22	CS-22 348291 05/02/02 0-0.5'	Sediment Guidance Normalized to Concentration of TOC in CS-26A	CS-26A 348297 05/02/02 0-0.5'
4-Chlorophenyl-phenylether	NA	NR	NA	NR	NA	NR	NA	NR
Fluorene	23.8	440 U	13.4	89 J	30.4	510	33.4	46 J
4-Nitroaniline	NA	NR	NA	NR	NA	NR	NA	NR
N-Nitrosodiphenylamine	NA	NR	NA	NR	NA	NR	NA	NR
4-Bromophenyl-phenylether	NA	NR	NA	NR	NA	NR	NA	NR
Hexachlorobenzene	0.4	NR	0.3	NR	0.6	NR	0.6	NR
Phenanthrene	356.4	440 U	201.6	480	456.0	4500	500.4	190 J
Anthracene	317.8	440 U	179.8	130 J	406.6	1200	446.2	150 J
Carbazole	NA	NR	NA	NR	NA	NR	NA	NR
Di-n-butylphthalate	NA	NR	NA	NR	NA	NR	NA	NR
Fluoranthene	3,029.4	13 J	1,713.6	310 J	3,876.0	5100	4,253.4	830
Pyrene	2,854.2	12 J	1,614.5	270 J	3,651.8	5200	4,007.4	1000
Butylbenzylphthalate	NA	NR	NA	NR	NA	NR	NA	NR
3,3'-Dichlorobenzidine	NA	NR	NA	NR	NA	NR	NA	NR
Benzo(a)anthracene	35.6	44 U	20.2	120	45.6	2700	50.0	650
Chrysene	NA	440 U	NA	93 J	NA	2300	NA	660
bis(2-Ethylhexyl)phthalate	592.5	NR	335.2	NR	758.1	NR	831.9	NR
Di-n-octylphthalate	NA	NR	NA	NR	NA	NR	NA	NR
Benzo(b)fluoranthene	NA	44 U	NA	100	NA	2100	NA	840
Benzo(k)fluoranthene	NA	44 U	NA	44	NA	890	NA	330
Benzo(a)pyrene	3.9	44 U	2.2	98	4.9	2000	5.4	780
Indeno(1,2,3-cd)pyrene	NA	44 U	NA	54	NA	950	NA	490
Dibenz(a,h)anthracene	NA	44 U	NA	14 J	NA	260	NA	120
Benzo(g,h,i)perylene	NA	440 U	NA	54 J	NA	900	NA	480
Total Estimated Conc. BNA TICs (s)		NA		NA		NA		NA
Total PAHs		25		2136		29720		6899

See appendix introduction for abbreviations and data qualifiers.
Sediment results are presented in ug/kg (ppb); field blank results are presented in ug/L (ppb).

Table 2 TCL SVOCs

Sample ID Lab Sample Number Sampling Date Units	Sediment Guidance Normalized to Concentration of TOC in CS-81	CS-81 348294 05/02/02 0-0.5'	FB-050202-01 348304 05/02/02 0-0.5'
Phenol	NA	NR	NR
2-Chlorophenol	NA	NR	NR
2-Methylphenol	NA	NR	NR
4-Methylphenol	NA	NR	NR
2-Nitrophenol	NA	NR	NR
2,4-Dimethylphenol	NA	NR	NR
2,4-Dichlorophenol	NA	NR	NR
4-Chloro-3-methylphenol	NA	NR	NR
2,4,6-Trichlorophenol	NA	NR	NR
2,4,5-Trichlorophenol	NA	NR	NR
2,4-Dinitrophenol	NA	NR	NR
4-Nitrophenol	NA	NR	NR
4,6-Dinitro-2-methylphenol	NA	NR	NR
Pentachlorophenol	908.0	NR	NR
bis(2-Chloroethyl)ether	0.7	NR	NR
1,3-Dichlorobenzene	NA	NR	NR
1,4-Dichlorobenzene	NA	NR	NR
1,2-Dichlorobenzene	NA	NR	NR
bis(2-chloroisopropyl)ether	NA	NR	NR
N-Nitroso-di-n-propylamine	NA	NR	NR
Hexachloroethane	NA	NR	NR
Nitrobenzene	NA	NR	NR
Isophorone	NA	NR	NR
bis(2-Chloroethoxy)methane	NA	NR	NR
1,2,4-Trichlorobenzene	77,180.0	NR	NR
Naphthalene	681.0	1900 J	0.7 U
4-Chloroaniline	NA	NR	NR
Hexachlorobutadiene	6.8	NR	NR
2-Methylnaphthalene	771.8	NR	NR
Hexachlorocyclopentadiene	99.9	NR	NR
2-Chloronaphthalene	NA	NR	NR
2-Nitroaniline	NA	NR	NR
Dimethylphthalate	NA	NR	NR
Acenaphthylene	NA	5000	0.7 U
2,6-Dinitrotoluene	NA	NR	NR
3-Nitroaniline	NA	NR	NR
Acenaphthene	3,178.0	3400	0.7 U
Dibenzofuran	NA	NR	NR
2,4-Dinitrotoluene	NA	NR	NR
Diethylphthalate	NA	NR	NR

See appendix introduction for abbreviations and data qualifiers.
Sediment results are presented in ug/kg (ppb); field blank results are presented in ug/L (ppb).

Table 2 TCL SVOCs

Sample ID Lab Sample Number Sampling Date Units	Sediment Guidance Normalized to Concentration of TOC in CS-81	CS-81 348294 05/02/02 0-0.5'	FB-050202-01 348304 05/02/02 0-0.5'
4-Chlorophenyl-phenylether	NA	NR	NR
Fluorene	181.6	3000	0.7 U
4-Nitroaniline	NA	NR	NR
N-Nitrosodiphenylamine	NA	NR	NR
4-Bromophenyl-phenylether	NA	NR	NR
Hexachlorobenzene	3.4	NR	NR
Phenanthrene	2,724.0	28000	0.6 U
Anthracene	2,428.9	8800	0.5 U
Carbazole	NA	NR	NR
Di-n-butylphthalate	NA	NR	NR
Fluoranthene	23,154.0	50000	0.5
Pyrene	21,814.7	42000	0.5
Butylbenzylphthalate	NA	NR	NR
3,3'-Dichlorobenzidine	NA	NR	NR
Benzo(a)anthracene	272.4	22000	0.4 U
Chrysene	NA	19000	0.6 U
bis(2-Ethylhexyl)phthalate	4,528.7	NR	NR
Di-n-octylphthalate	NA	NR	NR
Benzo(b)fluoranthene	NA	25000	0.3 U
Benzo(k)fluoranthene	NA	8800	1.0 U
Benzo(a)pyrene	29.5	21000	0.2 U
Indeno(1,2,3-cd)pyrene	NA	12000	0.2 U
Dibenz(a,h)anthracene	NA	2600	0.7 U
Benzo(g,h,i)perylene	NA	10000	0.4 U
Total Estimated Conc. BNA TICs (s)		NA	NA
Total PAHs		262500	1

See appendix introduction for abbreviations and data qualifiers.
Sediment results are presented in ug/kg (ppb); field blank results are presented in ug/L (ppb).

Table 3 TCL Pesticides

Sample ID	CS-19A
Lab Sample Number	348295
Sampling Date	05/02/02
Depth	0-0.5'
Aldrin	8.4 U
alpha-BHC	8.4 U
beta-BHC	8.4 U
delta-BHC	8.4 U
gamma-BHC(Lindane)	8.4 U
Chlordane	84 U
4,4'-DDD	15
4,4'-DDE	8.7 P*
4,4'-DDT	10 P*
Dieldrin	8.4 U
EndosulfanI	8.4 U
EndosulfanII	8.4 U
Endosulfansulfate	8.4 U
Endrin	8.4 U
Endrinaldehyde	8.4 U
Endrinketone	25
Heptachlor	8.4 U
Heptachlorepoxide	8.4 U
Methoxychlor	230
Toxaphene	84 U

See appendix introduction for abbreviations and data qualifiers.
Sediment results are presented in ug/kg (ppb).

Table 4 TCL PCBs

Sample ID	CS-19A
Lab Sample Number	348295
Sampling Date	05/02/02
Depth	0-0.5'
Aroclor-1016	84 U
Aroclor-1221	84 U
Aroclor-1232	84 U
Aroclor-1242	84 U
Aroclor-1248	84 U
Aroclor-1254	84 U
Aroclor-1260	84 U
Aroclor-1262	84 U
Aroclor-1268	84 U

See appendix introduction for abbreviations and data qualifiers.
Sediment results are presented in ug/kg (ppb).

Table 5 TAL Metals

Sample ID	CS-19A
Lab Sample Number	348295
Sampling Date	05/02/02
Depth	0-0.5'
Aluminum	2940
Antimony	1.5 U
Arsenic	0.81 U
Barium	27.6 B
Beryllium	0.37 B
Cadmium	0.10 U
Calcium	6180
Chromium	3.8
Cobalt	2.4 B
Copper	12.6
Iron	7680
Lead	32.7
Magnesium	3150
Manganese	116
Mercury	0.05
Nickel	5.4 B
Potassium	79.6 U
Selenium	1.1 U
Silver	0.51 B
Sodium	151 B
Thallium	1.2 U
Vanadium	7.2 B
Zinc	68.3

See appendix introduction for abbreviations and data qualifiers.
Sediment results are presented in mg/kg (ppm).

Table 6 Total Cyanide/TOC

Sample ID	CS-17	CS-18	CS-19A	CS-19B	CS-20A	CS-20B	CS-20C
Lab Sample Number	348296	348292	348295	348303	348298	348300	348301
Sampling Date	05/02/02	05/02/02	05/02/02	05/02/02	05/02/02	05/02/02	05/02/02
Depth	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'
Total Organic Carbon	5680	10900	13400	4930	1960	1560	2970

Sample ID	CS-19A
Lab Sample Number	348295
Sampling Date	05/02/02
Depth	0-0.5'
Total Cyanide	0.5 U

See appendix introduction for abbreviations and data qualifiers.
Sediment results are presented in mg/kg (ppm); field blank results are presented in mg/L (ppm).

Table 6 Total Cyanide/TOC

Sample ID	CS-20D	CS-22	CS-26A	CS-81	FB-050202-01
Lab Sample Number	348302	348291	348297	348294	348304
Sampling Date	05/02/02	05/02/02	05/02/02	05/02/02	05/02/02
Depth	0-0.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'
Total Organic Carbon	1680	3800	4170	22700	1.0 U

See appendix introduction for abbreviations and data qualifiers.
Sediment results are presented in mg/kg (ppm); field blank results are presented in mg/L (ppm).

Site: NMNGrid Glens Falls

Lab Job No: W022

Date Sampled: 05/02/02
Date Received: 05/03/02
Matrix: Solid

Date Extracted: 05/10/02
Date Analyzed: 05/14/02

GC/FID FINGERPRINT

STL Edison Sample #	Client ID	Product I.D.
348293	CT-1	Most closely resembles Coal Tar.
348299	CT-2	Most closely resembles Coal Tar.

APPENDIX B

Geotechnical Data

TRENT SERVICES

Site: NMNGrid Glens Falls

Lab Job No: W022

Date Received: 05/03/2002
Matrix: SOIL

Date Analyzed: 05/08/2002
QA Batch: 2080

Total Organic Carbon

STL Edison Sample #	Client ID	Sample Date	Percent Moisture	Dilution Factor	Analytical Result Units: mg/kg (Dry Weight)
348291	CS-22	05/02/2002	21.1	1.0	3800
348292	CS-18	05/02/2002	20.1	4.0	10900
348294	CS-81	05/02/2002	28.1	10.0	22700
348295	CS-19A	05/02/2002	20.8	5.0	13400
348296	CS-17	05/02/2002	31.1	2.0	5680
348297	CS-26A	05/02/2002	26.8	2.0	4170
348298	CS-20A	05/02/2002	24.6	1.0	1960
348300	CS-20B	05/02/2002	18.4	1.0	1560
348301	CS-20C	05/02/2002	25.1	1.0	2970
348302	CS-20D	05/02/2002	20.0	1.0	1680
348303	CS-19B	05/02/2002	20.7	2.0	4930

Quantitation Limit for Total Organic Carbon is 100 mg/kg.

Particle Size of Soils by ASTM D422

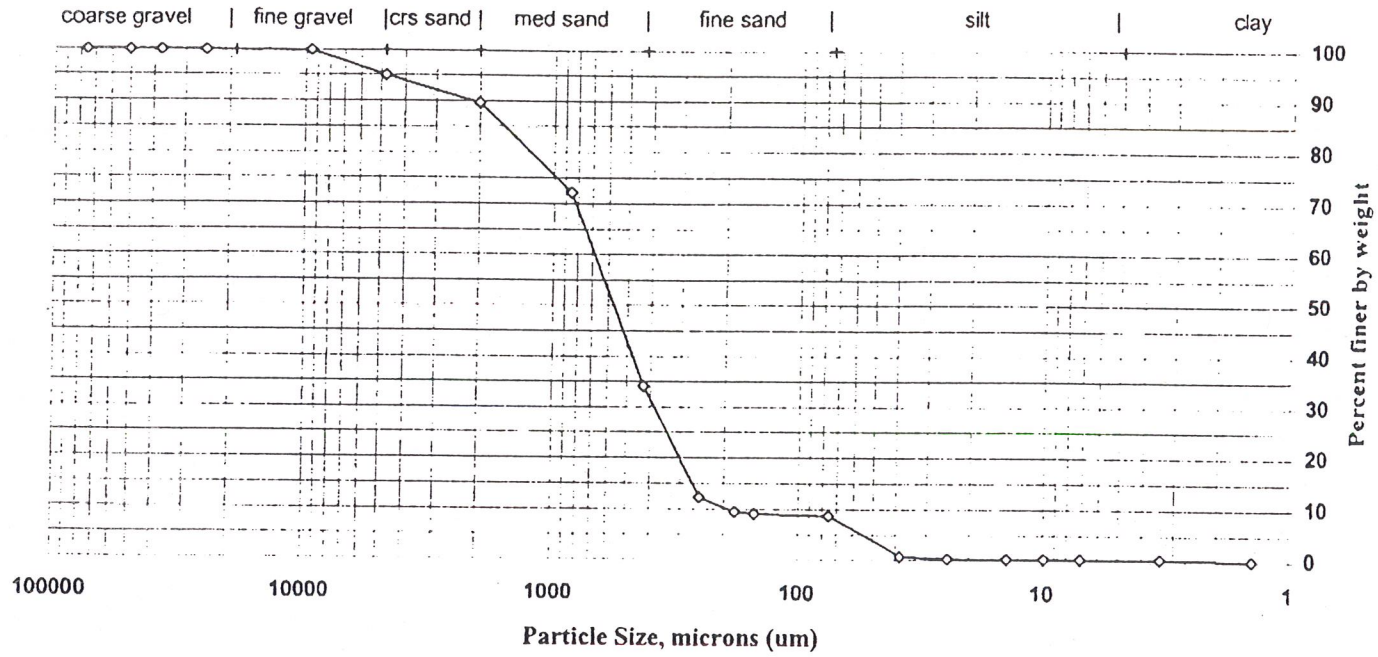
Sample preparation by: D2217

Client:	STLNJE	**Project No.:**	22019	**ETR(s) #:**	87865
Client Code:	STLNJE	**Job No.:**	W022	**SDG(s):**	87865
Date Received:	09-May-02	**Start Date:**	17-May-02	**End Date:**	22-May-02

Lab ID: 486888 **Sample ID:** 348291

Percent Solids: 76.8%
Specific Gravity: 2.65

Maximum Particle Size: 9.5 mm
Shape (> #10): subrounded
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	95.0	5.0
#10	2000	89.6	5.4
#20	850	72.2	17.5
#40	425	34.1	38.1
#60	250	12.2	21.9
#80	180	9.5	2.7
#100	150	9.1	0.4
#200	75	8.6	0.4
Hydrometer	38.0	0.8	7.9
|	24.1	0.3	0.5
|	13.9	0.3	0.0
|	9.9	0.3	0.0
|	7.0	0.3	0.0
|	3.4	0.3	0.0
V	1.4	0.0	0.0

Dispersion of soil for hydrometer test by mechanical mixer with metal paddle, operated for at least one minute within a dispersion cup with 125 mls sodium hexametaphosphate

0035

9/27

Particle Size of Soils by ASTM D422

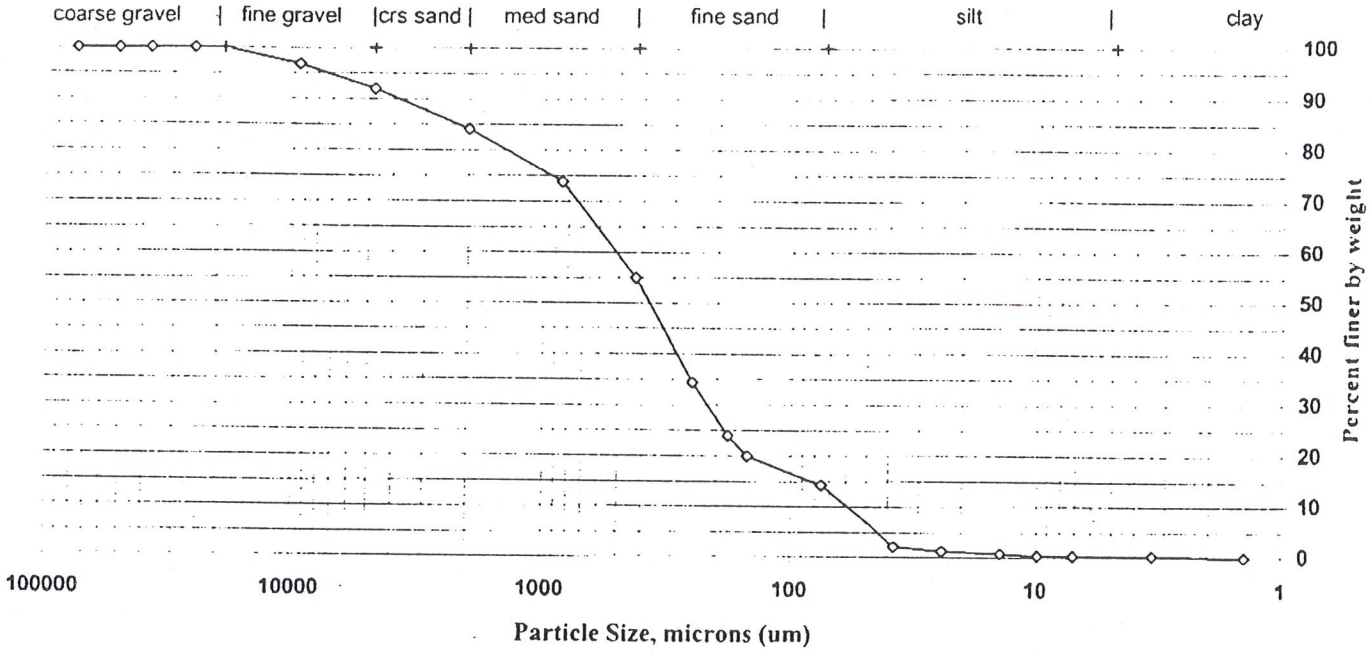
Sample preparation by: D2217

Client:	STLNJE	**Project No.:**	22019	**ETR(s) #:**	87865
Client Code:	STLNJE	**Job No.:**	W022	**SDG(s):**	87865
Date Received:	09-May-02	**Start Date:**	17-May-02	**End Date:**	22-May-02

Lab ID: 486889 **Sample ID:** 343292

Percent Solids: 72.0%
Specific Gravity: 2.65

Maximum Particle Size: 19 mm
Shape (> #10): subrounded
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	96.8	3.2
#4	4750	92.0	4.8
#10	2000	84.1	7.9
#20	850	73.8	10.2
#40	425	55.0	18.9
#60	250	34.4	20.6
#80	180	24.0	10.4
#100	150	20.0	4.0
#200	75	14.3	5.7
Hydrometer	37.5	2.1	12.2
|	23.9	1.2	0.9
|	13.9	0.8	0.5
|	9.9	0.3	0.5
|	7.1	0.3	0.0
|	3.4	0.3	0.0
V	1.4	0.0	0.0

Dispersion of soil for hydrometer test by mechanical mixer with metal paddle, operated for at least one minute within a dispersion cup with 125 mls sodium hexametaphosphate

Particle Size of Soils by ASTM D422

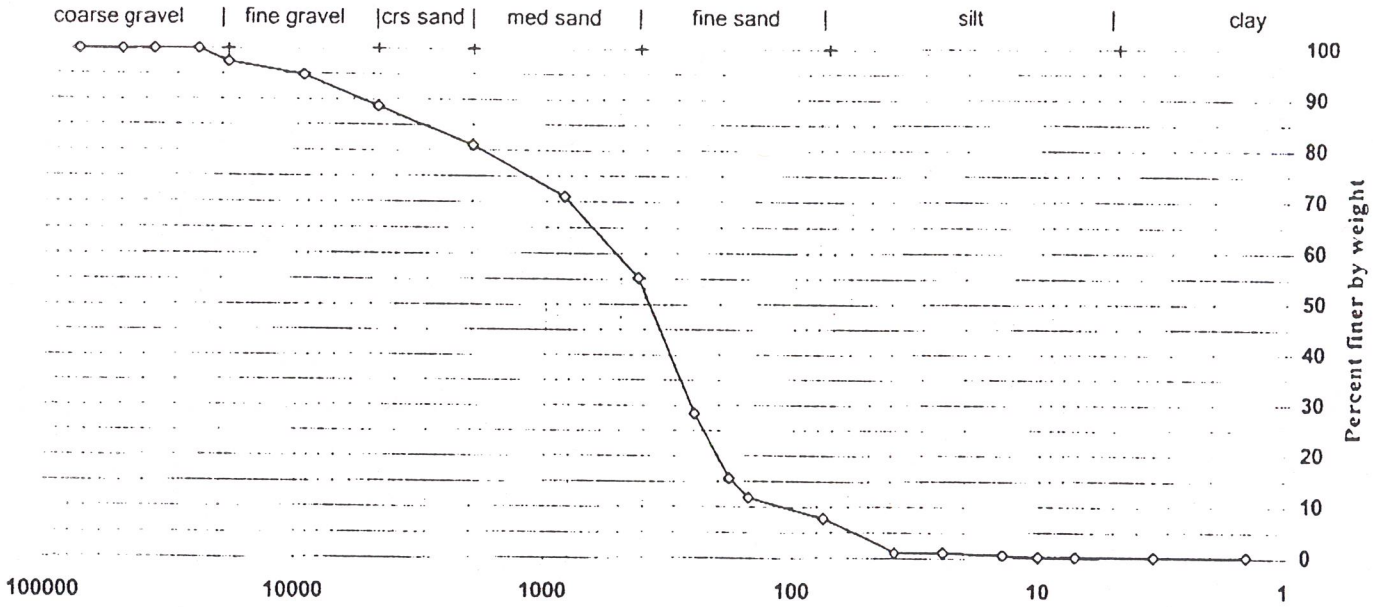
Sample preparation by: D2217

Client:	STLNJE	**Project No.:**	22019	**ETR(s) #:**	87865
Client Code:	STLNJE	**Job No.:**	W022	**SDG(s):**	87865
Date Received:	09-May-02	**Start Date:**	17-May-02	**End Date:**	22-May-02

Lab ID: 486890 **Sample ID:** 348294

Percent Solids: 79.9%
Specific Gravity: 2.65

Maximum Particle Size: 25 mm
Shape (> #10): subrounded
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	97.4	2.6
3/8 inch	9500	94.8	2.6
#4	4750	88.7	6.2
#10	2000	81.0	7.7
#20	850	71.1	9.9
#40	425	55.2	15.8
#60	250	28.3	26.9
#80	180	15.7	12.7
#100	150	11.8	3.9
#200	75	7.7	4.1
Hydrometer	37.8	1.1	6.7
|	23.9	1.1	0.0
|	13.9	0.7	0.4
|	10.0	0.3	0.4
|	7.1	0.3	0.0
|	3.4	0.3	0.0
V	1.4	0.3	0.0

Dispersion of soil for hydrometer test by mechanical mixer with metal paddle, operated for at least one minute within a dispersion cup with 125 mls sodium hexametaphosphate

Particle Size of Soils by ASTM D422

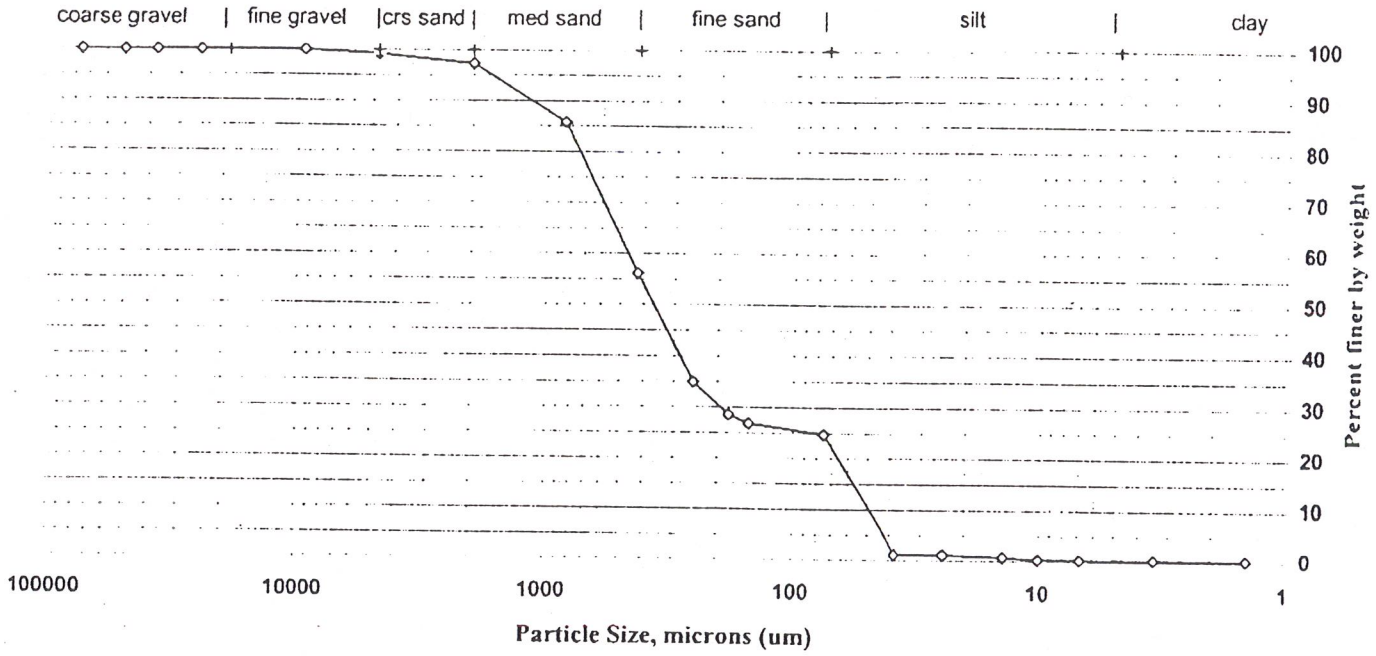
Sample preparation by: D2217

Client:	STLNJE	**Project No.:**	22019	**ETR(s) #:**	87865
Client Code:	STLNJE	**Job No.:**	W022	**SDG(s):**	87865
Date Received:	09-May-02	**Start Date:**	17-May-02	**End Date:**	22-May-02

Lab ID: 486891 **Sample ID:** 348295

Percent Solids: 79.0%
Specific Gravity: 2.65

Maximum Particle Size: 9.5 mm
Shape (> #10): subrounded
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.2	0.8
#10	2000	97.4	1.8
#20	850	85.8	11.6
#40	425	56.2	29.7
#60	250	34.9	21.2
#80	180	28.5	6.4
#100	150	26.9	1.7
#200	75	24.8	2.1
Hydrometer	37.8	1.1	23.7
I	23.9	1.1	0.0
I	13.9	0.7	0.4
I	10.0	0.3	0.4
I	6.8	0.3	0.0
I	3.4	0.3	0.0
V	1.4	0.3	0.0

Dispersion of soil for hydrometer test by mechanical mixer with metal paddle, operated for at least one minute within a dispersion cup with 125 mls sodium hexametaphosphate

Submitted By: 5/11/02 Date: 05/24/02

Particle Size of Soils by ASTM D422

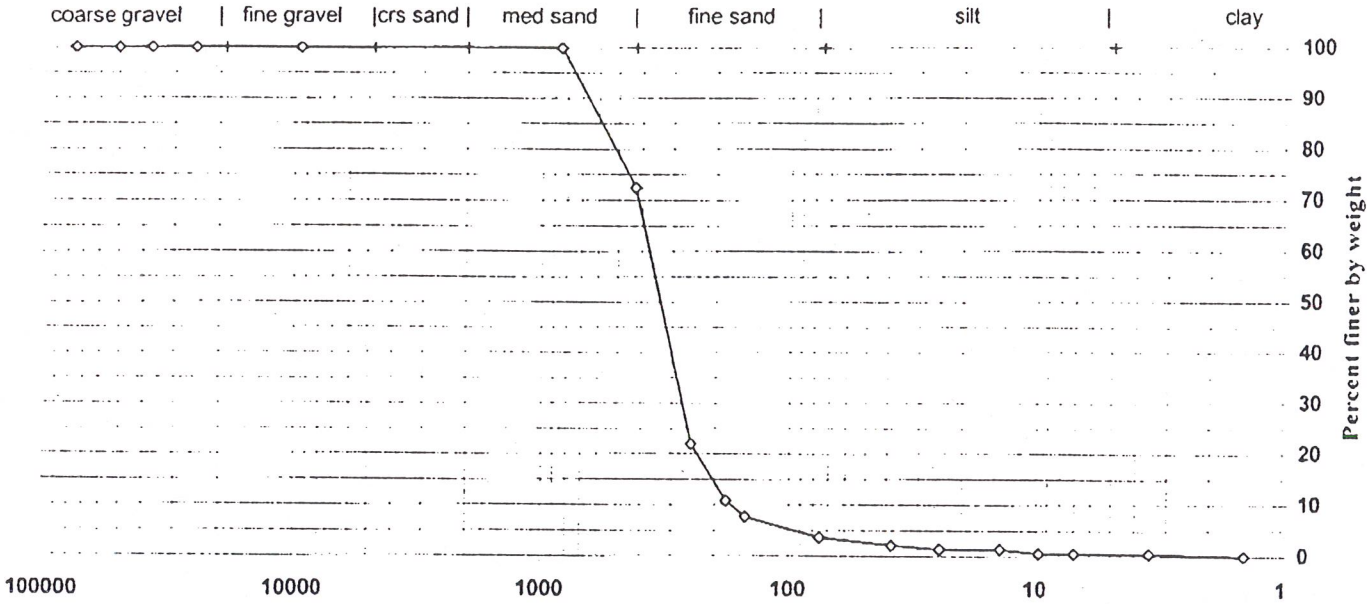
Sample preparation by: D2217

Client:	STLNJE	**Project No.:**	22019	**ETR(s) #:**	87865
Client Code:	STLNJE	**Job No.:**	W022	**SDG(s):**	87865
Date Received:	09-May-02	**Start Date:**	17-May-02	**End Date:**	22-May-02

Lab ID: 486892 **Sample ID:** 348297

Percent Solids: 72.8%
Specific Gravity: 2.65

Maximum Particle Size: Med sand
Shape (> #10): N/A
Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	100.0	0.0
#40	425	72.4	27.5
#60	250	22.0	50.5
#80	180	10.8	11.2
#100	150	7.7	3.1
#200	75	3.7	4.0
Hydrometer	37.8	2.1	1.6
|	24.0	1.3	0.8
|	13.9	1.3	0.0
|	9.7	0.5	0.8
|	7.0	0.5	0.0
|	3.5	0.5	0.0
V	1.4	0.0	0.5

Dispersion of soil for hydrometer test by mechanical mixer with metal paddle, operated for at least one minute within a dispersion cup with 125 mls sodium hexametaphosphate

Particle Size of Soils by ASTM D422

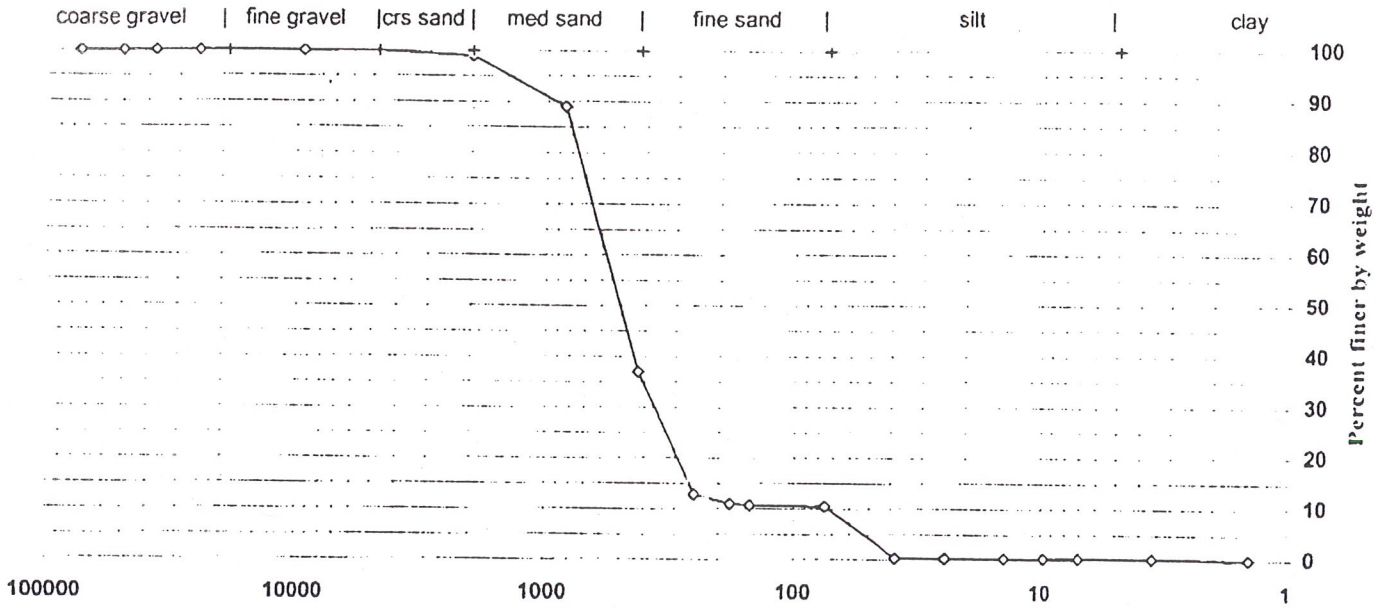
Sample preparation by: D2217

Client:	STLNJE	**Project No.:**	22019	**ETR(s) #:**	87865
Client Code:	STLNJE	**Job No.:**	W022	**SDG(s):**	87865
Date Received:	09-May-02	**Start Date:**	17-May-02	**End Date:**	22-May-02

Lab ID: 486893 **Sample ID:** 348298

Percent Solids: 78.0%
Specific Gravity: 2.65

Maximum Particle Size: Crs sand
Shape (> #10): rounded
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.0	1.0
#20	850	89.0	10.0
#40	425	37.0	52.0
#60	250	12.8	24.2
#80	180	11.0	1.8
#100	150	10.7	0.2
#200	75	10.5	0.2
Hydrometer	38.2	0.3	10.2
|	24.1	0.3	0.0
|	13.9	0.3	0.0
|	9.7	0.3	0.0
|	7.0	0.3	0.0
|	3.5	0.3	0.0
V	1.4	0.0	0.3

Dispersion of soil for hydrometer test by mechanical mixer with metal paddle, operated for at least one minute within a dispersion cup with 125 mls sodium hexametaphosphate

Particle Size of Soils by ASTM D422

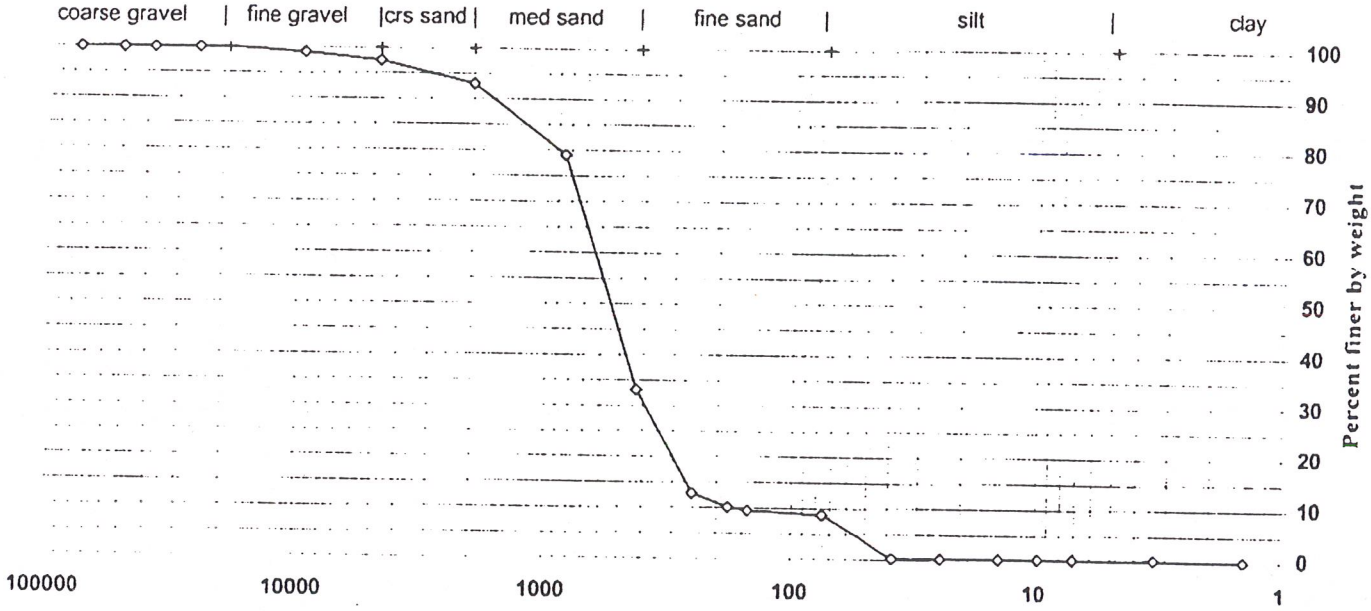
Sample preparation by: D2217

Client:	STLNJE	Project No.:	22019	ETR(s) #:	87865
Client Code:	STLNJE	Job No.:	W022	SDG(s):	87865
Date Received:	09-May-02	Start Date:	17-May-02	End Date:	22-May-02

Lab ID: 486894 **Sample ID:** 348300

Percent Solids: 79.5%
Specific Gravity: 2.65

Maximum Particle Size: 19 mm
Shape (> #10): subrounded
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	99.1	0.9
#4	4750	97.5	1.6
#10	2000	92.9	4.6
#20	850	79.1	13.9
#40	425	33.1	45.9
#60	250	12.9	20.3
#80	180	10.1	2.8
#100	150	9.5	0.6
#200	75	8.7	0.8
Hydrometer	38.2	0.3	8.5
|	24.1	0.3	0.0
|	13.9	0.3	0.0
|	9.7	0.3	0.0
|	7.0	0.3	0.0
|	3.3	0.3	0.0
V	1.4	0.0	0.3

Dispersion of soil for hydrometer test by mechanical mixer with metal paddle, operated for at least one minute within a dispersion cup with 125 mls sodium hexametaphosphate

W022

Particle Size of Soils by ASTM D422

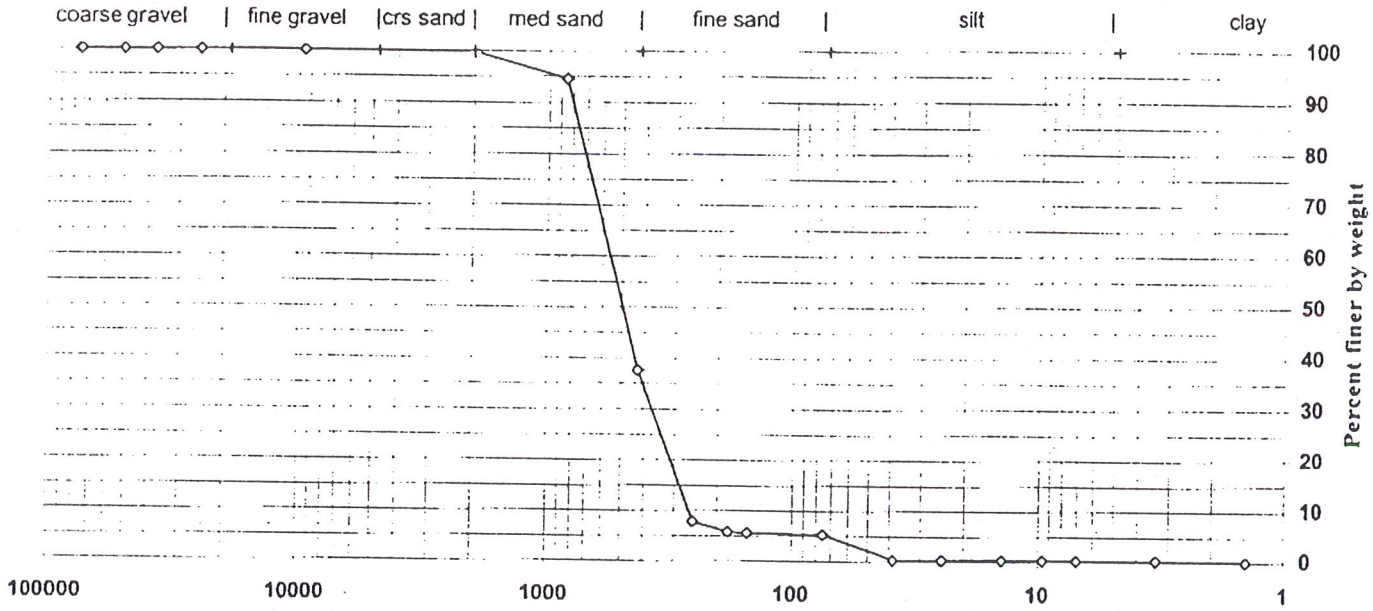
Sample preparation by: D2217

Client:	STLNJE	**Project No.:**	22019	**ETR(s) #:**	87865
Client Code:	STLNJE	**Job No.:**	W022	**SDG(s):**	87865
Date Received:	09-May-02	**Start Date:**	17-May-02	**End Date:**	22-May-02

Lab ID: 486895 **Sample ID:** 348301

Percent Solids: 78.6%
Specific Gravity: 2.65

Maximum Particle Size: Crs sand
Shape (> #10): rounded
Hardness (> #10): brittle



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.8	0.2
#20	850	94.5	5.3
#40	425	37.6	56.9
#60	250	7.9	29.7
#80	180	5.8	2.1
#100	150	5.6	0.2
#200	75	5.3	0.3
Hydrometer	38.2	0.3	5.1
|	24.1	0.3	0.0
|	13.9	0.3	0.0
|	9.5	0.3	0.0
|	7.0	0.3	0.0
|	3.4	0.3	0.0
V	1.4	0.0	0.0

Dispersion of soil for hydrometer test by mechanical mixer with metal paddle, operated for at least one minute within a dispersion cup with 125 mls sodium hexametaphosphate

Particle Size of Soils by ASTM D422

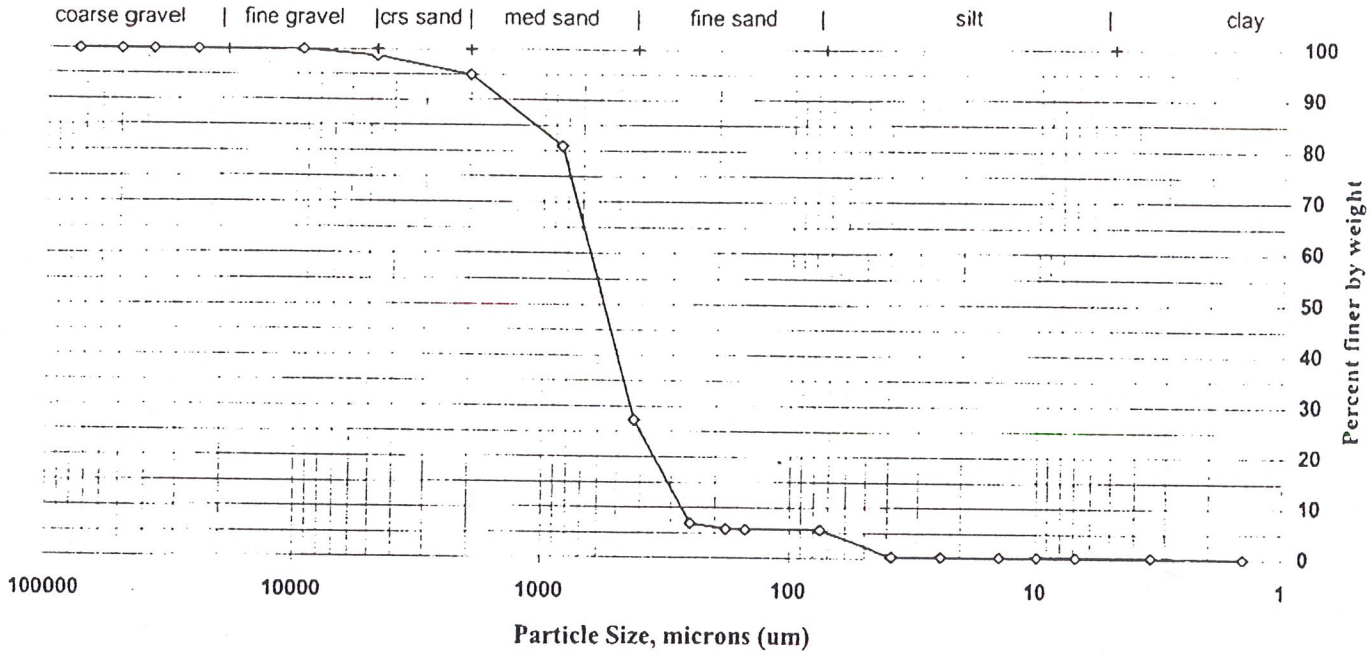
Sample preparation by: D2217

Client:	STLNJE	**Project No.:**	22019	**ETR(s) #:**	87865
Client Code:	STLNJE	**Job No.:**	W022	**SDG(s):**	87865
Date Received:	09-May-02	**Start Date:**	17-May-02	**End Date:**	22-May-02

Lab ID: 486896 **Sample ID:** 348302

Percent Solids: 77.1%
Specific Gravity: 2.65

Maximum Particle Size: 9.5 mm
Shape (> #10): rounded
Hardness (> #10): brittle



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	98.7	1.3
#10	2000	95.0	3.7
#20	850	81.0	14.0
#40	425	27.2	53.7
#60	250	6.9	20.4
#80	180	5.8	1.1
#100	150	5.6	0.1
#200	75	5.6	0.0
Hydrometer	38.2	0.3	5.3
|	24.1	0.3	0.0
|	13.9	0.3	0.0
|	9.9	0.3	0.0
|	6.8	0.3	0.0
|	3.4	0.3	0.0
V	1.4	0.0	0.3

Dispersion of soil for hydrometer test by mechanical mixer with metal paddle, operated for at least one minute within a dispersion cup with 125 mls sodium hexametaphosphate

Particle Size of Soils by ASTM D422

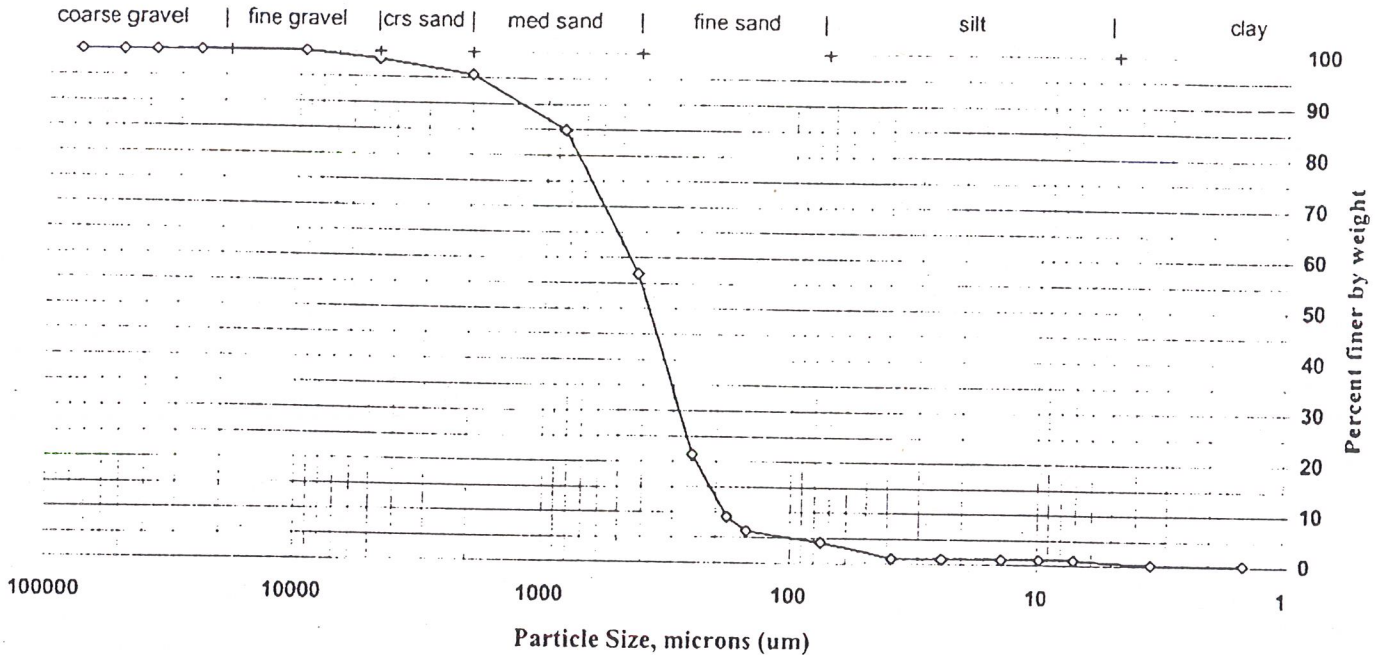
Sample preparation by: D2217

Client:	STLNJE	**Project No.:**	22019	**ETR(s) #:**	87865
Client Code:	STLNJE	**Job No.:**	W022	**SDG(s):**	87865
Date Received:	09-May-02	**Start Date:**	17-May-02	**End Date:**	22-May-02

Lab ID: 486897 **Sample ID:** 348303

Percent Solids: 73.3%
Specific Gravity: 2.65

Maximum Particle Size: 9.5 mm
Shape (>#10): subrounded
Hardness (>#10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	98.5	1.5
#10	2000	95.6	2.9
#20	850	84.9	10.6
#40	425	56.9	28.1
#60	250	21.5	35.4
#80	180	9.1	12.3
#100	150	6.3	2.8
#200	75	4.1	2.2
Hydrometer	37.8	1.1	3.1
|	23.9	1.1	0.0
|	13.8	1.1	0.0
|	9.8	1.1	0.0
|	7.1	1.1	0.0
|	3.4	0.3	0.8
V	1.4	0.3	0.0

Dispersion of soil for hydrometer test by mechanical mixer with metal paddle, operated for at least one minute within a dispersion cup with 125 mls sodium hexametaphosphate

Submitted By: [illegible] Date: 05/24/02