

APPENDIX A

CHEMICAL CONSTITUENTS USED (Prepared by Buffalo Color Corporation)

APPENDIX A- 1

HISTORICAL USAGE OF CHEMICALS IN AREA ABCE
(Prepared by Buffalo Color Corporation)

Table 1

Historical Usage of Chemicals in Area ABCE

Chemical Constituents	Period of Use Start End	Documented Usage				Chemical ID Code(s) from Accounting Records and other Bases of Documentation
		1879-1920	1920-1977	1977-1995		
Acenaphthene	1885 DEC 1995	FC	RM/FC	FC		11294, Constituent of Coal and Petroleum
Acenaphthylene	1885 DEC 1995	FC	FC	FC		Constituent of Kerosene and #6 Fuel Oil
Acetone	1923 APR 1974	—	RM	—		11298
Aniline	1885 DEC 1995	RM/INT	RM/INT/REC/SP	RM/REC		11370, 12340
Anthracene	1885 SEP 1977	FC	FC	—		Constituent of Coal
Benzene	1885 JUN 1977	RM	RM	RM		11415
Benzidine	1914 JUL 1976	INT	INT	—		12416
Benzo(a)Pyrene	1885 DEC 1995	FC	FC	FC		Constituent of Coal, Kerosene, and #6 Fuel Oil
Bromoform	1976 JUN 1977	—	RC	—		Research Chemical
Bromodichloromethane	1976 JUN 1977	—	RC	—		Research Chemical
1-Butanol	1945 AUG 1974	—	RC	—		11301
Carbon Tetrachloride	1976 JUN 1977	—	RM	—		Research Chemical
4-Chloroaniline	1945 JUN 1953	—	RM	—		11717
Chlorobenzene	1923 OCT 1976	—	RM/REC	—		11481
Chloroform	1971 DEC 1995	—	RC	RC		Research Chemical
2-Chlorophenol	1945 DEC 1971	—	RM	—		11693
Chrysene	1885 DEC 1995	FC	FC	FC		Constituent of Coal and #6 Fuel Oil
Cyanide	1923 DEC 1995	—	RM/INT/REC	RM/REC		11859, 11860
Dibromodichloromethane	1966 JAN 1977	—	RC	—		Research Chemical
1,2-Dichlorobenzene	1924 AUG 1981	—	RM/REC	RM/REC		11690
1,3-Dichlorobenzene	1976 JUN 1977	—	RC	—		Research Chemical
1,4-Dichlorobenzene	1931 AUG 1967	—	RM	—		11718
1,1-Dichloroethane	1974 JUN 1977	—	RC	—		Research Chemical
1,2-Dichloroethane	1976 JUN 1977	—	RC	—		Research Chemical
2,4-Dichlorophenol	1976 JUN 1977	—	RC	—		Research Chemical
2,4-Dichlorotoluene	1976 JUN 1977	—	RC	—		Research Chemical
N,N-Diethylaniline	1931 DEC 1995	—	INT/SP	SP		12480, 12481
Diethylphthalate	1947 MAR 1980	—	RM	RM		11603
N,N-Dimethylaniline	1953 DEC 1995	—	RM/INT/SP	INT/SP		14505
2,4-Dinitrophenol	1946 MAR 1969	—	SP	—		12517
2,4-Dinitrotoluene	1916 DEC 1968	INT	RM/INT/SP	—		11551, 12520-12522, 12524, 12553, 12554
2,6-Dinitrotoluene	1916 DEC 1968	INT	RM/INT/SP	—		11551, 12520-12522, 12524, 12553, 12554
DL-n-Octylphthalate	1920 SEP 1976	—	RM	—		11776
Ethanol	1924 DEC 1995	—	RM/REC	RM		11309, 11312, 11313, 11317
N-Ethylaniline	1933 DEC 1995	—	SP	SP		12564
Ethylbenzene	1924 DEC 1969	—	RM/INT	—		11552, 14261, 14278, 14288
Fluoranthene	1885 DEC 1995	FC	FC	FC		Constituent of Coal, Kerosene, and #6 Fuel Oil
Fluorene	1885 DEC 1995	FC	FC	FC		Constituent of Coal, Kerosene, and #6 Fuel Oil
Formaldehyde	1923 DEC 1995	—	RM	RM		11544
Hexachlorobutadiene	1976 JUN 1977	—	RC	—		Research Chemical
Hydrochloric Acid	1901 FEB 1982	RM	RM	RM		11150, 11151
Isopropyl Alcohol	1920 MAY 1980	—	RM	RM		11314
Maleic Anhydride	1953 DEC 1995	—	RM/SP	RM		11650, 11761
Methanol	1916 DEC 1995	RM	RM/REC	RM/REC		11320, 11322
Methylene Chloride	1972 JUN 1977	—	RM	—		Research Chemical
2-Methylnaphthalene	1885 DEC 1995	FC	FC	FC		Constituent of Coal, Kerosene, and #6 Fuel Oil
2-Methylphenol	1945 DEC 1971	—	RM	—		11688
4-Methylphenol	1956 OCT 1969	—	RM	—		11721
Naphthalene	1917 DEC 1975	—	RM	—		11670, 11671, 11672
1-Naphthylamine	1926 MAY 1969	—	INT/SP	—		12305, 12307
2-Naphthylamine	1926 MAY 1969	—	INT/SP	—		12305 (0.7% Impurity)
Nitric Acid	1885 DEC 1975	—	RM/REC	RM		11177-11180, 11187, 11191, 11202, 11203
Nitrobenzene	1885 OCT 1978	—	RM/INT/REC/SP	—		12723, 12727, 12725
PCB - Arochlor 1242	1950 NOV 1994	—	TO	TO		Heat transfer oil in electrical equipment
Phenanthrene	1885 DEC 1995	FC	RM/FC	FC		11750
Phenol	1885 OCT 1976	RM	RM	—		11741, 11742
Phosphoric Acid	1923 DEC 1995	—	RM	RM		11232-11235
Pyrene	1885 DEC 1995	FC	FC	FC		Constituent of Coal and #6 Fuel Oil
Sodium Amide	1923 DEC 1995	—	INT	INT		Non-Isolated production intermediate
Sodium Sulfide	1916 DEC 1984	RM	RM	RM		11918
Sulfuric Acid	1885 DEC 1995	RM	RM/REC	RM		11260, 11263, 11270
Toluene	1907 FEB 1976	RM	RM	—		11962
O-Toluidine	1936 JUL 1968	—	SP	—		12826, 12836
P-Toluidine	1960 NOV 1966	—	RM/SP	—		11966, 14878, 14879
1,2,4-Trichlorobenzene	1924 JAN 1976	—	RM	—		11964
1,1,1-Trichloroethane	1971 DEC 1995	—	RC	—		Research Chemical, Cleaner
Xylene	1924 MAY 1968	—	RM	—		11982, 11983, 11988
Aluminum	1934 DEC 1973	—	RM	—		11323, 11327-11328, 11330, 11332, 11334-11335
Antimony	1925 SEP 1976	—	RM	—		11378
Arsenic	1922 JUN 1970	—	RM	—		11122
Barium	1924 DEC 1964	—	RM	—		11404
Chromium	1916 SEP 1979	RM/REC	RM/REC	RM		11483, 11840
Chromium (6)	1916 SEP 1979	RM/REC	RM/REC	RM		11843
Cobalt	1960 OCT 1974	—	RM/REC	—		11494
Copper	1916 MAR 1985	RM/REC	RM/REC	RM/REC		11495-11499, 11501-11503
Iron	1916 MAY 1979	RM/REC	RM/REC	RM		11584-11588, 11590-11591, 11593, 11595, 11597-11600
Lead	1922 SEP 1968	—	RM/REC	—		12642R
Manganese	1945 JAN 1971	—	RM	—		11636, 11790
Mercury	1926 MAY 1970	—	RM/REC	—		11637, 11642, 11648
Nickel	1945 DEC 1995	—	RM	—		11678, 11665, 13184
Silver	1964 MAR 1971	—	RM	—		11811, 11857
Tin	1945 NOV 1964	—	RM	—		11899, 11923, 11950
Vanadium	1945 DEC 1979	—	RM	—		11348, 11973
Zinc	1916 SEP 1979	RM/REC	RM/REC	RM		11989, 11991, 11993-11994, 11996-11998
Coal	1879 JUN 1971	Fuel	Fuel	—		Fuel used in Powerhouses
Kerosene	1934 OCT 1968	Fuel	RM/Fuel	—		11667, 11668
#6 Fuel Oil	1917 DEC 1995	Fuel	Fuel	Fuel		Fuel used in Powerhouses

Starting data for each chemical is set equal to the earliest recorded data of a product in which it was used.

Ending data for each chemical is the last recorded transaction for itself or for a product in which it was used.

RM = Raw Material

INT = Intermediate

SP = Sales Product

RC = Research Chemical

REC = Recovery, Recycle, and Reuse

FC = Fuel Constituent

TO = Transformer Oil

APPENDIX A-2

SOLID WASTE ACTIVITY IN AREA ABCE
(Prepared by Buffalo Color Corporation)

Table 2

Solid Waste Activity in Area ABCE

Chemical Constituent	Detected in Area ABCE	HW Code	Nature of Waste Handling	First Notification of Activity Date	Basis of Report
Acenaphthalene	YES	U002	Constituent of Petroleum.	13 APR 1989	Remedial Investigation Area D
Acenaphthene	YES	U012	Constituent of Coal and Petroleum.	13 APR 1989	Remedial Investigation Area D
Acetone	YES	U002	Residuals Discharged to Sewers/Lagoons	13 MAY 1991	Groundwater Monitoring Report
Aniline	YES	U012	Residuals Discharged to Sewers/Lagoons	25 MAY 1976	BPDES Sewer Permit Application
		K103	Residuals Incinerated in Area D	4 OCT 1984	HW Disposal Questionnaire
		U012	Residuals disposed of off site	17 NOV 1980	Part A Application
Anthracene	YES	U019	Constituent of Coal.	13 APR 1989	Remedial Investigation Area D
Benzene	YES	U019	Residuals Discharged to Sewers/Lagoons	3 JUN 1985	BPDES Monitoring Report
		K104	Residuals disposed of off site	4 OCT 1984	HW Disposal Questionnaire
Benzidine	YES	U021	Residuals Discharged to Sewers/Lagoons	9 JUL 1991	Groundwater Monitoring Report
		U021	Residuals disposed of off site	4 OCT 1984	HW Disposal Questionnaire
Benzo(a)Pyrene	YES	U022	Constituent of coal and petroleum.	3 JUN 1985	BPDES Monitoring Report
Beta BHC	YES		No known waste activity.	29 MAR 1989	Lagoon Clay Report
Bis (2-Chloroethylether)	YES		No known waste activity.	29 MAR 1989	Lagoon Clay Report
Bis (2-Ethylhexylphthalate)	YES		No known waste activity.	3 JUN 1985	BPDES Monitoring Report
Benzyl Alcohol		D001	Residuals Incinerated in Area D	4 OCT 1984	HW Disposal Questionnaire
Bromodichloromethane	YES		Research Chemical	9 NOV 1976	Halogenated Hydrocarbon Survey
Bromoform	YES	U225	Research Chemical	20 DEC 1976	Halogenated Hydrocarbon Survey
1-Butanol		U131	Residuals Incinerated in Area D	4 OCT 1984	HW Disposal Questionnaire
Butylbenzylphthalate	YES		No known waste activity.	18 JUN 1993	Groundwater Monitoring Report
Carbon Tetrachloride	YES	U211	Research Chemical	9 NOV 1976	Halogenated Hydrocarbon Survey
4-Chloroaniline	YES	P024	Residuals Discharged to Sewers/Lagoons	30 DEC 1993	Groundwater Monitoring Report
Chlorobenzene	YES	U037	Residuals Discharged to Sewers/Lagoons	25 MAY 1976	BPDES Sewer Permit Application
		U037	Residuals disposed of off site	17 NOV 1980	Part A Application
		U037	Residuals Incinerated in Area D	4 OCT 1984	HW Disposal Questionnaire
Chloroform	YES	U044	Research Chemical	9 NOV 1976	Halogenated Hydrocarbon Survey
		U044	Residuals disposed of off site	17 NOV 1980	Part A Application
P-Chloro-N-Cresol	YES	U039	Research Chemical	9 NOV 1976	Halogenated Hydrocarbon Survey
2-Chlorophenol	YES	U048	Research Chemical	3 JUN 1985	BPDES Monitoring Report
2-Chloronaphthalene	YES	U047	No known waste activity.	3 JUN 1985	BPDES Monitoring Report
Chrysene	YES	U050	Constituent of Coal and #6 Fuel Oil.	13 MAY 1991	Groundwater Monitoring Report
Cyanide	YES	P030	Residuals Discharged to Sewers/Lagoons	25 MAY 1976	BPDES Sewer Permit Application
			Residuals disposed of off site	17 NOV 1980	Part A Application
4,4'-DDD	YES	U060	No known waste activity.	29 MAR 1989	Lagoon Clay Report
Dibenzofuran	YES		No known waste activity.	13 APR 1989	Remedial Investigation Area D
Di (n)butylphthalate	YES	U069	No known waste activity.	17 MAY 1990	BPDES Monitoring Report
1,2-Dichlorobenzene	YES	U070	Residuals Discharged to Sewers/Lagoons	25 MAY 1976	BPDES Sewer Permit Application
		U070	Residuals disposed of off site	17 NOV 1980	Part A Application
		U070	Residuals Incinerated in Area D	4 OCT 1984	HW Disposal Questionnaire
1,3-Dichlorobenzene	YES	U071	Research Chemical	9 NOV 1976	Halogenated Hydrocarbon Survey
1,4-Dichlorobenzene	YES	U072	Residuals Discharged to Sewers/Lagoons	3 JUN 1985	BPDES Monitoring Report
		U072	Residuals disposed of off site	17 NOV 1980	Part A Application
		U072	Residuals Incinerated in Area D	4 OCT 1984	HW Disposal Questionnaire
1,1-Dichloroethane	YES		Research Chemical	9 NOV 1976	Halogenated Hydrocarbon Survey
1,2-Dichloroethane	YES		Research Chemical	9 NOV 1976	Halogenated Hydrocarbon Survey
1,1-Dichloroethene	YES	U078	Research Chemical	9 NOV 1976	Halogenated Hydrocarbon Survey
2,4-Dichlorophenol	YES	U081	Research Chemical	9 NOV 1976	Halogenated Hydrocarbon Survey
2,4-Dichlorotoluene	YES		Research Chemical	9 NOV 1976	Halogenated Hydrocarbon Survey
N,N-Diethylaniline	YES		Residuals Discharged to Sewers/Lagoons	9 NOV 1976	Halogenated Hydrocarbon Survey
			Residuals disposed of off site	25 MAY 1976	BPDES Sewer Permit Application
			Residuals Incinerated in Area D	17 NOV 1980	Part A Application
			Residuals Incinerated in Area D	4 OCT 1984	HW Disposal Questionnaire
Diethylphthalate	YES	U088	Residuals Discharged to Sewers/Lagoons	25 MAY 1976	BPDES Sewer Permit Application
N,N-Dimethylaniline	YES		Residuals Discharged to Sewers/Lagoons	25 MAY 1976	BPDES Sewer Permit Application
			Residuals disposed of off site	17 NOV 1980	Part A Application
			Residuals Incinerated in Area D	4 OCT 1984	HW Disposal Questionnaire
2,4-Dimethylphenol	YES	U101	No known waste activity.	3 JUN 1985	BPDES Monitoring Report
4,6-Dinitro-O-Cresol	YES		No known waste activity.	3 JUN 1985	BPDES Monitoring Report
2,4-Dinitrophenol	YES	U081	Residuals Discharged to Sewers/Lagoons	3 JUN 1985	BPDES Monitoring Report
2,4-Dinitrotoluene	YES	U105	Residuals Discharged to Sewers/Lagoons	3 JUN 1985	BPDES Monitoring Report

2,6-Dinitrotoluene	YES	U106	No known waste activity.		3 JUN 1985	BPDES Monitoring Report
Di(n)octylphthalate	YES	U107	Residuals Discharged to Sewers/Lagoons		30 DEC 1993	Groundwater Monitoring Report
N-Ethylaniline	YES		Residuals Discharged to Sewers/Lagoons		25 MAY 1976	BPDES Sewer Permit Application
			Residuals disposed of off site		17 NOV 1980	Part A Application
			Residuals Incinerated in Area D		4 OCT 1984	HW Disposal Questionaire
Ethanol	YES	D001	Residuals Discharged to Sewers/Lagoons		25 MAY 1976	Groundwater Monitoring Report
		D001	Residuals disposed of off site		4 OCT 1984	HW Disposal Questionaire
		D001	Residuals Incinerated in Area D		13 APR 1989	Remedial Investigation Area D
Ethylbenzene	YES		Residuals Discharged to Sewers/Lagoons		3 JUN 1985	BPDES Monitoring Report
Fluoranthene	YES		Constituent of Coal and Petroleum.		13 MAY 1991	Groundwater Monitoring Report
Fluorene	YES		Constituent of Coal and Petroleum.		13 APR 1989	Remedial Investigation Area D
Formaldehyde		U122	Residuals Discharged to Sewers/Lagoons		25 MAY 1976	BPDES Sewer Permit Application
			Residuals disposed of off site		17 NOV 1980	Part A Application
Hexachlorobutadiene	YES		Research Chemical		9 NOV 1976	Halogenated Hydrocarbon Survey
Hydrochloric Acid	YES	D002	Residuals Discharged to Sewers/Lagoons		OCT 1967	Consultant's Report on WTP
Isopropyl Alcohol		D001	Residuals Incinerated in Area D		4 OCT 1984	HW Disposal Questionaire
Maleic Anhydride		U147	Residuals disposed of off site		17 NOV 1980	Part A Application
Methanol	YES	U154	Residuals Discharged to Sewers/Lagoons		25 MAY 1976	BPDES Sewer Permit Application
		U154	Residuals disposed of off site		17 NOV 1980	Part A Application
		D001	Residuals Incinerated in Area D		4 OCT 1984	HW Disposal Questionaire
N-Methylaniline	YES		Residuals Discharged to Sewers/Lagoons		2 SEP 1982	BPDES Monitoring Report
			Residuals disposed of off site		17 NOV 1980	Part A Application
			Residuals Incinerated in Area D		4 OCT 1984	HW Disposal Questionaire
Methylene Chloride	YES	U080	Research Chemical		9 NOV 1976	Halogenated Hydrocarbon Survey
		U080	Residuals disposed of off site		4 OCT 1984	HW Disposal Questionaire
2-Methylnaphthalene	YES		Constituent of Coal and Petroleum.		13 APR 1989	Remedial Investigation Area D
2-Methylphenol		U052	Residuals Discharged to Sewers/Lagoons		18 SEP 1980	SPDES Sewer Permit Application
		U052	Residuals disposed of off site		4 OCT 1984	HW Disposal Questionaire
		U052	Residuals Incinerated in Area D		13 APR 1989	Remedial Investigation Area D
4-Methylphenol	YES	U052	Residuals Discharged to Sewers/Lagoons		28 OCT 1994	Groundwater Monitoring Report
		U052	Residuals disposed of off site		4 OCT 1984	HW Disposal Questionaire
		U052	Residuals Incinerated in Area D		13 APR 1989	Remedial Investigation Area D
Naphthalene	YES	U165	Residuals Discharged to Sewers/Lagoons		25 MAY 1976	BPDES Sewer Permit Application
		U165	Residuals disposed of off site		4 OCT 1984	HW Disposal Questionaire
		K024	Residuals Incinerated in Area D		13 APR 1989	Remedial Investigation Area D
1-Naphthylamine	YES	U167	Residuals Discharged to Sewers/Lagoons		20 AUG 1984	Building 100 Borings
2-Naphthylamine	YES	U168	Residuals Discharged to Sewers/Lagoons		20 AUG 1984	Building 100 Borings
Nitric Acid	YES	D002	Residuals Discharged to Sewers/Lagoons		OCT 1967	Consultant's Report on WTP
4-Nitroaniline	YES	P077	Residuals Discharged to Sewers/Lagoons		25 MAY 1976	BPDES Sewer Permit Application
Nitrobenzene	YES	U169	Residuals Discharged to Sewers/Lagoons		25 MAY 1976	BPDES Sewer Permit Application
		K104	Residuals disposed of off site		17 NOV 1980	Part A Application
		K025	Residuals Incinerated in Area D		4 OCT 1984	HW Disposal Questionaire
4-Nitrophenol	YES	U170	No known waste activity.		3 JUN 1985	BPDES Monitoring Report
N-Nitrosodiphenylamine	YES		No known waste activity.		29 MAR 1989	Lagoon Clay Report
N-Nitrosodipropylamine			No known waste activity.		29 MAR 1989	Lagoon Clay Report
PCB - Arochlor 1242	YES	B001	Residuals Discharged to Sewers/Lagoons		18 SEP 1980	SPDES Sewer Permit Application
		B004	Residuals disposed of off site		25 JUN 1979	PCB Annual Reports
Pentachlorophenol	YES		No known waste activity.		3 JUN 1985	BPDES Monitoring Report
Phenanthrene	YES		Residuals Discharged to Sewers/Lagoons		13 MAY 1991	Groundwater Monitoring Report
Phenol	YES	U188	Residuals Discharged to Sewers/Lagoons		25 MAY 1976	BPDES Sewer Permit Application
		U188	Residuals disposed of off site		17 NOV 1980	Part A Application
		U188	Residuals Incinerated in Area D		4 OCT 1984	HW Disposal Questionaire
Phosphoric Acid	YES	D002	Residuals Discharged to Sewers/Lagoons		OCT 1967	Consultant's Report on WTP
		D002	Residuals disposed of off site		17 NOV 1980	Part A Application
Pyrene	YES		Constituent of Coal and #6 Fuel Oil.		13 MAY 1991	Groundwater Monitoring Report
Sodium Amide		D003	Residuals disposed of off site		17 NOV 1980	Part A Application
Sodium Sulfide		D003	Residuals Discharged to Sewers/Lagoons		25 MAY 1976	BPDES Sewer Permit Application
		D003	Residuals disposed of off site		17 NOV 1980	Part A Application
Styrene	YES		No known waste activity.		18 JUN 1993	Groundwater Monitoring Report
Sulfuric Acid	YES	D002	Residuals Discharged to Sewers/Lagoons		OCT 1967	Consultant's Report on WTP
		D002	Residuals disposed of off site		4 OCT 1984	HW Disposal Questionaire
Tetrachloroethane	YES	U208	No known waste activity.		3 JUN 1985	BPDES Monitoring Report
Toluene	YES	U220	Residuals Discharged to Sewers/Lagoons		25 MAY 1976	BPDES Sewer Permit Application
		U220	Residuals disposed of off site		17 NOV 1980	Part A Application
		D001	Residuals Incinerated in Area D		4 OCT 1984	HW Disposal Questionaire
Toluene Diisocyanate		U223	Residuals disposed of off site		17 NOV 1980	Part A Application
O-Toluidine	YES	U328	Residuals Discharged to Sewers/Lagoons		25 MAY 1976	Lagoon Clay Report

P-Toluidine	YES	U153 D001	Residuals Discharged to Sewers/Lagoons Residuals Incinerated in Area D	25 MAY 1976 4 OCT 1984	BPDES Sewer Permit Application HW Disposal Questionnaire
1,2,4-Trichlorobenzene	YES		Residuals Discharged to Sewers/Lagoons	22 FEB 1981	BPDES Monitoring Report
1,1,1-Trichloroethane	YES	F001	Research Chemical	9 NOV 1976	Halogenated Hydrocarbon Survey
Trichloroethene	YES	U228	Research Chemical	9 NOV 1976	Halogenated Hydrocarbon Survey
Xylenes	YES		Residuals Discharged to Sewers/Lagoons	8 JUL 1992	Groundwater Monitoring Report
Aluminum	YES		Residuals Discharged to Sewers/Lagoons Residuals disposed of off site	30 JUL 1971 4 OCT 1984	NPDES Sewer Permit Application HW Disposal Questionnaire
Arsenic	YES	D004	Residuals Discharged to Sewers/Lagoons Residuals disposed of off site Residuals Recycled through Area D	30 JUL 1971 4 OCT 1984 13 APR 1989	NPDES Sewer Permit Application HW Disposal Questionnaire Remedial Investigation Area D
Antimony	YES		Residuals Discharged to Sewers/Lagoons Residuals disposed of off site Residuals Incinerated in Area D	30 JUL 1971 4 OCT 1984 13 APR 1989	NPDES Sewer Permit Application HW Disposal Questionnaire Remedial Investigation Area D
Barium	YES	D005	Residuals Discharged to Sewers/Lagoons Residuals disposed of off site Residuals Recycled through Area D	30 JUL 1971 4 OCT 1984 13 APR 1989	NPDES Sewer Permit Application HW Disposal Questionnaire Remedial Investigation Area D
Cadmium	YES	D006	Residuals Discharged to Sewers/Lagoons	30 JUL 1971	NPDES Sewer Permit Application
Chromium	YES	D007	Residuals Discharged to Sewers/Lagoons Residuals disposed of off site Residuals Recycled through Area D	30 JUL 1971 17 NOV 1980 13 APR 1989	NPDES Sewer Permit Application Part A Application Remedial Investigation Area D
Chromium (+6)	YES	D007	Residuals Discharged to Sewers/Lagoons Residuals disposed of off site Residuals Recycled through Area D	25 MAY 1976 4 OCT 1984 13 APR 1989	BPDES Sewer Permit Application HW Disposal Questionnaire Remedial Investigation Area D
Cobalt	YES		Residuals Discharged to Sewers/Lagoons Residuals Recycled through Area D	30 JUL 1971 13 APR 1989	NPDES Sewer Permit Application Remedial Investigation Area D
Copper	YES		Residuals Discharged to Sewers/Lagoons Residuals disposed of off site Residuals Recycled through Area D	30 JUL 1971 17 NOV 1980 13 APR 1989	NPDES Sewer Permit Application Part A Application Remedial Investigation Area D
Iron	YES		Residuals Discharged to Sewers/Lagoons Residuals Recycled through Area D	30 JUL 1971 13 APR 1989	NPDES Sewer Permit Application Remedial Investigation Area D
Manganese	YES		Residuals Discharged to Sewers/Lagoons	30 JUL 1971	NPDES Sewer Permit Application
Lead	YES	D008	Residuals Discharged to Sewers/Lagoons Residuals disposed of off site Residuals Recycled through Area D	30 JUL 1971 4 OCT 1984 13 APR 1989	NPDES Sewer Permit Application HW Disposal Questionnaire Remedial Investigation Area D
Mercury	YES	D009	Residuals Discharged to Sewers/Lagoons Residuals Recycled through Area D	30 JUL 1971 13 APR 1989	NPDES Sewer Permit Application Remedial Investigation Area D
Nickel	YES		Residuals Discharged to Sewers/Lagoons Residuals Recycled through Area D	30 JUL 1971 13 APR 1989	NPDES Sewer Permit Application Remedial Investigation Area D
Silver	YES	D011	Residuals Discharged to Sewers/Lagoons	22 MAY 1986	BPDES Monitoring Report
Tin	YES		Residuals Discharged to Sewers/Lagoons	30 JUL 1971	NPDES Sewer Permit Application
Vanadium	YES	P119 P119	Residuals Discharged to Sewers/Lagoons Residuals disposed of off site	30 JUL 1971 17 NOV 1980	NPDES Sewer Permit Application Part A Application
Zinc	YES		Residuals Discharged to Sewers/Lagoons Residuals disposed of off site Residuals Recycled through Area D	30 JUL 1971 4 OCT 1984 13 APR 1989	NPDES Sewer Permit Application HW Disposal Questionnaire Remedial Investigation Area D

APPENDIX B
RFI FIELD BORING LOGS

APPENDIX B-1

RFI FIELD BORING LOGS

Phase I
Boring Logs

FIELD BORING LOG

DEPTH HOLE	64.5'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-16
DEPTH SOIL DRILL	64.5'	GA INSP.	D. WEHN	DRILLING METHOD	6-1/4" AND 4-1/4" I.D. HOLLOW STEM AUGER	SHEET	1 of 3
DEPTH ROCK CORE	0	WEATHER	CLOUDY	DRILLING CO.	SJB SERVICES	SURFACE EL.	586.94
NO. DIST. SA.	0	U.S. SA.	32	TEMP.	55° F	DRILL RIG	CME-85
				DRILLER	A. MILLER	DATUM	MSL
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
				STARTED	1115 4/26/96		
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
				COMPLETED	1600 5/1/96		

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	W MEDIUM	SA SAMPLE	*TRACE" - 0-5%	
B.R. BROWN SAMPLE	BR BROWN	MC MICACEOUS	SAT SATURATED	"LITTLE" - 5-12%	
D.O. DRIVE OPEN	C COARSE	MT MOTILED	S SAND	"SOME" - 12-30%	
D.S. DENSON SAMPLE	CA CASHG	NP NON-PLASTIC	SALT SALT	"AND" - 30-50%	
P.S. PITCHER SAMPLE	CL CLAY	OC ORANGE	SD SALTY	CONSISTENCY	
R.C. ROCK CORE	CLY CLY	ORG ORGANIC	SN SOME		
S.L. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE		
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PI PRESSURE-MANUAL	WL WATER LEVEL	LS LOOSE	S SOFT
T.P. THIN-WALLED, PISTON	G GRAVEL	R RED	WH WEIGHT OF HAMMER	CP COMPACT	M MEDIUM
W.S. WASH SAMPLE	LAYE LAYED	RES RESIDUAL	Y YELLOW	DN DENSE	ST STIFF
	LYO LYO	RX ROCK		V VERY	H HARD
	LI LITTLE				

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				q ^a (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAND. BLOWS PEET & IN. (FORCE)	REC/ATT		
	FILL							1. 0-2 ft.-Loose br. to black, CLAYEY SAND AND SILT, some fine gravel, little slag and indigo colored chips. FILL.
2			1	SS	5-4-4-5	1.6 2.0	NR	
								2. 2-4 ft.- As above with little silty clay. FILL. Samples RFI-16S2F and RFI-16C2F collected. Sample FDUP05 collected.
4			2	SS	1-3-1-1	0.7 2.0	NR	
								3. 4-6 ft.- Moist, brown to gray, SILTY CLAY AND SAND with some weathered concrete and coal. FILL. Sample RFI16S5F collected.
6			3	SS	1-2-1-2	0.6 2.0	NR	
								4. 6-8 ft.- From 7.0 to 7.6 ft., Soft, dark gray to gray black CLAY then black to brown, loose, medium to coarse SAND with trace bricks. FILL.
8			4	SS	WH-1-1-3	1.0 2.0	0.7	
								5. 8-10 ft.- loose, black, SAND, fine to medium, saturated. Trace coarse sand. FILL. Sample RFI16SWT collected.
10			5	SS	WH-WH-1-1	1.8 2.0	0.5	
								6. 10-12 ft.- Black stained brick, crushed stone. FILL.
12							7. 12-14 ft.- Soft, black, SILTY CLAY. Wood stuck in spoon tip. FILL.	
		6	SS	2-5-7-4	0.8 2.0	NR		
14							8. 14-16 ft.- Wood, firm, med. brown to gray, SILTY CLAY and dark gray stained to black fine SAND AND SILT. FILL to 15 ft.	
		7	SS	WH-WH-10-5	1.6 2.0	0.5		
16							9. 16-18 ft.- Compressed leaves.	
							10. 18-20 ft.- Fine to med. SAND with some leaves.	
18							11. No Recovery.	
20	ALLUVIUM		8	SS	1-2-1-2	1.0 2.0	NR	
22								
			9	SS	WH-WH-1-2	1.0 2.0	NR	
24			10	SS	WH-1-2-1	1.0 2.0	NR	
26			11	SS	1-2-3-3	0.0 2.0	NR	
28								

FIELD BORING LOG

DEPTH HOLE	64.5'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-16
DEPTH SOIL DRILL	64.5'	GA INSP.	D. WEHN	DRILLING METHOD	6-1/4" AND 4-1/4" I.D. HOLLOW STEM AUGER	SHEET	2 of 3
DEPTH ROCK CORE	0	WEATHER	CLOUDY	DRILLING CO.	SJB SERVICES	SURFACE EL.	586.94
NO. DIST. SA.	0	US. SA.	32	TEMP.	55° F	DRILL RIG	CME-85
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						STARTED	1115 4/26/96
						COMPLETED	1600 5/1/96

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL. BLACK	M. MEDIUM	SA. SAMPLE	"TRACE" - 0-5%	
C.S. CHUCK SAMPLE	BR. BROWN	MC. MUCKY	SAT. SATURATED	"LITTLE" - 5-12%	
D.O. DRIVE OPEN	C. COARSE	NOT. NOTED	SD. SAND	"SOM" - 15-30%	
D.S. DEKSON SAMPLE	CA. CASING	NP. NON-PLASTIC	SI. SILT	"AND" - 30-50%	
P.S. PITCHER SAMPLE	CL. CLAY	OC. ORGANIC	SM. SOME		
R.C. ROCK CORE	CLY. CLAYEY	ORC. ORG.	TR. TRACE		
S.T. SLOTTED TUBE	F. FINE	PH. PRESSURE-HYDRAULIC	WL. WATER LEVEL		
T.O. THIN-WALLED, OPEN	FRAG. FRAGMENTS	PM. PRESSURE-MANUAL	WH. WEIGHT OF HAMMER		
T.P. THIN-WALLED, PISTON	GL. GRAVEL	RED. RESIDUAL	Y. YELLOW		
W.S. WASH SAMPLE	LVD. LAYERED	RES. RESIDUAL			
	LU. LITTLE	RK. ROCK			
				CONSISTENCY	
				LS. LOOSE	S. SOFT
				OP. COMPACT	FM. FIRM
				DN. DENSE	ST. STIFF
				V. VERY	H. HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/FT.	SAMPLES				q ^a (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN. (FORCE)	REC/ATT		
24	ALLUVIUM		12	SS	WH-WH-WH-2	0.6 2.0	NR	12. 22-24 ft.- Loose, dark gray, med. to coarse SAND with trace gravel.
			13	SS	3-3-4-2	0.5 2.0	NR	13. 24-26 ft.- As above with some gravel.
								26-28 ft.- Not sampled due to running sands. Test boring located ~6 ft. from RFI-16 drilled for locating top of clay.
26								14. 28-30 ft.- Coarse SAND and brick fragments. Dragdown from above. Not Representative.
28			14	SS	6-5-4-2	0.2 2.0	NR	15. 30-32 ft.- Loose, dark gray med. to course SAND with trace gravel to 30.2 ft. then soft, gray brown CLAY with trace silt partings.
30	30.2 - GLACIOLACUSTRINE CLAY	SAMPLES FROM 4 1/4-INCH ID HSA TEST BORING	15	SS	5-2-2-3	2.0 2.0	0.1	16. 32-34 ft.- As from 30.2 ft. above.
32			16	SS	2-1-1-1	1.9 2.0	0.1	17. 34-36 ft.- As above varying in color from grayish brown to reddish brown.
34			17	SS	WH-WH-1-1	2.0 2.0	0.2	18. 36-38 ft.- As above.
36			18	SS	WR-WH-WH-1	2.0 2.0	0.2	19. 38-40 ft.- As above.
38			19	SS	WH-WH-WH-1	2.0 2.0	0.2	20. 40-42 ft.- As above.
40			20	SS	WH-WH-WH-2	2.0 2.0	0.2	21. 42-44 ft.- As above but very soft.
42			21	SS	WH-WH-WH-WH	2.0 2.0	0.1	
44								

FIELD BORING LOG

DEPTH HOLE 64.5' JOB NO. 963-9117 PROJECT BCC/RFI/NY BORING NO. RFI-16
 DEPTH SOIL DRILL 64.5' GA INSP. D. WEHN DRILLING METHOD 6-1/4" AND 4-1/4" I.D. HOLLOW STEM AUGER SHEET 3 of 3
 DEPTH ROCK CORE 0 WEATHER CLOUDY DRILLING CO. SJB SERVICES SURFACE EL. 586.94
 NO. DIST. SA. 0 US. SA. 32 TEMP. 55° F DRILL RIG CME-85 DRILLER A. MILLER DATUM MSL
 DEPTH WL. NA HRS. PROD. NA WT. SAMPLER HAMMER 140# DROP 30" STARTED 1115 4/26/96
 TIME WL. NA HRS. DELAYED NA WT. CASING HAMMER NA DROP NA COMPLETED 1600 5/1/96

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION				
A.S. AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" - 0-5%			
C.S. CHURN SAMPLE	BR	BROWN	MC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%			
D.O. DRIVE OPEN	C	COARSE	MP	MOTTLED	SD	SAND	"SOME" - 12-30%			
D.S. DEWSON SAMPLE	CA	CASING	NP	NON-PLASTIC	S	SILT	"AND" - 30-50%			
P.S. PITCHER SAMPLE	CL	CLAY	OC	ORANGE	SY	SILTY	CONSISTENCY			
R.C. ROCK CORE	CLY	CLAYEY	ORC	ORANGE	SM	SOME				
S.T. SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	LS	LOOSE	S	SOFT
T.O. THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	OP	COMPACT	FM	FIRM
T.P. THIN-WALLED, PISTON	CL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	ON	ON	ST	STIFF
W.S. WASH SAMPLE	LVD	LAYERED	RES	RESIDUAL	Y	YELLOW	V	VERY	H	HARD
	LT	LITTLE	RX	ROCK						

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				q ^a (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAND BLOWS PER 6 IN. (FORCE)	REC/ATT		
46	GLACIOLACUSTRINE CLAY		22	SS	WR-WR- WH-WH	2.0 2.0	0.2	22. 44-46 ft.- Very soft, grayish brown to reddish brown CLAY with trace of silt partings (As Above).
			23	SS	WH-WH- WH-1	2.0 2.0	0.1	23. 46-48 ft.- As above.
48			24	SS	WR-WR- WH-WH	2.0 2.0	0.1	24. 48-50 ft.- As above.
			25	SS	WR-WR- WH-WH	2.0 2.0	0.1	25. 50-52 ft.- As above.
50			26	SS	WR-WR- WR-WH	2.0 2.0	0.1	26. 52-54 ft.- As above.
			27	SS	WR-WR- 1-1	2.0 2.0	NR	27. 54-56 ft.- As above with trace of rounded gravel and sand.
52			28	SS	WR-WR- WR-WR	2.0 2.0	0.1	28. 56-58 ft.- As above
			29	SS	WR-WR- WR-WH	2.0 2.0	0.2	29. 58-60 ft.- As above
54			30	SS	WR-4- 6-6	2.0 2.0	1.0	30. 60-62 ft. - As above to 60.9 then soft, gray GRAVEL AND CLAY with some coarse sand.
			31	SS	22-32- 27-16	0.7 2.0	2.0	31. 62-64 ft. - As above grading to loose, gray, SILT, FINE SAND and GRAVEL. Saturated.
56			32	SS	50/0.6	0 0.6	NR	32. No Recovery.
58								
60								
62	60.9 - BASAL TILLS							
64								
66	64.6 BEDROCK - END OF SAMPLING							

FIELD BORING LOG

DEPTH HOLE	12'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-17
DEPTH SOIL DRILL	12'	GA INSP.	D. WEHN	DRILLING METHOD	4-1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 1
DEPTH ROCK CORE	0	WEATHER	P. CLOUDY	DRILLING CO.	SJB SERVICES	SURFACE EL.	583.69
NO. DIST. SA.	0	U.S. SA.	6	TEMP.	50° F	DRILL RIG	ACKER SOILMAX
						DRILLER	R. STIENER
						DATUM	MSL
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
						STARTED	1130 5/13/96
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						COMPLETED	1345 5/13/96

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BK BLACK	M MEDIUM	SA SAMPLE	"TRACE" - 0-5%	
D.S. DRUM SAMPLE	BR BROWN	MC MACADEUS	SAT SATURATED	"LITTLE" - 5-12%	
D.O. DRIVE OPN	C COARSE	MO MOTLED	SD SAND	"SOME" - 12-30%	
D.D. DEEMSON SAMPLE	CASIN CASING	HP NON-PLASTIC	S SILT	"AND" - 30-50%	
P.S. PITCHER SAMPLE	CL CLAY	OG ORANGE	SLT SLTY		
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANIC	SN SOME		
L.T. LOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TH TRACE		
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM WATER LEVEL	WH WATER LEVEL		
T.P. THIN-WALLED, PISTON	GL GRAVEL	RP WEIGHT OF HAMMER	DN DENSE		
N.S. NASH SAMPLE	LVD LAYERED	RES RESIDUAL	Y YELLOW		
	U LITTLE	RX ROCK			

CONSISTENCY

LS LOOSE	S SOFT
CP COMPACT	FM FIRM
DN DENSE	ST STIFF
V VERY HARD	HARD

[illegible]

FIELD BORING LOG

DEPTH HOLE	14'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-18
DEPTH SOIL DRILL	14'	GA INSP.	D. WEHN	DRILLING METHOD	4-1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 1
DEPTH ROCK CORE	0	WEATHER	SUN	DRILLING CO.	SUB SERVICES	SURFACE EL.	586.26
NO. DIST. SA.	0	US. SA.	4	TEMP.	65° F	DRILL RIG	ACKER SOILMAX
						DRILLER	R. STIENER
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
						STARTED	1250 5/20/96
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						COMPLETED	1445 5/20/96

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" - 0-5%
B.R.	BROWN SAMPLE	BR	BROWN	MC	MICACEOUS	SAT	SATURATED	"LITTLE" - 5-12%
D.O.	DRIVE OPEN	C	COARSE	MO	MOTTLED	SD	SAND	"SILT" - 13-30%
D.S.	DENISON SAMPLE	CA	CALSH	NP	NON-PLASTIC	S	SALT	"AND" - 30-50%
P.S.	PITCHER SAMPLE	CL	CLAY	OT	ORANGE	SH	SILT	
R.C.	ROCK CORE	CLY	CLAYCY	OR	ORANGE	SM	SOME	
L.T.	LIGHTED TUBE	FMC	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	
T.O.	THIN-WALLED, OPEN	FRAC	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	Y	YELLOW	
		U	LITTLE	RX	ROCK			
								CONSISTENCY
						LS	LOOSE	S SOFT
						CP	COMPACT	FN FIRM
						ON	ST	STIFF
						V	VERY	HARD

[illegible]

FIELD BORING LOG

DEPTH HOLE 45.4' JOB NO. 963-9117 PROJECT BCC/RFI/NY BORING NO. RFI-19D
 DEPTH SOIL DRILL 45.4' GA INSP. D. WEHN DRILLING METHOD 6-1/4, 4-1/4-INCH I.D. HOLLOW STEM AUGER SHEET 1 of 3
 DEPTH ROCK CORE 0 WEATHER CLOUDY DRILLING CO. SUB SERVICES SURFACE EL. 586.05
 NO. DIST. SA. 0 U.S. SA. 23 TEMP. 60° F DRILL RIG ACKER SOILMAX DRILLER R. STEINER DATUM MSL
 DEPTH WL. NA HRS. PROD. NA WT. SAMPLER HAMMER 140# DROP 30" STARTED 0800 5/20/96
 TIME WL. NA HRS. DELAYED NA WT. CASING HAMMER NA DROP NA COMPLETED 1000 5/23/96

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL. BLACK	M. MEDIUM	SA. SAMPLE	"TRACE" - 0-3%	
C.S. CHURN SAMPLE	BR. BROWN	MAC. MACROSCOPIC	SAT. SATURATED	"LITTLE" - 5-12%	
D.O. DRIVE OPEN	C. COARSE	MOT. MOTTLED	SAND	"SOME" - 13-30%	
D.S. DENSON SAMPLE	CA. CASING	NP. NON-PLASTIC	SILT	"AND" - 30-50%	
P.S. PITCHER SAMPLE	CL. CLAY	OC. ORANGE	SILT		
R.C. ROCK CORE	CLV. CLAYEY	ORG. ORGANIC	SOME		
S.T. SLOTTED TUBE	F. FINE	PH. PRESSURE-HYDRAULIC	TRACE		
T.O. THIN-WALLED, OPEN	FRAG. FRAGMENTS	PM. PRESSURE-MANUAL	WATER LEVEL		
T.P. THIN-WALLED, PISTON	GL. GRAVEL	R. RED	WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LYD. LAYERED	RES. RESIDUAL	YELLOW		
	U. LITTLE	RK. ROCK			

CONSISTENCY			
LS. LOOSE	OP. COMPACT	S. SOFT	
DN. DENSE	FM. FIRM	ST. STIFF	
V. VERY	H. HARD		

ELEV. DEPTH	DESCRIPTION	BLOWS/FT.	SAMPLES				q _s (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMB. BLOWS PER 6 IN. (FORCE)	REC/ATT		
	FILL		1	SS	4-5-50/0.3	0.4 1.3	0.2	1. 0-1.3 ft.- Soft, brown, SILTY CLAY with some crushed limestone gravel. FILL.
2	1.3 - CONCRETE							2. 2-4 ft.- Concrete floor to approx. 3.5 ft. Augered to 4.0 with no sampling.
4	3.5 - FILL		3	SS	3-4-5-4	0.8 2.0	NR	3. 4-6 ft.- Loose, gray-black, SILT AND FINE SAND with trace gravel, trace brick. FILL.
6	6.3 - UPPER TILLS		4	SS	2-6-7-11	1.8 2.0	3.0	4. 6-8 ft.- As above to 6.3 ft. then stiff, brown with gray mottling. SILTY CLAY with trace silt and fine sand partings. Sample RFI19DSBF collected.
8			5	SS	9-13-14-19	1.9 2.0	3.5	5. 8-10 ft.- As above with trace of wood piling Sample RFI19DGAF collected.
10			6	SS	2-6-12-12	1.8 2.0	3.2	6. 10-12 ft.- Stiff, brown with gray mottling, SILTY CLAY with trace of silt and fine sand partings. Sample RFI19DSAF, RFI19DCAF collected.
12			7	SS	2-2-2-2	2.0 2.0	0.2	7. 12-14 ft.- As above to 12.8 ft. then soft, brown with faint reddish-brown varving, CLAY with trace silt and fine sand partings.
14	12.8 - GLACIOLACUSTRINE CLAY		8	SS	2-2-3-3	0.2 2.0	0.2	8. 14-16 ft. - Same as above.
16			9	SS	WH-2-2-2	2.0 2.0	0.5	9. 16-18 ft.- Same as above.
18			10	SS	1-1-2-2	2.0 2.0	0.5	10. 18-20 ft.- Same as above. Sample RFI19DG5-7C collected.
20			11	SS	WH-WH-2-2	2.0 2.0	0.2	11. 20-22 ft.- As above with little silt and fine sand partings.
22								

FIELD BORING LOG

DEPTH HOLE	45.4'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-19D
DEPTH SOIL DRILL	45.4'	GA INSP.	D. WEHN	DRILLING METHOD	6-1/4, 4-1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	2 of 3
DEPTH ROCK CORE	0	WEATHER	CLOUDY	DRILLING CO.	SJB SERVICES	SURFACE EL.	586.05
NO. DIST. SA.	0	U.S. SA.	23	TEMP.	60° F	DRILL RIG	ACKER SOILMAX
						DRILLER	R. STEINER
						DATUM	MSL
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
						STARTED	0800 5/20/96
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						COMPLETED	1000 5/23/96

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" - 0-5%	
C.S. CHURN SAMPLE	BR BROWN	WC WHITISH	SAT SATURATED	"LITTLE" - 5-12%	
D.S. DRIVE OPEN	C COARSE	WP MOTTLED	SD SAND	"SOME" - 12-30%	
D.S. DENISON SAMPLE	CA CAGING	WT NON-PLASTIC	SI SILT	"AND" - 30-50%	
D.S. DITCHER SAMPLE	CL CLAY	OR ORANGE	SIT SILTY		
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANIC	SN SOME		
S.T. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE		
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL		
T.P. THIN-WALLED, PISTON	GL GRAVEL	R RED	WH WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LAYERED	RES RESIDUAL	Y YELLOW		
	U LITTLE	RX ROCK			
				CONSISTENCY	
				LS LOOSE	S SOFT
				CP COMPACT	FM FIRM
				SD STICKY	ST STIFF
				V VERY	HA HARD

[illegible]

FIELD BORING LOG

DEPTH HOLE 45.4' JOB NO. 963-9117 PROJECT BCC/RFI/NY BORING NO. RFI-19D
 DEPTH SOIL DRILL 45.4' GA INSP. D. WEHN DRILLING METHOD 6-1/4, 4-1/4-INCH I.D. HOLLOW STEM AUGER SHEET 3 of 3
 DEPTH ROCK CORE 0 WEATHER CLOUDY DRILLING CO. SUB SERVICES SURFACE EL. 586.05
 NO. DIST. SA. 0 US. SA. 23 TEMP. 60° F DRILL RIG ACKER SOILMAX DRILLER R. STEINER DATUM MSL
 DEPTH WL. NA HRS. PROD. NA WT. SAMPLER HAMMER 140# DROP 30" STARTED 0800 5/20/96
 TIME WL. NA HRS. DELAYED NA WT. CASING HAMMER NA DROP NA COMPLETED 1000 5/23/96

SAMPLE TYPES

A.S. AUGER SAMPLE
 C.S. CHUNK SAMPLE
 D.O. DRIVE OPEN
 D.S. DENSOM SAMPLE
 P.S. PITCHER SAMPLE
 R.C. ROCK CORE
 S.T. SLOTTED TUBE
 T.O. THIN-WALLED, OPEN
 T.P. THIN-WALLED, PISTON
 W.S. WASH SAMPLE

BL BLACK
 BR BROWN
 C COARSE
 CA CASING
 CL CLAY
 CLY CLAYEY
 F FINE
 FRAC FRAGMENTS
 G GRAVEL
 L LAYERED
 U LITTLE

ABBREVIATIONS

M MEDIUM
 MC MICACEOUS
 MOT MOTTLED
 NP NON-PLASTIC
 OG ORANGE
 ORG ORGANIC
 PH PRESSURE-HYDRAULIC
 PM PRESSURE-MANUAL
 R RED
 RES RESIDUAL
 RX ROCK

SA SAMPLE
 SAT SATURATED
 SD SAND
 S SILT
 SI SILTY
 SM SOME
 TR TRACE
 WL WATER LEVEL
 WH WEIGHT OF HAMMER
 Y YELLOW

SOIL DESCRIPTION - RANGE OF PROPORTION

"TRACE" - 0-5%
 "LITTLE" - 5-12%
 "SOME" - 12-30%
 "AND" - 30-50%

CONSISTENCY

LS LOOSE S SOFT
 CP COMPACT FM FIRM
 DN DENSE ST STIFF
 V VERY H HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				q ^u (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN. (FORCE)	REC/ATT		
	BASAL TILLS		23	SS	30-48-50/0.2	0.9 1.2		23. 44-45.2 ft.- As above grading to a dense, fractured limestone. Augered to 45.4 ft. RFI19DSBG Collected.
	45.2 - BEDROCK							
	45.4 - END OF BOREHOLE							
46								
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								

FIELD BORING LOG

DEPTH HOLE	12.3'	JOB NO.	953-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-20
DEPTH SOIL DRILL	12.3'	GA INSP.	D. WEHN	DRILLING METHOD	4-1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 1
DEPTH ROCK CORE	0	WEATHER	RAIN	DRILLING CO.	SJB SERVICES	SURFACE EL.	585.80
NO. DIST. SA.	0	US. SA.		TEMP.	40° F	DRILL RIG	CME-85
						DRILLER	A. MILLER
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
						STARTED	1415 4/22/96
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						COMPLETED	1600 4/23/96

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SAT SAMPLE SATURATED	"TRACE" - 0-3%	
C.S. CHUNK SAMPLE	BR BROWN	MC MICACEOUS	SD SAND	"LITTLE" - 5-12%	
D.O. DITCH OPEN	C COARSE	MO MOTTLED	SF SILT	"SOME" - 12-30%	
D.S. DESIGN SAMPLE	CA CASING	NP NON-PLASTIC	SL SLT	"AND" - 30-50%	
P.S. PISTON SAMPLE	CL CLAY	OC ORANGE	SN SOME	CONSISTENCY	
R.C. ROCK CORE	CLY CLAYEY	OC ORANGE	SN SOME		
T. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE		
T.O. THIN-WALLED, OPEN	FRAC FRAGMENTS	PL PRESSURE-MANUAL	WL WATER LEVEL		
T.P. THIN-WALLED, PISTON	GL GRAVEL	R RED	WH WEIGHT OF HAMMER	LS LOOSE	S SOFT
W.S. WASH SAMPLE	LYO LAYERED	RES RESIDUAL	DN DENSE	CP COMPACT	FW FIRM
	LITTLE	RX ROCK	Y YELLOW	DN DENSE	ST STIFF
				V VERY	H HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES					SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	NAME, BLOWS PER 6 IN. (FORCE)	REC/ATT	q _u (Tons/ft. ²)	
2	FILL FOR COMPLETE SOIL DESCRIPTION SEE FIELD BORING LOG FOR ADJACENT WELL RFI-21D							1. 0-2 ft.- No sample - Augered through gravel fill and concrete.
4	4.0 - UPPER TILLS		1	SS	2-3-3-3	1.5 2.0	0.5	2. 2-4 ft.- Loose, black, crushed stone to 2.5 ft. then compact, dark gray-brown SILT and fine SAND with some clay. Sample RFI20S2F and RFI20C2F collected.
6			2	SS	2-4-6-8	1.8 2.0	0.5	3. 10-12 ft.- Very soft, gray-brown with faint varving CLAY with trace silt and some silt to fine sand seams or partings. Sample RFI20SWT collected.
8								Auger to 12.3 ft. BGS.
10								
12	11.5 - GLACIOLACUSTRINE CLAY		3	SS	WH-WH- 2-2	2.0 2.0	NR	
14	12.3 - END OF BOREHOLE							
16								
18								
20								
22								

FIELD BORING LOG

DEPTH HOLE	40.75'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-21D
DEPTH SOIL DRILL	40.75'	GA INSP.	D. WEHN	DRILLING METHOD	6 1/4-4 1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 2
DEPTH ROCK CORE	0	WEATHER	RAIN	DRILLING CO.	SJB SERVICES	SURFACE EL.	585.76
NO. DIST. SA.	0	US. SA.	21	TEMP.	40° F	DRILL RIG	CME-85
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						STARTED	0930 4/23/96
						COMPLETED	1300 4/24/96

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S. AUGER SAMPLE	BL. BLACK	M. MEDIUM	SA. SAMPLE	TRACE" - 0-5%				
C.S. CHUCK SAMPLE	BR. BROWN	MC. MUCOUS	SAT. SATURATED	"LITTLE" - 5-12%				
D.O. DRIVE OPEN	C. COARSE	WOT. WOTLED	SD. SAND	"SOME" - 12-30%				
D.S. DENSON SAMPLE	CA. CASING	NP. NON-PLASTIC	SI. SILT	"AND" - 30-50%				
P.S. PITCHER SAMPLE	CL. CLAY	OC. ORANGE	SY. SILTY					
R.C. ROCK CORE	CLY. CLAYEY	ORG. ORGANIC	SM. SOME					
S.T. SLOTTED TUBE	F. FINE	PH. PRESSURE-HYDRAULIC	TR. TRACE					
T.O. THIN-WALLED, OPEN	FRAG. FRAGMENTS	PM. PRESSURE-MANUAL	WL. WATER LEVEL					
T.P. THIN-WALLED, PISTON	QL. GRAVEL	R. RED	WH. WEIGHT OF HAMMER					
W.S. WASH SAMPLE	LYD. LAYERED	RES. RESIDUAL	Y. YELLOW					
	U. LITTLE	RK. ROCK						

CONSISTENCY

LS. LOOSE	S. SOFT
OP. COMPACT	FM. FIRM
DN. DENSE	ST. STIFF
V. VERY	H. HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				q ^a (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMM. BLOW PER 6 IN. (FORCE)	REC/ATT		
	FILL		1	SS	4-12	0.2 1.0	NR	1. 0-2.0 ft.- Gray to black crushed stone, building debris. (fill). Concrete from 1-2 ft.
2			2	SS	8-8-1-3	1.5 2.0	0.8	2. 2-4 ft.- Dark red to black SILT, CLAY AND SAND. FILL. Strong organic odor - 34 ppm on PID. Sample RFI21DSBF collected.
4	4.0 - UPPER TILLS		3	SS	WH-WH-1-2	1.2 2.0	0.2	3. 4-6 ft.- Soft, Gray to black SILTY CLAY with silt and fine sand partings.
6			4	SS	WH-1-4-6	1.6 2.0	2.0	4. 6-8 ft.- As above to 6.4 ft. then stiff light brown with gray mottling, SILTY CLAY.
8			5	SS	2-2-4-8	2.0 2.0	2.2	5. 8-10 ft.- As above with faint varving instead of mottling. Trace of sand and silt parting. Sample RFI21DGBA collected.
10			6	SS	1-2-1-2	2.0 2.0	0.2	6. 10-12 ft.- As above, grading at 10.6 ft. to a soft, light brown with faint varving CLAY with some silt and little sand and silt parting.
12	10.6 - GLACIOLACUSTRINE CLAY		7	SS	WH-WH-WH-WH	2.0 2.0	0.2	7. 12-14 ft.- Same as above.
14			8	SS	WH-WH-WH-WH	2.0 2.0	0.1	8. 14-16 ft.- As above to 14.8 ft. then more slightly reddish-brown in color. Sample RFI21DSBA and RFI21DCBA collected.
16			9	SS	WH-WH-WH-WH	2.0 2.0	0.1	9. 16-18 ft.- As above grading to light brown in color. Sample RFI21DB5-7C collected.
18			10	SS	WH-WH-WH-WH	2.0 2.0	0.2	10. 18-20 ft.- As above color varies from light brown to slightly reddish-brown.
20			11	SS	WH-WH-WH-WH	2.0 2.0	0.2	11. 20-22 ft.- Same as above.
22								

FIELD BORING LOG

DEPTH HOLE	40.75'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-21D
DEPTH SOIL DRILL	40.75'	GA INSP.	D. WEHN	DRILLING METHOD	6 1/4-4 1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	2 of 2
DEPTH ROCK CORE	0	WEATHER	RAIN	DRILLING CO.	SJB SERVICES	SURFACE EL.	585.76
NO. DIST. SA.	0	U.S. SA.	21	TEMP.	40° F	DRILL RIG	CME-550X
				DRILLER	D. BUTZER	DATUM	MSL
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
						STARTED	0930 4/23/96
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						COMPLETED	1300 4/24/96

[illegible]

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.		SAMPLES				q ^a (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
				NO.	TYPE	HAND. BLOWS PER 8 IN. (FORCE)	REC/ATT		
24	GLACIOLACUSTRINE CLAY			12	SS	WH-WH- WH-WH	$\frac{2.0}{2.0}$	0.2	12. 22-24 ft.- As above with contorted flow structures.
				13	SS	WH-WH- WH-WH	$\frac{2.0}{2.0}$	0.1	13. 24-26 ft.- As sample 10 above.
26				14	SS	WH-WH- WH-WH	$\frac{2.0}{2.0}$	0.1	14. 26-28 ft.- Same as above.
				15	SS	WH-WH- WH-WH	$\frac{2.0}{2.0}$	0.1	15. 28-30 ft.- Same as above.
28				16	SS	WR-WH- WH-WH	$\frac{2.0}{2.0}$	0.2	16. 30-32 ft.- Same as above.
				17	SS	WH-WH- WH-WH	$\frac{2.0}{2.0}$	NR	17. 32-34 ft.- Same as above but very soft.
30				18	SS	WH-1- 4-16	$\frac{1.3}{2.0}$	0.2	18. 34-36 ft.- As above to 35.0 then soft reddish-brown CLAY with trace subrounded gravel, little sand.
				19	SS	3-6- 6-12	$\frac{1.0}{2.0}$	0.7	19. 36-38 ft.- Compact, gray, saturated FINE SAND AND SILT with some fine to coarse gravel (limestone).
32	36.0 - BASAL TILLS			20	SS	17-38- 54-50/0.4	$\frac{1.2}{1.9}$	0.2	20. 38-40 ft.- As above with some silt grading to weathered dark gray limestone with some silty zones. Sample RF12DSBG collected.
				21	SS	22-50/0.3	$\frac{1.3}{0.8}$	N/A	21. 40-42 ft.- Weathered dark gray limestone at 40.8 ft.
34									
36									
38									
40	40.8 - BEDROCK END OF BOREHOLE.								
42									
44									

FIELD BORING LOG

DEPTH HOLE	35.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-22
DEPTH SOIL DRILL	35.0'	GA INSP.	D. WEHN	DRILLING METHOD	4 1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 2
DEPTH ROCK CORE	0	WEATHER	CLOUDY	DRILLING CO.	SJB SERVICES	SURFACE EL.	588.12
NO. DIST. SA.	0	US. SA.	8	TEMP.	45° F	DRILL RIG	CME-550X
				DRILLER	D. BUTZER	DATUM	MSL
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
						STARTED	0830 5/7/96
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						COMPLETED	1030 5/7/96

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" - 0-5%	
C.S. CHUNK SAMPLE	BR BROWN	MC MICACEOUS	SAT SATURATED	"LITTLE" - 5-12%	
D.O. DRIVE OPEN	C COARSE	MO MOTLED	SD SAND	"SOME" - 12-30%	
D.S. DEWSON SAMPLE	CA CASING	NP NON-PLASTIC	S SILT	"AND" - 30-50%	
P.S. PISTON SAMPLE	CL CLAY	OR ORANGE	SI SILTY		
R.C. ROCK CORE	CLY CLAYEY	OC ORGANIC	SM SOME		
S.T. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE		
T.W.-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL	LS LOOSE	S SOFT
T.W.-WALLED, PISTON	G GRAVEL	RED RED	WH WEIGHT OF HAMMER	CP CONTACT	ST FIRM
W.S. WASH SAMPLE	L LAYERED	RES RESIDUAL	Y YELLOW	DN DENSE	ST STIFF
	LYO LITTLE	RX ROCK		V VERY	H HARD
	U				

CONSISTENCY

[illegible]

FIELD BORING LOG

DEPTH HOLE 35.0' JOB NO. 963-9117 PROJECT BCC/RFI/NY BORING NO. RFI-22
 DEPTH SOIL DRILL 35.0' GA INSP. D. WEHN DRILLING METHOD 4-1/4-INCH I.D. HOLLOW STEM AUGER SHEET 2 of 2
 DEPTH ROCK CORE 0 WEATHER CLOUDY DRILLING CO. SJB SERVICES SURFACE EL. 588.12
 NO. DIST. SA. 0 US. SA. 8 TEMP. 45° F DRILL RIG CME-550X DRILLER D. BUTZER DATUM MSL
 DEPTH WL. NA HRS. PROD. NA WT. SAMPLER HAMMER 140# DROP 30" STARTED 0830 5/7/96
 TIME WL. NA HRS. DELAYED NA WT. CASING HAMMER NA DROP NA COMPLETED 1030 5/7/96

SOIL DESCRIPTION - RANGE OF PROPORTION

SAMPLE TYPES

A.S. AUGER SAMPLE
 C.S. CHUNK SAMPLE
 D.O. DRIVE OPEN
 D.S. DEHON SAMPLE
 P.S. PITCHER SAMPLE
 R.C. ROCK CORE
 S.T. SLOTTED TUBE
 T.O. THIN-WALLED, OPEN
 T.P. THIN-WALLED, PISTON
 W.S. WASH SAMPLE

B. BLACK
 BR. BROWN
 C. COARSE
 CA. CASING
 CL. CLAY
 CLY. CLAYEY
 F. FINC.
 FRAG. FRAGMENTS
 GL. GRAVEL
 LYD. LAYERED
 L. LITTLE

ABBREVIATIONS

M. MEDIUM
 MC. MEDIUM COARSE
 MP. MEDIUM PLASTIC
 OR. ORANGE
 ORG. ORGANIC
 PH. PRESSURE-HYDRAULIC
 PM. PRESSURE-MANUAL
 R. RED
 RES. RESIDUAL
 RK. ROCK

SA. SATURATED
 SD. SAND
 SI. SILT
 SY. SILTY
 SM. SOME
 TR. TRACE
 WL. WATER LEVEL
 WH. WEIGHT OF HAMMER
 Y. YELLOW

"TRACE" - 0-5%
 "LITTLE" - 5-12%
 "SOME" - 12-30%
 "AND" - 30-50%

CONSISTENCY

LS. LOOSE
 CP. COMPACT
 DN. DENSE
 V. VERY
 S. SOFT
 PM. FIRM
 ST. STIFF
 H. HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				q _n (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMM. BLOWS PER 6 IN. (FORGE)	REC/ATT		
24	ALLUVIUM		6	SS	1-2-4-3	1.2 2.0	NR	6. 25-27 ft.- Loose, dark gray, med. to v. coarse SAND with trace clay.
26								7. 30-32 ft.- Loose, dark gray to brown, med. coarse SAND AND GRAVEL. Lower portion stained black with chemical odor.
28								8. 35-37 ft.- Soft, brown, CLAY with very faint varving.
30			7	SS	7-15-16-16	1.6 2.0	NR	
32								
34	33.8 - GLACIOLACUSTRINE CLAY		8	SS	WH-WH1-WH-WH	2.0 2.0	0.2	
36	35.0 - END OF BOREHOLE							
38								
40								
42								
44								

FIELD BORING LOG

DEPTH HOLE	62.5	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-23D
DEPTH SOIL DRILL	62.5	GA INSP.	D. WEHN	DRILLING METHOD	6-1/4, 4-1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 3
DEPTH ROCK CORE	0	WEATHER	CLOUDY	DRILLING CO.	SJB SERVICES	SURFACE EL.	588.41
NO. DIST. SA.	0	US. SA.	31	TEMP.	55° F	DRILL RIG	CME-550X
DRILLER	D. BUTZER	DATUM	MSL	WT. SAMPLER HAMMER	140#	DROP	30"
STARTED	1600 5/3/96	COMPLETED	1215 5/8/96	WT. CASING HAMMER	NA	DROP	NA

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL. BLACK	M. MEDIUM	SA. SAMPLE	"TRACE" - 0-5%	CONSISTENCY
C.S. CHUNK SAMPLE	BR. BROWN	MC. MACEDONIS	SAT. SATURATED	"LITTLE" - 5-12%	
D.O. DRIVE OPEN	C. COARSE	MOT. MOTTLED	SD. SAND	"SOME" - 12-30%	
D.S. DEWSON SAMPLE	CA. CASING	NP. NON-PLASTIC	SI. SILT	"AND" - 30-50%	
P.S. PITCHER SAMPLE	CL. CLAY	OG. ORANGE	SIY. SILTY		
R.C. ROCK CORE	CLY. CLAYEY	ORG. ORGANIC	SM. SOME		
S.T. SLOTTED TUBE	F. FINE	PH. PRESSURE-HYDRAULIC	TR. TRACE		
T.O. THIN-WALLED, OPEN	FR. FRAGMENTS	PM. PRESSURE-MANUAL	WL. WATER LEVEL		
T.P. THIN-WALLED, PISTON	GL. GRAVEL	R. RED	WH. WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LYO. LAYERED	RES. RESIDUAL	Y. YELLOW		
	U. LITTLE	ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS/FT.	SAMPLES				q ^c (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMM. BLOWS PER 6 IN. (FORCE)	REC/ATT		
	FILL							1. 0-0.8 ft. - TOPSOIL (silt, brown, SILTY CLAY) 0.8-1.2 ft. - Crushed brick-concrete. FILL
2			1	SS	2-5-4-3	1.2 2.0	NR	2. 2-4 ft. - Crushed brick, concrete FILL
4			2	SS	10-6-17-15	1.0 2.0	NR	3. 4-6 ft. - Loose, brown, CLAYEY SILT with little brick, wood, gravel. FILL
6			3	SS	3-4-4-5	1.6 2.0	1.0	4. 6-8 ft. - Loose, brown, CLAYEY SILT with trace slag, gravel. FILL
8			4	SS	1-1-1-1	0.6 2.0	1.0	5. 8-10 ft. - Loose, variegated, brown to tan CLAYEY SILT with little brick red colored zones, little sand. Trace slag. FILL
10			5	SS	WH-WH-1-1	0.9 2.0	1.0	6. 10-12 ft. - Very loose, dark reddish brown, med. SAND with trace wood. Saturated. FILL
12			6	SS	WH-WH-WH-WH	1.5 2.0	NR	7. 12-14 ft. - Very loose, brown, med. to fine SAND with little clay.
14			7	SS	WH-WH-1-WH	0.8 2.0	NR	8. 14-16 ft. - Very loose, brown, SANDY GRAVEL with some clay and brick. FILL
16			8	SS	WH-WH-4-3	0.6 2.0	NR	9. 16-18 ft. - Loose gray, GRAVEL AND SAND with trace wood, some clay and brick. FILL Sample RFI23DSBF Collected.
18			9	SS	1-4-8-5	1.2 2.0	NR	10. 18-20 ft. - Loose gray, CLAYEY SILT with black varving, trace gravel to ~19 ft. then loose, brown, GRAVEL with little sand and clay.
20			10	SS	WH-WH-11-11	1.4 2.0	NR	11. 20-22 ft. - Loose, gray rounded GRAVEL with some sand, trace clay.
22	21.0 - ALLUVIUM		11	SS	WH-1-2-3	0.5 2.0	NR	

FIELD BORING LOG

DEPTH HOLE 62.5 JOB NO. 963-9117 PROJECT BCC/RFI/NY BORING NO. RFI-23D
 DEPTH SOIL DRILL 62.5 GA INSP. D. WEHN DRILLING METHOD 6-1/4, 4-1/4-INCH I.D. HOLLOW STEM AUGER SHEET 2 of 3
 DEPTH ROCK CORE 0 WEATHER CLOUDY DRILLING CO. SJB SERVICES SURFACE EL. 588.41
 NO. DIST. SA. 0 US. SA. 31 TEMP. 55° F DRILL RIG CME-550X DRILLER D. BUTZER DATUM MSL
 DEPTH WL. NA HRS. PROD. NA WT. SAMPLER HAMMER 140# DROP 30" STARTED 1600 5/3/96
 TIME WL. NA HRS. DELAYED NA WT. CASING HAMMER NA DROP NA COMPLETED 1215 5/8/96

SAMPLE TYPES

- A.S. AUGER SAMPLE
- C.S. CHURN SAMPLE
- D.O. DRIVE OPEN
- D.S. DENSON SAMPLE
- P.C. PITCHER SAMPLE
- R.C. ROCK CORE
- S.T. SLOTTED TUBE
- T.O. THIN-WALLED, OPEN
- T.P. THIN-WALLED, PISTON
- W.S. WASH SAMPLE

- BL BLACK
- BR BROWN
- CA CASING
- CL CLAY
- FR FINE FRAGMENTS
- GL GRAVEL
- LY LAYERED
- LT LITTLE

ABBREVIATIONS

- MC MEDIUM
- MP MOTTLED
- NP NON-PLASTIC
- OP ORANGE
- OR ORANGE
- PH PRESSURE-HYDRAULIC
- PM PRESSURE-MANUAL
- R RED
- RES RESIDUAL
- ROCK ROCK
- SA SAT
- SD SAND
- SLT SILT
- SM SOME
- TR TRACE
- WL WATER LEVEL
- WH WEIGHT OF HAMMER
- Y YELLOW

SOIL DESCRIPTION - RANGE OF PROPORTION

- "TRACE" - 0-5%
- "LITTLE" - 5-12%
- "SOME" - 12-30%
- "AND" - 30-50%

CONSISTENCY

- LS LOOSE
- OP COMPACT
- DM DENSE
- V VERY
- S SOFT
- PM FIRM
- ST STIFF
- H HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/FT.	SAMPLES				SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMM. BLOWS PER 8 IN. (FORC.)	REC/ATT	
24	ALLUVIUM		12	SS	4-4-4-4	1.1 2.0	NR - 12. 22-24 ft.- Loose, gray, rounded, coarse SAND with some gravel, trace clay.
			13	SS	4-5-9-10	1.5 2.0	NR - 13. 24-26 ft.- Loose, dark-gray, medium v. coarse SAND with trace gravel.
26			14	SS	4-6-10-10	1.8 2.0	NR - 14. 26-28 ft.- Loose, black, coarse SAND AND GRAVEL with trace clay.
			15	SS	2-3-10-9	2.0 2.0	NR - 15. 28-30 ft.- As above with little clay. Sample RFI23DGAF collected.
28			16	SS	5-25-36-19	1.6 2.0	NR - 16. 30-32 ft.- Compact, rust-red, GRAVEL AND SAND with trace clay.
30			17	SS	2-8-4-7	1.9 2.0	NR - 17. 32-33.8 ft.- Loose to compact reddish gray GRAVEL AND SAND with little clay to 33.8 ft. then v. soft gray-brown CLAY with trace silt partings. Sample RFI23DSAF collected.
32			18	SS	WH-WH-WH-WH	2.0 2.0	0.2 - 18. 34-36 ft.- Same as above.
34			19	SS	WH-WH-WH-WH	2.0 2.0	0.2 - 19. 36-38 ft.- Very soft, brown, with faint reddish varving. CLAY.
36			20	SS	WH-WH-WH-WH	2.0 2.0	0.2 - 20. 38-40 ft.- Same as above with trace silt partings 1/2 of Sample RFI23DG5-7C collected.
38			21	SS	WH-WH-WH-WH	2.0 2.0	0.2 - 21. 40-42 ft.- Same as above. second 1/2 of Sample RFI23DG5-7C collected.
40	33.8 - GLACIOLACUSTRINE CLAY		22	SS	WH-WH-WH-WH	2.0 2.0	0.2 - 22. 42-44 ft.- Same as above.
42							
44							

FIELD BORING LOG

DEPTH HOLE	62.5	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-230
DEPTH SOIL DRILL	62.5	GA INSP.	D. WEHN	DRILLING METHOD	6-1/4, 4-1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	3 of 3
DEPTH ROCK CORE	0	WEATHER	CLOUDY	DRILLING CO.	SJB SERVICES	SURFACE EL.	588.41
NO. DIST. SA.	0	US. SA.	31	TEMP.	55° F	DRILL RIG	CME-550X
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROPPED	30"
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROPPED	NA
						STARTED	1600 5/3/96
						COMPLETED	1215 5/8/96

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE C.S. CHUNK SAMPLE D.O. DRIVE OPEN D.S. DENISON SAMPLE P.S. PITCHER SAMPLE R.C. ROCK CORE S.T. SLOTTED TUBE T.O. THIN-WALLED, OPEN Y.P. THIN-WALLED, PISTON W.S. WASH SAMPLE	BL. BLACK BR. BROWN C. COARSE CA. CASING CL. CLAY CLY. CLAYEY F. FINE FRAG. FRAGMENTS GL. GRAVEL L.O. LAYERED U. LITTLE	M. MEDIUM MC. MICACEOUS MOT. MOTTLED NP. NON-PLASTIC OC. ORANGE ORG. ORGANIC PH. PRESSURE-HYDRAULIC PM. PRESSURE-MANUAL R. RESIDUAL RX. ROCK	SA. SATURATED SD. SAND SI. SILT SILTY SILT SOME TR. TRACE WL. WATER LEVEL WH. WEIGHT OF HAMMER Y. YELLOW	"TRACE" - 0-5% "LITTLE" - 5-12% "SOME" - 12-30% "AND" - 30-50% CONSISTENCY LS. LOOSE CP. COMPACT DN. DENSE V. VERY S. SOFT FM. FIRM ST. STIFF H. HARD	

ELEV. DEPTH	DESCRIPTION	BLOWS/FT.	SAMPLES				q ^a (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN. (FORCE)	REC/ATT		
	GLACIOLACUSTRINE CLAY							
			23	SS	WH-WH-WH-3	2.0 2.0	0.2	23. 44-46 ft.- Very soft, brown with faint reddish varving to mottling, CLAY with trace silt partings.
46								24. 46-48 ft.- As above.
			24	SS	WH-WH-WH-3	2.0 2.0	0.2	25. 48-50 ft.- As above.
								26. 50-52 ft.- As above.
48								27. 52-54 ft.- As above.
			25	SS	WH-WH-WH-1	2.0 2.0	0.2	28. 54-56 ft.- As above.
								29. 56-58 FT. - As above, grading to soft, gray-brown, CLAY with little sand, gravel and silt.
50			26	SS	WR-WR-WH	2.0 2.0	0.2	30. 58-60 FT. - Loose gray-brown, SILT with little sand and gravel and some clay. Sample RFI23DCBG (8270/8080,6000/7000,CN Analysis methods only).
								31. 60-62 FT. - As above, Samples RFI23DSBG AND RFI23DCBG (8260 Analysis method) collected.
52			27	SS	WR-WR-WH-2	2.0 2.0	0.2	
54			28	SS	WR-WR-WH-2	2.0 2.0	0.2	
56			29	SS	6-6-8-3 50/0.2	0.9 2.0	0.2	
58	58.0 - BASAL TILLS		30	SS	6-7-15-8	1.2 2.0	0.5	
60			31	SS	2-4-5-50/0.4	1.1 1.9		
62	61.9 - BEDROCK							
	62.5 - END OF BOREHOLE							
64								
66								

FIELD BORING LOG

DEPTH HOLE	8	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-24
DEPTH SOIL DRILL	8	GA INSP.	D. WEHN	DRILLING METHOD	4-1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 1
DEPTH ROCK CORE	0	WEATHER	CLOUDY	DRILLING CO.	SJB SERVICES	SURFACE EL.	NA
NO. DIST. SA.	0	U.S. SA.	4	TEMP.	55° F	DRILL RIG	CME-550X
				DRILLER	D. BUTZER	DATUM	MSL
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						COMPLETED	1638 5/3/96

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE C.S. CHURN SAMPLE D.O. DRIVE OPEN D.S. DEMONSTRATION SAMPLE P.S. PITCHER SAMPLE R.C. ROCK CORE S.T. SLOTTED TUBE T.O. THIN-WALLED, OPEN T.P. THIN-WALLED, PISTON W.S. WASH SAMPLE	BL BLACK BR BROWN C COARSE CA CASING CL CLAY CLY CLAYEY F FINE FRAG FRAGMENTS L LAYERED LYD LAYERED U UTILE	M MEDIUM MC MEDIUM COARSE MOT MOTTLED NP NON-PLASTIC OG ORANGE ORG ORANGE PH PRESSURE-HYDRAULIC PM PRESSURE-MANUAL R RED RES RESIDUAL RX ROCK	SA SATURATED SD SAND SILT SILTY SM SOME TR TRACE WL WATER LEVEL WH WEIGHT OF HAMMER Y YELLOW	"TRACE" - 0-5% "LITTLE" - 5-12% "SOME" - 12-30% "AND" - 30-50%	CONSISTENCY LS LOOSE CP COMPACT DN DENSE V VERY S SOFT PM FIRM ST STIFF H HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				q ^a (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN. (FORCE)	REC/ATT		
			1	SS	1-5-7-13	1.2 2.0	1.5	1. 0-2 ft.- TOPSOIL. Concrete from 1.8-2.0 ft.
2			2	SS	7-11- 19-8	1.2 2.0		2. 2-4 ft.- Firm, brown, SILTY CLAY with little gravel and brick. FILL
4			3	SS	4-7-6-6	0.6 2.0		3. 4-6 ft.- As. above.
6			4	SS	37-2-3-5	0.0 2.0		4. No recovery - concrete blocked off spoon.
8	8.0 - END OF BOREHOLE							NO AUGERING POSSIBLE-REBAR IN CONCRETE. ABANDONED HOLE, FILLED WITH CHIPS.
10								
12								
14								
16								
18								
20								
22								

ABANDONED

FIELD BORING LOG

DEPTH HOLE	32.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-24
DEPTH SOIL DRILL	32.0'	GA INSP.	D. WEHN	DRILLING METHOD	4 1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 2
DEPTH ROCK CORE	0	WEATHER	SUN	DRILLING CO.	SJB SERVICES	SURFACE EL.	584.34
NO. DIST. SA.	0	U.S. SA.	13	TEMP.	70° F	DRILL RIG	ACKER SOILMAX
DRILLER	R. STEINER	DATUM	MSL	WT. SAMPLER HAMMER	140#	DROP	30"
DEPTH WL.	NA	HRS. PROD.	NA	STARTED	1445 5/15/96		
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
				COMPLETED	1645 5/21/96		

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S. AUGER SAMPLE	BL BLACK	M MIC	MEAN MICA/ZEOLUS	SA SAMPLE	"TRACE" - 0-5%	CONSISTENCY		
C.S. CHUMK SAMPLE	BR BROWN	MC MOTTLED	NON-PLASTIC	SAT SATURATED	"LITTLE" - 5-12%			
D.O. DRIVE OPEN	C COARSE	HP NON-PLASTIC	ORANGE	SD SAND	"SOME" - 12-30%			
D.S. DENSON SAMPLE	CA CASING	OG ORANGE	ORGANIC	SI SILT	"AND" - 30-50%			
P.S. PITCHER SAMPLE	CL CLAY	ORC ORG	PH PRESSURE-HYDRAULIC	ST SILTY		LS LOOSE	S SOFT	
R.C. ROCK CORE	CLY CLAYEY	PH PRESSURE-HYDRAULIC	PM PRESSURE-MANUAL	SM SOME		CP COMPACT	FM FIRM	
S.T. SLOTTED TUBC	F FINE	PM PRESSURE-MANUAL	R RED	TR TRACE		DN DENSE	ST STIFF	
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	R RED	RES RESIDUAL	WL WATER LEVEL		V VERY	H HARD	
T.P. THIN-WALLED, PISTON	GL GRAVEL	RES RESIDUAL	Y YELLOW	WH WEIGHT OF HAMMER				
W.S. WASH SAMPLE	LYD LAYERED	Y YELLOW						
	LI LITTLE							

ELEV. DEPTH	DESCRIPTION	BLOWS/FT.	SAMPLES				q ^u (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN. (FORCE)	REC/ATT		
	ASPHALT							
	0.3 FT. - FILL		1	SS	NA-12-9-10	0.8 1.5	NR	1. 0.5-2.0 ft.- Loose, crushed brick and concrete with trace slag. FILL
2			2	SS	7-4-3-4	1.1 2.0	NR	2. 2-4 ft.- As above to 2.4 ft. then a loose, white granular substance, med. sand sized. FILL Sample RFI24S2F collected.
4			3	SS	2-5-3-1	0.4 2.0	NR	3. 4-6 ft.- As from 2.4 ft. above. Sample RFI24S5F Collected.
6			4	SS	4-3-1-10/0.1	0.6 1.6	NR	4. 6-7.6 ft.- Loose, white, sand to silt sized substance. Sample RFI24C5F Collected. Spoon refusal at 7.6 ft.
8	7.6 - CONCRETE							9-10 ft.- Solid concrete. No spoon sample collected. Augered through.
10								10-12 ft.- Solid concrete. No spoon sample collected. Augered through.
12								12-14 ft.- As above. Augered from 7.6 to 12.5 then switched to a 7 7/8-INCH DIA. roller bit from 12.5 to 15.0. Augered from 15.0 to 16.0 ft.
14								14-16 ft.- Concrete to approx. 14.5 ft. No sample.
16								5. 16-18 ft.- Loose, black, very coarse SAND AND GRAVEL with trace brick. FILL
18								6. 18-20 ft.- As above with some gravel, trace brick.
20	14.5 - FILL							7. 20-22 ft.- Compact to dense, black, v. coarse SAND with some gravel. Saturated Sample RFI24SWT collected. Petroliferous odor.
22	20.0 - ALLUVIUM		5	SS	11-11-5-2	0.8 2.0	NR	
			6	SS	9-5-2-2	0.1 2.0	NR	
			7	SS	1-50-34-20	1.5 2.0	1.0	

FIELD BORING LOG

DEPTH HOLE	32.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-24
DEPTH SOIL DRILL	32.0'	GA INSP.	D. WEHN	DRILLING METHOD	4 1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	2 of 2
DEPTH ROCK CORE	0	WEATHER	SUN	DRILLING CO.	SJB SERVICES	SURFACE EL.	584.34
NO. DIST. SA.	0	US. SA.	13	TEMP.	70° F	DRILL RIG	ACKER SOILMAX
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						STARTED	1445 5/15/96
						COMPLETED	645 5/21/96

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" - 0-5%	
C.S. CHUNK SAMPLE	BR BROWN	MC MICACEOUS	SAT SATURATED	"LITTLE" - 5-12%	
D.O. DRIVE OPEN	C COARSE	MT MOTTLED	SD SAND	"SOME" - 12-30%	
D.S. DENISON SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT	"AND" - 30-50%	
P.S. PITCHER SAMPLE	CL CLAY	OC ORANGE	SH SH		
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SOME		
S.T. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE		
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL		
T.P. THIN-WALLED, PISTON	CL DRAGEL	R RED	WH WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LYD LAYERED	RES RESIDUAL	Y YELLOW		
	U LITTLE	ROCK ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMM. BLOWS PER 6 IN. (FORCE)	REC/ATT	
24	ALLUVIUM		8	SS	7-17-14-13	1.2 2.0	NR
							8. 22-24 ft.- Compact, gray-black, v. coarse SAND with some gravel. Petroliferous odor.
			9	SS	9-14-15-14	1.0 2.0	NR
							9. 24-26 ft.- As above. First half of RFI24GAF collected. Petroliferous odor.
							10. 26-28 ft.- As above, grading to SILT AND SAND with no gravel. Petroliferous odor. Remainder of RFI24GAF collected.
26			10	SS	7-2-2-4	1.2 2.0	NR
							11. 28-30 ft.- Loose to compact, gray-black, coarse SAND with some silt, trace gravel.
							12. 30-32 ft.- As above to 30.9 ft. then soft, uniform brown, CLAY.
28			11	SS	5-9-12-15	1.4 2.0	NR
							13. 32-34 ft.- As from 30.9 ft. above. Sample RFI24G0-2C collected.
30							
32	30.9 - GLACIOLACUSTRINE CLAY		12	SS	7-7-8-7	1.8 2.0	0.2
	32.0 - END OF BOREHOLE						
34			13	SS	2-1-1-1	2.0 2.0	0.2
36							
38							
40							
42							
44							

FIELD BORING LOG

DEPTH HOLE	30.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-25
DEPTH SOIL DRILL	30.0'	GA INSP.	D. WEHN	DRILLING METHOD	4 1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 2
DEPTH ROCK CORE	0	WEATHER	RAIN	DRILLING CO.	SJB SERVICES	SURFACE EL.	584.14
NO. DIST. SA.	0	US. SA.	15	TEMP.	50° F	DRILL RIG	CME-550X
				DRILLER	D. BUTZER	DATUM	MSL
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
						STARTED	1245 4/30/96
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						COMPLETED	1500 4/30/96

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" - 0-5%	
C.S. CHUNK SAMPLE	BR BROWN	MC MACROSCOPIC	SAT SATURATED	"LITTLE" - 5-12%	
D.O. DRIVE OPEN	C COARSE	MT MOTTLED	SD SAND	"SOME" - 12-30%	
D.S. DENSON SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT	"AND" - 30-50%	
P.S. PITCHER SAMPLE	CL CLAY	OZ ORANGE	ST SILTY		
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SOME		
S.T. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE		
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL		
T.P. THIN-WALLED, PISTON	Q DRILL	R RESIDUAL	WH WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LYD LAYERED	RK ROCK	Y YELLOW		
	LI LITTLE				

ELEV. DEPTH	DESCRIPTION	BLOWS/FT.	SAMPLES				q ^a (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN. (FORCE)	REG/ATT		
	FILL							1. 0-2.0 ft.- Loose, black, GRAVEL AND SAND with some silt, brick, concrete etc. FILL
2			1	SS	2-3-3-1	0.8 2.0	NR	2. 2-4 ft.- As above. Samples RFI25S2F and RFI25C2F collected. FILL
4			2	SS	2-2-1-2	1.5 2.0	NR	3. 4-6 ft.- As above. FILL Sample RFI25S5F Collected.
6			3	SS	3-1-1-1	0.2 2.0	NR	4. 6-8 ft.- As above, grading to reddish-brown in color. FILL
8			4	SS	2-1-2-1	0.6 2.0	NR	5. 8-10 ft.- Loose, reddish-brown, SAND AND GRAVEL with slag fragments. FILL
10			5	SS	2-2-2-1	0.8 2.0	NR	6. 10-12 ft.- As above, varving in color from brown to blueish-black with silty clay portions. FILL
12			6	SS	2-2-1-1	1.3 2.0	0.5	7. 12-14 ft.- Loose, black, coarse SAND with trace gravel and wood. FILL
14			7	SS	3-4-33-50/0.1	1.5 1.6	NR	8. 14-16 ft.- As above with some gravel, Saturated. Sample RFI25SWT collected.
16	14.0 - ALLUVIUM		8	SS	5-1-2-2	1.1 2.0	NR	9. 16-18 ft.- Firm, black, SILTY CLAY with little sand, strong crude oil odor.
18			9	SS	2-3-2-7	1.3 2.0	NR	10. 18-20 ft.- Loose, black, coarse SAND with trace gravel and leaves. Crude oil odor.
20			10	SS	2-1-3-4	1.0 2.0	NR	11. 20-22 ft.- As above with no leaves or odor.
22			11	SS	4-3-2-2	1.3 2.0	NR	

FIELD BORING LOG

DEPTH HOLE 30.0' JOB NO. 963-9117 PROJECT BCC/RFI/NY BORING NO. RFI-25
 DEPTH SOIL DRILL 30.0' GA INSP. D. WEHN DRILLING METHOD 4 1/4-INCH I.D. HOLLOW STEM AUGER SHEET 2 of 2
 DEPTH ROCK CORE 0 WEATHER RAIN DRILLING CO. SJB SERVICES SURFACE EL. 584.14
 NO. DIST. SA. 0 U.S. SA. 15 TEMP. 50° F DRILL RIG CME-550X DRILLER D. BUTZER DATUM MSL
 DEPTH WL. NA HRS. PROD. NA WT. SAMPLER HAMMER 140# DROP 30" STARTED 1245 4/30/96
 TIME WL. NA HRS. DELAYED NA WT. CASING HAMMER NA DROP NA COMPLETED 1500 4/30/96

SOIL DESCRIPTION - RANGE OF PROPORTION

"TRACE" - 0-5%
 "LITTLE" - 5-12%
 "SOME" - 12-30%
 "AND" - 30-50%

CONSISTENCY

LS LOOSE S SOFT
 CP COMPACT FM FIRM
 DH DENSE ST STIFF
 V VERY H HARD

SAMPLE TYPES

A.S. AUGER SAMPLE
 C.S. CHURN SAMPLE
 D.O. DRIVE OPEN
 D.S. DENSON SAMPLE
 P.S. PITCHER SAMPLE
 R.C. ROCK CORE
 S.T. SLOTTED TUBE
 T.O. THIN-WALLED, OPEN
 T.P. THIN-WALLED, PISTON
 W.S. WASH SAMPLE

BL BLACK
 BR BROWN
 C COARSE
 CA CASING
 CL CLAY
 CLY CLAYEY
 F FINE
 FRAG FRAGMENTS
 G GRAVEL
 L LAYERED
 LIT LITTLE

ABBREVIATIONS

M MEDIUM
 MC MICACEOUS
 MOT MOTTLED
 NP NON-PLASTIC
 OC ORANGE
 ORC ORGANIC
 PH PRESSURE-HYDRAULIC
 PM PRESSURE-MANUAL
 R RED
 RES RESIDUAL
 RX ROCK
 SA SATURATED
 SD SAND
 SI SILT
 SILT SILTY
 SM SOME
 TR TRACE
 WL WATER LEVEL
 WH WEIGHT OF HAMMER
 Y YELLOW

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				q _a (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAND. BLOWS PER 6 IN. (FORCE)	REC/ATT		
24	ALLUVIUM		12	SS	2-2-3-4	1.5 2.0	NR	12. 22-24 ft.- Loose, black, coarse SAND with some gravel and crude oil odor.
			13	SS	4-7-8-6	1.7 2.0	NR	13. 24-26 ft.- Loose, black to gray. GRAVEL AND SAND. Crude oil odor.
26			14	SS	5-5-6-3	1.8 2.0	0.2	14. 26-28 ft.- As above to 27.8 ft. then soft, brown, CLAY.
28	27.8 - GLACIOLACUSTRINE CLAY		15	SS	WH-WH-WH-WH	2.0 2.0	0.2	15. 28-30 ft.- Soft, brown, CLAY with trace silt stringers.
30	30.0 - END OF BOREHOLE							
32								
34								
36								
38								
40								
42								
44								

FIELD BORING LOG

DEPTH HOLE	36.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-26
DEPTH SOIL DRILL	36.0'	GA INSP.	D. WEHN	DRILLING METHOD	4 1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 2
DEPTH ROCK CORE	0	WEATHER	SUN	DRILLING CO.	SJB SERVICES	SURFACE EL.	585.17
NO. DIST. SA.	0	US. SA.	18	TEMP.	55° F	DRILL RIG	CME-550X
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						STARTED	1430 5/2/96
						COMPLETED	0930 5/3/96

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	M MIC	MEDM MEDIUM	SA SAT	SAMPLE SATURATED
C.S. CHUNK SAMPLE	BR BROWN	MC MIC	MICACEOUS	SAT SAT	SAND
D.O. DRIVE OPEN	C COARSE	MO MOTTLED	MOTTLED	SF SALT	SALT
D.S. DENSITY SAMPLE	CA CASING	NP NON-PLASTIC	NON-PLASTIC	SY SILTY	SILT
P.S. PITCHER SAMPLE	CL CLAY	OG ORANGE	ORANGE	SM SOME	SOME
R.C. ROCK CORE	CLY CLAYEY	ORC ORG	ORGANIC	TR TRACE	TRACE
S.T. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	PRESSURE-HYDRAULIC	WL WATER LEVEL	WATER LEVEL
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	PRESSURE-MANUAL	WH WEIGHT OF HAMMER	WEIGHT OF HAMMER
T.P. THIN-WALLED, PISTON	CL GRAVEL	R RES	RESIDUAL	Y YELLOW	YELLOW
W.S. WASH SAMPLE	LYD LAYERED	RES RES	RESIDUAL		
	U LITTLE	ROCK	ROCK		

ELEV. DEPTH	DESCRIPTION	BLOWS/FT.	SAMPLES				SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMM. BLOWS PER 8 IN. (FORCE)	REC/ATT	
	FILL						
			1	SS	4-7-7-99	1.6 2.0	NR
2							1. 0-2.0 ft.- 0-0.6 ft. Topsoil, 0.6-2.0 ft. loose, brown SAND and gravel with trace clay. FILL. Sample RFI26S2F and FDUP02 collected.
							2. No sample - concrete floor - penetrated with augers. FILL
4							3. 4-6 ft.- Loose, soft, dark purple-black variegated CLAY, SILT AND SAND. FILL
							Samples RFI26S5F and RFI26C5F collected.
			3	SS	2-2-3-1	1.8 2.0	1.5
6							4. 6-8 ft.- Loose, purple-gray grading to gray, SILT.
							5. 8-10 ft.- Loose, gray, SILT grading to a clayey silt.
8			4	SS	WH-WH- WH-1	2.0 2.0	1.0
							6. 10-12 ft.- Soft, gray SILTY CLAY with faint motling. Saturated. Sample RFI26SWT collected.
			5	SS	1-2-2-3	2.0 2.0	1.2
10							7. 12-14 ft.- As above with trace limonite.
							8. 14-16 ft.- Loose, gray, SAND AND SILT with little clay.
12							9. 16-18 ft.- As above grading to loose, dark gray med. to coarse SAND with little silt.
			7	SS	WH-WH- 2-2	1.8 2.0	1.0
							10. 18-20 ft.- As above with trace compressed leaves.
14	14.0 - ALLUVIUM						11. 20-22 ft.- Very loose, dark gray, med. SAND.
			8	SS	WH-1-1-1	2.0 2.0	0.2
16							
			9	SS	WH-1-1-2	2.0 2.0	NR
18							
			10	SS	WH-1-1-2	2.0 2.0	NR
20							
			11	SS	WR-WR- WR-WH	1.1 2.0	NR
22							

FIELD BORING LOG

DEPTH HOLE	36.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-26
DEPTH SOIL DRILL	36.0'	GA INSP.	D. WEHN	DRILLING METHOD	4 1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	2 of 2
DEPTH ROCK CORE	0	WEATHER	SUN	DRILLING CO.	SJB SERVICES	SURFACE EL.	585.17
NO. DIST. SA.	0 U.S. SA.	TEMP.	55° F	DRILL RIG	CME-550X	DRILLER	D. BUTZER
						DATUM	MSL
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
						STARTED	1430 5/2/96
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						COMPLETED	0930 5/3/96

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION			
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE"	0-5%
B.R.	BROWN	MC	MICACEOUS	MC	MICA	SAT	SATURATED	"LITTLE"	6-12%
C.S.	CHUNK SAMPLE	C	COARSE	MOT	MOTTLED	SD	SAND	"SOME"	12-30%
D.O.	DRY OPEN	CA	CASING	NP	NON-PLASTIC	S	SILT	"AND"	30-50%
D.S.	DENSION SAMPLE	CL	CLAY	OC	ORANGE	SY	SALT		
P.	PISTON SAMPLE	Q	QUARTZ	ORG	ORGANIC	SOM	SOME		
R.C.	ROCK CORE	CLY	CLAYEY	PH	PRESSURE-HYDRAULIC	TR	TRACE		
S.T.	SHOT TUBE	F	FINE	PM	PRESSURE-MANUAL	WL	WATER LEVEL	LS	LOOSE
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	RD	RED	WH	WEIGHT OF HAMMER	CP	COMPACT
T.P.	THIN-WALLED, PISTON	GRL	GRAVEL	RES	RESIDUAL	Y	YELLOW	DN	DENSE
W.S.	WASH SAMPLE	LTD	LAYERED	RX	ROCK			SV	SOFT
		LUT	LITTLE					ST	STIFF
								H	HARD

CONSISTENCY

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				q" (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMM. BLOWS PER 6 IN. (FORCES)	REG/ATT		
24	ALLUVIUM		12	SS	1-2-2-3	$\frac{2.0}{2.0}$	NR	12. 22-24 ft.- Loose, black, coarse SAND with trace silt.
			13	SS	3-2-3-4	$\frac{1.7}{2.0}$	0.1	13. 24-26 ft.- As above with trace of leaves and gravel.
26			14	SS	4-6-8-8	$\frac{1.8}{2.0}$	NR	14. 26-28 ft.- As above, grading to loose, black, GRAVEL with some coarse sand.
								15. 28-30 ft.- As above, grading back to loose, black, coarse SAND with little gravel.
28			15	SS	5-8-11-7	$\frac{1.7}{2.0}$	NR	16. 30-32 ft.- As above.
								17. 32-34 ft.- As above, grading to loose, black fine to med. SAND with trace compressed leaves.
30			16	SS	5-5-8-7	$\frac{1.8}{2.0}$	NR	18. 34-36 ft.- As above to 34.2 ft. then soft reddish-brown to brown, varved CLAY with trace of silt partings.
								32
34			18	SS	1-WH-1	$\frac{2.0}{2.0}$	0.2	
								34.2 - GLACIOLACUSTRINE CLAY
36	36.0 - END OF BOREHOLE							
38								
40								
42								
44								

FIELD BORING LOG

DEPTH HOLE	18.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-27
DEPTH SOIL DRILL	18.0'	GA INSP.	D. WEHN	DRILLING METHOD	4-1/2" I.D. HOLLOW STEM AUGER	SHEET	1 of 1
DEPTH ROCK CORE	0	WEATHER	CLOUDY	DRILLING CO.	SUB SERVICES	SURFACE EL.	
NO. DIST. SA.	0	US. SA.	9	TEMP.	65° F	DRILL RIG	CME-85
						DRILLER	A. MILLER
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						STARTED	1430 4/25/96
						COMPLETED	1630 4/25/96

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL. BLACK	M. MEDIUM	SA. SAMPLE	"TRACE" - 0-5%	
C.S. CHUNK SAMPLE	BR. BROWN	MC. MICACEOUS	SAT. SATURATED	"LITTLE" - 5-12%	
D.O. DRIVE OPEN	C. COARSE	MOT. MOTTLED	SD. SAND	"SOME" - 12-30%	
D.S. DENISON SAMPLE	CA. CASING	NP. NON-PLASTIC	SI. SILT	"AND" - 30-50%	
P.S. PITCHER SAMPLE	CL. CLAY	OC. ORANGE	SY. SILTY		
R.C. ROCK CORE	CLY. CLAYEY	ORG. ORGANIC	SM. SOME		
S.T. SLOTTED TUBE	F. FINE	ORG. ORGANIC	TR. TRACE		
T.O. THIN-WALLED, OPEN	FRAG. FRAGMENTS	PH. PM. PRESSURE-HYDRAULIC	WL. WATER LEVEL		
T.P. THIN-WALLED, PISTON	QL. GRAVEL	PM. PRESSURE-MANUAL	WH. HEIGHT OF HAMMER		
W.S. WASH SAMPLE	LYD. LAYERED	R. RED	Y. YELLOW		
	UTL. LITTLE	RES. RESIDUAL			
		ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				q ⁹ (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN. (FORCE)	REG/ATT		
	FILL		1	SS	2-5-2-3	1.1 2.0	NR	1. 0-2 ft.- Firm, brown, SILTY CLAY/ brick debris/ med. to coarse sand. FILL
2								2. 2-4 ft.- As above. Sample RFI27S2F collected.
			2	SS	2-13-13-10	0.8 2.0	NR	3. 4-6 ft.- Crushed brick and concrete. Sample RFI27S5F collected. FILL
4								4. 6-8 ft.- Crushed brick, metal cable, wood, crushed concrete. FILL
			3	SS	4-6-15-12	0.6 2.0	NR	5. 8-10 ft.- 8-9.2 ft. concrete (augured not spoon sampled) crushed stone, concrete brick. FILL
6								6. 10-12 ft.- Soft, dark gray, SILTY CLAY with trace wood, concrete. FILL
			4	SS	12-8-8-28	1.0 2.0	NR	7. 12-14 ft.- Stiff, med. brown SILTY CLAY with faint varving and little silt and sand partings. Samples RFI27SWT and RFI27CWT collected.
8								8. 14-16 ft.- As above with trace of silt and sand partings and grading to firm.
			5	SS	NA-NA-5-2	0.3 1.0	NR	9. 16-18 ft.- Soft, med. brown CLAY with trace sand, silt partings.
10								
			6	SS	1-2-5-5	0.3 2.0	0.2	
12	12.0' - UPPER TILLS							
			7	SS	2-4-5-5	1.8 2.0	2.0	
14								
			8	SS	1-3-3-2	2.0 2.0	1.0	
16	16.0' - GLACIOLACUSTRINE CLAY							
			9	SS	WH-WH-WH-1	2.0	0.2	
18	18.0' - END OF BOREHOLE							
20								
22								

FIELD BORING LOG

DEPTH HOLE	16.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-28
DEPTH SOIL DRILL	16.0'	GA INSP.	D. WEHN	DRILLING METHOD	4-1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 1
DEPTH ROCK CORE	0	WEATHER	CLOUDY	DRILLING CO.	SJB SERVICES	SURFACE EL.	585.90
NO. DIST. SA.	0	US. SA.	9	TEMP.	55° F	DRILL RIG	ACKER SOILMAX
						DRILLER	R. STEINER
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						STARTED	0950 5/16/96
						COMPLETED	1100 5/16/96

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION					
A.S.	AUGER SAMPLE	BK	BLACK	M	MEDIAN	SA	SAMPLE	"TRACE"	0-5%		
C.S.	CHURK SAMPLE	BR	BROWN	MC	MEGACIOUS	SAT	SATURATED	"LITTLE"	5-12%		
D.O.	DRIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND	"SOME"	12-30%		
D.S.	DENISON SAMPLE	CA	CASING	NP	NON-PLASTIC	SF	SILT	"FAND"	30-50%		
P.S.	PITCHER SAMPLE	CL	CLAY	OR	ORANGE	SV	SILTY				
R.C.	ROCK CORE	CLY	CLAYEY	ORG	ORGANIC	SW	SOME				
S.T.	SKOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE				
T.O.	TURN-WALLED, OPEN	FRAC	FRAGMENTS	PN	PRESSURE-MANUAL	WL	WATER LEVEL	LS	LOOSE	S	SOFT
T.P.	TURN-WALLED, PISTON	GL	GRAVEL	RD	RED	WR	WEIGHT OF HAMMER	CM	COMPACT	FM	FIRM
W.S.	WASH SAMPLE	LVD	LAYERED	RES	RESIDUAL	Y	YELLOW	DN	DENSE	ST	STIFF
		U	LITTLE	RL	ROOM			V	VERY	H	HARD

CONSISTENCY

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				q^* (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAND. BLOW PER 6 IN. (FOUR)	REC/ATT		
FILL			1	SS	2-3-6-12	1.2 2.0	0.5	1. 0-2 ft.- Firm, brown, SILTY CLAY with some slag, trace brick, trace blue sand. Samples RF128S2F, RF128C2F, FDUP03 and FDUP04 collected. FILL
2			2	SS	36-24-50/0.1	0.8 1.1	NR	2. 2-3.1 ft.- Crushed concrete-augered through to 4.0 ft. FILL
4			3	SS	4-3-2-2	1.6 2.0	NR	3. 4-6 ft.- Loose, purple-black, SILT AND SAND with trace brick, trace clayey zones. Sample RF128SSF collected.
6			4	SS	4-1-1-5	1.1 2.0	NR	4. 6-8 ft.- Loose, purple-black, SAND AND GRAVEL with trace brick. FILL
8			5	SS	4-2-3-1	0.8 2.0	NR	5. 8-10 ft.- As above. Saturated Sample RF128SWT collected.
10			6	SS	1-1-5-6	1.2 2.0	1.2	6. 10-12 ft.- As above to 11.4 ft. then firm, brown, mottled, SILTY CLAY.
12	11.4' - UPPER TILLS		7	SS	2-2-2-3	1.6 2.0	1.0	7. 12-14 ft.- Firm, gray, mottled SILTY CLAY.
14			8	SS	1-WH-1-2	1.7 2.0	0.2	8. 14-16 ft.- As above grading to soft, gray CLAY.
16	15.0' - GLACIOLACUSTRINE CLAY		9	SS	1-1-1-1	1.8 2.0	0.2	9. 16-18 ft.- Soft, gray CLAY with trace silt.
18	16.0' - END OF BOREHOLE							
20								
22								

FIELD BORING LOG

DEPTH HOLE	14.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-29
DEPTH SOIL DRILL	14.0'	GA INSP.	D. WEHN	DRILLING METHOD	4-1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 1
DEPTH ROCK CORE	0	WEATHER	CLOUDY	DRILLING CO.	SJB SERVICES	SURFACE EL.	584.01
NO. DIST. SA.	0	US. SA.	7	TEMP.	65° F	DRILL RIG	ACKER SOILMAX
DRILLER	R. STEINER	DATUM	MSL	WT. SAMPLER HAMMER	140#	DROP	30"
DEPTH WL.	NA	HRS. PROD.	NA	WT. CASING HAMMER	NA	DROP	NA
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
STARTED	1000 5/17/96	COMPLETED	1130 5/17/96				

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	TRACE - 0-5%				
C.S. CHUNK SAMPLE	BR BROWN	MC MICACEOUS	SAT SATURATED	LITTLE - 5-12%				
D.O. DRIVE OPEN	C COARSE	MOT MOTTLED	SD SAND	SOME - 12-30%				
D.S. DENSOM SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT	AND - 30-50%				
P.S. PITCHER SAMPLE	CL CLAY	OG ORANGE	SY SILTY					
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SOME					
S.T. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE					
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL					
T.P. THIN-WALLED, PISTON	GL GRAVEL	R RED	WH WEIGHT OF HAMMER					
W.S. WASH SAMPLE	LID LAYERED	RES RESIDUAL	Y YELLOW					
	U LITTLE	ROCK ROCK						

ELEV. DEPTH	DESCRIPTION	BLOWS/FT.	SAMPLES				q ⁿ (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN. (FORCE)	REC/ATT		
	CONCRETE							1. 0.8-2.0 ft.- Crushed limestone. Augered with no sampling from 0.0-0.8 ft. (Concrete)
2	0.8 - CRUSHED STONE FILL		1	SS	8/0.2-11-14	0.1/1.2	NR	2. 2-4 ft.- As above to 3.0 ft. then loose. brown, med. to coarse SAND with trace gravel. Sample RFI29S2F.
4	3.0 - ALLUVIUM		2	SS	16-7-7-3	1.4/2.0	NR	3. 4-6 ft.- As above with little gravel. Samples RFI29S5F and RFI29C5F collected. Saturated.
6			3	SS	2-2-2-2	1.6/2.0	NR	4. 6-8 ft.- As above to 7.4 ft. then firm, brown to black mottled, SILTY CLAY. Sample RFI29SWT collected.
8	7.4 - UPPER TILLS		4	SS	2-1-1-3	1.8/2.0	0.5	5. 8-10 ft.- Firm, brown with faint varving, SILTY CLAY with little silt and fine sand partings.
10			5	SS	1-4-4-5	1.9/2.0	1.5	6. 10-12 ft.- As above grading to soft, brown with faint varving, CLAY with little silt and med. sand partings.
12	11.2 - GLACIOLACUSTRINE CLAY		6	SS	1-2-2-3	2.0/2.0	0.5	7. 12-14 ft.- As above with varving a reddish-brown.
14	14.0 - END OF BOREHOLE		7	SS	1-1-1-2	2.0/2.0	0.2	
16								
18								
20								
22								

FIELD BORING LOG

DEPTH HOLE	15.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-30
DEPTH SOIL DRILL	15.0'	GA INSP.	D. WEHN	DRILLING METHOD	4-1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 1
DEPTH ROCK CORE	0	WEATHER	CLOUDY	DRILLING CO.	SJB SERVICES	SURFACE EL.	585.56
NO. DIST. SA.	0	U.S. SA.	8	TEMP.	55° F	DRILL RIG	CME-85
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						STARTED	1030 4/25/96
						COMPLETED	1145 4/25/96

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL. BLACK	M. MEDIAN	SA. SAMPLE	"TRACE" - 0-5%	CONSISTENCY
C.S. CHUNK SAMPLE	BR. BROWN	MC. MUCKY	SAT. SATURATED	"LITTLE" - 5-12%	
D.O. DRIVE OPEN	C. COARSE	MT. MOTTLED	SD. SAND	"SOME" - 12-30%	
D.S. DENSON SAMPLE	CA. CASING	NP. NON-PLASTIC	SI. SILT	"AND" - 30-50%	
P.S. PITCHER SAMPLE	CL. CLAY	OG. ORANGE	SY. SILTY		
R.C. ROCK CORE	CLY. CLAYEY	ORG. ORGANIC	SN. SOME		
S.T. SLOTTED TUBE	F. FINE	PH. PRESSURE-HYDRAULIC	TR. TRACE		
T.O. THIN-WALLED, OPEN	FRAG. FRAGMENTS	PM. PRESSURE-MANUAL	WL. WATER LEVEL		
T.P. THIN-WALLED, PISTON	CL. GRAVEL	R. RESIDUAL	WH. WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LYD. LAYERED	RES. RESIDUAL	Y. YELLOW		
	LI. LITTLE	RX. ROCK			
				LS. LOOSE	S. SOFT
				CP. COMPACT	PM. FIRM
				DN. DENSE	ST. STIFF
				V. VERY	H. HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				q ^a (Tons/ft. ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMM. BLOWS PER 6 IN. (FORCE)	REC/ATT		
	FILL							1. 0.0-2.0 ft.- Black to gray brown, crushed stone, concrete, and silty clay. FILL
2			1	SS	4-4-7-7	1.5 2.0	NR	2. 2-4 ft.- Black to dark gray, silty clay, coal, brick. FILL Saturated. Sample RFI30S3F collected.
4			2	SS	6-8-8-10	1.6 2.0	NR	3. 4-6 ft.- Brick blocked off spoon
6			3	SS	5-5-2-3	0.1 2.0	NR	4. 6-8 ft.- Stiff, dark gray to yellow-brown, SILTY CLAY with trace of limonite staining, trace of sand (in a lens). Sample RFI30S6F collected.
8	6.0 - UPPER TILLS		4	SS	WH-3-6-5	1.2 2.0	2.5	5. 8-10 ft.- Stiff to very stiff, med. brown, SILTY CLAY with gray mottling, little sand/silt partings.
10			5	SS	3-6-9-13	2.0 2.0	3.0	6. 10-12 ft.- As above.
12			6	SS	4-7-9-9	2.0 2.0	2.5	7. 12-14 ft.- As above grading to soft, med. brown CLAY with trace silt and faint varving by 13.8 ft. Samples RFI30SWT and RFI30CWT collected.
14	13.8 - GLACIOLACUSTRINE CLAY		7	SS	3-3-3-3	2.0 2.0	1.0	8. 14-16 ft.- Soft, med. brown with faint reddish varving, CLAY with trace silt partings.
16			8	SS	WH-WH-1-2	2.0 2.0	0.2	
18	16.0 - END OF SAMPLING							
20								
22								

FIELD BORING LOG

DEPTH HOLE	14.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-31
DEPTH SOIL DRILL	14.0'	GA INSP.	D. WEHN	DRILLING METHOD	4-1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 1
DEPTH ROCK CORE	0	WEATHER	CLOUDY	DRILLING CO.	SJB SERVICES	SURFACE EL.	585.76
NO. DIST. SA.	0	US. SA.	7	TEMP.	65° F	DRILL RIG	ACKER SOILMAX
	NA					DRILLER	R. STEINER
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
						STARTED	1500 5/16/96
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						COMPLETED	1620 5/16/96

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL. BLACK	MC MEDIUM	SA. SAMPLE	"TRACE" - 0-5%	
B.S. BROWN SAMPLE	BR. BROWN	MG MICAEOUS	SAT SATURATED	"LITTLE" - 5-12%	
D.O. DRIVE OPEN	C. COARSE	MOT MOTTLED	SD SAND	"SOME" - 12-30%	
D.S. DENISON SAMPLE	CA. CASHING	NP NOT-PLASTIC	S. SILT	"AND" - 30-50%	
P.S. PITCHER SAMPLE	CLAY CLAY	OR ORANGE	SLT SLTY		
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANC	SM SOME		
S. SLOTTED TUBE	FMC FINE	PH PRESSURE-HYDRAULIC	TR TRACE		
S.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PR PRESSURE-MANUAL	WL WATER LEVEL		
T.P. THIN-WALLED, PISTON	GL GRAVEL	R RED	WH WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LAYERED	RES RESIDUAL	Y YELLOW		
	LTY LITTLE	RX ROCK			
				CONSISTENCY	
				LS LOOSE	S SOFT
				CP COMPACT	PM FIRM
				DN DENSE	ST STIFF
				V VERY	H HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				q ^a (Tons/ft. ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAND- BLOWS PER F.T. (FORCE)	REC./ATT		
	TOPSOIL							1. 0.0-0.5 ft.- Loose, brown, CLAYEY SILT
	0.5 - CONCRETE		1	SS	50	0.3 0.5	1.0	TOPSOIL, concrete floor beneath to 1.5 ft. Auger to 2.0 ft.
2	1.5 - FILL		2	SS	8-5- 20-50	1.7 2.0	NR	2. 2-4 ft.- Loose, brown, rust-red, yellow and black SAND AND GRAVEL. ASH. FILL Samples RF131C2F and RF131S2F collected.
4			3	SS	18-10- 10-8	1.4 2.0	NR	3. 4-6 ft.- Loose, black, GRAVEL AND SAND grading to loose, black fine to med. SAND. Oily sheen. Sample RF131S5F collected. FILL
6	6.0 - UPPER TILLS		4	SS	1-5-5-6	1.6 2.0	2.5	4. 6-8 ft.- Compact, brown with gray mottling, CLAYEY SILT with little silt partings. Sample RF131SWT collected.
8			5	SS	5-8-11-12	1.8 2.0	2.5	5. 8-10 ft.- As above.
10			6	SS	5-9-12-14	1.9 2.0	2.2	6. 10-12 ft.- As above.
12			7	SS	1-2-2-2	2.0 2.0	0.2	7. 12-14 ft.- As above to 12.4 ft. then soft, gray-brown, faintly varved CLAY with trace silt partings.
14	12.4 - GLACIOLACUSTRINE CLAY							
16	14.0 - END OF BOREHOLE							
18								
20								
22								

FIELD BORING LOG

DEPTH HOLE	13.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-32
DEPTH SOIL DRILL	13.0'	GA INSP.	D. WEHN	DRILLING METHOD	4-1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 1
DEPTH ROCK CORE	0	WEATHER	RAIN	DRILLING CO.	SJB SERVICES	SURFACE EL.	584.46
NO. DIST. SA.	0	U.S. SA.	7	TEMP.	65° F	DRILL RIG	ACKER SOILMAX
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROPPED	30"
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROPPED	NA
						STARTED	0915 5/21/96
						COMPLETED	1020 5/21/96

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL. BLACK	M. MEDIUM	SA. SAMPLE	"TRACE" - 0-5%	
C.S. CHUNK SAMPLE	BR. BROWN	MC. MACERATE	SAT. SATURATED	"LITTLE" - 5-12%	
D.O. DRIVE OPEN	C. COARSE	MO. MOTTLED	SD. SAND	"SOME" - 12-30%	
D.S. DENSON SAMPLE	CA. CASING	NP. NON-PLASTIC	S. SILT	"AND" - 30-50%	
P.S. PITCHER SAMPLE	CL. CLAY	OC. ORANGE	ST. SILTY		
R.C. ROCK CORE	CLY. CLAYEY	ORG. ORGANIC	SM. SOME		
S.T. SLOTTED TUBE	F. FINE	PH. PRESSURE-HYDRAULIC	TR. TRACE		
T.O. THIN-WALLED, OPEN	FRAG. FRAGMENTS	PM. PRESSURE-MANUAL	WL. WATER LEVEL		
T.P. THIN-WALLED, PISTON	QL. GRAVEL	R. RED	WH. WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LYD. LAYERED	RES. RESIDUAL	Y. YELLOW		
	U. LITTLE	RO. ROCK			

CONSISTENCY

LS. LOOSE	S. SOFT
CP. COMPACT	FM. FIRM
DN. DENSE	ST. STIFF
V. VERY	H. HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/FT.	SAMPLES				q ^a (Tons/H ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN. (FORCE)	REC/ATT		
	FILL		1	SS	5-4-6-9	0.6 2.0	NR	1. 0-2 ft.- Firm, brown, SILTY CLAY AND GRAVEL. Gravel consists of crushed stone. FILL.
2			2	SS	4-6-9-10	1.4 2.0	1.0	2. 2-4 ft.- Stiff, brown to gray mottled, SILTY CLAY AND SILTY SAND. FILL. Samples RFI32C2F and RFI32S2F collected.
4	4.0 - UPPER TILLS		3	SS	2-6-14-16	1.8 2.0	2.2	3. 4-6 ft.- Stiff, brown with gray mottling, SILTY CLAY with trace silt or fine sand partings. Sample RFI32S5F collected.
6			4	SS	7-12-19-20	1.9 2.0	3.0	4. 6-8 ft.- As above. Sample RFI32GAF collected.
8			5	SS	5-15-16-18	2.0 2.0	3.0	5. 8-10 ft.- As above. Sample RFI32SWT collected.
10			6	SS	4-5-5-5	2.0 2.0	0.2	6. 10-12 ft.- As above to 10.6 ft. then soft, brown, with faint varving, CLAY with trace of silt or fine sand partings. Sample RFI32G02-C collected from 10.6 to 12 ft.
12	10.6 - GLACIOLACUSTRINE CLAY		7	SS	2-2	1.0 1.0	0.2	7. 12-13 ft.- As from 10.6 ft. above.
14	13.0 - END OF BOREHOLE							
16								
18								
20								
22								

FIELD BORING LOG

DEPTH HOLE	12'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-33
DEPTH SOIL DRILL	12'	GA INSP.	D. WEHN	DRILLING METHOD	4-1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 1
DEPTH ROCK CORE	0	WEATHER	RAIN	DRILLING CO.	SJB SERVICES	SURFACE EL.	583.45
NO. DIST. SA.	0	US. SA.	6	TEMP.	60° F	DRILL RIG	CME-85
				DRILLER	A. MILLER	DATUM	MSL
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
						STARTED	1415 4/22/96
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						COMPLETED	1530 4/22/96

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" - 0-5%				
C.S. CHUNK SAMPLE	BR BROWN	MC MACROSCOPIC	SAT SATURATED	"LITTLE" - 5-12%				
D.O. DRIVE OPEN	C COARSE	MOT MOTTLED	SD SAND	"SOME" - 12-30%				
D.S. DENSITY SAMPLE	CA CASING	NP NON-PLASTIC	SILT SILT	"AND" - 30-50%				
P.S. PITCHER SAMPLE	CL CLAY	OC ORANGE	SI SILT					
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SOME					
S.T. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE					
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL					
T.P. THIN-WALLED, PISTON	QL QUARTZ	R RED	WH WEIGHT OF HAMMER					
W.S. WASH SAMPLE	LTD LAYERED	RES RESIDUAL	Y YELLOW					
	LI LITTLE	RX ROCK						

ELEV. DEPTH	DESCRIPTION	BLOWS/FT.	SAMPLES				q ^u (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMM. BLOWS PER 6 IN. (FORCE)	REC/ATT		
	FILL		1	SS	6-3-6-8	1.4 2.0	2.0	1. 0-2 ft.- Black, loose, SILTY CLAY and coarse sand. FILL
2			2	SS	6-2-2-4	0.9 2.0	0.8	2. 2-4 ft.- Black to greenish-gray SILTY CLAY and coarse sand with little crushed stone. FILL. Samples RFI33S2F collected.
4			3	SS	3-4-3-6	1.6 2.0	2.7	3. 4-6 ft.- As above to 5.0 ft. then firm, gray to brown mottled, SILTY CLAY. Samples RFI33S5F and RFI33C5F collected.
6	5.0 - UPPER TILLS		4	SS	3-5-7-11	1.5 2.0	1.5	4. 6-8 ft.- As above.
8			5	SS	2-4-4-4	2.0 2.0	0.2	5. 8-10 ft.- As above to 8.7 ft. then grading to soft to very soft. Sample RFI33SWT collected.
10	8.7 - GLACIOLACUSTRINE CLAY		6	SS	WH-WH-WH-WH	2.0 2.0	0.1	6. 10-12 ft.- Soft, brown, CLAY with trace silt partings.
12	12.0 - END OF SAMPLING							
14								
16								
18								
20								
22								

FIELD BORING LOG

DEPTH HOLE	14.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-PZ16
DEPTH SOIL DRILL	14.0'	GA INSP.	D. WEHN	DRILLING METHOD	4-1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 1
DEPTH ROCK CORE	0	WEATHER	P. CLOUDY	DRILLING CO.	SJB SERVICES	SURFACE EL.	584.67
NO. DIST. SA.	0	US. SA.	7	TEMP.	70° F	DRILL RIG	CME-550X
				DRILLER	D. BUTZER	DATUM	MSL
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
				STARTED	0815 5/10/96		
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
				COMPLETED	0945 5/10/96		

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	TRACE - 0-5%	
C.S. CHURN SAMPLE	BR BROWN	MC MICACIOUS	SAT SATURATED	LITTLE - 5-12%	
D.O. DRIVE OPEN	C COARSE	MOT MOTTLED	S2 SAND	SOME - 12-30%	
D.E. DEBRIS SAMPLE	CA CASHING	NP NON-PLASTIC	S3 SALT	AND - 30-50%	
P.S. PITCHER SAMPLE	CL CLAY	OR ORANGE	SY SILENT		
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SOME	CONSISTENCY	
T.C. TIGHT TUBE	F FINE	P PRESSURE-HYDRAULIC	TR TRACE		
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL	LS LOOSE	S SOFT
T.W. THIN-WALLED, PISTON	FRAG FRAG	RED RED	W WEIGHT OF HAMMER	CP COMPACT	M MEDIUM
W.S. WASH SAMPLE	LYO LAYERED	RES RESIDUAL	Y YELLOW	DN DENSE	ST STIFF
	L LITTLE	RX ROCK		VR VERY	HT HARD

[illegible]

FIELD BORING LOG

DEPTH HOLE	10.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-PZ16A
DEPTH SOIL DRILL	10.0'	GA INSP.	D. WEHN	DRILLING METHOD	4-1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 1
DEPTH ROCK CORE	0	WEATHER	SUN	DRILLING CO.	SJB SERVICES	SURFACE EL.	NA
NO. DIST. SA.	0	US. SA.	5	TEMP.	70° F	DRILL RIG	CME-550X
DRILLER	D. BUTZER	DATUM	MSL	WT. SAMPLER HAMMER	140#	DROP	30"
DEPTH WL.	NA	HRS. PROD.	NA	STARTED	1515 5/9/96		
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
				COMPLETED	1230 5/9/96		

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SATURATED	"TRACE" - 0-5%	
C.S. CRUSH SAMPLE	BR BROWN	MC MUCKY	SAT SATURATED	"LITTLE" - 5-12%	
D.O. DRIVE OPEN	C COARSE	WOT WOT	SD SAND	"SOME" - 12-30%	
D.S. DENSON SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT	"AND" - 30-50%	
P.S. PITCHER SAMPLE	CL CLAY	OG ORGANIC	ST SILTY		
R.C. ROCK CORE	CLY CLAYEY	PH PRESSURE-HYDRAULIC	SW SOME		
S.T. SLOTTED TUBE	F FINE	PM PRESSURE-MANUAL	TR TRACE		
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	RD RESIDUAL	WL WATER LEVEL		
T.P. THIN-WALLED, PISTON	G GRAVEL	RX ROCK	WH WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LYD LAYERED		Y YELLOW		
	U LITTLE				
				CONSISTENCY	
				LS LOOSE	S SOFT
				CP COMPACT	FM FIRM
				DN DENSE	ST STIFF
				V VERY	H HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				q ^u (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN. (FORCE)	REG/ATT		
	FILL							
2			1	SS	4-6-3-2	0.3 2.0	NR	1. 0-2 ft.- Soft, brown, silty clay TOPSOIL with little gravel.
			2	SS	5-5-2-2	1.2 2.0	0.1	2. 2-4 ft.- Loose, gray to black, SILT with some slag, little coal. FILL
4	4.0 - UPPER TILLS		3	SS	1-2-3-4	1.6 2.0	0.2	3. 4-6 ft.- Soft, brown with black or tan flecks SILTY CLAY.
6			4	SS	4-6-8-8	1.8 2.0		4. 6-8 ft.- Firm, brown, with tan flecks, SILTY CLAY.
8			5	SS	5-6-6-4	1.7 2.0		5. 8-10 ft.- As above.
10	10.0 - END OF BOREHOLE							* NOTE: Stopped sampling at 10 ft. - this NOT BSA BACKFILL. Borehole grouted to surface.
12								
14								
16								
18								
20								
22								

FIELD BORING LOG

DEPTH HOLE	14.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-P217
DEPTH SOIL DRILL	14.0'	GA INSP.	D. WEHN	DRILLING METHOD	4-1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 1
DEPTH ROCK CORE	0	WEATHER	CLOUDY	DRILLING CO.	SJB SERVICES	SURFACE EL.	583.86
NO. DIST. SA.	0	U.S. SA.	7	TEMP.	70° F	DRILL RIG	CME-550X
				DRILLER	D. BUTZER	DATUM	MSL
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
				STARTED	1045 5/10/96		
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
				COMPLETED	1145 5/10/96		

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	M MEDIAN	SA SAMPLE	"TRACE" - 0-5%	
B.B. BROWN	MIC MICACEOUS	SAT SATURATED	SAT SAT	"LITTLE" - 5-12%	
C.S. CRINK SAMPLE	C COARSE	MOT MOTTLED	SD SAND	"SMALL" - 12-30%	
O.O. ORISKANY OPEN	CASING	NP NON-PLASTIC	SI SILT	"AND" - 30-50%	
D.S. DITCHER SAMPLE	CL CLAY	O ORANGE	SY SILTY		
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SOME		
S.T. SLOTTED TUBE	F FINE	PRES PRESSURE-HYDRAULIC	TR TRACE		
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PRES PRESSURE-MANUAL	WL WATER LEVEL		
P. THIN-WALLED, PISTON	QL GRAVEL	R RED	WH WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LAYED LAYERS	RES RESIDUAL	Y YELLOW		
	U LITTLE	RX ROCK			
				CONSISTENCY	
				LS LOOSE	S SOFT
				CP COMPACT	FM FIRM
				DN DENSE	ST STIFF
				V VERY	HN HARD

[illegible]

FIELD BORING LOG

DEPTH HOLE	<u>14.0'</u>	JOB NO.	<u>963-9117</u>	PROJECT	<u>BCC/RFI/NY</u>	BORING NO.	<u>RFI-PZ18</u>
DEPTH SOIL DRILL	<u>14.0'</u>	GA INSP.	<u>D. WEHN</u>	DRILLING METHOD	<u>4-1/4-INCH I.D. HOLLOW STEM AUGER</u>	SHEET	<u>1 of 1</u>
DEPTH ROCK CORE	<u>0</u>	WEATHER	<u>CLOUDY</u>	DRILLING CO.	<u>SJB SERVICES</u>	SURFACE EL.	<u>584.95</u>
NO. DIST. SA.	<u>0</u>	U.S. SA.	<u>7</u>	TEMP.	<u>70° F</u>	DRILL RIG	<u>CME-550X</u>
						DRILLER	<u>D. BUTZER</u>
DEPTH WL.	<u>NA</u>	HRS. PROD.	<u>NA</u>	WT. SAMPLER HAMMER	<u>140#</u>	DROP	<u>30"</u>
						DATUM	<u>MSL</u>
TIME WL.	<u>NA</u>	HRS. DELAYED	<u>NA</u>	WT. CASING HAMMER	<u>NA</u>	DROP	<u>NA</u>
						COMPLETED	<u>1500 5/9/96</u>

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION -- RANGE OF PROPORTION		
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	TRACE -- 0-5%				
O.S. OILY SAMPLE	BR BROWN	MC MICACEOUS	SAT SATURATED	TITTLE -- 5-12%				
D.O. DRY OPEN	C COARSE	MT MOTTLED	SD SAND	SILT -- 12-30%				
D.S. DENSE SAMPLE	CA CASHING	NP NON-PLASTIC	SF SILT	AND -- 30-50%				
P.S. PITCHER SAMPLE	CL CLAY	OR ORANGE	SH SILTY	CONSISTENCY				
R. ROCK CORE	CLY CLAYEY	ORG ORGANG	SM SOME					
S.C. SLOTTED TUBE	PMC FINE	PH PRESSURE-HYDRAULIC	TR TRACE					
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL	LS LOOSE	S SOFT			
T.P. THIN-WALLED, PISTON	G GRAVEL	R RED	WH WEIGHT OF HAMMER	CP COMPACT	ST FIRM			
W.S. WASH SAMPLE	L LAYERED	RES RESIDUAL	Y YELLOW	DN DENSE	MT STIFF			
	U LITTLE	RX ROCK		V VERY	H HARD			

[illegible]

FIELD BORING LOG

DEPTH HOLE	28.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-PZ19
DEPTH SOIL DRILL	28.0'	GA INSP.	D. WEHN	DRILLING METHOD	4 1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 2
DEPTH ROCK CORE	0	WEATHER	SUN	DRILLING CO.	SJB SERVICES	SURFACE EL.	583.88
NO. DIST. SA.	0	U.S. SA.	14	TEMP.	60° F	DRILL RIG	ACKER SOILMAX
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						STARTED	1530 5/14/96
						COMPLETED	0930 5/15/96

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" - 0-5%	CONSISTENCY
C.S. CHURN SAMPLE	BR BROWN	MAC MICACEOUS	SAT SATURATED	"LITTLE" - 5-12%	
D.O. DRIVE OPEN	C COARSE	MOT MOTTLED	SD SAND	"SOME" - 12-30%	
D.S. DEWSON SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT	"AND" - 30-50%	
P.S. PITONER SAMPLE	CL CLAY	OG ORANGE	SH SILTY		
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SOME		
S.T. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE		
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL		
T.P. THIN-WALLED, PISTON	QL GRAVEL	R RESIDUAL	WH WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LVD LAYERED	RES RESIDUAL	Y YELLOW		
	U LITTLE				
				LS LOOSE	S SOFT
				CP COMPACT	FM FIRM
				DN DENSE	ST STIFF
				V VERY	H HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/FT.	SAMPLES				q ^a (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	MAX. BLOWS PER 6 IN. (FORCE)	REC/ATT		
	FILL		1	SS	4-10-30-45	0.4 2.0	NR	1. 0-2.0 ft.- Soft, brown, SILTY CLAY and crushed limestone. FILL
2								2. 2-4 ft. - Crushed limestone and yellow-brown to black SAND with some gravel. FILL
4			2	SS	22-15-7-2	0.5 2.0	NR	3. 4-6 ft.- Crushed brick and loose, black, SANDY GRAVEL. FILL. Sample RFPZ19C5F collected.
6			3	SS	1-2-6-7	0.8 2.0	NR	4. 6-8 ft.- Loose, gray-brown, SILT with trace iron-oxide staining. FILL. Little sand.
8	8.0 - ALLUVIUM		4	SS	6-7-10-11	1.5 2.0	0.2	5. 8-10 ft.- Loose, gray-brown, SILT AND SAND with trace brown, med. to coarse sand zones.
10								6. 10-12 ft.- As above.
12								7. 12-14 ft.- Firm, gray-brown CLAYEY SILT with little black mottling.
14			5	SS	2-7-5-8	2.0 2.0	0.5	8. 14-16 ft.- Loose, gray-brown SILT AND FINE SAND with some clayey silt zones.
16			6	SS	2-2-7-8	1.8 2.0	1.2	9. 16-18 ft.- As above with trace of wood.
18								10. 18-20 ft.- As above with trace compressed leaves.
20			7	SS	1-2-4-5	1.7 2.0	1.2	11. 20-22 ft.- Loose, gray-brown SILT AND SAND with little clayey silt zones, trace compressed leaves.
22			8	SS	1-1-1-3	1.9 2.0	0.5	
			9	SS	1-1-2-4	2.0 2.0	0.7	
			10	SS	1-1-2-4	2.0 2.0	0.5	
			11	SS	WH-WH-2-2	2.0 2.0	0.5	

FIELD BORING LOG

DEPTH HOLE	28.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-PZ19
DEPTH SOIL DRILL	28.0'	GA INSP.	D. WEHN	DRILLING METHOD	4 1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	2 of 2
DEPTH ROCK CORE	0	WEATHER	SUN	DRILLING CO.	SUB SERVICES	SURFACE EL.	583.65
NO. DIST. SA.	0	US. SA.	14	TEMP.	60° F	DRILL RIG	ACKER SOILMAX
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						DATUM	MSL
						STARTED	1530 5/14/96
						COMPLETED	0930 5/15/96

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" - 0-5%	
C.S. CHUNK SAMPLE	BR BROWN	MC MACCEOUS	SAT SATURATED	"LITTLE" - 5-12%	
D.O. DRIVE OPEN	C COARSE	MT MOTTLED	SD SAND	"SOM" - 12-30%	
D.S. DEKEDY SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT	"AND" - 30-50%	
P.S. PITCHER SAMPLE	CL CLAY	OC ORANGE	ST SILTY		
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANIC	SW SOME		
S.T. SLOTTED TUB	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE		
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL		
T.P. THIN-WALLED, PISTON	GL GRAVEL	R RED	WH WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LYO LAYERED	RES RESIDUAL	Y YELLOW		
	U UTILE	RX ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS/FT.	SAMPLES				q ^a (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMA BLOWS PER 6 IN. (FORCE)	REC/ATT		
24	ALLUVIUM		12	SS	1-1-1-4	2.0 2.0	0.5	12. 22-24 ft.- As above with some compressed leaves.
			13	SS	1-1-1-2	1.9 2.0	NR	13. 24-26 ft.- As above to 25.4 ft. then soft, gray-brown to red-brown varved CLAY with trace silt partings.
26	25.4 - GLACIOLACUSTRINE CLAY		14	SS	WH-WH-WH-1	2.0 2.0	0.2	14. 26-28 ft.- As from 25.4 ft. above.
28	28.0 - END OF BOREHOLE							
30								
32								
34								
36								
38								
40								
42								
44								

FIELD BORING LOG

DEPTH HOLE	28.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-PZ20
DEPTH SOIL DRILL	28.0'	GA INSP.	D. WEHN	DRILLING METHOD	4 1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	1 of 2
DEPTH ROCK CORE	0	WEATHER	SUN	DRILLING CO.	SJB SERVICES	SURFACE EL.	583.88
NO. DIST. SA.	0	U.S. SA.	14	TEMP.	50° F	DRILL RIG	ACKER SOILMAX
				DRILLER	R. STEINER	DATUM	MSL
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROP	30"
						STARTED	0915 5/14/96
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROP	NA
						COMPLETED	1130 5/14/96

[illegible]

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				q ^a (Tons/ft ²)	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMM. BLOWS PER 6 IN. (FORCE)	REC/ATT		
	FILL		1	SS	5-5-5-7	1.6 2.0	NR	1. 0-2.0 ft.- Loose, yellow, granular powder to 0.5 ft. then loose purple-black SILT AND SAND. Sample RFIPZ20C2F collected. FILL.
2			2	SS	3-2-2-2	0.6 2.0	NR	2. 2-4 ft. - Loose, purple-black SAND AND SILT. FILL
4			3	SS	2-5-5-4	1.4 2.0	1.2	3. 4-6 ft.- Loose, purple-black SAND AND GRAVEL to 5.8 ft. then firm, brown, mottled SILTY CLAY. FILL.
6			4	SS	1-1-4-4	1.6 2.0	NR	4. 6-8 ft.- Loose, yellow to brown to gray SILT AND SAND, FILL, with trace brick and slag.
8			5	SS	1-1-3-3	2.0 2.0	NR	5. 8-10 ft.- Loose, yellow to red to brown. SANDS AND SILTS with some clayey zones. FILL.
10	10.0 - ALLUVIUM		6	SS	1-6-4-7	2.0 2.0	NR	6. 10-12 ft.- As above but predominantly gray-brown in color.
12			7	SS	2-2-5-6	1.8 2.0	0.5	7. 12-14 ft.- Loose, gray-brown, SILT with some clay, little black mottling.
14			8	SS	1-1-1-1	2.0 2.0	0.2	8. 14-16 ft.- As above.
16			9	SS	1-WH-2-3	2.0 2.0	0.2	9. 16-18 ft.- Loose, gray-brown, SILT AND med. SAND, little clayey zones, trace black varving.
18			10	SS	1-WH-1-1	2.0 2.0		10. 18-20 ft.- As above.
20			11	SS	1-WH-1-1	2.0 2.0		11. 20-22 ft.- As above with trace leaves.
22								

FIELD BORING LOG

DEPTH HOLE	28.0'	JOB NO.	963-9117	PROJECT	BCC/RFI/NY	BORING NO.	RFI-PZ20
DEPTH SOIL DRILL	28.0'	GA INSP.	D. WEHN	DRILLING METHOD	4 1/4-INCH I.D. HOLLOW STEM AUGER	SHEET	2 of 2
DEPTH ROCK CORE	0	WEATHER	SUN	DRILLING CO.	SJB SERVICES	SURFACE EL.	583.88
NO. DIST. SA.	0	US. SA.	14	TEMP.	60° F	DRILL RIG	ACKER SOILMAX
DEPTH WL.	NA	HRS. PROD.	NA	WT. SAMPLER HAMMER	140#	DROPPED	30"
TIME WL.	NA	HRS. DELAYED	NA	WT. CASING HAMMER	NA	DROPPED	NA
				STARTED	1530 5/14/96		
				COMPLETED	0930 5/15/96		

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL. BLACK	M. MEDIAN	SA. SAMPLE	"TRACE" - 0-5%	
C.S. CHUNK SAMPLE	BR. BROWN	MC. MUCK	SAT. SATURATED	"LITTLE" - 5-12%	
D.O. DRINE OPEN	C. COARSE	MO. MOTTLED	SD. SAND	"SOME" - 12-30%	
D.S. DENISON SAMPLE	CA. CASING	NP. NON-PLASTIC	SI. SILT	"AND" - 30-50%	
P.S. PITCHER SAMPLE	CL. CLAY	OG. ORANGE	SI. SILTY		
R.C. ROCK CORE	CLY. CLAYEY	ORG. ORGANIC	SM. SOME		
S.T. SLOTTED TUBE	F. FINE	PH. PRESSURE-HYDRAULIC	TR. TRACE		
T.O. THIN-WALLED, OPEN	FRAG. FRAGMENTS	PM. PRESSURE-MANUAL	WL. WATER LEVEL		
T.P. THIN-WALLED, PISTON	GRAVEL	R. RED	WH. WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LAYERED	RES. RESIDUAL	Y. YELLOW		
	LITTLE	ROCK			

CONSISTENCY

LS	LOOSE	S	SOFT
CP	COMPACT	FM	FIRM
DN	DENSE	ST	STIFF
V	VERY	H	HARD

ELEV. DEPTH	DESCRIPTION	BLOWS/ FT.	SAMPLES				SAMPLE DESCRIPTION AND BORING NOTES	
			NO.	TYPE	HAMMER BLOWS PER 6 IN. (FORCE)	REC/ATT		q" (Tons/ft ²)
24	ALLUVIUM		12	SS	1-WH-4-5	2.0 2.0	NR	12. 22-24 ft.- Loose, gray-brown, SILT AND SAND with some to trace clay.
			13	SS	2-2-4-4	2.0 2.0	NR	13. 24-26 ft.- As above to 25.8 ft. then soft, brown, CLAY.
26	25.8 - GLACIOLACUSTRINE CLAY		14	SS	WH-WH-WH-2	2.0 2.0	0.2	14. 26-28 ft.- Soft, gray-brown to red-brown varved, CLAY with trace silt stringers.
28	28.0 - END OF BOREHOLE							
30								
32								
34								
36								
38								
40								
42								
44								

APPENDIX B-2

RFI FIELD BORING LOGS

Phase II
Boring Logs

Golder Associates Field Boring Log

DEPTH HOLE <u>10 FT</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCC / RFE / NY</u>	BORING NO. <u>PRB-1M</u>
DEPTH SOIL DRILL <u>10 FT</u>	GA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEOPROBE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>SUN</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NO. DIST. SA. <u>0</u>	UD. SA. <u>3</u>	TEMP. <u>90°F</u>	DRILL RIG <u>GH-40</u>
DRILLER <u>M. FALZONE</u>	DATUM <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u>
DEPTH WL. <u>5 FT</u>	HRS. PROG. <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u>
TIME WL. <u>16:30</u>	HRS. DELAYED <u>N/A</u>	COMPLETED <u>16:30, 8/6/96</u>	

SAMPLE TYPES	ABBREVIATIONS	SOIL DESCRIPTION - RANGE OF PROPORTION
AS AUGER SAMPLE CS CHUNG SAMPLE DO DRIVE OPEN DS DENISON SAMPLE PS PITCHER SAMPLE RC ROCK CORE ST SLOTTED TUBE TO THIN-WALLED, OPEN TP THIN-WALLED, PISTON WS WASH SAMPLE	BL BLACK BR BROWN C COARSE CL CLAY CLY CLAYEY F FINE FRAG FRAGMENTS GL GRAVEL LYO LAYERED U LITTLE M MEDIUM MC MUCOUS NOT NOTED NP NON-PLASTIC OG ORANGE ORG ORGANIC PH PRESSURE-HYDRAULIC PM PRESSURE-MANUAL R RED RES RESIDUAL RI ROCK	SA SAMPLE SAT SATURATED SD SAND SI SILT SILTY SILTY SM SOME TR TRACE WL WATER LEVEL WH WEIGHT OF HAMMER Y YELLOW "TRACE" 0-1% "LITTLE" 1-12% "SOME" 12-30% "AND" 30-50% RELATIVE DENSITY BLOWS VERY LOOSE VLS 0-4 LOOSE LS 4-10 COMPACT CP 10-30 DENSE DN 30-50 VERY DENSE VDN 50 CONSISTENCY VERY SOFT VS SOFT S FIRM FM STIFF ST VERY STIFF VST HARD H FINGER PRESSURE VS EXTRINSIC S MEDIUM LAMELY FM MODULUS ST THUMB MODULUS VST THUMB MODULUS H RESIST THUMB MODULUS

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMA. BLOWS PER 6 IN (FORCE)	REC. ATT.		
1			1	DO	N/A			① Loose, black to gray, SAND and SILT with trace gravel. Sample PRBIMCAF and PRBIMSAF collected. FILL
2								② Loose, light gray, saturated SILT
3			2	DO	N/A			Sample PRBIMSSF collected
4								
5								
6								③ Loose, black, saturated SILT
7			2	DO	N/A			Sample PRBIMSWT collected
8								
9								
10	END OF BORE HOLE							
11								
12								
13								
14								
15								
16								
								Screen point from 5-10 ft. Sample PRBIM collected. aqueous

Golder Associates Field Boring Log

DEPTH HOLE <u>10 FT</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCC / RFE / NY</u>	BORING NO. <u>PRB-2M</u>
DEPTH SOIL DRILL <u>10 FT</u>	GA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEOPROBE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>SUN</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NO. DIST. SA. <u>0</u> UD. SA. <u>3</u>	TEMP. <u>90°F</u>	DRILL RIG <u>GH-40</u>	DRILLER <u>M. FINE</u>
DEPTH WL. <u>7 FT</u>	HRS. PROD. <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u>
TIME WL. <u>14:40</u>	HRS. DELAYED <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u>
			DATUM <u>N/A</u>
			STARTED <u>14:00, 8/6/96</u>
			COMPLETED <u>14:40, 8/6/96</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTIONS	
AS AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" 0-1%	"SOME" 12-30%
CS CHURN SAMPLE	BR BROWN	MC MICACEOUS	SAT SATURATED	"LITTLE" 5-12%	"AND" 30-50%
DO DRIVE OPEN	C COARSE	MT MOTTLED	SD SAND		
DS DENISON SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT		
FS FITCHER SAMPLE	CL CLAY	OR ORANGE	SILT SILTY		
RC ROCK CORE	CLY CLAY	ORG ORGANIC	SM SOME		
ST SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE		
TQ THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL		
TJ THIN-WALLED, PISTON	QL GRAVEL	R RED	WH WEIGHT OF HAMMER		
WS WASH SAMPLE	LTD LAYERED	RES RESIDUAL	Y YELLOW		
	LI LITTLE	RI ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES			DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS (PER 6 IN) (FORCE)		
1			1	DO	N/A		Loose, black SAND with trace gravel Sample PRB-2M C2F collected Sample PRB-2M S2F collected
2							
3							
4							
5			2	DO	N/A		Very soft, black to tan to green, SILT CLAY with trace gravel Sample PRB-2M C2F collected
6							
7			3	DO	N/A		Loose, black SAND and SILT Sample PRB-2M S2F collected
8							
9							
10	END OF BOREHOLE						
11							
12							
13							
14							
15							
16							
							Water Table approx 7' bgs
							Screen point from 5'-10' bgs - Sample PRB-2M collected (2 water)

Golder Associates Field Boring Log

DEPTH HOLE <u>10 FT</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCC / RFE / NY</u>	BORING NO. <u>PRB-3M</u>
DEPTH SOIL DRILL <u>10 FT</u>	QA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEOPROBE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>SUN</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NO. DIST. SA. <u>0</u>	UO. SA. <u>2</u>	TEMP. <u>90°F</u>	DRILL RIG <u>GH-40</u>
DEPTH WL. <u>~5 FT</u>	HRS. PROD. <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u>
TIME WL. <u>13:00</u>	HRS. DELAYED <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u>
			STARTED <u>12:15</u> / <u>8/7/96</u>
			COMPLETED <u>13:00</u> / <u>8/7/96</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" 0-1%	"SOME" 12-20%
C.S. CHURN SAMPLE	BR BROWN	MC MICACEOUS	SAT SATURATED	"LITTLE" 5-12%	"AND" 30-50%
O.O. DRIVE OPEN	C COARSE	NOT NOT	SD SAND		
O.S. DENISON SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT		
P.S. PITCHER SAMPLE	CL CLAY	OG ORANGE	SHY SILTY		
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SOME		
S.T. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE		
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL		
T.P. THIN-WALLED, PISTON	GL GRAVEL	R RED	WH WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LTD LAYERED	RES RESIDUAL	Y YELLOW		
	U LITTLE	ROCK ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES			REC. ATT	DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	WATER BLOWS PER 6 IN (FORCE)			
1			1	00	N/A			Loose, black to indig. SAND with some silt
2								Fill
3								Samples PRB3M02F, FPRB3M, and PRB3M52F collected
4								As above
5								Sample PRB3M55F collected at 5 ft bgs. Sample PRB3M
6			2	00	N/A			SWT collected at 7 ft bgs
7								
8								
9								
10	END OF BOREHOLE							
11								
12								
13								
14								
15								
16								
								Screen point located from 5-10 ft bgs. Samples PRB3M and FPRB3M (aqueous) collected

Golder Associates Field Boring Log

DEPTH HOLE <u>8 FT</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCC / RFE / NY</u>	BORING NO. <u>PRB-4M</u>
DEPTH SOIL DRILL <u>8 FT</u>	QA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEOPROBE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>SUN</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NQ. DIST. SA. <u>2</u>	UD. SA. <u>2</u>	TEMP. <u>90°F</u>	DRILL RIG <u>GH-40</u>
DRILLER <u>M. FALZONE</u>	DATUM <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u>
DEPTH WL. <u>~ 4 FT</u>	MRS. PROD. <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u>
TIME WL. <u>10:30</u>	MRS. DELAYED <u>N/A</u>		STARTED <u>9:30 9/7/96</u>
			COMPLETED <u>10:30 9/7/96</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION			
A.S. AUGER SAMPLE	BL. BLACK	M. MEDIUM	SA. SAMPLE	"TRACE" 0-1%	"SOME" 12-30%		
C.S. CHURN SAMPLE	BR. BROWN	MC. MICACEOUS	SAT. SATURATED	"LITTLE" 5-12%	"AND" 30-50%		
O.O. DRIVE OPEN	C. COARSE	MT. MOTTLED	SD. SAND				
O.S. OSHOWN SAMPLE	CA. CASING	NP. NON-PLASTIC	SI. SILT				
P.S. PITCHER SAMPLE	CL. CLAY	OR. ORANGE	ST. SILTY				
RC. ROCK CORE	CLY. CLAYEY	ORG. ORGANIC	SM. SOME				
ST. SLOTTED TUBE	F. FINE	PH. PRESSURE-HYDRAULIC	TR. TRACE				
T.O. THIN-WALLED, OPEN	FRAG. FRAGMENTS	PM. PRESSURE-MANUAL	WL. WATER LEVEL				
T.P. THIN-WALLED, PISTON	QL. GRAVEL	R. RED	WH. WEIGHT OF HAMMER				
W.S. WASH SAMPLE	LYD. LAYERED	RES. RESIDUAL	Y. YELLOW				
	U. LITTLE	RO. ROCK					

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES			DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN (FORCE)		
1			1	DO	N/A		Loose gray to black GRAVEL to 6.0 ft. bgs. then gray-brown clay.
2							Samples PRB4M C2F and PRB4M S2F collected
3							
4							
5			2	DO	N/A		Samples PRB4M S5F collected at 5 ft bgs. sample PRB4M S4T collected at 7 ft bgs.
6							
7							
8	END OF BOREHOLE						
9							
10							
11							
12							
13							
14							
15							
16							
							Screen point set 3-8 ft bgs. Water Sample PRB4M MSMSD collected

Golder Associates Field Boring Log

DEPTH HOLE <u>2 FT</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCC / RFF / NY</u>	BORING NO. <u>PRB-5</u>
DEPTH SOIL DRILL <u>2 FT</u>	QA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEOPHONE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>SUN</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NO. DIST. SA. <u>0</u> UD. SA. <u>1</u>	TEMP. <u>90°F</u>	DRILL RIG <u>GH-40</u>	DATUM <u>N/A</u>
DEPTH WL. <u>N/A</u>	HRS. PROD. <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u>
TIME WL. <u>N/A</u>	HRS. DELAYED <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u>
			STARTED <u>10:40 8/7/96</u>
			COMPLETED <u>10:55 8/7/96</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
AS AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" 0 - 1%	"SOME" 12 - 25%
CS CHUNK SAMPLE	BR BROWN	MC MICACEOUS	SAT SATURATED	"LITTLE" 5 - 12%	"AND" 30 - 50%
DO DRIVE OPEN	CA COARSE	MOT MOTTLED	SD SAND		
DS DENISON SAMPLE	CC CASING	NP NON-PLASTIC	SI SILT		
FS PITCHER SAMPLE	CL CLAY	OG ORANGE	SV SILTY		
RC ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SOME		
ST SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE		
TQ THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL		
T.P. THIN-WALLED, PISTON	QL GRAVEL	R RED	WH WEIGHT OF HAMMER		
WS WASH SAMPLE	LYD LAYERED	RES RESIDUAL	Y YELLOW		
	U LITTLE	RX ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES			DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN (FORCE)		
1			1	DO	N/A		Large, black SAND AND GRAVEL FILL
2	END OF BOREHOLE						
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

Golder Associates Field Boring Log

DEPTH HOLE <u>2 FT</u>	JOB NO <u>963-9117</u>	PROJECT <u>BCC / RFE / NY</u>	BORING NO. <u>PRB-6</u>
DEPTH SOIL DRILL <u>2 FT</u>	GA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEOPROBE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>SUN</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NO. DIST. SA. <u>0</u>	TEMP. <u>90°F</u>	DRILL RIG <u>GH-40</u>	DRILLER <u>M. FALZONE</u>
DEPTH WL. <u>N/A</u>	HRS. PROD. <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u>
TIME WL. <u>N/A</u>	HRS. DELAYED <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u>
			STARTED <u>11:00, 8/7/92</u>
			COMPLETED <u>11:05, 8/7/92</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL. BLACK	M. MEDIUM	SA. SAMPLE	"TRACE" 0 - 1%	"SOME" 12 - 30%
C.S. CHUNK SAMPLE	BR. BROWN	MC. MICACEOUS	SAT. SATURATED	"LITTLE" 5 - 12%	"AND" 30 - 50%
D.O. DRIVE OPEN	C. COARSE	NP. NOT	SD. SAND		
D.S. DENISON SAMPLE	CA. CASING	NP. NON-PLASTIC	SI. SILT		
P.S. PITCHER SAMPLE	CL. CLAY	OG. ORANGE	SH. SILTY		
R.C. ROCK CORE	CLY. CLAYEY	ORG. ORGANIC	SH. SOME		
S.T. SLOTTED TUBE	F. FINE	PH. PRESSURE-HYDRAULIC	TR. TRACE		
T.O. THIN-WALLED, OPEN	FRAG. FRAGMENTS	PM. PRESSURE-MANUAL	WL. WATER LEVEL		
T.P. THIN-WALLED, PISTON	GL. GRAVEL	R. RED	WH. WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LTD. LAYERED	RES. RESIDUAL	Y. YELLOW		
	LI. LITTLE	RO. ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMM. BLOWS PER 6 IN. (FORCE)	REC. ATT		
1			1	SD	N/A			Loose Hard CLAYEL AND SAND with some Clay FILL
2	END OF BOREHOLE							
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Golder Associates Field Boring Log

DEPTH HOLE <u>2 FT</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCC / RFE / NY</u>	BORING NO. <u>PRB-7</u>
DEPTH SOIL DRILL <u>2 FT</u>	GA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEOPCBE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>SUN</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NO. DIST. SA. <u>0</u>	UD. SA. <u>1</u>	TEMP. <u>90°F</u>	DRILL RIG <u>BH-40</u>
		DRILLER <u>M. FALZONE</u>	DATUM <u>N/A</u>
DEPTH WL. <u>N/A</u>	HRS. PROD. <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u>
TIME WL. <u>N/A</u>	HRS. DELAYED <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u>
			STARTED <u>11:10, 8/2/96</u>
			COMPLETED <u>11:20, 8/2/96</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" 0-1%	"SOME" 12-30%
C.S. CHUNK SAMPLE	BR BROWN	MIC MICACEOUS	SAT SATURATED	"LITTLE" 5-12%	"AND" 30-50%
D.O. DRIVE OPEN	C COARSE	MOT MOTTLED	SD SAND		
D.S. DENISON SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT	RELATIVE DENSITY	BLOWS
P.S. PITCHER SAMPLE	CL CLAY	OG ORANGE	STV SILTY	VERY LOOSE VLS 0-4	VERY SOFT VS ESTIMATES
RC ROCK CORE	CLV CLAYEY	ORG ORGANIC	SM SOME	LOOSE LS 4-10	SOFT S MEDIUM LAMIN
S.T. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE	COMPACT CP 10-30	FIRM FA MEDIUM
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL	DENSE DM 30-50	STIFF ST THICK LAMIN
T.P. THIN-WALLED, PISTON	GL GRAVEL	R RED	WH WEIGHT OF HAMMER	VERY DENSE VDM 50	VERY STIFF VST THICK LAMIN
W.S. WASH SAMPLE	LTO LAYERED	RES RESIDUAL	Y YELLOW		
	L LITTLE	ROX ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES			DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN. (FORCE)		
1			1	SD	N/A		Loose, gray-black SAND with some gravel.
2	END OF BOREHOLE						
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
							2.5 grains / 1 MS/MSD Collected Samples PRB7S2F, PRB7C2F, PRB7MS and PRB7MSD collected

Golder Associates Field Boring Log

DEPTH HOLE <u>4 FT</u>	JOB NO. <u>963-9117</u>	PROJECT <u>PCC / RFI / NY</u>	BORING NO. <u>PRB-8</u>
DEPTH SOIL DRILL <u>4 FT</u>	QA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEOPROBE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>CLOUDY</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NO. DIST. SA. <u>0</u>	TEMP. <u>70°F</u>	DRILL RIG <u>BH-40</u>	DRILLER <u>M. FALZONE</u>
DEPTH WL. <u>N/A</u>	HRS. PROD. <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u>
TIME WL. <u>N/A</u>	HRS. DELAYED <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u>
			STARTED <u>7:30, 8/16/96</u>
			COMPLETED <u>8:00, 8/16/96</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTIONS			
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" 0-1% "SOME" 12-30%			
C.S. CHURN SAMPLE	BR BROWN	MC MACEROUS	SAT SATURATED	"LITTLE" 5-12% "AND" 30-50%			
D.O. DRIVE OPEN	C COARSE	MOT MOTTLED	SD SAND				
D.S. DENISON SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT	RELATIVE DENSITY BLOWS CONSISTENCY VS. FINGER PRESSURE			
P.S. PITCHER SAMPLE	CL CLAY	OS ORANGE	SVV SILTY	VERY LOOSE VLS 0-4	VERY SOFT VS	EXTRUDES	
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SOME	LOOSE LS 4-10	SOFT VS	NEEDS LADY	
S.T. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE	COMPACT CP 10-30	FIRM FM	MOLDS	
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL	DENSE DN 30-50	STIFF ST	THUMB POINTS	
T.P. THIN-WALLED, PISTON	QL GRAVEL	R RED	WH WEIGHT OF HAMMER	VERY DENSE VDN 50	VERY STIFF VST	THUMB POINT	
W.S. WASH SAMPLE	LYD LAYERED	RES RESIDUAL	Y YELLOW		HARD	N	
	U LITTLE	RS ROCK					

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES			DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN (FORCE)		
			1	DD	N/A		0-1.5 ft bgs concrete
1							1.5-4.0 ft bgs Soft, blue-black, SILTY CLAY
2							
3							
4	END OF BOREHOLE						
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
							Screening fundamental MS / MSP collected
							Samples PRB8 SAT, PRB8 MS, and PRB8 MSP collected

Golder Associates Field Boring Log

DEPTH HOLE <u>2 FT</u>	JOB NO. <u>963-9117</u>	PROJECT <u>PCC / RFE / NY</u>	BORING NO. <u>PRB-9</u>
DEPTH SOIL DRILL <u>2 FT</u>	QA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEO PROBE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>SUN</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NO. DIST. SA. <u>0</u>	UO. SA. <u>1</u>	TEMP. <u>90°F</u>	DRILL RIG <u>GH-40</u>
DRILLER <u>M. FALZONE</u>	DATUM <u>N/A</u>	STARTED <u>0800 / 8/12/96</u>	COMPLETED <u>10:10 / 8/12/96</u>
DEPTH WL. <u>N/A</u>	HRS. PROD. <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u>
TIME WL. <u>N/A</u>	HRS. DELAYED <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
AS AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" 0-1%	"SOME" 12-30%
CS CHURN SAMPLE	BR BROWN	MC MICACEOUS	SAT SATURATED	"LITTLE" 5-12%	"AND" 30-50%
OG ORIVE OPEN	C COARSE	MT MOTTLED	SD SAND		
OS DENISON SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT	RELATIVE DENSITY	BLOWS
PS RITCHER SAMPLE	CL CLAY	OG ORANGE	SHY SILTY	VERY LOOSE VS 0-4	VERY SOFT VS 5-10
RC ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SOME	LOOSE LS 4-10	SOFT S 10-20
ST SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE	COMPACT CP 10-30	FIRM FM 30-50
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL	DENSE ON 30-50	STIFF ST 50-100
T.P. THIN-WALLED, PISTON	GL GRAVEL	R RED	WH WEIGHT OF HAMMER	VERY DENSE VDN 50	VERY STIFF VST 100-200
WS WASH SAMPLE	LYO LAYERED	RES RESIDUAL	Y YELLOW		
	LI LITTLE	RO ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES			DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 8 IN (FORCE)		
1			1	DD	N/A		Loose red to brown to gray (BRKY) GRAVEL AND SAND FILL
2	END OF BOREHOLE						
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

Field Boring Log

DEPTH HOLE <u>2 FT</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCC / RFI / NY</u>	BORING NO. <u>PRB-10</u>
DEPTH SOIL DRILL <u>2 FT</u>	QA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEOPROCURE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>SUN</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NO. DIST. SA. <u>0</u>	TEMP. <u>90°F</u>	DRILL RIG <u>BH-40</u>	DATUM <u>N/A</u>
DEPTH WL. <u>N/A</u>	HRS. PROD. <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u>
TIME WL. <u>N/A</u>	HRS. DELAYED <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u>
			STARTED <u>9:50 8/1/92</u>
			COMPLETED <u>9:55 8/1/92</u>

SAMPLE TYPES		ABBREVIATIONS				SOIL DESCRIPTION - RANGE OF PROPORTION							
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE"	0 1%	SOME	12 30%		
C.S.	CHUNK SAMPLE	BR	BROWN	MC	MICACEOUS	SAT	SATURATED	"LITTLE"	5 12%	"AND"	30 50%		
O.O.	ORIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND						
O.S.	ORISON SAMPLE	CA	CASING	NP	NON-PLASTIC	SI	SILT	RELATIVE DENSITY	BLOWS	CONSISTENCY	POWDER PRESSURE		
P.S.	PITCHER SAMPLE	CL	CLAY	OG	ORANGE	SM	SALT	VERY LOOSE	VLS 0 4	VERY SOFT	VS (ENTRANCE)		
R.C.	ROCK CORE	CLY	CLAYEY	ORG	ORGANIC	TH	SOME	LOOSE	LS 4 10	SOFT	S (MULDED LAMIN)		
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	COMPACT	CP 10 30	FIRM	FM (MOLLS)		
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	DENSE	DN 30 50	STIFF	ST (THUMB INDENTS)		
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WN	WEIGHT OF HAMMER	VERY DENSE	VDN 50	VERY STIFF	VST (THUMB INDENTS)		
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	Y	YELLOW			HARD	HST (THUMB INDENTS)		
		U	LITTLE	RX	ROCK								

[illegible]

Golder Associates Field Boring Log

DEPTH HOLE <u>2 FT</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCC / RFI / NY</u>	BORING NO. <u>PRB-11</u>
DEPTH SOIL DRILL <u>2 FT</u>	QA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEOPROBE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>SUN</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NQ. DIST. SA. <u>0</u>	UD. SA. <u>1</u>	TEMP. <u>90°F</u>	DRILL RIG <u>GH-40</u>
DEPTH WL. <u>N/A</u>	HRS. PROD. <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u>
TIME WL. <u>N/A</u>	HRS. DELAYED <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u>
			DATUM <u>N/A</u>
			STARTED <u>10:10, 8/6/96</u>
			COMPLETED <u>10:17, 8/6/96</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
AS AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" 0 - 1%	"SOME" 12 - 30%
CS CHURK SAMPLE	BR BROWN	MC MICACEOUS	SAT SATURATED	"LITTLE" 5 - 12%	"AND" 30 - 50%
DS DRIVE OPEN	C COARSE	MOT MOTTLED	SD SAND		
DS DENISON SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT		
PS PATCHER SAMPLE	CL CLAY	OG ORANGE	SH SILTY		
RC ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SOME		
ST SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE		
TQ THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL		
TP THIN-WALLED, PISTON	GL GRAVEL	R RED	WH WEIGHT OF HAMMER		
WS WASH SAMPLE	LYD LAYERED	RES RESIDUAL	Y YELLOW		
	LI LITTLE	RX ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES			DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN. (FORCE)		
1			1	SD	N/A		Loose, black to gray, crushed limestone GRAVEL Fill
2	END OF BOREHOLE						
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

**Golder Associates
Field Boring Log**

DEPTH HOLE <u>2 FT</u>	JOB NO <u>963-9117</u>	PROJECT <u>BCC / RFE / NY</u>	BORING NO. <u>PRB-12</u>
DEPTH SOIL DRILL <u>2 FT</u>	QA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEOPROBE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>SUN</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NO. DIST. SA. <u>0</u>	UD. SA. <u>1</u>	TEMP. <u>90°F</u>	DRILL RIG <u>GH-40</u>
DRILLER <u>M. FALZONE</u>	DATUM <u>N/A</u>	STARTED <u>10:30, 8/6/96</u>	COMPLETED <u>10:40, 8/6/96</u>
DEPTH WL. <u>N/A</u>	HRS. PROD. <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u>
TIME WL. <u>N/A</u>	HRS. DELAYED <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL. BLACK	M. MEDIUM	SA. SAMPLE	"TRACE" 0-1%	"SOME" 1-2%
C.S. CHUNK SAMPLE	BR. BROWN	MIC. MICACEOUS	SAT. SATURATED	"LITTLE" 3-12%	"AND" 13-50%
O.O. DRIVE OPEN	C. COARSE	MOT. MOTTLED	SD. SAND		
D.S. DIBSON SAMPLE	CA. CASING	NP. NON-PLASTIC	SI. SILT		
P.S. PITCHER SAMPLE	CL. CLAY	OG. ORANGE	ST. SILTY		
R.C. ROCK CORE	CLY. CLAYEY	ORG. ORGANIC	SM. SILTY		
S.T. SLOTTED TUBE	F. FINE	PH. PRESSURE-HYDRAULIC	TR. TRACE		
T.Q. THIN-WALLED, OPEN	FRAG. FRAGMENTS	PM. PRESSURE-MANUAL	WL. WATER LEVEL		
T.P. THIN-WALLED, PISTON	GR. GRAVEL	R. RED	WM. WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LTD. LAYERED	RES. RESIDUAL	Y. YELLOW		
	LI. LITTLE	RO. ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN (FORCE)	REC-ATT		
1			1	SD	N/A			Loose, gray crushed stone GRAVEL AND SAND FILL
2	END OF BOREHOLE							
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Golder Associates Field Boring Log

DEPTH HOLE <u>4 FT</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCC / RFE / NY</u>	BORING NO. <u>PRB-17</u>
DEPTH SOIL DRILL <u>4 FT</u>	QA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEOPROBE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>SUN</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NO. DIST. SA. <u>0</u>	UD. SA. <u>1</u>	TEMP. <u>90°F</u>	DRILL RIG <u>BH-40</u>
DRILLER <u>M. FULZONE</u>	DATUM <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u>
DEPTH WL. <u>N/A</u>	HRS. PROD. <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u>
TIME WL. <u>N/A</u>	HRS. DELAYED <u>N/A</u>	STARTED <u>11:20, 8/6/96</u>	COMPLETED <u>11:50, 8/6/96</u>

SAMPLE TYPES		ABBREVIATIONS				SOIL DESCRIPTION - RANGE OF PROPORTION			
A.S. AUGER SAMPLE	BL. BLACK	M. MEDIUM	SA. SAMPLE	"TRACE" 0-1%		"SOME" 12-20%			
C.S. CHUNK SAMPLE	BR. BROWN	MIC. MICACEOUS	SAT. SATURATED	"LITTLE" 5-12%		"AND" 30-50%			
O.O. DRIVE OPEN	C. COARSE	MOT. MOTTLED	SO. SAND						
D.S. DENSON SAMPLE	CA. CASING	NP. NON-PLASTIC	SI. SILT						
P.S. PITCHER SAMPLE	CL. CLAY	OG. ORANGE	SPY. SALTY						
R.C. ROCK CORE	CLY. CLAYEY	ORG. ORGANIC	SM. SOME						
S.T. SLOTTED TUBE	F. FINE	PH. PRESSURE-HYDRAULIC	TR. TRACE						
T.O. THIN-WALLED, OPEN	FRAG. FRAGMENTS	PM. PRESSURE-MANUAL	WL. WATER LEVEL						
T.P. THIN-WALLED, PISTON	QL. GRAVEL	R. RED	WM. WEIGHT OF HAMMER						
W.S. WASH SAMPLE	LTD. LAYERED	RES. RESIDUAL	Y. YELLOW						
	LI. LITTLE	RL. ROCK							

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN (FORCE)	REC. ATT.		
1			1	DO	N/A			Loose, gray to red to brown (crushed) concrete and brick. GRAVEL SAND AND CLAY. FILL
2								
3								
4								
5	END OF BOREHOLE							
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								Sample FDUP01 collected here

Golder Associates Field Boring Log

DEPTH HOLE <u>2 FT</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCC / REI / NY</u>	BORING NO. <u>PRB-18</u>
DEPTH SOIL DRILL <u>2 FT</u>	QA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEOPROBE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>SUN</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NO. DIST. SA. <u>0</u> UD. SA. <u>1</u>	TEMP. <u>90°F</u>	DRILL RIG <u>GH-40</u>	DRILLER <u>M. FALZONE</u>
DEPTH WL. <u>N/A</u>	HRS. PROD. <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u>
TIME WL. <u>N/A</u>	HRS. DELAYED <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u>
			STARTED <u>11:35, 8/6/96</u>
			COMPLETED <u>11:40, 8/6/96</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" 0 1% "SOME" 12 30%	
C.S. CHUNK SAMPLE	BR BROWN	MIC MICACEOUS	SAT SATURATED	"LITTLE" 5 12% "AND" 30 50%	
O.O. DRIVE OPEN	C COARSE	MOT MOTTLED	SD SAND		
O.S. DENISON SAMPLE	CA CASING	NP NON-PLASTIC	SH SILT		
P.S. PITCHER SAMPLE	CL CLAY	OG ORANGE	SHY SILTY	RELATIVE DENSITY BLOWS CONSISTENCY PENETRATION	
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SILTSTONE	VERY LOOSE VLS 0 4 VERY SOFT VS (EXTRUDES)	
S.T. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE	LOOSE LS 4 10 SOFT S (MULDS LAMBY)	
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL	COMPACT CP 10 30 FIRM FM (MOLDS)	
T.P. THIN-WALLED, PISTON	GL GRAVEL	R RED	WH WEIGHT OF HAMMER	DENSE DN 30 50 STIFF ST (THINWALLS, PENETRANT)	
W.S. WASH SAMPLE	LTD LAYERED	RES RESIDUAL	Y YELLOW	VERY DENSE VDN 50 HARD HD (RESIDUALS, PENETRANT)	
	U LITTLE	RI ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN (FORCE)	REC. ATT		
1			1	SD	N/A			Loose, light grey, cased stone. FILL
2	END OF BOREHOLE							
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

**Golder Associates
Field Boring Log**

DEPTH HOLE <u>2 FT</u>	JOB NO. <u>963-9117</u>	PROJECT <u>PCC / RFE / NY</u>	BORING NO. <u>PR3-P2</u>
DEPTH SOIL DRILL <u>2 FT</u>	QA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEOPROBE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>SUN</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NO. DIST. SA. <u>0</u> UD. SA. <u>1</u>	TEMP. <u>90°F</u>	DRILL RIG <u>GH-40</u>	DRILLER <u>M. FALZONE</u>
DEPTH WL. <u>N/A</u>	HRS. PROD. <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u>
TIME WL. <u>N/A</u>	HRS. DELAYED <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u>
			DATUM <u>N/A</u>
			STARTED <u>8:15, 8/7/96</u>
			COMPLETED <u>8:30, 8/7/96</u>

[illegible][illegible]

Golder Associates Field Boring Log

DEPTH HOLE <u>2 FT</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCC / REI / NY</u>	BORING NO. <u>PRB-20</u>
DEPTH SOIL DRILL <u>2 FT</u>	GA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEOPROBE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>SWH</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NQ. DIST. SA. <u>0</u> UD. SA. <u>1</u>	TEMP. <u>90°F</u>	DRILL RIG <u>BH-40</u>	DRILLER <u>M. FAIZONE</u> DATUM <u>N/A</u>
DEPTH WL. <u>N/A</u>	MRS. PROG. <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u> STARTED <u>7:55 / 8/7/96</u>
TIME WL. <u>N/A</u>	MRS. DELAYED <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u> COMPLETED <u>8:10 / 8/7/96</u>

SAMPLE TYPES

A.S. AUGER SAMPLE
 C.S. CHURN SAMPLE
 D.O. DRIVE OPEN
 D.S. DENISON SAMPLE
 P.S. PITCHER SAMPLE
 R.C. ROCK CORE
 S.T. SLOTTED TUBE
 T.O. THIN-WALLED, OPEN
 T.P. THIN-WALLED, PISTON
 W.S. WASH SAMPLE

BL BLACK
 BR BROWN
 C COARSE
 CA CASING
 CL CLAY
 CLY CLAYEY
 F FINE
 FRAG FRAGMENTS
 GL GRAVEL
 LYO LAYERED
 U LITTLE

ABBREVIATIONS

M MEDIUM
 MC MICACEOUS
 MT MOTTLED
 NP NON-PLASTIC
 OG ORANGE
 ORG ORGANIC
 PH PRESSURE-HYDRAULIC
 PM PRESSURE-MANUAL
 R RED
 RES RESIDUAL
 RE ROCK

SA SAMPLE
 SAT SATURATED
 SD SAND
 SI SILT
 SILT SILTY
 SM SOME
 TR TRACE
 WL WATER LEVEL
 WH WEIGHT OF HAMMER
 Y YELLOW

SOIL DESCRIPTION - RANGE OF PROPORTION

"TRACE" 0-1% "SOME" 12-30%
 "LITTLE" 5-12% "AND" 30-50%
 RELATIVE DENSITY BLOWS CONSISTENCY FINGER PRESSURE
 VERY LOOSE VLS 0-4 VERY SOFT VS EXTRUDES
 LOOSE LS 4-10 SOFT S MUDS LAMINATE
 COMPACT CP 10-30 FIRM FM MOLDS
 DENSE DN 30-50 STIFF ST THUMB-NAILS
 VERY DENSE VDN 50 VERY STIFF VST THUMB-NAILS, HIGH W RESISTS THUMB-NAILS

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN (FORCE)	REC. ATT		
1			1	SD	N/A			Loose, gray to red crushed gravel SAND AND GRAVEL FILL
2	END OF BOREHOLE							
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Golder Associates Field Boring Log

DEPTH HOLE	<u>2 FT</u>	JOB NO.	<u>963-9117</u>	PROJECT	<u>BCC / RFE / NY</u>	BORING NO.	<u>PRB-21</u>
DEPTH SOIL DRILL	<u>2 FT</u>	GA INSP.	<u>D. WEHN</u>	DRILLING METHOD	<u>GEOPROBE</u>	SHEET	<u>1</u> OF <u>1</u>
DEPTH ROCK CORE	<u>0</u>	WEATHER	<u>SIL</u>	DRILLING COMPANY	<u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV.	<u>N/A</u>
NO. DIST. SA.	<u>0</u>	UD. SA.	<u>1</u>	TEMP.	<u>90°F</u>	DRILL RIG	<u>GH-40</u>
						DRILLER	<u>M. FALZONE</u>
						DATUM	<u>N/A</u>
DEPTH WL.	<u>N/A</u>	HRS. PROD.	<u>N/A</u>	WT. SAMPLER HAMMER	<u>N/A</u>	DROP	<u>N/A</u>
						STARTED	<u>13:10</u> , <u>8/6/96</u>
TIME WL.	<u>N/A</u>	HRS. DELAYED	<u>N/A</u>	WT. CASING HAMMER	<u>N/A</u>	DROP	<u>N/A</u>
						COMPLETED	<u>13:25</u> , <u>8/6/96</u>

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION			RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE"	0 TO 1%	SOME	12 TO 20%
C.S.	CHUNK SAMPLE	BR	BROWN	MC	MUCACEOUS	SAT	SATURATED	"LITTLE"	5 TO 12%	AND	30 TO 50%
O.O.	ORIVE OPEN	C	COARSE	MOT	MOTTLED	SD	SAND				
D.S.	DENISON SAMPLE	CA	CASSING	NP	NON-PLASTIC	SI	SILT				
P.S.	PITCHER SAMPLE	CL	CLAY	OG	ORANGE	SIL	SILTY				
R.C.	ROCK CORE	CLV	CLAYEY	ORG	ORGANIC	SM	SOME	RELATIVE DENSITY	BLOWS	CONSISTENCY	FINGER PRESSURE
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	VERY LOOSE	1-5	VERY SOFT	VS. STRIKERS
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	LOOSE	LS 4-10	SOFT	S. MEDIUM-LABLY
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WM	WEIGHT OF HAMMER	COMPACT	CP 10-30	FIRM	F. MOIST
W.S.	WASH SAMPLE	LYD	LAYERED	RES	RESIDUAL	Y	YELLOW	DENSE	DN 30-50	STIFF	ST. FIRM-MOIST
		LI	LITTLE	RL	ROCK			VERY DENSE	VDN 50	VERY STIFF	VST. THUMBING, MOIST E
										HARD	H. RES-15 THUMBING

[illegible]

**Golder Associates
Field Boring Log**

DEPTH HOLE <u>2 FT</u>	JOB NO <u>963-9117</u>	PROJECT <u>BCC / RFI / NY</u>	BORING NO. <u>PRB-22</u>
DEPTH SOIL DRILL <u>2 FT</u>	QA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEOPROBE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>SUN</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NO. DIST. SA. <u>0</u>	UD. SA. <u>1</u>	TEMP. <u>90°F</u>	DRILL RIG <u>GH-40</u>
		DRILLER <u>M. FALZONE</u>	DATUM <u>N/A</u>
DEPTH WL. <u>N/A</u>	HRS. PROD. <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u>
TIME WL. <u>N/A</u>	HRS. DELAYED <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u>
			STARTED <u>11:40, 8/1/96</u>
			COMPLETED <u>11:45, 8/1/96</u>

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION			
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" 0 1% "SOME" 12 30%					
C.S. CHURN SAMPLE	BR BROWN	MC MICACEOUS	SAT SATURATED	"LITTLE" 5 12% "AND" 30 50%					
O.O. DRIVE OPEN	C COARSE	MOT MOTTLED	SD SAND						
O.S. OSHISON SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT						
P.S. PITCHER SAMPLE	CL CLAY	OG ORANGE	SIY SILTY						
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SOME						
S.T. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE						
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL						
T.P. THIN-WALLED, PISTON	GL GRAVEL	R RED	WM WEIGHT OF HAMMER						
W.S. WASH SAMPLE	LTD LAYERED	RES RESIDUAL	Y YELLOW						
	LI LITTLE	RL ROCK							

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 8 IN (FORCE)	REC / ATT		
1			1	SD	N/A			Loose brown to black SAND, with some gravel fill
2	END OF BOREHOLE							
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

**Golder Associates
Field Boring Log**

DEPTH HOLE <u>2 FT</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCC / RFI / NY</u>	BORING NO. <u>PRB-24</u>
DEPTH SOIL DRILL <u>2 FT</u>	GA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>GEOPROBE</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>0</u>	WEATHER <u>SUN</u>	DRILLING COMPANY <u>ZEBRA ENVIRONMENTAL</u>	SURFACE ELEV. <u>N/A</u>
NO. DIST. SA. <u>0</u> UD. SA. <u>1</u>	TEMP. <u>90°F</u>	DRILL RIG <u>GH-40</u>	DRILLER <u>M. FALZONE</u> DATUM <u>N/A</u>
DEPTH WL. <u>N/A</u>	HRS. PROD. <u>N/A</u>	WT. SAMPLER HAMMER <u>N/A</u>	DROP <u>N/A</u> STARTED <u>12:50, 8/6/96</u>
TIME WL. <u>N/A</u>	HRS. DELAYED <u>N/A</u>	WT. CASING HAMMER <u>N/A</u>	DROP <u>N/A</u> COMPLETED <u>12:58, 8/6/96</u>

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APPENDIX B-3

RFI FIELD BORING LOGS

Supplemental Investigation
Boring Logs

Buffalo Color Corporation Supplemental Investigation Monitoring Well and Boring Logs Generalized Stratigraphic Unit Description Key

GENERALIZED DESCRIPTION

UNIT

FILL

Variable proportions of gravel and foundry sand, brick, and re-worked clay and silt till.

UPPER TILLS

Soft to firm, light brown to brown-gray, Silty Clay to Sandy Clay, occasional gray clay infilling of fractures and interbedded fine to medium sand seams.

ALLUVIUM

Very loose to compact, brown to black, fine to coarse SAND, less commonly Clayey Silt to Clayey Sand, occasionally interbedded with thin seams of leaves and/or wood bits.

GLACIOLACUSTRINE
CLAY

Soft to very soft, brown-gray, Silty Clay to Clay with reddish brown to brown varving and occasional interbedded fine sand seams.

NOTES

1. The stratigraphic descriptions presented above are summarized from individual samples obtained at each boring. Consequently, minor deviations from these "type" descriptions may be observed within individual sample descriptions.

TITLE

STRATIGRAPHIC UNIT DESCRIPTION KEY



**Golder
Associates**

Buffalo, New York

CLIENT/PROJECT

BUFFALO COLOR CORPORATION
RCRA FACILITY INVESTIGATION (RFI)

DRAWN

BEC

DATE

10/2/97

JOB NO.

963-9117

CHECKED

DJM

SCALE

N/A

DWG NO.

BCC-020

REVIEWED

FILE NO.

963-9117

FIGURE NO.

KEY

Golder Associates Field Boring Log

DEPTH HOLE <u>30'</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCL/RFE/IN</u>	BORING NO. <u>RFI-34</u>
DEPTH SOIL DRILL <u>28'</u>	GA INSP. <u>DTM</u>	DRILLING METHOD <u>4.25" Hollow Stem Augers</u>	SHEET <u>1</u> OF <u>2</u>
DEPTH ROCK CORE <u>NA</u>	WEATHER <u>Clear</u>	DRILLING COMPANY <u>STB Services Inc.</u>	SURFACE ELEV. <u>583.70</u>
NO. DIST. SA. <u>15</u> UO. SA. <u>—</u>	TEMP. <u>55°F</u>	DRILL RIG <u>CME-85</u>	DATUM <u>MSL</u>
DEPTH WL. <u>NA</u>	HRS. PROD. <u>NA</u>	WT. SAMPLER HAMMER <u>140lb</u>	DROP <u>30"</u>
TIME WL. <u>NA</u>	HRS. DELAYED <u>NA</u>	WT. CASING HAMMER <u>NA</u>	DROP <u>NA</u>
			STARTED <u>0915 5-27-97</u>
			COMPLETED <u>1155 5-27-97</u>

SAMPLE TYPES				ABBREVIATIONS				SOIL DESCRIPTION - RANGE OF PROPORTION			
A.S. AUGER SAMPLE	BL. BLACK	M. MEDIUM	SA. SAMPLE SATURATED	MC. MUCOUS	SD. SAND	REL. DENSITY	BLOWS	CONSISTENCY	PRESSURE		
C.S. CHURN SAMPLE	BR. BROWN	MC. MUCOUS	SAT. SATURATED	NP. NON-PLASTIC	SI. SILT	VERY LOOSE	VLS 0-4	VERY SOFT	VS. EXTREMELY		
O.O. DRIVE OPEN	CA. COARSE	NP. NON-PLASTIC	SD. SAND	OR. ORANGE	SH. SILTY	LOOSE	LS 4-10	SOFT	S. MEDIUM		
O.S. DENISON SAMPLE	CL. CLAY	OR. ORANGE	SH. SILTY	ORG. ORGANIC	SM. SOME	COMPACT	CP 10-30	FIRM	FS. MODERATE		
P.S. PITCHER SAMPLE	CLY. CLAYEY	PH. PRESSURE-HYDRAULIC	SM. SOME	PH. PRESSURE-HYDRAULIC	TR. TRACE	DENSE	DN 30-50	STIFF	ST. THICK		
R.C. ROCK CORE	P. PINE	PM. PRESSURE-MANUAL	TR. TRACE	PM. PRESSURE-MANUAL	WL. WATER LEVEL	VERY DENSE	VDN 50	VERY STIFF	VST. THICK		
S.T. SLOTTED TUBE	FRAG. FRAGMENTS	RED. RESIDUAL	WL. WATER LEVEL	RED. RESIDUAL	WH. WEIGHT OF HAMMER						
T.O. THIN-WALLED OPEN	LYG. LAYERED	RE. ROCK	WH. WEIGHT OF HAMMER	RE. ROCK							
T.P. THIN-WALLED PISTON	LYG. LAYERED										
W.S. WASH SAMPLE	U. LITTLE										

W.S. WASH SAMPLE		U LITTLE		SAMPLES		DEPTH		SAMPLE DESCRIPTION AND BORING NOTES
ELEV. DEPTH	DESCRIPTION	BLOWS / FT	NO.	TYPE	HAMMER BLOWS PER 6 IN (FOOT)	REC ATT		
	<u>Fill</u>		0					No split spoon sample. Auger cuttings - brick crushed stone, concrete
2		10	2	1	SS	4 5/8 / 3 1/2"	0 / 2.0	
		5	4	2	SS	8 3/4 / 2 1/2"	0.5 / 2.0	Loose, br-bk, md SAND, foundry sand, sft br clay in tip
4		4	6	3	SS	2 1/2 / 2 1/2"	1.8 / 2.0	V. sft, br, silty CLAY, some to tr fn sand several 1"-2" fn sand seams, moist
6		7	8	4	SS	2 3/4 / 4"	1.8 / 2.0	Soft, br w slgy. mottling, silty CLAY, some slag and glass, trace to some fn-md sand
8	<u>Alluvium</u>	5	8	5	SS	WH / 2 3/3	1.9 / 2.0	Same as above w 4" of sat. fn sand in tip - No slag or glass
10		10	6	SS	WH / WH	WH / WH	2.0 / 2.0	VLS, br, fn-md Clayey SAND, tr cs sand, saturated
12		WH	12	7	SS	WR / 12"	2.0 / 2.0	VLS, br, fn-md, Clayey SAND, little cs sand, saturated
		WH	14	8	SS	WH / 24"	2.0 / 2.0	VLS br, fn-md Clayey Sand to 14.5' then interbedded with 1" to 2" sft, gray clay seams
14		WH	16	9	SS	WH / 12" / 1 1/2	1.8 / 2.0	VLS, br, fn-md SAND, trace to some cs sand
16		<2	18	10	SS	WH / 12" / 1 1/1	1.8 / 2.0	VLS, md-cs SAND, tr - some fn sand
18		<2	20	11	SS	WH / 1 1/2 / 2	1.8 / 2.0	Same as above with trace wood frags.
20		3	22					

Golder Associates
Field Boring Log

FIELD BORING LOG						BORING NO.	<u>RFI-34</u>	
DEPTH HOLE	<u>30'</u>	JOB NO.	<u>963-9117</u>	PROJECT	<u>BCC / RFI / NY</u>	SHEET	<u>2 OF 2</u>	
DEPTH SOIL DRILL	<u>28'</u>	GA INSP.	<u>DJM</u>	DRILLING METHOD	<u>4.25" Hollow Stem Augers</u>	SURFACE ELEV.	<u>583.70</u>	
DEPTH ROCK CORE	<u>NA</u>	WEATHER	<u>Clear</u>	DRILLING COMPANY	<u>SJB Services Inc.</u>	DATUM	<u>MSL</u>	
NQ. DIST. SA.	<u>15</u>	UD. SA.	<u>TEMP.</u>	<u>55°F</u>	DRILL RIG	<u>CME-85</u>	GRILLER	<u>C. Ackley</u>
DEPTH WL.	<u>NA</u>	HRS. PROG.	<u>NA</u>	WT. SAMPLER HAMMER	<u>140lb</u>	DROP	<u>30"</u>	
TIME WL.	<u>NA</u>	HRS. DELAYED	<u>NA</u>	WT. CASING HAMMER	<u>NA</u>	DROP	<u>NA</u>	
						STARTED	<u>0915 15-27-97</u>	
						COMPLETED	<u>1155 15-27-97</u>	
SOIL DESCRIPTION - RANGE OF PROPORTION								

[illegible]

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	MASS. BLOWS PER 6 IN. (FORCE)	REC. ATT		
22	<u>Alluvium</u>	3	12	SS	3 2/1/4	1.2 / 2.0		Vis, md-cs SAND, tr-some fn sand and wood frags, tr fn gravel
24			13	SS	2 1/1/WT/3	1.5 / 2.0		Same as above with greater clay content
26			14	SS	7/6/3/3	1.8 / 2.0		Vis, md-cs SAND, tr-some fn sand to 27.3 then sft, gy-br, Silty CLAY, tr fn-md sand
28	<u>Glaciolacustrine Clay</u>	9	15	SS	WT / 24"	2.0 / 2.0		VS, gy-br, silty CLAY, uniform with some red varving at base, tr fn-md sand
30	<u>End of boring</u>	WH						

Golder Associates Field Boring Log

DEPTH HOLE <u>18'</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCC/REF/1NY</u>	BORING NO. <u>107-35</u>
DEPTH SOIL DRILL <u>16'</u>	QA INSP. <u>SAV</u>	DRILLING METHOD <u>4.25" HOLLOW STEM AUGER</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>NA</u>	WEATHER <u>SUNNY</u>	DRILLING COMPANY <u>SIR SERVICES INC.</u>	SURFACE ELEV. <u>585.30</u>
NO. DIST. SA. <u>9</u> UD. SA. <u>—</u>	TEMP. <u>63°</u>	DRILL RIG <u>CME-ASC</u>	DATUM <u>MSL</u>
DEPTH WL. <u>NA</u>	HRS. PROD. <u>NA</u>	WT. SAMPLER HAMMER <u>140lb</u>	DROP <u>30"</u>
TIME WL. <u>NA</u>	HRS. DELAYED <u>NA</u>	WT. CASING HAMMER <u>NA</u>	DROP <u>NA</u>
			STARTED <u>0840, 4/4/97</u>
			COMPLETED <u>1015, 4/4/97</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
AS AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" 0.1%	"SOIL" 12.30%
CS CHURCH SAMPLE	BR BROWN	MC MICACEOUS	SAT SATURATED	"LITTLE" 5.12%	"AND" 30.60%
DO DRIVE OPEN	C COARSE	MO MOT	SD SAND		
DS DENISON SAMPLE	CA COARSE	NP NON-PLASTIC	SI SILT	RELATIVE DENSITY	BLOWS
FS PITCHER SAMPLE	CL CLAY	OS ORANGE	SIL SILTY	VERY LOOSE VLS 0.4	CONSISTENCY
RC ROCK CORE	CL CLAYEY	ORG ORGANIC	SM SOME	LOOSE LS 4.10	VERY SOFT VS
ST SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE	COMPACT CP 10.30	STIFF SM
T.O. THIN-WALLED, OPEN	FRAG. FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL	DENSE DN 30.60	VERY STIFF VS1
T.P. THIN-WALLED, PISTON	GL GRAVEL	R RED	WH WEIGHT OF HAMMER	VERY DENSE VDN 50	HAIRY VS2
W.S. WASH SAMPLE	LTO LAYERED	RES RESIDUAL	Y YELLOW		RECKLESS THUNDER
	LI LITTLE	ROX ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	WATER BLOWN PER 6 IN (FORCE)	REC. ATT		
2	<u>Fill</u>	0	1	SS	2, 4	1.0	2.0	TOP 2" OK BROWN SANDY SILT, GRASS
		10	2	SS	6, 10	1.0	2.0	2"-5" OK BROWN BLK FINE-MED SAND AND GRAVEL, BOTTOM BLK-OK BROWN MED-COARSE SAND, LITTLE GRAVEL, TRACE BRCK
		20	3	SS	6, 7	1.0	2.0	TOP 3" BLK-OK BROWN MED-COARSE SAND SOME GRND. (FOUNDED) 3"-8" MED-COARSE SAND STAINED OK-RED - MAROON TO BLK THIN LAYER OF FIBROUS MATL. 2"-5" BOTTOM GRAY-LT GRAY SILTY CLAY, BLK SPOTS
4		4	3	SS	1, 2	1.4	2.0	TOP 4" GRAY SILTY CLAY, MOTTLED LT BRN W/ BLK SPOTS, BOTTOM LT BRN-GRAY SILTY CLAY, LITTLE MOIST, FAIRLY UNIFORM
		6	4	SS	5, 6	1.4	2.0	
		7	5	SS	6, 8	1.8	2.0	LT-BRN TO BRN SILTY CLAY W/ GRAY VEINS AND BLK SPOTTING, TRACE COARSE SAND IN UPPER HALF
6	<u>Upper Tills</u>	16	4	SS	8, 10	1.8	2.0	
		8	5	SS	8, 8	1.7	2.0	LT BRN - BRN, FIRM SILTY CLAY, GRAY VEIN RUNNING DOWN ENTIRE LENGTH, TRACE COARSE SAND THROUGHOUT AND BLK SPOTTING, LITTLE - SOME MOIST
		18	6	SS	10, 11	1.7	2.0	
10		12	6	SS	3, 6	1.9	2.0	TOP 18" AS ABOVE W/ INTERBEDDED FINE SAND LAYERS, BOTTOM SET LT BRN-BRN SILTY CLAY, SOME MOIST, TRACE BLACK SPOTTING, GRAY VEINS END
		12	7	SS	6, 7	2.0	2.0	
		2	7	SS	1, 1	2.0	2.0	TOP 6" AS ABOVE, NO BLK SPOTTING, BOTTOM BRN - OK BROWN, SAT, UNIFORM SILTY CLAY W/ INTERBEDDED FINE SAND LAYERS
14	<u>Glacio lacustrine Clay</u>	14	8	SS	1, 2	2.0	2.0	OK BROWN SAT, UNIFORM, VSF SILTY CLAY W/ INTERBEDDED SAND LAYERS, MULTIPLE, CLOSE SPACING
		WH	8	SS	WH 24"	2.0	2.0	
		16	9	SS	WH 24"	2.0	2.0	TOP 18" AS ABOVE, BOTTOM 6" VSFT OK BROWN - BRN SILTY CLAY, UNIFORM, SAT RED VARIING
18	<u>End of boring</u>	WH	9	SS	WH 24"	2.0	2.0	
		18						

**Golder Associates
Field Boring Log**

DEPTH HOLE <u>16'</u>	JOB NO. <u>923-917</u>	PROJECT <u>BCL/RFI/NY</u>	BORING NO. <u>RFI-36</u>
DEPTH SOIL DRILL <u>14'</u>	QA INSP. <u>SN</u>	DRILLING METHOD <u>4.25" HOLLOW STEM AUGER</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>NA</u>	WEATHER <u>RAIN</u>	DRILLING COMPANY <u>SJB SERVICES INC.</u>	SURFACE ELEV. <u>585.20</u>
NO. DIST. SA. <u>8</u>	UD. SA. <u>TEMP. 65°</u>	DRILL RIG <u>CME-85</u>	DRILLER <u>C. ACKLEY</u>
DEPTH WL. <u>NA</u>	HRS. PROD. <u>NA</u>	WT. SAMPLER HAMMER <u>140lb</u>	DROP <u>30 in</u>
TIME WL. <u>NA</u>	HRS. DELAYED <u>NA</u>	WT. CASING HAMMER <u>NA</u>	DROP <u>NA</u>
			DATUM <u>M.S.L.</u>
			STARTED <u>1525 10/2/97</u>
			COMPLETED <u>0945 10/2/97</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL. BLACK	M. MEDIUM	SA. SAMPLE	TRACE 0-1%	SAND 12-20%
C.S. CHURN SAMPLE	BR. BROWN	MC. MICACEOUS	SAT. SATURATED	"LITTLE" 5-12%	AND 30-50%
D.O. DRIVE OPEN	C. COARSE	MOT. MOTTLED	SD. SAND		
D.S. DEWSON SAMPLE	CA. CASING	NP. NON-PLASTIC	SI. SILT	RELATIVE DENSITY	BLOWS
P.S. PITCHER SAMPLE	CL. CLAY	OG. ORANGE	ST. SILTY	VERY LOOSE VLS 0-4	VERY SOFT VS 5-12
R.C. ROCK CORE	CLT. CLAYEY	ORG. ORGANIC	SM. SOME	LOOSE LS 4-10	SOFT S 13-20
S.T. SLOTTED TUBE	F. FINE	PH. PRESSURE-HYDRAULIC	TR. TRACE	COMPACT CP 10-30	FIRM FS 31-40
T.O. THIN-WALLED, OPEN	FRAG. FRAGMENTS	PM. PRESSURE-MANUAL	WL. WATER LEVEL	DENSE DN 30-60	STIFF ST 61-100
T.P. THIN-WALLED, PISTON	QL. GRAVEL	R. RED	WH. WEIGHT OF HAMMER	VERY DENSE VDN 50	VERY STIFF VST 101-200
W.S. WASH SAMPLE	LTD. LAYERED	RES. RESIDUAL	Y. YELLOW		
	L. LITTLE	RO. ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT		SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES	
				NO.	TYPE	MAXIMUM BLOWS PER 6 IN (FORCE)	REC. / ATT			
2	<u>Fill</u>	4	2	1	SS	1, 1 3, 3	0.9 2.0		TOP 2" MED-COARSE BROWN SAND AND GRVL, 2-4" ORNG-WHITE FINE-MED SAND AND GRVL W/BLK STAINING, BOTTOM LT BRN- BRN MED-COARSE SAND AND GRAVEL	
4		11	4	2	SS	5, 5 6, 6	1.5 2.0		TOP 4", BLACK LS OR BRN MED-COARSE SAND & GRVL, LT BRN-ORNG SILTY SILTY CLAY MOTTLED DK GRAY AND BLK MED-COARSE SAND AND GRAVEL, TRACE BRCK	
6		2	6	3	SS	WH, 1 1, 3	1.1 2.0		TOP 9" AS ABOVE, BOTTOM 4" FIRM BRN SILTY CLAY W/TRACE MED SAND AND BRCK	
8		12	8	4	SS	1, 4 8, 2	0.9 2.0		TOP 5", STT BRN SANDY CLAY AND BRCK, SAT, CHANGE TO LT BRN-GRAY SANDY CLAY, FIRM, MOTTLED BLK, LITTLE MOIST, BOTTOM 2" BAGE-TEAL MED-COARSE SAND AND GRVL, VERY ANGULAR (M.S. PIPE ROCKFILL)	
10		<u>Upper Till</u>	10	5	SS	4, 5 5, 6	1.0 2.0		TOP 8" BAGE-TEAL MED-COARSE SAND AND GRVL, VERY ANGULAR, BOTTOM 4" LT BRN- BRN SILTY CLAY, INTERBEDDED ORNG-BRN FINE SAND LAYERS	
12			8	12	6	SS	4, 4 4, 4	2.0 2.0		TOP 4", BRN-LT BRN SILTY CLAY, SET, WITH INTERBEDDED FINE SAND LAYERS (≤ 1/4") BOTTOM DK BRN SET SILTY CLAY, SOME MOIST, INTERBEDDED FINE SAND LAYERS (≤ 1/8"), TRACE RED VARYING
14		<u>Glaciolacustrine Clay</u>	WH	14	7	SS	WH 24"	1.5 2.0		VSFT DK BRN-BRN, SAT, SILTY CLAY, INTERBEDDED FINE SAND LAYERS (≤ 1/8") TRACE RED VARYING
16			WH	16	8	SS	WH 24"	1.7 2.0		AS ABOVE, SAND LAYERS MORE NUMEROUS AND APPROACHING 1/4" THICK
		<u>End of boring</u>								

**Golder Associates
Field Boring Log**

DEPTH HOLE <u>22'</u>	JOB NO. <u>963-917</u>	PROJECT <u>BCC/REF/117</u>	BORING NO. <u>RFI-37</u>
DEPTH SOIL DRILL <u>22'</u>	QA INSP. <u>SN</u>	DRILLING METHOD <u>4.25" HOLLOW STEM AUGER</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>NA</u>	WEATHER <u>RAIN</u>	DRILLING COMPANY <u>SJR SERVICES INC.</u>	SURFACE ELEV. <u>584.60</u>
NO. DIST. SA. <u>11</u> UD. SA. <u>—</u>	TEMP. <u>60°</u>	DRILL RIG <u>CME-85</u>	DRILLER <u>C. A. O'LEARY</u>
DEPTH WL. <u>NA</u>	MRS. PROD. <u>NA</u>	WT. SAMPLER HAMMER <u>140 lb</u>	DROP <u>30 in</u>
TIME WL. <u>NA</u>	MRS. DELAYED <u>NA</u>	WT. CASING HAMMER <u>NA</u>	DROP <u>NA</u>
			DATUM <u>MSL</u>
			STARTED <u>0745 6/2/97</u>
			COMPLETED <u>0840 6/2/97</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S.	AUGER SAMPLE	BL	BLACK	SA	SAMPLE
C.S.	CHUNK SAMPLE	BR	BROWN	SAT	SATURATED
D.O.	DRIVE OPEN	C	COARSE	SD	SAND
D.S.	DENISON SAMPLE	CA	CASING	SI	SILT
P.S.	PITCHER SAMPLE	CL	CLAY	SH	SILT
R.C.	ROCK CORE	CLY	CLAYEY	SM	SOME
S.T.	SLOTTED TUBE	F	FINE	TR	TRACE
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	WL	WATER LEVEL
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	WH	WEIGHT OF HAMMER
W.S.	WASH SAMPLE	LTD	LAYERED	Y	YELLOW
		U	LITTLE		
		M	MEDIUM		
		MAC	MICACEOUS		
		MOT	MOTTLED		
		NP	NON-PLASTIC		
		OR	ORGANIC		
		PH	PRESSURE-HYDRAULIC		
		PM	PRESSURE-MANUAL		
		R	RED		
		RES	RESIDUAL		
		RO	ROCK		

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN (FORCE)	REC. ATT		
	<u>Fill</u>		0		- , 4	1.1		AUGERED 1" 6" THROUGH BLACKTOP AND STONE BASE, TOP 2" LT GRAY - GRAY FINE-MED SAND
			1	SS	3, 5	2.0		TRACE GRAVEL, NEXT 3" BLK STAINED MED-COARSE FOUNDRY SAND, BOTTOM OK BRN - BLK MED-COARSE FOUNDRY SAND, TRACE ROCK
2		7	2	SS	5, 4	1.2		OK BRN - BLK FOUNDRY SAND, TRACE GRAVEL AND ROCK, BOTTOM 3" OK BRN - BEN SFT FINE-MED SILTY SAND, MOTTLED BLACK, LITTLE MOIST
		5	4		1, 4	2.0		
4	<u>Upper Tills</u>		3	SS	2, 3	1.1		1" 4" ORNG-BEN FIN-MED SILTY SAND, BOTTOM 1" - CP GRAY-LT BEN FINE-MED CLAYEY SAND, MOTTLED ORANGE
		8	6		5, 5	2.0		
6			4	SS	3, 5	1.8		BRN-LT BRN FIRM SILTY CLAY W/GRAY-OK GRAY VEINS RUNNING ALONG ENTIRE LENGTH, UNIFORM, LITTLE MOIST
		12	8		7, 10	2.0		
8			5	SS	1, 6	1.8		TOP 1/2 SET BRN-LT BRN SILTY CLAY, SOME MOIST, GRAY VEINS THROUGHOUT LENGTH, BOTTOM 1/2 BRN-LT BRN FINE-MED SANDY CLAY, RED VARYING LAST 5", GRAY VEINS
		18	10		12, 8	2.0		END
10			6	SS	WH, 3	2.0		BRN-LT BRN SFT SILTY CLAY, GRAY VEINS, 2 INTERBEDDED 1" THICK COARSE-MED SAND, TRACE GRAVEL, 1.2' FROM TOP SET BRN SILTY CLAY W/INTERBEDDED FIN-MED SAND LAYERS (ORNG-BEN), BOTTOM 0.5' VST OK BRN SILTY CLAY, SOME MOIST
		8	12		5, 5	2.0		
12			7	SS	WH 24"	2.0		VST OK BROWN SILTY CLAY, UNIFORM, RED VARYING
		WH	14			2.0		
14			8	SS	WH 24"	2.0		BROWN-GRAY VST SILTY CLAY, UNIFORM, RED VARYING
		WH	16			2.0		
16			9	SS	WH 24"	2.0		AS ABOVE, TRACE MED-COARSE SAND FROM 1.1' - 1.7', THIN LAYER OF BRN FINE-MED SAND @ 1'
		WH	18			2.0		
18	<u>Glaciolacustrine Clay</u>		10	SS	WH 24"	2.0		AS ABOVE, INTERBEDDED FINE SAND LAYERS
		WH	20			2.0		
20			11	SS	WH 1/6" 18"	1.8		AS ABOVE, TRACE INTERMIXED MED-COARSE SAND, BOTTOM 0.8' NO SAND, UNIFORM BROWN-GRAY SILTY CLAY W/ RED VARYING
		WH	22			2.0		
22	<u>End of boring</u>							

**Golder Associates
Field Boring Log**

DEPTH HOLE <u>30'</u>	JOB NO <u>963-9117</u>	PROJECT <u>BCC / RFI / NY</u>	BORING NO. <u>RFI-38</u>
DEPTH SOIL DRILL <u>28'</u>	QA INSP. <u>SAV</u>	DRILLING METHOD <u>4 1/4" Hollow Stem Augers</u>	SHEET <u>1</u> OF <u>2</u>
DEPTH ROCK CORE <u>NA</u>	WEATHER <u>Clear</u>	DRILLING COMPANY <u>SJB Services Inc.</u>	SURFACE ELEV. <u>582.90</u>
NO. DIST. SA. <u>15</u> UD. SA. <u>—</u>	TEMP. <u>60°F</u>	DRILL RIG <u>CME BS</u>	DRILLER <u>C. Ackley</u>
DEPTH WL. <u>NA</u>	HRS. PROD. <u>NA</u>	WT. SAMPLER HAMMER <u>140 lb</u>	DROP <u>30"</u>
TIME WL. <u>NA</u>	HRS. DELAYED <u>NA</u>	WT. CASING HAMMER <u>NA</u>	DROP <u>NA</u>
			DATUM <u>MSL</u>
			STARTED <u>0800, 5-28-97</u>
			COMPLETED <u>1030, 5-28-97</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" 0.1% - 1.0%	SAND 12.5% - 30.0%
C.S. CHUNK SAMPLE	BR BROWN	MC MICACEOUS	SAT SATURATED	"LITTLE" 1.1% - 5.0%	AND 30.0% - 50.0%
O.O. DRIVE OPEN	C COARSE	MOT MOTTLED	SD SAND		
O.S. DEBRIER SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT	RELATIVE DENSITY	BLOWS
P.C. PITCHER SAMPLE	CL CLAY	OR ORANGE	SV SILTY	VERY LOOSE VLS 0-4	VERY SOFT VS 5-10
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SOME	LOOSE LS 4-10	SOFT S 10-20
S.T. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE	COMPACT CP 10-30	FIRM FA 20-30
T.O. THIN-WALLED, OPEN	FR FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL	DENSE DN 30-50	STIFF ST 30-50
T.P. THIN-WALLED, PISTON	GL GRAVEL	R RED	WH WEIGHT OF HAMMER	VERY DENSE VD 50	VERY STIFF VS 50
W.S. WASH SAMPLE	LTO LAYERED	RES RESIDUAL	Y YELLOW		
	U LITTLE	RL ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	WATER BLOWS PER 6 IN (FORCE)	REC. ATT		
	<u>Fill</u>		0					
			1	SS	3/8/5/2	1.0/2.0		0-2 Loose, Rusty br, SAND and limestone GRAVEL with topsoil
2		13	2	SS	4/2/1/12	0.8/2.0		VS, tan-br, SILT, to iron staining, little - some fn - md sand
4		<3	3	SS	5/2/1/1	1.0/2.0		Limestone cobble 4-4.5' - LS, SILT and GRAVEL with black staining, little - some fn - md sand
6		3	4	SS	2/2/1/2	1.5/2.0		VIS, CLAYEY SAND, dk br - blk, some cs sand and fn gravel, v. moist, tr brick
8		3	5	SS	WH/12"/1/1	1.1/2.0		VIS, CLAYEY GRAVEL and SAND, satur. dk-br to blk, trace brick
10		<2	6	SS	WH/24"	0.6/2.0		As 8-10
12		WH	7	SS	WH/24"	0.3/2.0		As 8-10, with less clay, trace recovery
14		WH	8	SS	WH/24"	0/2.0		As above, trace recovery
16		WH	9	SS	WH/12"/2/1	0.7/2.0		VS, CLAYEY SILT, brown w trace wood trace - some fn - md sand, trace gravel
18		<3	10	SS	WH/2/1/3	1.0/2.0		VS CLAYEY SILT, brown, 2" seam of fn - md sand and gravel, 2" seam of wood
20		3	11	SS	1/1/5/4	1.0/2.0		Interbedded, cs - fn, SAND, some fn gravel
22		6						
	<u>Alluvium</u>							

Golder Associates Field Boring Log

DEPTH HOLE <u>30'</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCC/RFI/NY</u>	BORING NO. <u>RFI-38</u>
DEPTH SOIL DRILL <u>28'</u>	QA INSP. <u>JAV</u>	DRILLING METHOD <u>4 1/4" Hollow Stem Augers</u>	SHEET <u>2</u> OF <u>2</u>
DEPTH ROCK CORE <u>NA</u>	WEATHER <u>Clear</u>	DRILLING COMPANY <u>STB Services Inc.</u>	SURFACE ELEV. <u>582.90</u>
NO. DIST. SA. <u>15</u> UD. SA. <u>—</u>	TEMP. <u>60°F</u>	DRILL RIG <u>CME 85</u>	DRILLER <u>C. Ackley</u>
DEPTH WL. <u>NA</u>	HRS. PROD. <u>NA</u>	WT. SAMPLER HAMMER <u>140 lb</u>	DATUM <u>MSL</u>
TIME WL. <u>NA</u>	HRS. DELAYED <u>NA</u>	WT. CASING HAMMER <u>NA</u>	DROP <u>30"</u>
			STARTED <u>0800, 5-28-97</u>
			COMPLETED <u>1030, 5-28-97</u>

SAMPLE TYPES

A.S. AUGER SAMPLE
 C.S. CHURN SAMPLE
 D.O. DRIVE OPEN
 O.S. ORISON SAMPLE
 P.S. PITCHER SAMPLE
 R.C. ROCK CORE
 S.T. SLOTTED TUBE
 T.O. THIN-WALLED OPEN
 T.P. THIN-WALLED PISTON
 W.S. WASH SAMPLE

BL BLACK
 BR BROWN
 C COARSE
 CA CASING
 CL CLAY
 CLY CLAYEY
 F FINE
 FRAG FRAGMENTS
 GL GRAVEL
 LAY LAYERED
 LIT LITTLE

ABBREVIATIONS

M MEDIUM
 MIC MICACEOUS
 MOT MOTTLED
 NP NON-PLASTIC
 OG ORANGE
 ORG ORGANIC
 PH PRESSURE-HYDRAULIC
 PM PRESSURE-MANUAL
 R RED
 RES RESIDUAL
 RI ROCK

SA SATURATED
 SD SAND
 SI SILT
 SILT SILTY
 SM SOME
 TR TRACE
 WL WATER LEVEL
 WH WEIGHT OF HAMMER
 Y YELLOW

SOIL DESCRIPTION - RANGE OF PROPORTION

"TRACE" 0 - 1%
 "LITTLE" 1 - 10%
 "SOME" 10 - 30%
 "MODERATE" 30 - 50%
 "ABUNDANT" 50 - 70%
 "VERY ABUNDANT" 70 - 90%
 "EXTENSIVE" 90 - 100%

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN (FORCE)	REC ATT		
22	<u>Alluvium</u>	<u>4</u>	12	SS	1 1/3 1/4	1.6 / 2.0	22	VLS, br, fa-med SAND, trace gravel, several 1" interbedded clayey silt seams
24			13	SS	1 1/2 2/2	1.4 / 2.0	24	As above to 24.5', then VS, gy-br, SILTY CLAY, tr fa sand, upper 2" w red varving
26	<u>Glaciolacustrine Clay</u>	<u>3</u>	14	SS	WH 24"	1.4 / 2.0	26	VS, gy-br, SILTY CLAY, tr-little fa sand - Uniform
28		WH	15	SS	WH/12" WH/12"	2.0 / 2.0	28	VS, gy-br, SILTY CLAY, tr-little fa sand, some red varving at base
30	<u>End of Boring</u>	WH					30	

**Golder Associates
Field Boring Log**

DEPTH HOLE <u>26</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCC/RFI/NY</u>	BORING NO. <u>RFI-39</u>
DEPTH SOIL DRILL <u>24</u>	QA INSP. <u>SAV</u>	DRILLING METHOD <u>4 1/4" HOLLOW STEM AUGER</u>	SHEET <u>1</u> OF <u>2</u>
DEPTH ROCK CORE <u>NA</u>	WEATHER <u>CLEAR</u>	DRILLING COMPANY <u>SJR SERVICES INC.</u>	SURFACE ELEV. <u>585.40</u>
NO. DIST. SA. <u>13</u> UD. SA. <u>TEMP. 75°</u>		DRILL RIG <u>CME-85</u>	DATUM <u>MSL</u>
DEPTH WL. <u>NA</u>	HRS. PROD. <u>NA</u>	WT. SAMPLER HAMMER <u>140lb</u>	DROP <u>30in</u>
TIME WL. <u>NA</u>	HRS. DELAYED <u>NA</u>	WT. CASING HAMMER <u>NA</u>	DROP <u>NA</u>
			STARTED <u>1300 5/29/97</u>
			COMPLETED <u>1430 5/29/97</u>

SAMPLE TYPES			ABBREVIATIONS			SOIL DESCRIPTION - RANGE OF PROPORTION		
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	"TRACE" 0 1% SOM 12 30%
C.S.	CHUNK SAMPLE	BR	BROWN	MC	MACEOUS	SAT	SATURATED	"LITTLE" 5 12% AND 30 50%
O.O.	DRIVE OPEN	C	COARSE	MO	MOTTLED	SD	SAND	
D.S.	DENSION SAMPLE	CA	CASSING	NP	NON-PLASTIC	SI	SILT	RELATIVE DENSITY BLOWS CONSISTENCY FINER PRESSURE
P.S.	PITCHER SAMPLE	CL	CLAY	OG	ORANGE	SI	SILTY	VERY LOOSE VLS 0 4 VS EXTREMELY
R.C.	ROCK CORE	CLY	CLAYEY	ORG	ORGANIC	SM	SOME	LOOSE LS 4 10 VS MODERATELY
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	COMPACT CP 10 30 FHM FM MOLLIS
T.O.	THIN-WALLED, OPEN	FRAG	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	DENSE DN 30 50 STF ST THUMB NAILS
T.P.	THIN-WALLED, PISTON	GL	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	VERY DENSE VDN 50 VST VST THUMB NAIL NOT RES IS THUMB NAIL
W.S.	WASH SAMPLE	LTD	LAYERED	RES	RESIDUAL	Y	YELLOW	
		L	LITTLE	RI	ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	NO.	TYPE	SAMPLES		DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
					HAMM. BLOWS FEET IN (FORCE)	REC. ATT		
2	Fill	-	0	1A	SS	AUGERED	0.5	AUGERED 0-1 ft., 3" OF LIMESTONE GRAVEL, 1.5 LOAMY SAND, BROWN - DK BRN, TRACE BRICK, TRACE IRON STAINING
			1	1B	SS	4, 6	2.0	1B: AS ABOVE, BRICK, FOUNDRY SAND
			2	2	SS	5, 6	0.7	AS ABOVE, IRON STAINED FOUNDRY SAND AND GRAVEL, SOME BLACK SLAG
			3	2	SS	4, 4	2.0	
			4	3	SS	1, 2	0.8	BLACK SLAG AND FOUNDRY SAND, CHANGES TO BROWN W/IRON STAINING, VLS
			5	3	SS	1, 2	2.0	
			6	4	SS	3, 4	1.5	1.5 FOUNDRY SAND IN COLORED LAYERS (FROM TOP): BLK-BROWN, TAN-GRAY W/ IRON STAIN, RED-ORNG W/IRON STAIN, GRAY-BLK-TAN, SOME MOISTURE
			7	4	SS	1, 2	2.0	
			8	5	SS	3, 1	2.0	TOP 2" 1.5 TAN-WHITE FOUNDRY SAND, 1' LAYER OF OFF-WHITE, GRAINY, UNIFORM, CHEM RESIDUAL, COLORED AS ABOVE
			9	5	SS	2, 3	2.0	FROM BLK TO RED-ORNG TO TAN W/IRON STAIN TO BLACK
10		3	10	6	SS	1, 1	2.0	1.5 DK GRAY-BLK, FINE-MED SAND, TRACE GRAVEL, NOT NATURAL-ANGULAR GRANULARITY, SATURATED
			11	6	SS	2, 2	2.0	
			12	7	SS	WH/12"	2.6	SFT, DK GRAY-BLK W/WHITE PATCHES SILTY CLAY, TRACE COARSE SAND, SEVERAL 2" LAYERS OF FOUNDRY SAND
			13	7	SS	2, 1	2.0	
			14	8	SS	3, 2	1.4	SFT, DK TO LT GRAY W/WHITE PATCHES, SILTY CLAY-LIKE MAT'L, TRACE COARSE SAND, MOTTL'D W/ YEL + GRAY
			15	8	SS	1, 1	2.0	
			16	9	SS	1, 1	2.0	INTERBEDDED, BLK-STAIN, FINE CLAYEY SAND IN BLK SILTY CLAY, CHANGES TO DK BROWN CLAYEY SAND AT TIP
			17	9	SS	1, 1	2.0	
			18	10	SS	WR/12"	2.0	SAT DK GRAY-BLK SILTY SAND TO DK BROWN, MOTTL'D BLK, SILTY CLAY, SEVERAL 1" FINE SAND SEAMS
			19	10	SS	WH/12"	2.0	
20		WH	20	11	SS	WH/24"	1.7	DK BROWN-BLK SILTY CLAY, INTERBEDDED W/FINE SANDS, BLACK STAINING AT TOP? DK BROWN W/MOTTL'D BLACK AT BOTTOM
			21			2.0		
22	Glaciolacustrine Clay	WH	22					

Golder Associates Field Boring Log

DEPTH HOLE <u>26</u>	JOB NO. <u>963-9117</u>	PROJECT <u>R/L IREF/AY</u>	BORING NO. <u>REF-39</u>
DEPTH SOIL DRILL <u>24</u>	QA INSP. <u>SAV</u>	DRILLING METHOD <u>4 1/4" HOLLOW STEM AUGER</u>	SHEET <u>2</u> OF <u>2</u>
DEPTH ROCK CORE <u>NA</u>	WEATHER <u>CLEAR</u>	DRILLING COMPANY <u>SIB SERVICES INC.</u>	SURFACE ELEV. <u>585.40</u>
NO. DIST. SA. <u>13</u> UD. SA. <u>TEMP.</u>	TEMP. <u>75°</u>	DRILL RIG <u>CME-85</u>	DRILLER <u>C. ACKLEY</u>
DEPTH WL. <u>NA</u>	HRS. PROD. <u>NA</u>	WT. SAMPLER HAMMER <u>140 lb</u>	DROP <u>30 in</u>
TIME WL. <u>NA</u>	HRS. DELAYED <u>NA</u>	WT. CASING HAMMER <u>NA</u>	DROP <u>NA</u>
			DATUM <u>M.S.L.</u>
			STARTED <u>1300 5/28/97</u>
			COMPLETED <u>1430 5/28/97</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
AS. AUGER SAMPLE	BL. BLACK	M. MEDIUM	SA. SAMPLE	TRACE 0-1%	SOME 12-30%
CS. CHUNK SAMPLE	BR. BROWN	MIC. MICACEOUS	SAT. SATURATED	LITTLE 5-12%	AND 30-50%
OO. DRIVE OPEN	C. COARSE	MOT. MOTTLED	SD. SAND		
OS. DENISON SAMPLE	CA. CASING	NP. NON-PLASTIC	SI. SILT		
PS. PITCHER SAMPLE	CL. CLAY	OG. ORANGE	ST. SILTY		
RC. ROCK CORE	CLY. CLAYEY	ORG. ORGANIC	SM. SOME		
ST. SLOTTED TUBE	F. FINE	PH. PRESSURE-HYDRAULIC	TR. TRACE		
T.O. THIN-WALLED, OPEN	FRAG. FRAGMENTS	PM. PRESSURE-MANUAL	WL. WATER LEVEL		
T.P. THIN-WALLED, PISTON	QL. GRAVEL	R. RED	WH. WEIGHT OF HAMMER		
WS. WASH SAMPLE	LYD. LAYERED	RES. RESIDUAL	Y. YELLOW		
	LI. LITTLE	RX. ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT		SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
				NO.	TYPE	HAMM. BLOWS PER 6 IN (FORCE)	REC. ATT		
22	Glaciolacustrine Clay	WH	22						
			12	SS	WH 24"	1.8 2.0		VS GRAY-BROWN SILTY CLAY, UNIFORM, RED VARYING IN MIDDLE, ~2" LAYER	
24			24						
		WH							
			13	SS	WR 1/6" WH 1/8"	2.0 2.0		AS BEFORE, RED VARYING AT TOP	
26	End of boring	WH	26						

Golder Associates Field Boring Log

DEPTH HOLE <u>36'</u>	JOB NO. <u>963-917</u>	PROJECT <u>BCL/RFI/IN</u>	BORING NO. <u>RFI-40</u>
DEPTH SOIL DRILL <u>30'</u>	QA INSP. <u>SAV</u>	DRILLING METHOD <u>4 1/2" HOLLOW STEM AUGER</u>	SHEET <u>1</u> OF <u>2</u>
DEPTH ROCK CORE <u>NA</u>	WEATHER <u>OVERCAST</u>	DRILLING COMPANY <u>SIPS SERVICES INC.</u>	SURFACE ELEV. <u>583.00</u>
NO. DIST. SA. <u>15</u> UD. SA. <u>NA</u>	TEMP. <u>68°</u>	DRILL RIG <u>CME-85</u>	DRILLER <u>C. ARLLEY</u>
DEPTH WL. <u>NA</u>	HRS. PROD. <u>NA</u>	WT. SAMPLER HAMMER <u>140 lb</u>	DROP <u>30 in</u>
TIME WL. <u>NA</u>	HRS. DELAYED <u>NA</u>	WT. CASING HAMMER <u>NA</u>	DROP <u>NA</u>
			DATUM <u>MSL</u>
			STARTED <u>1220 15/29/97</u>
			COMPLETED <u>1430 15/29/97</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
AS AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" 0 - 1%	SOMA 12 JUN
CS CHUNK SAMPLE	BR BROWN	MC MICACEOUS	SAT SATURATED	"LITTLE" 1 - 12%	AND 30 50%
DO DRIVE OPEN	C COARSE	MT MOTTLED	SD SAND		
DS DEWISON SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT		
PS PITCHER SAMPLE	CL CLAY	OG ORANGE	SV SILTY		
RC ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SOME		
ST SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE		
TO THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL		
TP THIN-WALLED, PISTON	QL GRAVEL	R RES	WM WEIGHT OF HAMMER		
WS WASH SAMPLE	LTD LAYERED	RE RESIDUAL	Y YELLOW		
	LI LITTLE	RE ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMMER BLOWS PER 6 IN (FORCE)	REC ATT		
2	<u>Fill</u>	0	1	SS	3, 7 7, 7	1.3 2.0		LS (DK BROWN) FINE-MED SAND, SOME GRAVEL, TRACE ROCK & NOON, SANDY-SILT
		14	2	SS	7, 45 15, 7	1.2 2.0		ORNG-BROWN TO LT BROWN TO BLK FINE TO MEDIUM SAND, SOME GRAVEL, BRCK, COMPACT, BROWN CLAYEY SAND @ TIP
		60	4	SS	3, 2 2, 2	1.5 2.0		LS LT BROWN CLAYEY SAND, SEVERAL LAYERS BLACK WOOD COMPACT MED-COARSE SAND, BOTTOM 1" BROWN-GRAY LS FINE-MED SANDY SILT MOTTLED BLACK, SOME MOISTURE
		4	6	SS	WH, 2 2, 3	1.7 2.0		LS BROWN-GRAY FINE-MED SANDY SILT, SEVERAL 1" LAYERS BLACK WOOD COMPACT COARSE SAND, 2" LAYER BROWN CLAYEY SILT
8	<u>Alluvium</u>	4	8	SS	1, 2 2, 2	1.8 2.0		BROWN-GRAY LS FINE-MED SAND TRACE VARIANTS, LITTLE MOISTURE, UNIFORM GRAY-BROWN BOTTOM 1"
10		4	10	SS	WH, 1/2" 2, 2	2.0 2.0		DK BROWN-GRAY LS FINE-MED SAND MOTTLED BLACK, TRACE MOISTURE UNIFORM, THIN LAYER WOOD
12		<3	12	SS	WH, 1/2" 2, 3	1.5 2.0		AS ABOVE CHANGING TO VLS FINE-MED SAND AT BOTTOM 3", ALMOST SATURATED
14		<3	14	SS	WH, 1 1, 2	2.0 2.0		LS, BROWN-DK BROWN FINE-MED SAND, SATURATED, MOTTLED BLACK, UNIFORM
16		2	16	SS	WH, 1/2" 1, 1	1.9 2.0		AS ABOVE, THIN LAYER COMPRESSED LEAVES 3" FROM BOTTOM
18		<2	18	SS	WH, 1 1, 2	2.0 2.0		AS ABOVE, BOTTOM 1' HIGHLY STRATIFIED WITH COMPRESSED LAYERS OF LEAVES + ORGANICS, LEAF LAYERS ARE DK BROWN TO BLACK
20		2	20	SS	WH, 1/2" 2, 2	1.4 2.0		AS ABOVE, HIGHLY SATURATED, 1" COMP LAYER OF LEAVES/ORGANICS 2" FROM BOTTOM
22		<3	22					

Golder Associates Field Boring Log

DEPTH HOLE <u>28'</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCL/REI/IN</u>	BORING NO. <u>RFI-40</u>
DEPTH SOIL DRILL <u>26'</u>	QA INSP. <u>SAV</u>	DRILLING METHOD <u>4 1/2" HOLLOW STEM AUGER</u>	SHEET <u>2</u> OF <u>2</u>
DEPTH ROCK CORE <u>NA</u>	WEATHER <u>OVERCAST</u>	DRILLING COMPANY <u>SIB SERVICES INC.</u>	SURFACE ELEV. <u>583.00</u>
NO. DIST. SA. <u>15</u> UD. SA. <u>68°</u>	TEMP. <u>68°</u>	DRILL RIG <u>CMF-85</u>	DRILLER <u>C. ACKLEY</u>
DEPTH WL. <u>NA</u>	HRS. PROD. <u>NA</u>	WT. SAMPLER HAMMER <u>140 lb</u>	DROP <u>30 in</u>
TIME WL. <u>NA</u>	HRS. DELAYED <u>NA</u>	WT. CASING HAMMER <u>NA</u>	DROP <u>NA</u>
			DATUM <u>MSL</u>
			STARTED <u>1220 5/29/97</u>
			COMPLETED <u>1430 5/29/97</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	"TRACE" 0-1%	SOME 12-30%
C.S. CHUNK SAMPLE	BR BROWN	MIC MICACEOUS	SAT SATURATED	"LITTLE" 5-12%	AND 30-50%
D.O. DRIVE OPEN	C COARSE	MOT MOTTLED	SD SAND		
D.S. DENISON SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT		
P.S. PITCHER SAMPLE	CL CLAY	OG ORANGE	SIT SILTY		
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SOME		
S.T. SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE		
T.O. THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL		
T.P. THIN-WALLED, PISTON	GL GRAVEL	R RED	WM WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LTD LAYERED	RES RESIDUAL	Y YELLOW		
	LI LITTLE	RX ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	HAMM. BLOWS PER 6 IN. (FORCE)	REC-ATT		
22	<u>Alluvium</u>		22		3, 1	2.0		BROWN, VLS. FINE TO MEDIUM SAND, AND COARSE SAND, HIGHLY SAT
			12	SS	1, 2	2.0		MORE COARSE SAND / PEBBLES TOWARD BOTTOM
24		2	24		WH 24"	0.6 12		BROWN + MULTI-COLORED MED-COARSE SAND, VLS. LITTLE FINE SAND, HIGHLY SATURATED
26		WH 26	13	SS	WH 12"	2.0 2.0		AS ABOVE, MED-COARSE SAND, BOTTOM 4" UNIFORM, SET BROWN - GRAY SILT CLAY, RED VARIING
28	<u>Glaciolacustrine Clay</u>	<2 28	14	SS	1, 1	2.0 2.0		SET BROWN-GRAY SILTY CLAY, UNIFORM, RED VARIING
			15	SS	WH 12"	2.0 2.0		
30	<u>End of boring</u>	WH 30						

Golder Associates Field Boring Log

DEPTH HOLE <u>28'</u>	JOB NO. <u>963-9117</u>	PROJECT <u>BCC/REF/1NY</u>	BORING NO. <u>REF-41</u>
DEPTH SOIL DRILL <u>26'</u>	GA INSP. <u>SAV</u>	DRILLING METHOD <u>1 1/4" HOLLOW STEM AUGER</u>	SHEET <u>1</u> OF <u>2</u>
DEPTH ROCK CORE <u>NA</u>	WEATHER <u>OVERCAST</u>	DRILLING COMPANY <u>SVB SERVICES INC.</u>	SURFACE ELEV. <u>582.80</u>
NO. DIST. SA. <u>14</u>	UD. SA. <u>TEMP. 62°</u>	DRILL RIG <u>CME-85</u>	DRILLER <u>C. ACKERT</u>
DEPTH WL. <u>NA</u>	HRS. PROD. <u>NA</u>	WT. SAMPLER HAMMER <u>140lb</u>	DROP <u>30in</u>
TIME WL. <u>NA</u>	HRS. DELAYED <u>NA</u>	WT. CASING HAMMER <u>NA</u>	DROP <u>NA</u>
			DATUM <u>MSL</u>
			STARTED <u>0830 15/01/92</u>
			COMPLETED <u>1030 15/01/92</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
A.S. AUGER SAMPLE	BL BLACK	M MEDIUM	SA SATURATED	TRACE 0-1%	SOME 1-2%
C.S. CHURN SAMPLE	BR BROWN	MC MICACEOUS	SAT SAT	LITTLE 2-5%	AND 5-30%
D.O. DRIVE OPEN	C COARSE	MT MOTTLED	SD SAND		
D.S. DEWSON SAMPLE	CA CASING	NP NON-PLASTIC	S SILT		
P.S. PITCHER SAMPLE	CL CLAY	OG ORANGE	SV SILTY		
R.C. ROCK CORE	CLY CLAYEY	ORG ORGANIC	SM SOME		
ST SLOTTED TUBE	F FINE	PH PRESSURE HYDRAULIC	TR TRACE		
T THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE MANUAL	WL WATER LEVEL		
T.P. THIN-WALLED, PISTON	QL GRAVEL	R RED	WM WEIGHT OF HAMMER		
W.S. WASH SAMPLE	LYO LAYERED	RES RESIDUAL	Y YELLOW		
	U LITTLE	RX ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT		SAMPLES			DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
				NO.	TYPE	HAMM. BLOWS PER 6 IN (FORCE)		
	<u>Fill</u>		0					1' 4" VLS TAN SAND-LIKE MOTTLED, LIKE BEACH SAND, BOTTOM 6" BLACK FINE TO MED SAND AND GRAVEL, IS, TRACE BRCK
2		6	2	1	SS	3,3 3,4	1.2 2.0	
4		6	4	2	SS	3,2 4,3	1.5 2.0	TOP 2" BLACK COARSE SAND, GRIM? MIDDLE 6" BROWN CLAYEY SILT, IRON VARYING TRACE GRAVEL, RED BROWN COARSE SAND, TRACE GRAVEL, ORG BROWN MED-FINE SAND, TRACE GRAVEL
6		5	6	3	SS	4,3 2,2	1.6 2.0	TOP 4" AS ABOVE, BROWN-MED CLAYEY SAND, MED-COARSE, BROWN FINE-MED SAND, TRACE IRON STAINING, SOME MOISTURE
8	<u>Alluvium</u>	WH	8	4	SS	WH 2 1/2"	2.0 2.0	BROWN-OR BROWN FINE-MED SAND, (MOTTLED OR BROWN) SOME MOISTURE
10		9	10	5	SS	1,4 5.6	1.9 2.0	BROWN-OR BROWN FINE-MED SILTY SAND, IS, INTERBEDDED IRON STAININGS, 1 THIN LAYER OF TAN SAND, ABOUT 8" FROM BOTTOM, LITTLE
12		5	12	6	SS	2,2 3,3	2.0 2.0	BROWN FINE-MED SILTY SAND, LS, MOTTLED OR BROWN, SOME IRON STAINING, CHANGING TO OR BROWN BOTTOM 4", LITTLE MOIST
14		7	14	7	SS	2,3 4,6	2.0 2.0	SOFT OR BROWN, CLAYEY SAND MOTTLED BLACK TRACE, IRON STAIN, UNIFORM, LITTLE MOIST
16		10	16	8	SS	2,4 6,7	2.0 2.0	LS OR BROWN FINE-MED SILTY SAND, MOTTLED BLACK, THIN, BLACK STAIN COARSE SAND, LAYER MOISTURE IN MIDDLE
18		3	18	9	SS	1,2 1,2	2.0 2.0	LS OR BROWN FINE-MED SILTY SAND, MOTTLED BLACK, THIN, BLACK STAIN COARSE SAND, LAYER MOISTURE IN MIDDLE
20		4	20	10	SS	WH, 1 3,2	2.0 2.0	VLS FINE-MED SAND, SAT, 1" 6" 2 LAYERS OF LEAVES/ORGANICS, MOTTLED BLACK 2" IN MIDDLE, CHANGE TO MED-COARSE SAT SAND BOTTOM 9" BELOW ORG LAYER
22		2	22	11	SS	1,1 1,2	2.0 2.0	VLS OR BROWN-MULTI COLOR MED-COARSE SAND, SAT, UNIFORM

**Golder Associates
Field Boring Log**

DEPTH HOLE <u>28'</u>	JOB NO. <u>963-917</u>	PROJECT <u>BCL/REF/1NY</u>	BORING NO. <u>REF-41</u>
DEPTH SOIL DRILL <u>26'</u>	QA INSP. <u>SAV</u>	DRILLING METHOD <u>4 1/4" HOLLOW STEM AUGER</u>	SHEET <u>2</u> OF <u>2</u>
DEPTH ROCK CORE <u>NA</u>	WEATHER <u>OVERCAST</u>	DRILLING COMPANY <u>SIB SERVICES INC.</u>	SURFACE ELEV. <u>582.80</u>
NO. DIST. SA. <u>14</u> UO. SA. <u>—</u>	TEMP. <u>62°</u>	DRILL RIG <u>CME-85</u>	DRILLER <u>C. A. ARNEY</u>
DEPTH WL. <u>NA</u>	HRS. PROD. <u>NA</u>	WT. SAMPLER HAMMER <u>140lb</u>	DROP <u>30 in</u>
TIME WL. <u>NA</u>	HRS. DELAYED <u>NA</u>	WT. CASING HAMMER <u>NA</u>	DROP <u>NA</u>
			DATUM <u>MSL</u>
			STARTED <u>0830 5/20/91</u>
			COMPLETED <u>1030 5/20/91</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
AS AUGER SAMPLE	BL BLACK	M MEDIUM	SA SATURATED	"TRACE" 0 - 1%	SAND 12 - 30%
CS CHUNK SAMPLE	BR BROWN	MC MICACEOUS	SD SAND	"LITTLE" 1 - 5%	SILT 30 - 50%
DO DRIVE OPEN	C COARSE	MT MOTTLED	SI SILT		
DS DENISON SAMPLE	CA CASING	NP NON-PLASTIC	SILT	RELATIVE DENSITY	BLOWS
PL PITCHER SAMPLE	CL CLAY	OG ORANGE	SM SOME	VERY LOOSE VS 0-4	VERY SOFT VS 4-10
RC ROCK CORE	CLY CLAYEY	ORG ORGANIC	TR TRACE	LOOSE LS 4-10	SOFT S 10-30
ST SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	WL WATER LEVEL	COMPACT CP 10-30	FIRM FM 30-50
T THIN-WALLED, OPEN	FRAG FRAGMENTS	PM PRESSURE-MANUAL	WM WEIGHT OF HAMMER	DENSE DN 30-50	STIFF ST 50-100
TP THIN-WALLED, PISTON	GL GRAVEL	R RED	Y YELLOW	VERY DENSE VDN 50	VERY STIFF VST 100-200
WS WASH SAMPLE	LTD LAYERED	RES RESIDUAL			
	L LITTLE	ROCK ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT		SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
				NO.	TYPE	HAMM. BLOWS PER 6 IN (FORCE)	REC. ATT		
22	<u>Alluvium</u> <u>Glaciolacustrine Clay</u>		22						
			12	SS	WH 24"	0.8 2.0		AS ABOVE, OR BROWN, VLS, MED-COARSE SAND, SAT / MULTI-COLORED	
24			WH 24						
			13	S	WH 24"	2.0 2.0		TOP 0.7' MED-COARSE SAT SAND AS ABOVE, BOTTOM 1.3' BROWN-GRAY SILT CLAY & RED VARYING	
26		WH 26							
			14	SS	WR 6" WH 18"	2.0 2.0		AS ABOVE, BROWN-GRAY SILT CLAY, RED VARYING, UNIFORM	
28		WH 28							
	<u>End of boring</u>								

Golder Associates Field Boring Log

DEPTH HOLE <u>12'</u>	JOB NO. <u>263-9117</u>	PROJECT <u>BCC/REF/1NY</u>	BORING NO. <u>REF-12</u>
DEPTH SOIL DRILL <u>12'</u>	QA INSP. <u>SAV</u>	DRILLING METHOD <u>4.25" HOLLOW STEM AUGER</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>NA</u>	WEATHER <u>FLY 30Y</u>	DRILLING COMPANY <u>SUB SERVICES INC.</u>	SURFACE ELEV. <u>583.60</u>
NO. DIST. SA. <u>6</u> UO. SA. <u> </u>	TEMP. <u>60°</u>	DRILL RIG <u>CME-85</u>	DRILLER <u>C. ACKLIN</u>
DEPTH WL. <u>NA</u>	MRS. PROD. <u>NA</u>	WT. SAMPLER HAMMER <u>140lb</u>	DROP <u>30 in</u>
TIME WL. <u>NA</u>	MRS. DELAYED <u>NA</u>	WT. CASING HAMMER <u>NA</u>	DROP <u>NA</u>
			DATUM <u>MSL</u>
			STARTED <u>1245</u> <u>6/3/97</u>
			COMPLETED <u>1320</u> <u>6/3/97</u>

SAMPLE TYPES				ABBREVIATIONS				SOIL DESCRIPTION - RANGE OF PROPORTION			
A.S.	AUGER SAMPLE	BL	BLACK	M	MEDIUM	SA	SAMPLE	TRCT%	0 - 1%	SOIL	12 - 30%
C.S.	CHUNK SAMPLE	BR	BROWN	MC	MUCOUS	SAT	SATURATED	"LITTLE"	5 - 12%	"AND"	30 - 60%
D.O.	DRIVE OPEN	C	CORNER	WOT	MOTTLED	SI	SILT				
D.S.	DEBON SAMPLE	CA	CASING	NP	NON-PLASTIC	SO	SAND	RELATIVE DENSITY	BLOWS	CONSISTENCY	FINAL PRESSURE
P.S.	PITCHER SAMPLE	CL	CLAY	OG	ORANGE	SHY	SILTY	VERY LOOSE	VLS	VERY SOFT	VS
R.C.	ROCK CORE	CLY	CLAY	ORG	ORGANIC	SM	SOME	LOOSE	L 4 - 10	SOFT	S
S.T.	SLOTTED TUBE	F	FINE	PH	PRESSURE-HYDRAULIC	TR	TRACE	COMPACT	CM	10 - 30	MODERATE
T.O.	THIN-WALLED, OPEN	FRAG.	FRAGMENTS	PM	PRESSURE-MANUAL	WL	WATER LEVEL	DENSE	DM	30 - 60	STIFF
T.P.	THIN-WALLED, PISTON	GR.	GRAVEL	R	RED	WH	WEIGHT OF HAMMER	VERY DENSE	VDM	50	VERY STIFF
W.S.	WASH SAMPLE	LTD	LAYERED	RES	RESIDUAL	Y	YELLOW				HARD
		LI	LITTLE	RS	ROCK						

ELEV. DEPTH	DESCRIPTION	BLOWS / FT		SAMPLES			DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
				NO.	TYPE	MAX. BLOWS PER 6 IN (FORCE)		
	<u>Fill</u>		0			12, 4	0.8	TOP 2" BLACK LS. FINE-MED SANDY GRAVEL
2		11	2	1	SS	7, 8	2.0	2"-5" V.S. LT BROWN - LT GRAY FINE-MED SANDY GRAVEL, BOTTOM BROWN - BLK FINE-MED SAND AND GRAVEL, LITTLE MOIST
4		9	4	2	SS	4, 5 4, 4	0.8 2.0	TOP 2" BLK-BROWN FINE-MED SAND AND GRAVEL, 1" THICK LAYER ASPHALT, 1" THICK BLK-MED-COARSE SAND, BOTTOM ORANGE-BROWN SANDY CLAY INTERMIXED BLACK SPOTTING, LITTLE MOIST
6		5	6	3	SS	1, 2 3, 8	1.5 2.0	SET-FIN LT BROWN - BROWN SANDY CLAY ORANGE-BROWN SAND INTERMIXED, TRACE BLK SPOTTING, LITTLE MOISTURE
8	<u>Sand backfill-Sewer</u>	19	8	4	SS	5, 9 10, 8	1.7 2.0	LS-CP BROWN FINE-MED SAND, SOME MOISTURE, UNIFORM, DK BROWN, UNIFORM SANDY CLAY IN TIP (BOTTOM 3")
10	<u>Glaciolacustrine Clay</u>	WH	10	5	SS	WH 2A"	2.0 2.0	DK BROWN, VSFT, UNIFORM SILTY CLAY WITH INTERBEDDED FINE SAND LAYERS, SOME MOISTURE, TRACE RED VARYING
12	<u>End of boring</u>	WH	12	6	SS	WH 2A"	2.0 2.0	VSFT DK BROWN, SAT, SILTY CLAY INTERBEDDED FINE SAND LAYERS (1/2") TRACE RED VARYING

**Golder Associates
Field Boring Log**

DEPTH HOLE <u>14'</u>	JOB NO. <u>963-9117</u>	PROJECT <u>RCI/REF/NY</u>	BORING NO. <u>RF1-43</u>
DEPTH SOIL DRILL <u>14'</u>	QA INSP. <u>SAV</u>	DRILLING METHOD <u>4.25" HOLLOW STEM AUGER</u>	SHEET <u>1</u> OF <u>1</u>
DEPTH ROCK CORE <u>NA</u>	WEATHER <u>RAIN</u>	DRILLING COMPANY <u>SJB SERVICES INC</u>	SURFACE ELEV. <u>584.40</u>
NO. DIST. SA. <u>7</u>	UD. SA. <u>—</u>	TEMP. <u>60°</u>	DRILL RIG <u>CME-85</u>
DRILLER <u>C. ACKLEY</u>	DATUM <u>MSL</u>	WT. SAMPLER HAMMER <u>140lb</u>	DROP <u>30in</u>
DEPTH WL. <u>NA</u>	MRS. PROD. <u>NA</u>	WT. CASING HAMMER <u>NA</u>	DROP <u>NA</u>
TIME WL. <u>NA</u>	MRS. DELAYED <u>NA</u>	STARTED <u>1220, 6/2/97</u>	COMPLETED <u>1315, 6/2/97</u>

SAMPLE TYPES		ABBREVIATIONS		SOIL DESCRIPTION - RANGE OF PROPORTION	
AS AUGER SAMPLE	BL BLACK	M MEDIUM	SA SAMPLE	TRAC 0 1%	SOM 12 30%
CS CHURN SAMPLE	BR BROWN	MC MACEROUS	SAT SATURATED	"LITTLE" 5 12%	AND 30 50%
DO DRIVE OPEN	C COARSE	MT MOTTLED	SO SAND		
DS DENSION SAMPLE	CA CASING	NP NON-PLASTIC	SI SILT	RELATIVE DENSITY	BLOWS
PS PITCHER SAMPLE	CL CLAY	OG ORANGE	ST SATY	VERY LOOSE VLS 0 4	VERY SOFT VS 1 15
RC ROCK CORE	CLT CLAYEY	ORG ORGANIC	SM SOME	LOOSE LS 4 10	SOFT S 15 30
ST SLOTTED TUBE	F FINE	PH PRESSURE-HYDRAULIC	TR TRACE	COMPACT CP 10 30	FIRM FM 30 50
TQ THIN-WALLED, OPEN	F FRAGMENTS	PM PRESSURE-MANUAL	WL WATER LEVEL	DENSE DN 30 50	STIFF ST 50 70
TJ THIN-WALLED, PISTON	GL GRAVEL	R RED	WH WEIGHT OF HAMMER	VERY DENSE VDN 50	VERY STIFF VST 70 90
WS WASH SAMPLE	LTD LAYERED	RES RESIDUAL	Y YELLOW		
	LI LITTLE	ROCK			

ELEV. DEPTH	DESCRIPTION	BLOWS / FT	SAMPLES				DEPTH	SAMPLE DESCRIPTION AND BORING NOTES
			NO.	TYPE	WATER BLOWS PER 6 IN (FORCE)	REC. ATT.		
	<u>Fill</u>		0		1, 11	0.6		0'-2" DK BROWN, SILTY LOAM, 2'-4" LT-BROWN-ORNG SILTY CLAY AND MED-COARSE SAND, BOTTOM BROWN-ORNG, MED-COARSE SAND AND GRAVEL
2	<u>Upper Till</u>	17	2	SS	4, 4	1.4		TOP 5" AS ABOVE, DK BROWN SANDY CLAY, SPOTTED BLK, MOTTLED GRAY, 10"-11" LRG BLK STAIN, BELOW STAIN BROWN-GRAY SANDY CLAY, MOTTLED GRAY
4		8	4		4, 4	2.0		LT BROWN GRAY, FIRM SANDY CLAY MOTTLED GRAY W/ GRAY VEINS IN TOP 6"
6		9	6		2, 3	1.4		
8		11	8		6, 7	2.0		
10		6	10		2, 4	1.8		AS ABOVE, SOME BLK STAIN SPOTTING (POSSIBLE TRACE BLK MED SAND) FINE-MED SAND LAYERS INTERBEDDED, 2 LAYERS OF GRAY MOTTLING, SMALL GRAY VEINS THROUGHOUT
12	<u>GLACIOFLUVIAL CLAY</u>	10.7'	6	SS	7, 8	2.0		TOP 1' AS ABOVE, BOTTOM 1' DK BROWN SILTY CLAY, INTERBEDDED FINE SAND LAYERS, TRACE RED VARIING
14	<u>End of boring</u>	WH	12		1, 3	2.0		TOP 8" BROWN-LT BROWN SILTY CLAY, INTERBEDDED FINE SAND LAYERS, MOTTLED DK BROWN-ORNG, BOTTOM 16" DK BROWN-VSET SILTY CLAY, SAT, TRACE RED VARIING
		WH	14		3, 3	2.0		VSET, DK BROWN, SAT, SILTY CLAY, INTERBEDDED THIN FINE SAND LAYERS
					WH / 24"	2.0		
					WH / 24"	2.0		

APPENDIX C

RFI MONITORING WELL AND PIEZOMETER INSTALLATION LOGS

APPENDIX C-1

RFI MONITORING WELL AND PIEZOMETER
INSTALLATION LOGS

Phase I
Monitoring Well and
Piezometer Installation Logs

MONITORING WELL INSTALLATION LOG

JOB NO. 953-9117 PROJECT BCC/RFI/NY WELL NO. RFI-16 SHEET 1 of 2
 GA INSP. D. WEHN DRILLING METHOD 6 1/4 AND 4 1/4-INCH ID HSA GROUND ELEV. 586.94 WATER DEPTH 28.30' btor
 WEATHER RAIN DRILLING COMPANY SJB SERVICES COLLAR ELEV. 586.34 DATE/TIME 5/3/96 1000
 TEMP. 60°F DRILL RIG CME-550X DRILLER D. BUTZER STARTED 1500 4/29/96 COMPLETED 1200 5/2/96
 LOCATION / COORDINATES N: 8692.55 E: 9279.65 TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia. 58.9 l.f. WELL SCREEN 2 in. dia. 5 l.f. BENTONITE SEAL CHIPS
 CASING TYPE TYPE 316 STAINLESS SCREEN TYPE CONTINUOUS WRAP INSTALLATION METHOD GRAVITY
 JOINT TYPE FLUSH THREAD SLOT SIZE 0.010 INCH FILTER PACK QTY. 150 LBS.
 GROUT QUANTITY 350 GAL. CENTRALIZERS NONE FILTER PACK TYPE NO. 0 MORIE SAND
 GROUT TYPE CEMENT/ 5% BENTONITE DRILLING MUD TYPE NA INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH		INSTALLATION NOTES
2.0			Flush Mount Protective Casing	
0.0	GROUND SURFACE			
2.0	0.0-15.0 FT. - FILL Typically, variable proportions of reworked till, crushed stone, concrete and building demolition debris.	0.6	Expanding Well Plug	
4.0			Cement/Bentonite grout	
6.0			2-inch DIA Riser	
8.0			11-inch DIA Borehole	Soils above Glaciolacustrine Clay bored with 6 1/4-inch ID HSAs. Borehole filled with grout. 10-inch dia. steel casing pushed to bottom of borehole. Interior of casing flushed until clear with potable water. Grout was allowed to set up a minimum of 24 hours before augering through the Glaciolacustrine Clay with 4 1/4-inch ID HSAs.
10.0				
12.0				
14.0				
16.0	15.0-30.2 FT. - ALLUVIUM Typically compact to v. loose, dark gray to nearly black, fine to very coarse SANDS, less commonly varying proportions of SAND, GRAVEL and SILT, occasionally interbedded with leaves and or wood bits.		10-inch DIA. Steel Casing	Well Depth = 63.90' btor.
18.0				
20.0				
22.0				
24.0				
26.0				
28.0				
30.0				
32.0	30.2-60.9 FT. - GLACIOLACUSTRINE CLAY Typically soft to v. soft, brown with reddish brown varving, CLAY with little to trace silt or fine sand partings.	31.0 32.0	8-inch DIA. Borehole	
34.0				
36.0				
38.0				
40.0				
42.0				

JOB NO.	953-9117	PROJECT	BCC/RFI/NY	WELL NO.	RFI-16	SHEET	2	of	2
GA INSP.	D. WEHN	DRILLING METHOD	6 1/4 AND 4 1/4-INCH ID HSA	GROUND ELEV.	586.94	WATER DEPTH	28.30'	bior	
WEATHER	RAIN	DRILLING COMPANY	SJB SERVICES	COLLAR ELEV.	586.34	DATE/TIME	5/3/96	1000	
TEMP.	60F	DRILL RIG	CME-550X	DRILLER	D. BUTZER	STARTED	1500	4/29/96	
LOCATION / COORDINATES	N: 8692.55		E: 9279.65		TIME / DATE	COMPLETED	1200	5/2/96	
							TIME / DATE		

MATERIALS INVENTORY

WELL CASING	<u>2</u>	in. dia.	<u>58.9</u>	I.F.	WELL SCREEN	<u>2</u>	in. dia.	<u>5</u>	I.F.	BENTONITE SEAL	<u>CHIPS</u>
CASING TYPE	<u>TYPE 316 STAINLESS</u>				SCREEN TYPE	<u>CONTINUOUS WRAP</u>				INSTALLATION METHOD	<u>GRAVITY</u>
JOINT TYPE	<u>FLUSH THREAD</u>				SLOT SIZE	<u>0.010 INCH</u>				FILTER PACK QTY.	<u>150 LBS.</u>
GROUT QUANTITY	<u>350 GAL.</u>				CENTRALIZERS	<u>NONE</u>				FILTER PACK TYPE	<u>NO. 0 MORIE SAND</u>
GROUT TYPE	<u>CEMENT/ 5% BENTONITE</u>				DRILLING MUD TYPE	<u>NA</u>				INSTALLATION METHOD	<u>GRAVITY</u>

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
44.0	GLACIOLACUSTRINE CLAY		
46.0	Typically soft to v. soft,		
48.0	brown with reddish brown		
	varving, CLAY with little		
	to trace silt or fine sand		
	partings.		
50.0			
52.0			
54.0			
56.0			
58.0			
60.0			
62.0	60.9-64.6 FT. - BASAL TILLS		
64.0	Typically loose to compact, gray-brown, SILT, SAND AND GRAVEL with little to some clay.		
66.0	64.6 FT. - BEDROCK		
68.0	Onondaga Limestone		
	End of Borehole.		

The well sketch shows a vertical cross-section of a well. The casing is represented by two parallel vertical lines. Inside the casing, there are several horizontal lines representing different materials or components. Labels with leader lines point to specific parts:

- "Cement/Bentonite Grout" points to the upper section of the casing.
- "Bentonite Chips" points to a section below the grout.
- "2-inch DIA. Screen" points to a section further down.
- "More No. 10 Sand" points to the bottom section of the well.

Depth markers are indicated on the left side of the sketch:

- 55.8
- 58.8
- 60.0
- 64.5
- 64.6

WELL DEVELOPMENT NOTES

MONITORING WELL INSTALLATION LOG

JOB NO. 953-9117	PROJECT BCC/RFI/NY	WELL NO. RFI-17	SHEET 1 of 1
GA INSP. D. WEHN	DRILLING METHOD 4 1/4-INCH ID HSA	GROUND ELEV. 583.69	WATER DEPTH 8.69' btor
WEATHER P. CLOUDY	DRILLING COMPANY SJB SERVICES	COLLAR ELEV. 586.24	DATE/TIME 5/17/96 1240
TEMP. 50F	DRILL RIG ACKER SOILMAX	DRILLER R. STENER	STARTED 1345 5/13/96
LOCATION / COORDINATES N: 10302.40 E: 11561.35		COMPLETED 1500 5/13/96	
		TIME / DATE	

MATERIALS INVENTORY

WELL CASING 2 in. dia. 9.1	I.f. WELL SCREEN 2 in. dia. 5	I.f. BENTONITE SEAL CHIPS
CASING TYPE TYPE 316 STAINLESS	SCREEN TYPE CONTINUOUS WRAP	INSTALLATION METHOD GRAVITY
JOINT TYPE FLUSH THREAD	SLOT SIZE 0.010 INCH	FILTER PACK QTY. 150 LBS.
GROUT QUANTITY 10 GAL.	CENTRALIZERS NONE	FILTER PACK TYPE NO. 0 MORIE SAND
GROUT TYPE CEMENT/ 5% BENTONITE	DRILLING MUD TYPE NA	INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
2.0		3.0 2.6	
	GROUND SURFACE		
0.0	0.0-10.2 FT. - UPPER TILLS		
2.0	Typically soft to firm, brown, to gray-brown with occasional gray mottling. SILTY CLAY to CLAYEY SILT, occasional silt to fine sand parting.		
4.0		3.0	
6.0		5.0	
8.0		6.8	
10.0			
12.0	10.2-12.0 FT. - GLACIOLACUSTRINE CLAY	11.8 12.0	
14.0	Typically soft to v. soft, brown with reddish brown varving, CLAY with little to trace silt or fine sand partings.		
16.0	12.0 FT. - END OF BOREHOLE		
18.0			
20.0			

MONITORING WELL INSTALLATION LOG

JOB NO. <u>953-9117</u>	PROJECT <u>BCC/RFI/NY</u>	WELL NO. <u>RFI-18</u>	SHEET <u>1</u> of <u>1</u>
GA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>4 1/4-INCH ID HSA</u>	GROUND ELEV. <u>586.26</u>	WATER DEPTH <u>7.24' btor</u>
WEATHER <u>SUN</u>	DRILLING COMPANY <u>SJB SERVICES</u>	COLLAR ELEV. <u>588.64</u>	DATE/TIME <u>5/22/96 0820</u>
TEMP. <u>70F</u>	DRILL RIG <u>ACKER SOILMAX</u>	DRILLER <u>R. STIENER</u>	STARTED <u>1445 5/20/96</u>
LOCATION / COORDINATES <u>N: 9819.55 E: 10394.29</u>		COMPLETED <u>1600 5/20/96</u>	
		TIME / DATE	

MATERIALS INVENTORY

WELL CASING <u>2</u> in. dia.	I.f. WELL SCREEN <u>2</u> in. dia.	<u>5</u> I.f. BENTONITE SEAL <u>CHIPS</u>
CASING TYPE <u>TYPE 316 STAINLESS</u>	SCREEN TYPE <u>CONTINUOUS WRAP</u>	INSTALLATION METHOD <u>GRAVITY</u>
JOINT TYPE <u>FLUSH THREAD</u>	SLOT SIZE <u>0.010 INCH</u>	FILTER PACK QTY. <u>150 LBS.</u>
GROUT QUANTITY <u>25 GAL.</u>	CENTRALIZERS <u>NONE</u>	FILTER PACK TYPE <u>NO. 0 MORIE SAND</u>
GROUT TYPE <u>CEMENT/ 5% BENTONITE</u>	DRILLING MUD TYPE <u>NA</u>	INSTALLATION METHOD <u>GRAVITY</u>

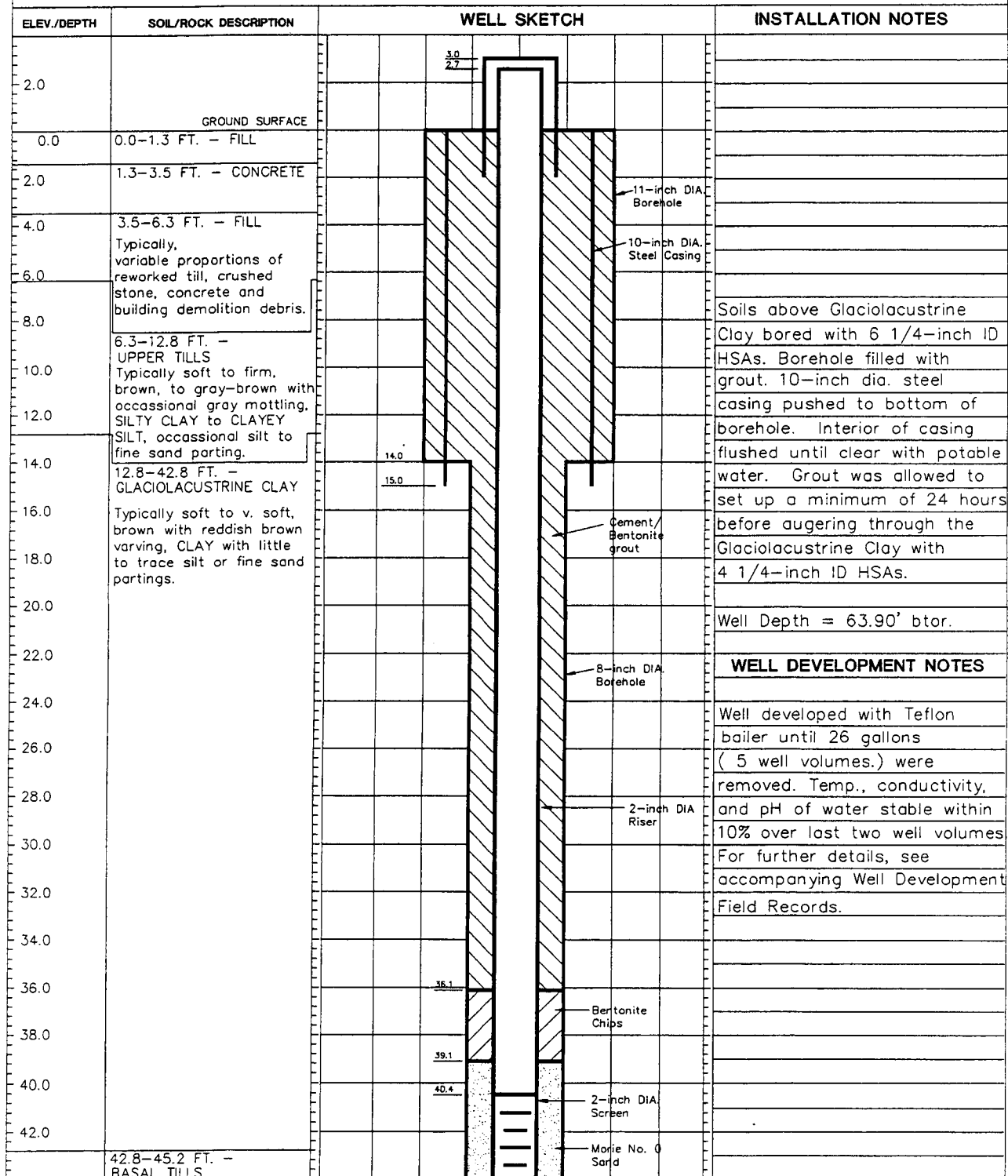
ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
2.0	Soil descriptions from well RFI-19D Boring Log.		
0.0	GROUND SURFACE		
0.0	0.0-5.7 FT. - FILL Typically, variable proportions of reworked till, crushed stone, concrete and building demolition debris.		
2.0			
4.0			
6.0	5.7-7.5 FT. - CONCRETE		
8.0	7.5-12.9 FT. - UPPER TILLS Typically soft to firm, brown, to gray-brown with occasional gray mottling, SILTY CLAY to CLAYEY SILT, occasional silt to fine sand parting.		
10.0			
12.0			
14.0	12.9-14.0 FT. - GLACIOLACUSTRINE CLAY Typically soft to v. soft, brown with reddish brown varving, CLAY with little to trace silt or fine sand partings.		
16.0	12.0 FT. - END OF BOREHOLE		Well Depth = 15.86' btor.
18.0			WELL DEVELOPMENT NOTES
20.0			Well developed with Stainless Steel bailer until 6.5 gallons (5 well volumes.) were removed. Temp., conductivity, and pH of water stable within 10% over last two well volumes. For further details, see accompanying Well Development Field Records.

MONITORING WELL INSTALLATION LOG

JOB NO. 953-9117	PROJECT BCC/RFI/NY	WELL NO. RFI-190	SHEET 1 of 2
GA INSP. D. WEHN	DRILLING METHOD 6 1/4, 4 1/4-INCH ID HSA	GROUND ELEV. 586.05	WATER DEPTH 15.37' btor
WEATHER SUN	DRILLING COMPANY SJB SERVICES	COLLAR ELEV. 588.78	DATE/TIME 5/24/96 1255
TEMP. 65F	DRILL RIG ACKER SOILMAX	DRILLER R. STEINER	STARTED 1000 5/23/96
LOCATION / COORDINATES N: 9824.03 E: 10297.34		COMPLETED 1240 5/23/96	TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia. 42.3 l.f.	WELL SCREEN 2 in. dia. 5 l.f.	BENTONITE SEAL CHIPS
CASING TYPE TYPE 316 STAINLESS	SCREEN TYPE CONTINUOUS WRAP	INSTALLATION METHOD GRAVITY
JOINT TYPE FLUSH THREAD	SLOT SIZE 0.010 INCH	FILTER PACK QTY. 150 LBS.
GROUT QUANTITY 80 GAL.	CENTRALIZERS NONE	FILTER PACK TYPE MORIE NO. 0 SAND
GROUT TYPE CEMENT/ 5% BENTONITE	DRILLING MUD TYPE NA	INSTALLATION METHOD GRAVITY



JOB NO.	953-9117	PROJECT	BCC/RFI/NY	WELL NO.	RFI-19D	SHEET	2	of	2
GA INSP.	D. WEHN	DRILLING METHOD	6 1/4 x 1/4-INCH ID HSA	GROUND ELEV.	586.05	WATER DEPTH	15.37'	btm	
WEATHER	SUN	DRILLING COMPANY	SJB SERVICES	COLLAR ELEV.	588.78	DATE/TIME	5/24/96	1255	
TEMP.	65F	DRILL RIG	ACKER SOILMAX	DRILLER	R. STEINER	STARTED	1000	5/23/96	1240
LOCATION	/ COORDINATES	N:	9824.03	E:	10297.34	TIME / DATE	COMPLETED	5/24/96	1250
						TIME / DATE			

MATERIALS INVENTORY

WELL CASING	2	in. dia.	42.3	l.f.	WELL SCREEN	2	in. dia.	5	l.f.	BENTONITE SEAL	CHIPS
CASING TYPE	TYPE 316 STAINLESS				SCREEN TYPE	CONTINUOUS WRAP				INSTALLATION METHOD	GRAVITY
JOINT TYPE	FLUSH THREAD				SLOT SIZE	0.010 INCH				FILTER PACK QTY.	150 LBS.
GROUT QUANTITY	80 GAL.				CENTRALIZERS	NONE				FILTER PACK TYPE	MORIE NO. 0 SAND
GROUT TYPE	CEMENT/ 5% BENTONITE				DRILLING MUD TYPE	NA				INSTALLATION METHOD	GRAVITY

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MONITORING WELL INSTALLATION LOG

JOB NO. 953-9117 PROJECT BCC/RFI/NY WELL NO. RFI-20 SHEET 1 of 1
 GA INSP. D. WEHN DRILLING METHOD 4 1/4-INCH ID HSA GROUND ELEV. 585.80 WATER DEPTH 4.96' btor
 WEATHER RAIN DRILLING COMPANY SJB SERVICES COLLAR ELEV. 588.03 DATE/TIME 4/24/96 1400
 TEMP. 40°F DRILL RIG CME-85 DRILLER A. MILLER STARTED 1440 4/23/96 COMPLETED 1630 4/23/96
 LOCATION / COORDINATES N: 10656.59 E: 10195.01 TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia. 9 I.F. WELL SCREEN 2 in. dia. 5 I.F. BENTONITE SEAL CHIPS
 CASING TYPE TYPE 316 STAINLESS SCREEN TYPE CONTINUOUS WRAP INSTALLATION METHOD GRAVITY
 JOINT TYPE FLUSH THREAD SLOT SIZE 0.010 INCH FILTER PACK QTY. 150 LBS.
 GROUT QUANTITY 30 GAL. CENTRALIZERS NONE FILTER PACK TYPE NO. 0 MORIE SAND
 GROUT TYPE CEMENT/ 5% BENTONITE DRILLING MUD TYPE NA INSTALLATION METHOD GRAVITY

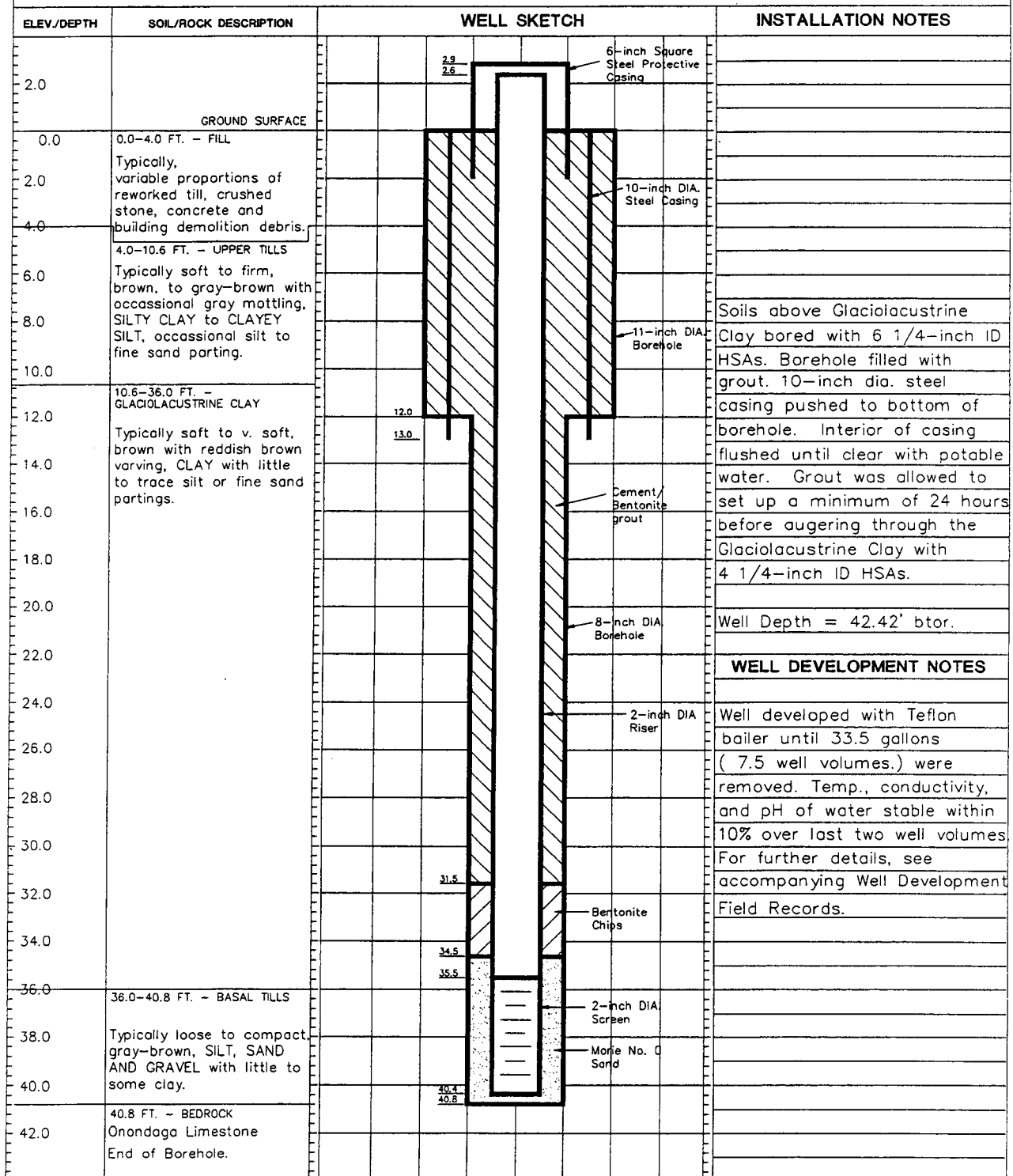
ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
2.0	SOIL DESCRIPTIONS FROM WELL RFI-21D BORING LOG.	6-inch Square Steel Protective Casing Cement/Bentonite grout Bentonite Chips 2-inch DIA Riser Morie No. 0 Sand 8-inch DIA Borehole 2-inch DIA Screen	
0.0	GROUND SURFACE		
0.0	0.0-4.0 FT. - FILL		
2.0	Typically, variable proportions of reworked till, crushed stone, concrete and building demolition debris.		
4.0	4.0-11.5 FT. - UPPER TILLS		
6.0	Typically soft to firm, brown, to gray-brown with occasional gray mottling, SILTY CLAY to CLAYEY SILT, occasional silt to fine sand parting.		
8.0			
10.0			
12.0	11.5 FT. - GLACIOLACUSTRINE CLAY		
14.0	Typically soft to v. soft, brown with reddish brown varving, CLAY with little to trace silt or fine sand partings.		
	12.3 FT. - End of Borehole.		
16.0			Well Depth = 14.08' btor.
18.0			WELL DEVELOPMENT NOTES
20.0			Well developed with Stainless Steel bailer until 14 gallons (10 well volumes.) were removed. Temp., conductivity, and pH of water stable within 10% over last two well volumes.
			For further details, see accompanying Well Development Field Records.

MONITORING WELL INSTALLATION LOG

JOB NO. 953-9117	PROJECT BCC/RFI/NY	WELL NO. RFI-21D	SHEET 1 of 1
GA INSP. D. WEHN	DRILLING METHOD 4 1/4-INCH ID HSA	GROUND ELEV. 585.76	WATER DEPTH 15.12' btor.
WEATHER CLOUDY	DRILLING COMPANY SJB SERVICES	COLLAR ELEV. 588.34	DATE/TIME 5/9/96 1035
TEMP. 45°F	DRILL RIG CME-85	DRILLER A. MILLER	STARTED 1315 4/23/96
			COMPLETED 0910 4/25/96
LOCATION / COORDINATES N: 10650.92 E: 10192.81		TIME / DATE	TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia.	38 I.f. WELL SCREEN 2 in. dia.	5 I.f. BENTONITE SEAL CHIPS
CASING TYPE TYPE 316 STAINLESS	SCREEN TYPE CONTINUOUS WRAP	INSTALLATION METHOD GRAVITY
JOINT TYPE FLUSH THREAD	SLOT SIZE 0.010 INCH	FILTER PACK QTY. 150 LBS.
GROUT QUANTITY 65 GAL.	CENTRALIZERS NONE	FILTER PACK TYPE NO. 0 MORIE SAND
GROUT TYPE CEMENT/ 5% BENTONITE	DRILLING MUD TYPE NA	INSTALLATION METHOD GRAVITY



Soils above Glaciolacustrine Clay bored with 6 1/4-inch ID HSAs. Borehole filled with grout. 10-inch dia. steel casing pushed to bottom of borehole. Interior of casing flushed until clear with potable water. Grout was allowed to set up a minimum of 24 hours before augering through the Glaciolacustrine Clay with 4 1/4-inch ID HSAs.

Well Depth = 42.42' btor.

WELL DEVELOPMENT NOTES

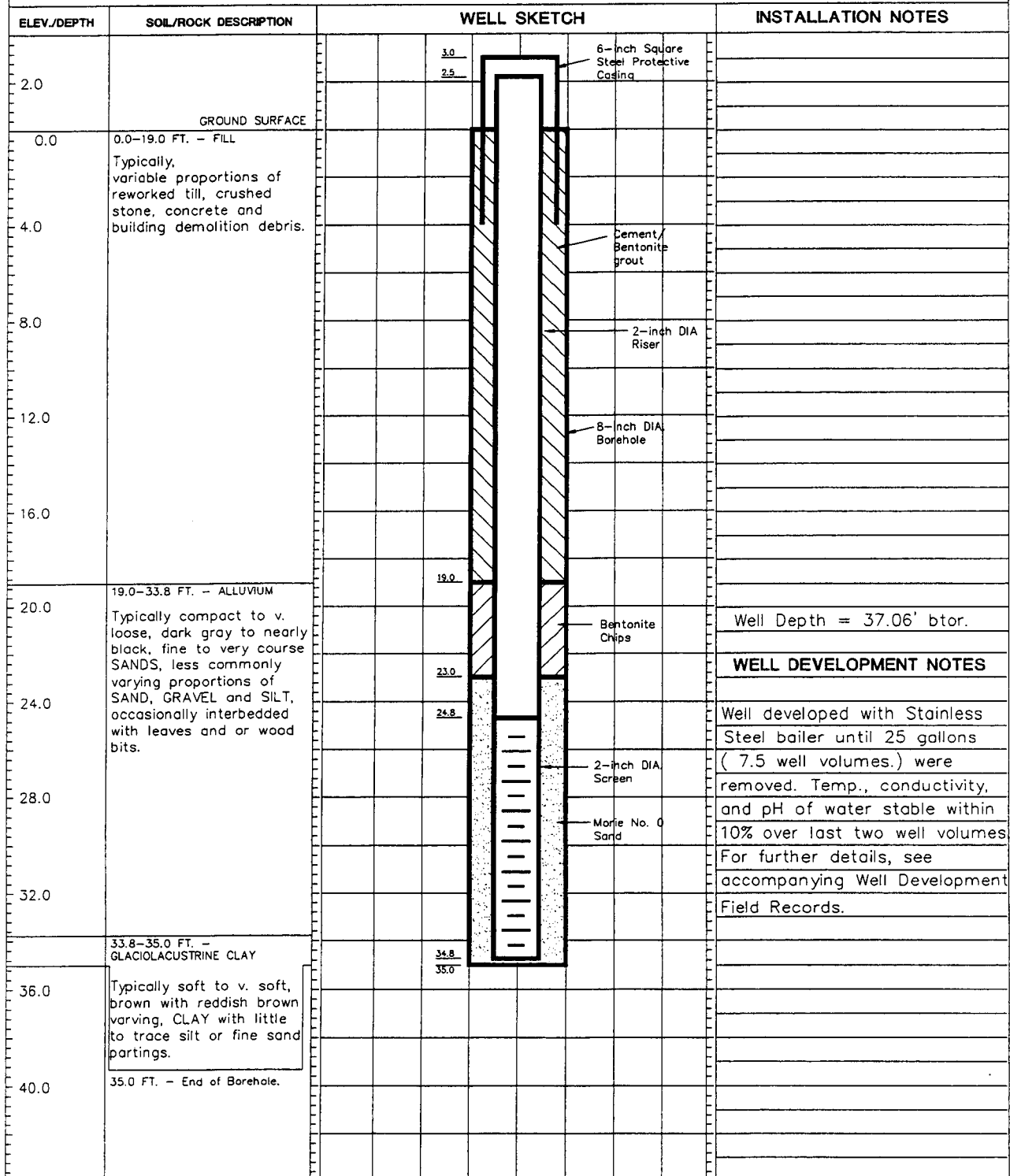
Well developed with Teflon bailer until 33.5 gallons (7.5 well volumes.) were removed. Temp., conductivity, and pH of water stable within 10% over last two well volumes. For further details, see accompanying Well Development Field Records.

MONITORING WELL INSTALLATION LOG

JOB NO. <u>953-9117</u>	PROJECT <u>BCC/RFI/NY</u>	WELL NO. <u>RFI-22</u>	SHEET <u>1</u> of <u>1</u>
GA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>4 1/4-INCH ID HSA</u>	GROUND ELEV. <u>588.12</u>	WATER DEPTH <u>17.32' btor.</u>
WEATHER <u>CLOUDY</u>	DRILLING COMPANY <u>SJB SERVICES</u>	COLLAR ELEV. <u>590.62</u>	DATE/TIME <u>5/9/96 1700</u>
TEMP. <u>55F</u>	DRILL RIG <u>CME-550X</u>	DRILLER <u>D. BUTZER</u>	STARTED <u>1030 5/7/96</u>
LOCATION / COORDINATES <u>N: 8995.21 E: 10103.99</u>		COMPLETED <u>1215 5/7/96</u>	
		TIME / DATE	

MATERIALS INVENTORY

WELL CASING <u>2</u> in. dia. <u>27</u> l.f. WELL SCREEN <u>2</u> in. dia. <u>10</u> l.f. BENTONITE SEAL <u>CHIPS</u>
CASING TYPE <u>TYPE 316 STAINLESS</u> SCREEN TYPE <u>CONTINUOUS WRAP</u> INSTALLATION METHOD <u>GRAVITY</u>
JOINT TYPE <u>FLUSH THREAD</u> SLOT SIZE <u>0.010 INCH</u> FILTER PACK QTY. <u>300 LBS.</u>
GROUT QUANTITY <u>55 GAL.</u> CENTRALIZERS <u>NONE</u> FILTER PACK TYPE <u>NO. 0 MORIE SAND</u>
GROUT TYPE <u>CEMENT/ 5% BENTONITE</u> DRILLING MUD TYPE <u>NA</u> INSTALLATION METHOD <u>GRAVITY</u>



MONITORING WELL INSTALLATION LOG

JOB NO. 953-9117 PROJECT BCC/RFI/NY WELL NO. RFI-23D SHEET 2 of 2
 GA INSP. D. WEHN DRILLING METHOD 6 1/4 1/4-INCH ID HSA GROUND ELEV. 588.41 WATER DEPTH 28.20' btor
 WEATHER SUN DRILLING COMPANY SJB SERVICES COLLAR ELEV. 590.88 DATE/TIME 5/9/96 1700
 TEMP. 65F DRILL RIG CME-550X DRILLER D. BUTZER STARTED 1245 5/8/96 COMPLETED 1630 5/9/96
 LOCATION / COORDINATES N: 9000.31 E: 10107.33 TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia. 59.5 l.f. WELL SCREEN 2 in. dia. 5 l.f. BENTONITE SEAL CHIPS
 CASING TYPE TYPE 316 STAINLESS SCREEN TYPE CONTINUOUS WRAP INSTALLATION METHOD GRAVITY
 JOINT TYPE FLUSH THREAD SLOT SIZE 0.010 INCH FILTER PACK QTY. 150 LBS.
 GROUT QUANTITY 150 GAL. CENTRAUZERS NONE FILTER PACK TYPE MORIE NO. 0 SAND
 GROUT TYPE CEMENT/ 5% BENTONITE DRILLING MUD TYPE NA INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
44.0	GLACIOLACUSTRINE CLAY		
46.0	Typically soft to v. soft, brown with reddish brown varving, CLAY with little to trace silt or fine sand partings.		
48.0			
50.0			
52.0			
54.0			
56.0			
58.0	58.0-61.9 FT. - BASAL TILLS		
60.0	Typically loose to compact, gray-brown, SILT, SAND AND GRAVEL with little to some clay.		
62.0	61.9 FT. - BEDROCK		
64.0	Onondaga Limestone		
66.0	End of Borehole.		
68.0			
70.0			
			WELL DEVELOPMENT NOTES

MONITORING WELL INSTALLATION LOG

JOB NO. 953-9117 PROJECT BCC/RFI/NY WELL NO. RFI-24 SHEET 1 of 1
 GA INSP. D. WEHN DRILLING METHOD 4 1/4-INCH ID HSA GROUND ELEV. 584.34 WATER DEPTH 10.55' btor
 WEATHER SUN DRILLING COMPANY SJB SERVICES COLLAR ELEV. 584.11 DATE/TIME 5/23/96 1245
 TEMP. 65F DRILL RIG ACKER SOILMAX DRILLER R. STEINER STARTED 0900 5/22/96 COMPLETED 1445 5/22/96
 LOCATION / COORDINATES N: 8808.07 E: 9830.88 TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia. 21.4 i.f. WELL SCREEN 2 in. dia. 10 i.f. BENTONITE SEAL CHIPS
 CASING TYPE TYPE 316 STAINLESS SCREEN TYPE CONTINUOUS WRAP INSTALLATION METHOD GRAVITY
 JOINT TYPE FLUSH THREAD SLOT SIZE 0.010 INCH FILTER PACK QTY. 300 LBS.
 GROUT QUANTITY 100 GAL. CENTRALIZERS NONE FILTER PACK TYPE NO. 0 MORIE SAND
 GROUT TYPE CEMENT/ 5% BENTONITE DRILLING MUD TYPE NA INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
2.0			
	GROUND SURFACE		
0.0	0.0-0.5 FT. - ASPHALT		
	0.5-7.6 FT. - FILL		
4.0	Typically, variable proportions of reworked till, crushed stone, concrete and building demolition debris.		
8.0	7.6-14.5 FT. - CONCRETE		
12.0			
16.0	14.5-20.0 FT. - FILL Same as Above.		
20.0	20.0-30.9 FT. - ALLUVIUM		
24.0	Typically compact to v. loose, dark gray to nearly black, fine to very coarse SANDS, less commonly varying proportions of SAND, GRAVEL and SILT, occasionally interbedded with leaves and or wood bits.		
28.0			
32.0	30.9-32.0 FT. - GLACIOLACUSTRINE CLAY		
36.0	Typically soft to v. soft, brown with reddish brown varving, CLAY with little to trace silt or fine sand partings.		
40.0	32.0 FT. - End of Borehole.		

MONITORING WELL INSTALLATION LOG

JOB NO. <u>953-9117</u>	PROJECT <u>BCC/RFI/NY</u>	WELL NO. <u>RFI-25</u>	SHEET <u>1</u> of <u>1</u>
GA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>4 1/4-INCH ID HSA</u>	GROUND ELEV. <u>584.14</u>	WATER DEPTH <u>13.88' btor</u>
WEATHER <u>CLOUDY</u>	DRILLING COMPANY <u>SJB SERVICES</u>	COLLAR ELEV. <u>586.76</u>	DATE/TIME <u>5/2/96 0830</u>
TEMP. <u>45F</u>	DRILL RIG <u>CME-550X</u>	DRILLER <u>D. BUTZER</u>	STARTED <u>1500 4/30/96</u>
LOCATION / COORDINATES <u>N: 8524.47 E: 9561.81</u>		COMPLETED <u>1630 4/30/96</u>	
		TIME / DATE TIME / DATE	

MATERIALS INVENTORY

WELL CASING <u>2</u> in. dia. <u>21.7</u> l.f.	WELL SCREEN <u>2</u> in. dia. <u>10</u> l.f.	BENTONITE SEAL <u>CHIPS</u>
CASING TYPE <u>TYPE 316 STAINLESS</u>	SCREEN TYPE <u>CONTINUOUS WRAP</u>	INSTALLATION METHOD <u>GRAVITY</u>
JOINT TYPE <u>FLUSH THREAD</u>	SLOT SIZE <u>0.010 INCH</u>	FILTER PACK QTY. <u>340 LBS.</u>
GROUT QUANTITY <u>40 GAL.</u>	CENTRALIZERS <u>NONE</u>	FILTER PACK TYPE <u>NO. 0 MORIE SAND</u>
GROUT TYPE <u>CEMENT/ 5% BENTONITE</u>	DRILLING MUD TYPE <u>NA</u>	INSTALLATION METHOD <u>GRAVITY</u>

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
2.0			
0.0	GROUND SURFACE		
0.0	0.0-14.0 FT. - FILL Typically, variable proportions of reworked till, crushed stone, concrete and building demolition debris.		
4.0			
8.0			
12.0			
14.0	14.0-27.8 FT. - ALLUVIUM Typically compact to v. loose, dark gray to nearly black, fine to very coarse SANDS, less commonly varying proportions of SAND, GRAVEL and SILT, occasionally interbedded with leaves and or wood bits.		
16.0			
20.0			
24.0			
28.0	27.8-30.0 FT. - GLACIOLACUSTRINE CLAY Typically soft to v. soft, brown with reddish brown varving, CLAY with little to trace silt or fine sand partings.		Well Depth = 31.66' btor.
32.0	30.0 FT. - End of Borehole.		WELL DEVELOPMENT NOTES Well developed with Stainless Steel bailer until 21 gallons (7 well volumes.) were removed. Temp., conductivity, and pH of water stable within 10% over last two well volumes. For further details, see accompanying Well Development Field Records.
36.0			
40.0			

MONITORING WELL INSTALLATION LOG

JOB NO. 953-9117 PROJECT BCC/RFI/NY WELL NO. RFI-26 SHEET 1 of 1
 GA INSP. D. WEHN DRILLING METHOD 4 1/4-INCH ID HSA GROUND ELEV. 585.17 WATER DEPTH 14.52' btor.
 WEATHER CLOUDY DRILLING COMPANY SJB SERVICES COLLAR ELEV. 587.84 DATE/TIME 5/9/96 1540
 TEMP. 55F DRILL RIG CME-550X DRILLER D. BUTZER STARTED 0930 5/3/96 COMPLETED 1300 5/3/96
 LOCATION / COORDINATES N: 8893.53 E: 9543.46 TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia. 28 i.f. WELL SCREEN 2 in. dia. 10 i.f. BENTONITE SEAL CHIPS
 CASING TYPE TYPE 316 STAINLESS SCREEN TYPE CONTINUOUS WRAP INSTALLATION METHOD GRAVITY
 JOINT TYPE FLUSH THREAD SLOT SIZE 0.010 INCH FILTER PACK QTY. 400 LBS.
 GROUT QUANTITY 25 GAL. CENTRALIZERS NONE FILTER PACK TYPE NO. 0 MORIE SAND
 GROUT TYPE CEMENT/ 5% BENTONITE DRILLING MUD TYPE NA INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
2.0		3.0 2.7	
	GROUND SURFACE	6-inch Square Steel Protective Casing	
0.0	0.0-14.0 FT. - FILL Typically, variable proportions of reworked till, crushed stone, concrete and building demolition debris.		
4.0		Cement/Bentonite grout	
8.0		8-inch DIA. Borehole	
12.0			
	14.0-34.2 FT. - ALLUVIUM	13.9	
16.0	Typically compact to v. loose, dark gray to nearly black, fine to very coarse SANDS, less commonly varying proportions of SAND, GRAVEL and SILT, occasionally interbedded with leaves and or wood bits.		
20.0		20.0	
24.0			
28.0			
32.0		25.5	
	34.2-36.0 FT. - GLACIOLACUSTRINE CLAY		
36.0	Typically soft to v. soft, brown with reddish brown varving. CLAY with little to trace silt or fine sand partings.		
40.0	36.0 FT. - End of Borehole.	35.5 36.0	
		2-inch DIA. Riser	Well Depth = 38.10' btor.
		Bentonite Chips	WELL DEVELOPMENT NOTES
		Morie No. 0 Sand	Well developed with Stainless Steel bailer until 22.5 gallons (6 well volumes.) were removed. Temp., conductivity, and pH of water stable within 10% over last two well volumes
		2-inch DIA. Screen	For further details, see accompanying Well Development Field Records.

MONITORING WELL INSTALLATION LOG

JOB NO. 953-9117 PROJECT BCC/RFI/NY WELL NO. RFI-27 SHEET 1 of 1
 GA INSP. D. WEHN DRILLING METHOD 4 1/4-INCH ID HSA GROUND ELEV. 585.10 WATER DEPTH 5.82' btor
 WEATHER CLOUDY DRILLING COMPANY SJB SERVICES COLLAR ELEV. 587.52 DATE/TIME 4/29/96 0810
 TEMP. 60°F DRILL RIG CME-85 DRILLER A. MILLER STARTED 0830 4/26/96 COMPLETED 1015 4/26/96
 LOCATION / COORDINATES N: 9497.44 E: 9656.75 TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia. 14.6 l.f. WELL SCREEN 2 in. dia. 5 l.f. BENTONITE SEAL CHIPS
 CASING TYPE TYPE 316 STAINLESS SCREEN TYPE CONTINUOUS WRAP INSTALLATION METHOD GRAVITY
 JOINT TYPE FLUSH THREAD SLOT SIZE 0.010 INCH FILTER PACK QTY. 150 LBS.
 GROUT QUANTITY 150 GAL. CENTRALIZERS NONE FILTER PACK TYPE NO. 0 MORIE SAND
 GROUT TYPE CEMENT/ 5% BENTONITE DRILLING MUD TYPE NA INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
2.0		6-inch Square Steel Protective Casing	
0.0	GROUND SURFACE		
2.0	0.0-12.0 FT. - FILL Typically, variable proportions of reworked till, crushed stone, concrete and building demolition debris.		
4.0			
6.0			
8.0			
10.0			
12.0	12.0-16.0 FT. - UPPER TILLS Typically soft to firm, brown, to gray-brown with occasional gray mottling. SILTY CLAY to CLAYEY SILT, occasional silt to fine sand parting.		Well Depth = 19.62' btor.
14.0			WELL DEVELOPMENT NOTES
16.0	16.0-18.0 FT. - GLACIOLACUSTRINE CLAY Typically soft to v. soft, brown with reddish brown varving, CLAY with little to trace silt or fine sand partings.		Well developed with Stainless Steel bailer until 12 gallons (5 well volumes.) were removed. Temp., conductivity, and pH of water stable within 10% over last two well volumes
18.0	18.0 FT. - End of borehole.		For further details, see accompanying Well Development Field Records.
20.0			

MONITORING WELL INSTALLATION LOG

JOB NO. 953-9117 PROJECT BCC/RFI/NY WELL NO. RFI-28 SHEET 1 of 1
 GA INSP. D. WEHN DRILLING METHOD 4 1/4-INCH ID HSA GROUND ELEV. 585.90 WATER DEPTH 14.12' btor
 WEATHER CLOUDY DRILLING COMPANY SUB SERVICES COLLAR ELEV. 588.60 DATE/TIME 5/17/96 0930
 TEMP. 55F DRILL RIG ACKER SOILMAX DRILLER R. STEINER STARTED 1115 5/16/96 COMPLETED 1430 5/16/96
 LOCATION / COORDINATES _____

MATERIALS INVENTORY

WELL CASING 2 in. dia. 12.4 i.f. WELL SCREEN 2 in. dia. 5 i.f. BENTONITE SEAL CHIPS
 CASING TYPE TYPE 316 STAINLESS SCREEN TYPE CONTINUOUS WRAP INSTALLATION METHOD GRAVITY
 JOINT TYPE FLUSH THREAD SLOT SIZE 0.010 INCH FILTER PACK QTY. 150 LBS.
 GROUT QUANTITY 20 GAL. CENTRALIZERS NONE FILTER PACK TYPE NO. 0 MORIE SAND
 GROUT TYPE CEMENT/ 5% BENTONITE DRILLING MUD TYPE NA INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
2.0			
0.0	GROUND SURFACE		
2.0	0.0-11.4 FT. - FILL Typically, variable proportions of reworked till, crushed stone, concrete and building demolition debris.		
4.0			
6.0			
8.0			
10.0			Well Depth = 17.42' btor.
12.0	11.4-15.0 FT. - UPPER TILLS Typically soft to firm, brown, to gray-brown with occasional gray mottling, SILTY CLAY to CLAYEY SILT, occasional silt to fine sand parting.		WELL DEVELOPMENT NOTES
14.0			Well developed with Stainless Steel bailer until 11 gallons (7 well volumes.) were removed. Temp., conductivity, and pH of water stable within 10% over last two well volumes
16.0	15.0-16.0 FT. - GLACIOLACUSTRINE CLAY Typically soft to v. soft, brown with reddish brown varving, CLAY with little to trace silt or fine sand partings.		For further details, see accompanying Well Development Field Records.
18.0	16.0 FT. - End of boring.		
20.0			

MONITORING WELL INSTALLATION LOG

JOB NO. 953-9117 PROJECT BCC/RFI/NY WELL NO. RFI-29 SHEET 1 of 1
 GA INSP. D. WEHN DRILLING METHOD 4 1/4-INCH ID HSA GROUND ELEV. 584.01 WATER DEPTH 4.18' btor
 WEATHER CLOUDY DRILLING COMPANY SJB SERVICES COLLAR ELEV. 586.33 DATE/TIME 5/20/96 1045
 TEMP. 70°F DRILL RIG ACKER SOILMAX DRILLER R. STEINER STARTED 1300 5/17/96 COMPLETED 1415 5/17/96
 LOCATION / COORDINATES N: 9896.48 E: 10446.31 TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia. 10 l.f. WELL SCREEN 2 in. dia. 5 l.f. BENTONITE SEAL CHIPS
 CASING TYPE TYPE 316 STAINLESS SCREEN TYPE CONTINUOUS WRAP INSTALLATION METHOD GRAVITY
 JOINT TYPE FLUSH THREAD SLOT SIZE 0.010 INCH FILTER PACK QTY. 200 LBS.
 GROUT QUANTITY 20 GAL. CENTRALIZERS NONE FILTER PACK TYPE NO. 0 MORIE SAND
 GROUT TYPE CEMENT/ 5% BENTONITE DRILLING MUD TYPE NA INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
2.0			
0.0	GROUND SURFACE		
0.0	0.0-0.8 FT. - CONCRETE		
2.0	0.8-3.0 FT. - FILL Typically, variable proportions of reworked till, crushed stone, concrete and building demolition debris.		
4.0	3.0-7.4 FT. - ALLUVIUM Typically compact to v. loose, dark gray to nearly black, fine to very coarse SANDS, less commonly varying proportions of SAND, GRAVEL and SILT, occasionally interbedded with leaves and or wood bits.		
6.0			
8.0	7.4-11.2 FT. - UPPER TILLS Typically soft to firm, brown, to gray-brown with occasional gray mottling, SILTY CLAY to CLAYEY SILT, occasional silt to fine sand partings.		
10.0			
12.0	11.2-14.0 FT. - GLACIOLACUSTRINE CLAY Typically soft to v. soft, brown with reddish brown varving, CLAY with little to trace silt or fine sand partings.		
14.0	14.0 FT. - End of borehole.		
16.0			Well Depth = 14.92' btor.
18.0			WELL DEVELOPMENT NOTES
20.0			Well developed with Stainless Steel bailer until 10.8 gallons (10 well volumes.) were removed. Temp., conductivity, and pH of water stable within 10% over last two well volumes. For further details, see accompanying Well Development Field Records.

MONITORING WELL INSTALLATION LOG

JOB NO. 953-9117 PROJECT BCC/RFI/NY WELL NO. RFI-30 SHEET 1 of 1
 GA INSP. D. WEHN DRILLING METHOD 4 1/4-INCH ID HSA GROUND ELEV. 585.56 WATER DEPTH 15.23' btor
 WEATHER CLOUDY DRILLING COMPANY SJB SERVICES COLLAR ELEV. 588.04 DATE/TIME 4/25/96 0820
 TEMP. 55F DRILL RIG CME-85 DRILLER A. MILLER STARTED 1145 4/25/96 COMPLETED 1430 4/25/96
 LOCATION / COORDINATES N: 10040.74 E: 9996.13 TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia. 12.5 l.f. WELL SCREEN 2 in. dia. 5 l.f. BENTONITE SEAL CHIPS
 CASING TYPE TYPE 316 STAINLESS SCREEN TYPE CONTINUOUS WRAP INSTALLATION METHOD GRAVITY
 JOINT TYPE FLUSH THREAD SLOT SIZE 0.010 INCH FILTER PACK QTY. 150 LBS.
 GROUT QUANTITY 20 GAL. CENTRALIZERS NONE FILTER PACK TYPE NO. 0 MORIE SAND
 GROUT TYPE CEMENT/ 5% BENTONITE DRILLING MUD TYPE NA INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
2.0			
0.0	GROUND SURFACE		
2.0	0.0-6.0 FT. - FILL Typically, variable proportions of reworked till, crushed stone, concrete and building demolition debris.		
4.0			
6.0	6.0-13.8 FT. - UPPER TILLS Typically soft to firm, brown, to gray-brown with occasional gray mottling, SILTY CLAY to CLAYEY SILT, occasional silt to fine sand partings.		
8.0			
10.0			
12.0			
14.0	13.8-15.1 FT. - GLACIOLACUSTRINE CLAY Typically soft to v. soft, brown with reddish brown varving, CLAY with little to trace silt or fine sand partings.		
16.0	15.1 FT. - End of borehole.		
18.0			
20.0			

Well Depth = 17.42' btor.

WELL DEVELOPMENT NOTES

Well developed with Stainless Steel bailer until 10.5 gallons (6 well volumes.) were removed. Temp., conductivity, and pH of water stable within 10% over last two well volumes
 For further details, see accompanying Well Development Field Records.

MONITORING WELL INSTALLATION LOG

JOB NO. 953-9117 PROJECT BCC/RFI/NY WELL NO. RFI-31 SHEET 1 of 1
 GA INSP. D. WEHN DRILLING METHOD 4 1/4-INCH ID HSA GROUND ELEV. 585.76 WATER DEPTH 7.41' btor
 WEATHER CLOUDY DRILLING COMPANY SJB SERVICES COLLAR ELEV. 588.37 DATE/TIME 5/20/96 0730
 TEMP. 60°F DRILL RIG ACKER SOILMAX DRILLER R. STEINER STARTED 0800 5/17/96 COMPLETED 0930 5/17/96
 LOCATION / COORDINATES N: 10299.13 E: 10335.11 TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia. 11.1 l.f. WELL SCREEN 2 in. dia. 5 l.f. BENTONITE SEAL CHIPS
 CASING TYPE TYPE 316 STAINLESS SCREEN TYPE CONTINUOUS WRAP INSTALLATION METHOD GRAVITY
 JOINT TYPE FLUSH THREAD SLOT SIZE 0.010 INCH FILTER PACK QTY. 150 LBS.
 GROUT QUANTITY 20 GAL. CENTRALIZERS NONE FILTER PACK TYPE NO. 0 MORIE SAND
 GROUT TYPE CEMENT/ 5% BENTONITE DRILLING MUD TYPE NA INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
2.0			
0.0	GROUND SURFACE		
	0.0-0.5 FT. - TOPSOIL		
	0.5-1.5 FT. - CONCRETE		
2.0	1.5-6.0 FT. - FILL Typically, variable proportions of reworked till, crushed stone, concrete and building demolition debris.		
4.0			
6.0	6.0-12.4 FT. - UPPER TILLS Typically soft to firm, brown, to gray-brown with occasional gray mottling, SILTY CLAY to CLAYEY SILT, occasional silt to fine sand partings.		
8.0			
10.0			Well Depth = 16.14' btor.
12.0			WELL DEVELOPMENT NOTES
14.0	12.4-14.0 FT. - GLACIOLACUSTRINE CLAY Typically soft to v. soft, brown with reddish brown varving, CLAY with little to trace silt or fine sand partings. 14.0 FT. - End of borehole.		Well developed with Stainless Steel bailer until 9.8 gallons (7 well volumes.) were removed. Temp., conductivity, and pH of water stable within 10% over last two well volumes For further details, see accompanying Well Development Field Records.
16.0			
18.0			
20.0			

MONITORING WELL INSTALLATION LOG

JOB NO. 953-9117 PROJECT BCC/RFI/NY WELL NO. RFI-32 SHEET 1 of 1
 GA INSP. D. WEHN DRILLING METHOD 4 1/4-INCH ID HSA GROUND ELEV. 584.46 WATER DEPTH 4.84' btor
 WEATHER CLOUDY DRILLING COMPANY SJB SERVICES COLLAR ELEV. 586.95 DATE/TIME 5/22/96 0810
 TEMP. 65F DRILL RIG ACKER SOILMAX DRILLER R. STEINER STARTED 1020 5/21/96 COMPLETED 1200 5/21/96
 LOCATION / COORDINATES N: 9779.62 E: 10744.19 TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia. 10 I.F. WELL SCREEN 2 in. dia. 5 I.F. BENTONITE SEAL CHIPS
 CASING TYPE TYPE 316 STAINLESS SCREEN TYPE CONTINUOUS WRAP INSTALLATION METHOD GRAVITY
 JOINT TYPE FLUSH THREAD SLOT SIZE 0.010 INCH FILTER PACK QTY. 150 LBS.
 GROUT QUANTITY 20 GAL. CENTRAUZERS NONE FILTER PACK TYPE NO. 0 MORIE SAND
 GROUT TYPE CEMENT/ 5% BENTONITE DRILLING MUD TYPE NA INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
2.0		6-inch Square Steel Protective Casing Cement/Bentonite grout 2-inch DIA Riser 8-inch DIA Borehole Bentonite Chips 2-inch DIA Screen Morie No. 0 Sand	
0.0	GROUND SURFACE		
2.0	0.0-4.0 FT. - FILL Typically, variable proportions of reworked till, crushed stone, concrete and building demolition debris.		
4.0	4.0-10.6 FT. - UPPER TILLS Typically soft to firm, brown, to gray-brown with occasional gray mottling, SILTY CLAY to CLAYEY SILT, occasional silt to fine sand parting.		
6.0			
8.0			
10.0			Well Depth = 14.93' btor.
12.0	10.6-13.0 FT. - GLACIOLACUSTRINE CLAY Typically soft to v. soft, brown with reddish brown varving, CLAY with little to trace silt or fine sand partings.		WELL DEVELOPMENT NOTES
14.0	13.0 FT. - End of boring.		Well developed with Stainless Steel bailer until 9.5 gallons (5.5 well volumes.) were removed. Temp., conductivity, and pH of water stable within 10% over last two well volumes
16.0			For further details, see accompanying Well Development Field Records.
18.0			
20.0			

MONITORING WELL INSTALLATION LOG

JOB NO. <u>953-9117</u>	PROJECT <u>BCC/RFI/NY</u>	WELL NO. <u>RFI-33</u>	SHEET <u>1</u> of <u>1</u>
GA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>4 1/4-INCH ID HSA</u>	GROUND ELEV. <u>583.45</u>	WATER DEPTH <u>0.1' btor</u>
WEATHER <u>RAIN</u>	DRILLING COMPANY <u>SJB SERVICES</u>	COLLAR ELEV. <u>583.04</u>	DATE/TIME <u>5/9/96 1000</u>
TEMP. <u>60°F</u>	DRILL RIG <u>CME-85</u>	DRILLER <u>A. MILLER</u>	STARTED <u>1525 4/22/96</u>
LOCATION / COORDINATES <u>N: 10453.73 E: 11007.12</u>		COMPLETED <u>1630 4/22/96</u>	
		TIME / DATE	

MATERIALS INVENTORY

WELL CASING <u>2</u> in. dia. <u>4.5</u> l.f. WELL SCREEN <u>2</u> in. dia. <u>5</u> l.f. BENTONITE SEAL <u>CHIPS</u>
CASING TYPE <u>TYPE 316 STAINLESS</u> SCREEN TYPE <u>CONTINUOUS WRAP</u> INSTALLATION METHOD <u>GRAVITY</u>
JOINT TYPE <u>FLUSH THREAD</u> SLOT SIZE <u>0.010 INCH</u> FILTER PACK QTY. <u>150 LBS.</u>
GROUT QUANTITY <u>10 GAL.</u> CENTRALIZERS <u>NONE</u> FILTER PACK TYPE <u>NO. 0 MORIE SAND</u>
GROUT TYPE <u>CEMENT/ 5% BENTONITE</u> DRILLING MUD TYPE <u>NA</u> INSTALLATION METHOD <u>GRAVITY</u>

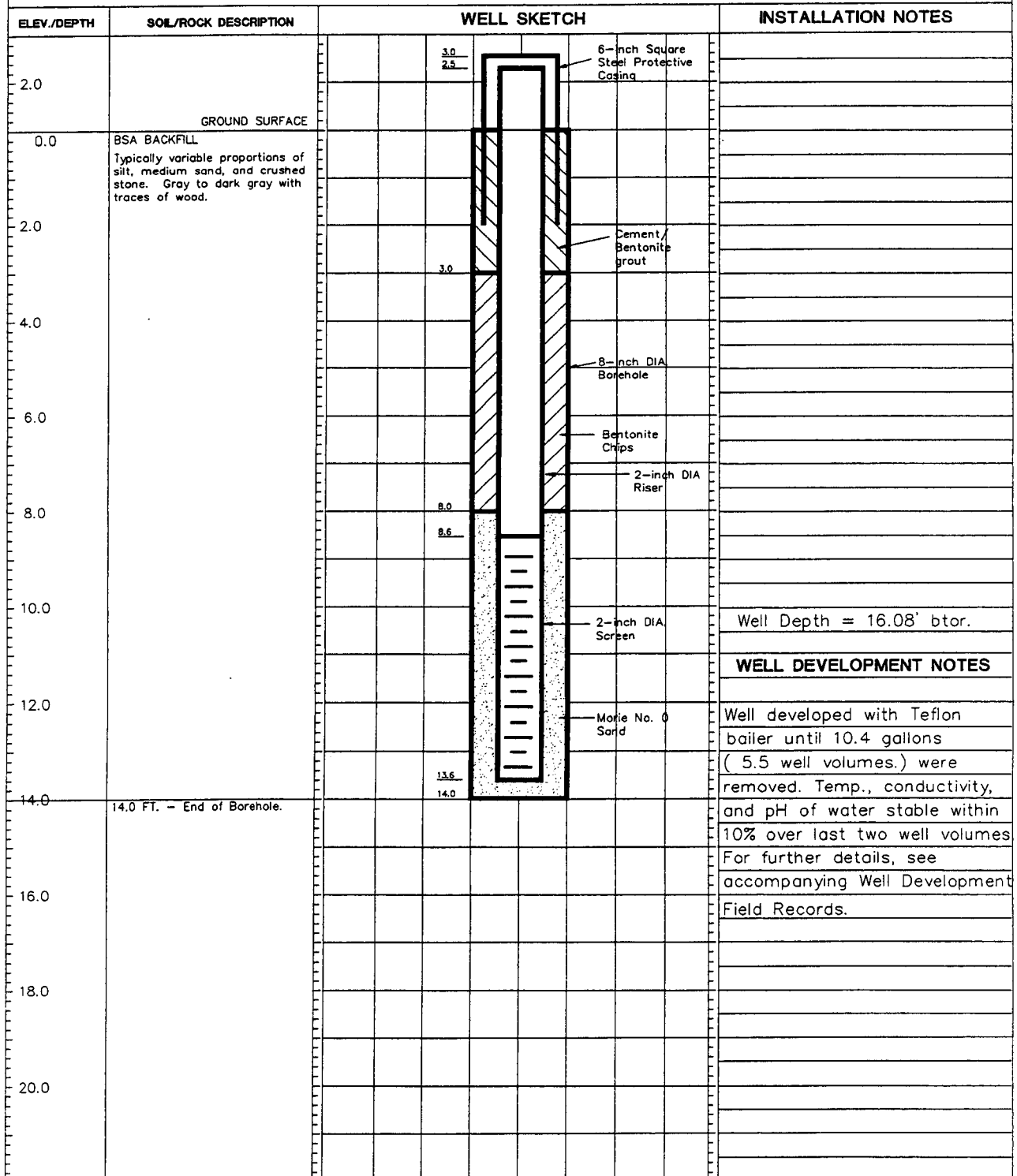
ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
2.0			
0.0	GROUND SURFACE		
0.0	0.0-5.0 FT. - FILL Typically, variable proportions of reworked till, crushed stone, concrete and building demolition debris.	0.4	
2.0		1.4	
4.0		3.9	
6.0	5.0-8.7 FT. - UPPER TILLS Typically soft to firm, brown, to gray-brown with occasional gray mottling, SILTY CLAY to CLAYEY SILT, occasional silt to fine sand parting.	5.0	
8.0			
10.0	8.7-10.1 FT. - GLACIOLACUSTRINE CLAY Typically soft to v. soft, brown with reddish brown varving, CLAY with little to trace silt or fine sand partings.	10.0	
12.0	10.1 FT. - End of Borehole.	10.1	
14.0	12.0 FT. - End of Sampling.	12.0	
16.0			
18.0			
20.0			

MONITORING WELL INSTALLATION LOG

JOB NO. 953-9117 PROJECT BCC/RFI/NY WELL NO. RFI-PZ16 SHEET 1 of 1
 GA INSP. D. WEHN DRILLING METHOD 4 1/4-INCH ID HSA GROUND ELEV. 584.67 WATER DEPTH 3.42' btor
 WEATHER SUN DRILLING COMPANY SJB SERVICES COLLAR ELEV. 587.22 DATE/TIME 5/14/96 1330
 TEMP. 70°F DRILL RIG CME-550X DRILLER D. BUTZER STARTED 0945 5/10/96 COMPLETED 1045 5/10/96
 LOCATION / COORDINATES N: 9630.63 E: 11161.10 TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia. 11 l.f. WELL SCREEN 2 in. dia. 5 l.f. BENTONITE SEAL CHIPS
 CASING TYPE SCH 40 PVC SCREEN TYPE MACHINE SLOTTED INSTALLATION METHOD GRAVITY
 JOINT TYPE FLUSH THREAD SLOT SIZE 0.010 INCH FILTER PACK QTY. 140 LBS.
 GROUT QUANTITY 10 GAL. CENTRALIZERS NONE FILTER PACK TYPE NO. 0 MORIE SAND
 GROUT TYPE CEMENT/ 5% BENTONITE DRILLING MUD TYPE NA INSTALLATION METHOD GRAVITY

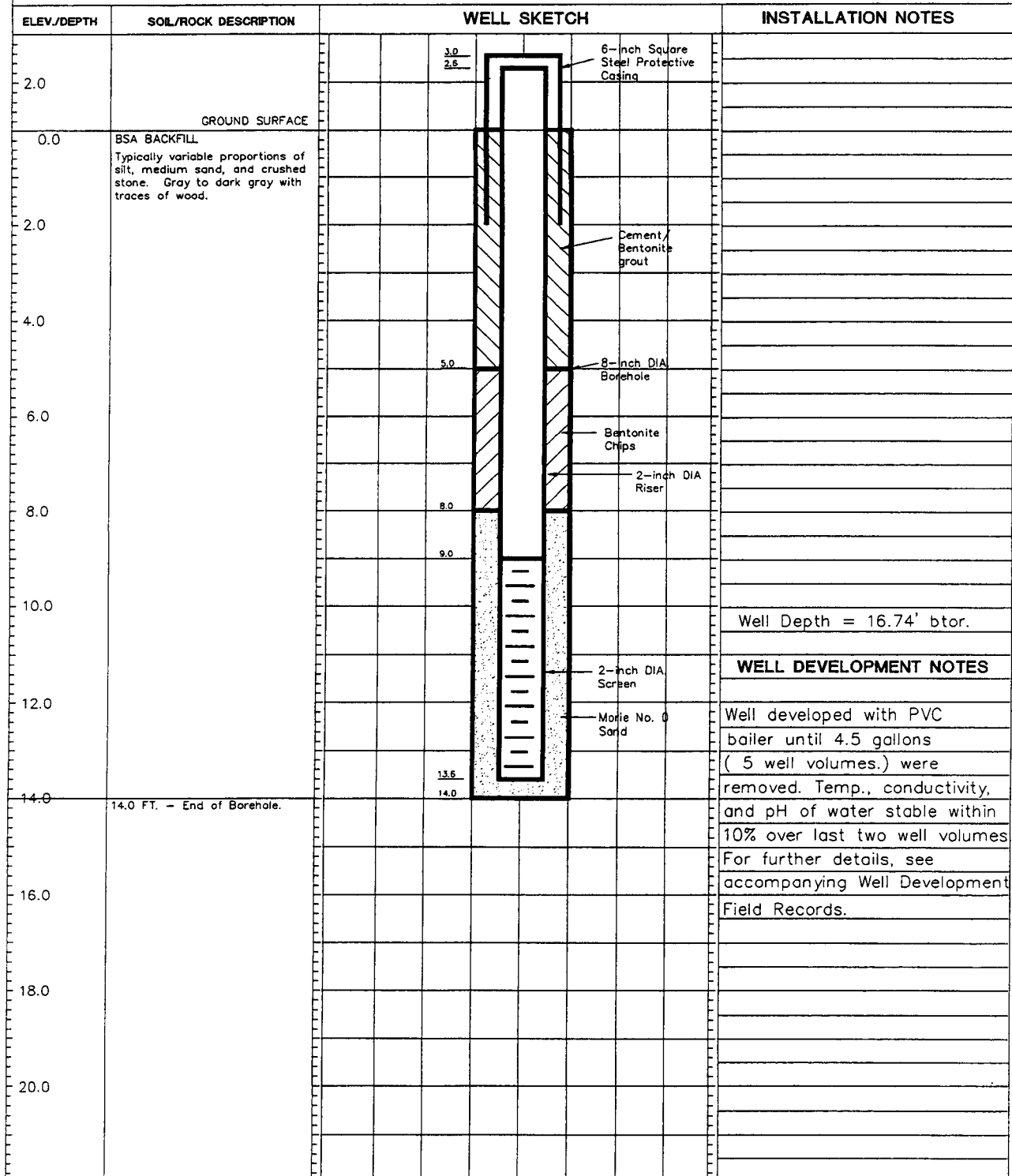


MONITORING WELL INSTALLATION LOG

JOB NO. <u>953-9117</u>	PROJECT <u>BCC/RFI/NY</u>	WELL NO. <u>RFI-PZ17</u>	SHEET <u>1</u> of <u>1</u>
GA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>4 1/4-INCH ID HSA</u>	GROUND ELEV. <u>583.86</u>	WATER DEPTH <u>10.62' btor</u>
WEATHER <u>CLOUDY</u>	DRILLING COMPANY <u>SJB SERVICES</u>	COLLAR ELEV. <u>586.48</u>	DATE/TIME <u>5/14/96 1315</u>
TEMP. <u>70°F</u>	DRILL RIG <u>CME-550X</u>	DRILLER <u>D. BUTZER</u>	STARTED <u>1145 5/10/96</u>
LOCATION / COORDINATES <u>N: 9537.68 E: 11525.11</u>		COMPLETED <u>1330 5/10/96</u>	

MATERIALS INVENTORY

WELL CASING <u>2</u> in. dia. <u>11.5</u> l.f. WELL SCREEN <u>2</u> in. dia. <u>5</u> l.f. BENTONITE SEAL <u>CHIPS</u>
CASING TYPE <u>SCH 40 PVC</u> SCREEN TYPE <u>MACHINE SLOTTED</u> INSTALLATION METHOD <u>GRAVITY</u>
JOINT TYPE <u>FLUSH THREAD</u> SLOT SIZE <u>0.010 INCH</u> FILTER PACK QTY. <u>150 LBS.</u>
GROUT QUANTITY <u>20 GAL.</u> CENTRALIZERS <u>NONE</u> FILTER PACK TYPE <u>NO. 0 MORIE SAND</u>
GROUT TYPE <u>CEMENT/ 5% BENTONITE</u> DRILLING MUD TYPE <u>NA</u> INSTALLATION METHOD <u>GRAVITY</u>

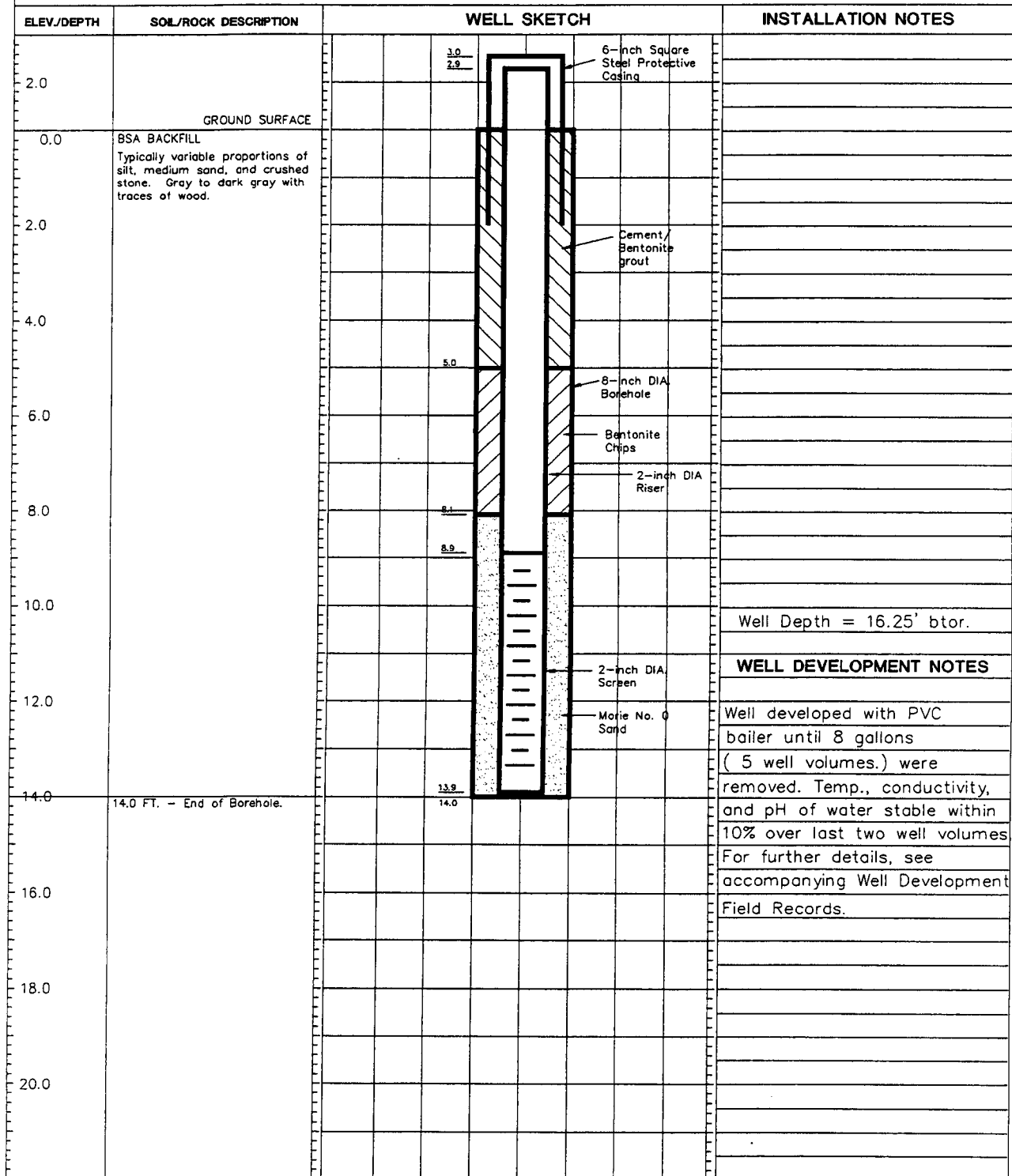


MONITORING WELL INSTALLATION LOG

JOB NO. <u>953-9117</u>	PROJECT <u>BCC/RFI/NY</u>	WELL NO. <u>RFI-PZ18</u>	SHEET <u>1</u> of <u>1</u>
GA INSP. <u>D. WEHN</u>	DRILLING METHOD <u>4 1/4-INCH ID HSA</u>	GROUND ELEV. <u>584.95</u>	WATER DEPTH <u>6.57' btor</u>
WEATHER <u>CLOUDY</u>	DRILLING COMPANY <u>SJB SERVICES</u>	COLLAR ELEV. <u>587.83</u>	DATE/TIME <u>5/10/96 0805</u>
TEMP. <u>70°F</u>	DRILL RIG <u>CME-550X</u>	DRILLER <u>D. BUTZER</u>	STARTED <u>1330 5/9/96</u>
LOCATION / COORDINATES <u>N: 9607.53 E: 11255.13</u>		COMPLETED <u>1430 5/9/96</u>	

MATERIALS INVENTORY

WELL CASING <u>2</u> in. dia. <u>11.3</u> l.f. WELL SCREEN <u>2</u> in. dia. <u>5</u> l.f. BENTONITE SEAL <u>CHIPS</u>
CASING TYPE <u>SCH 40 PVC</u> SCREEN TYPE <u>MACHINE SLOTTED</u> INSTALLATION METHOD <u>GRAVITY</u>
JOINT TYPE <u>FLUSH THREAD</u> SLOT SIZE <u>0.010 INCH</u> FILTER PACK QTY. <u>150 LBS.</u>
GROUT QUANTITY <u>15 GAL</u> CENTRALIZERS <u>NONE</u> FILTER PACK TYPE <u>NO. 0 MORIE SAND</u>
GROUT TYPE <u>CEMENT/ 5% BENTONITE</u> DRILLING MUD TYPE <u>NA</u> INSTALLATION METHOD <u>GRAVITY</u>



MONITORING WELL INSTALLATION LOG

JOB NO. 953-9117 PROJECT BCC/RFI/NY WELL NO. RFI-PZ19 SHEET 1 of 1
 GA INSP. D. WEHN DRILLING METHOD 4 1/4-INCH ID HSA GROUND ELEV. 583.88 WATER DEPTH 11.56' btor
 WEATHER SUN DRILLING COMPANY SJB SERVICES COLLAR ELEV. 586.30 DATE/TIME 6/3/96 1412
 TEMP. 65F DRILL RIG ACKER SOILMAX DRILLER R. STEINER STARTED 0945 5/15/96 COMPLETED 1130 5/15/96
 LOCATION / COORDINATES N: 9500.67 E: 11317.53

MATERIALS INVENTORY

WELL CASING 2 in. dia. 18.5 I.F. WELL SCREEN 2 in. dia. 10 I.F. BENTONITE SEAL CHIPS
 CASING TYPE SCH 40 PVC SCREEN TYPE MACHINE SLOTTED INSTALLATION METHOD GRAVITY
 JOINT TYPE FLUSH THREAD SLOT SIZE 0.010 INCH FILTER PACK QTY. 350 LBS.
 GROUT QUANTITY 40 GAL. CENTRALIZERS NONE FILTER PACK TYPE NO. 0 MORIE SAND
 GROUT TYPE CEMENT/ 5% BENTONITE DRILLING MUD TYPE NA INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
2.0		3.0 2.4	
	GROUND SURFACE		
0.0	0.0-8.0 FT. - FILL Typically, variable proportions of reworked till, crushed stone, concrete and building demolition debris.		
4.0			
8.0	8.0-25.4 FT. - ALLUVIUM Typically compact to v. loose, dark gray to nearly black, fine to very coarse SANDS, less commonly varying proportions of SAND, GRAVEL and SILT, occasionally interbedded with leaves and or wood bits.		
12.0		11.0	
16.0		14.0	
20.0		16.0	
24.0			Well Depth = 28.45' btor.
			WELL DEVELOPMENT NOTES
			Well developed with Teflon bailer until 14 gallons (5 well volumes.) were removed. Temp., conductivity, and pH of water stable within 10% over last two well volumes
			For further details, see accompanying Well Development Field Records.
28.0	25.4-28.0 FT. - GLACIOLACUSTRINE CLAY Typically soft to v. soft, brown with reddish brown varving, CLAY with little to trace silt or fine sand partings.	26.0	
32.0	28.0 FT. - End of boring.	28.0	
36.0			
40.0			

MONITORING WELL INSTALLATION LOG

JOB NO. 953-9117 PROJECT BCC/RFI/NY WELL NO. RFI-PZ20 SHEET 1 of 1
 GA INSP. D. WEHN DRILLING METHOD 4 1/4-INCH ID HSA GROUND ELEV. 583.65 WATER DEPTH 10.59' btor
 WEATHER SUN DRILLING COMPANY SJB SERVICES COLLAR ELEV. 586.14 DATE/TIME 5/15/96 0830
 TEMP. 50°F DRILL RIG ACKER SOILMAX DRILLER R. STEINER STARTED 1300 5/14/96 COMPLETED 1500 5/14/96
 LOCATION / COORDINATES N: 9490.92 E: 11415.51 TIME / DATE

MATERIALS INVENTORY

WELL CASING 2 in. dia. 20.2 l.f. WELL SCREEN 2 in. dia. 10 l.f. BENTONITE SEAL CHIPS
 CASING TYPE SCH 40 PVC SCREEN TYPE MACHINE SLOTTED INSTALLATION METHOD GRAVITY
 JOINT TYPE FLUSH THREAD SLOT SIZE 0.010 INCH FILTER PACK QTY. 350 LBS.
 GROUT QUANTITY 20 GAL. CENTRALIZERS NONE FILTER PACK TYPE NO. 0 MORIE SAND
 GROUT TYPE CEMENT/ 5% BENTONITE DRILLING MUD TYPE NA INSTALLATION METHOD GRAVITY

ELEV./DEPTH	SOIL/ROCK DESCRIPTION	WELL SKETCH	INSTALLATION NOTES
2.0			
	GROUND SURFACE		
0.0	0.0-10.0 FT. - FILL		
	Typically, variable proportions of reworked till, crushed stone, concrete and building demolition debris.		
4.0			
8.0			
12.0	10.0-25.8 FT. - ALLUVIUM		
	Typically compact to v. loose, dark gray to nearly black, fine to very coarse SANDS, less commonly varying proportions of SAND, GRAVEL and SILT, occasionally interbedded with leaves and or wood bits.		
16.0			
20.0			Well Depth = 30.15' btor.
24.0			WELL DEVELOPMENT NOTES
			Well developed with Teflon bailer until 15 gallons (5 well volumes.) were removed. Temp., conductivity, and pH of water stable within 10% over last two well volumes
28.0	25.8-28.0 FT. - GLACIOLACUSTRINE CLAY		For further details, see accompanying Well Development
	Typically soft to v. soft, brown with reddish brown varving, CLAY with little to trace silt or fine sand partings.		Field Records.
32.0	28.0 FT. - End of Borehole.		
36.0			
40.0			

APPENDIX C-2

**RFI MONITORING WELL AND PIEZOMETER
INSTALLATION LOGS**

**Supplemental Investigation
Monitoring Well Installation Logs**

Buffalo Color Corporation

Supplemental Investigation Monitoring Well and Boring Logs

Generalized Stratigraphic Unit Description Key

<u>UNIT</u>	<u>GENERALIZED DESCRIPTION</u>
FILL	Variable proportions of gravel and foundry sand, brick, and re-worked clay and silt till.
UPPER TILLS	Soft to firm, light brown to brown-gray, Silty Clay to Sandy Clay, occasional gray clay infilling of fractures and interbedded fine to medium sand seams.
ALLUVIUM	Very loose to compact, brown to black, fine to coarse SAND, less commonly Clayey Silt to Clayey Sand, occasionally interbedded with thin seams of leaves and/or wood bits.
GLACIOLACUSTRINE CLAY	Soft to very soft, brown-gray, Silty Clay to Clay with reddish brown to brown varving and occasional interbedded fine sand seams.

NOTES

- The stratigraphic descriptions presented above are summarized from individual samples obtained at each boring. Consequently, minor deviations from these "type" descriptions may be observed within individual sample descriptions.



Golder Associates Buffalo, New York

CLIENT/PROJECT

**BUFFALO COLOR CORPORATION
RCRA FACILITY INVESTIGATION (RFI)**

TITLE

STRATIGRAPHIC UNIT DESCRIPTION KEY

DRAWN	BEC	DATE	10/2/97	JOB NO.	963-9117
CHECKED	DJM	SCALE	N/A	DWG NO.	BCC-020
REVIEWED		FILE NO.	963-9117	FIGURE NO.	KEY

MONITORING WELL INSTALLATION LOG

Job No. <u>963-9117</u>	Project <u>BCC/RFI/NY</u>	Well No. <u>RFI-34</u>	Sheet <u>1</u> of <u>1</u>
GA Insp. <u>DTM</u>	Drilling Method <u>4 1/4" HSA</u>	Ground Elev. <u>583.70</u>	Water Depth <u>10.72 BTOR</u>
Weather <u>clear</u>	Drilling Company <u>STB Services Inc.</u>	Collar Elev. <u>586.17</u>	Date/Time <u>6-17-97 1105</u>
Temp. <u>65°F</u>	Drill Rig <u>CME-85</u>	Driller <u>C. Ackley</u>	Started <u>1230 5-27-97</u> Completed <u>1000 5-27-97</u>

MATERIALS INVENTORY

Well Casing <u>2</u> in. dia. <u>15</u> l.f.	Well Screen <u>2</u> in. dia. <u>15</u> l.f.	Bentonite Seal <u>1/2 in. chips</u>
Casing Type <u>Sch 40 PVC</u>	Screen Type <u>Sch 40 PVC</u>	Installation Method <u>Gravity</u>
Joint Type <u>Flash Thread</u>	Slot Size <u>#10</u>	Filter Pack Qty. <u>380 lbs</u>
Grout Quantity <u>~25 gal.</u>	Centralizers <u>NA</u>	Filter Pack Type <u>#0 Morie</u>
Grout Type <u>Cement/Bentonite</u>	Drilling Mud Type <u>NA</u>	Installation Method <u>Gravity</u>
<u>N 9213.33</u>	<u>E 10036.20</u>	

Elev./Depth	Soil/Rock Description	WELL SKETCH	Installation Notes
		3.0' — 2.5' — 6.0' — 9.2' — 12.5' — 27.5' — 28' — 30' 6 inch Square Steel Protective Casing CEMENT/BENTONITE GROUT BENTONITE CHIPS #0 MORIE SANDPACK	
0.0	<u>Fill</u>		
2			
4			
6			
8			
10	<u>9.7' ALLUVIUM</u>		
12			
14			
16			
18			
20			
22			
24			
26			
27.5	<u>GLACIOFLUVIAL CLAY</u>		
28.0	<u>END OF BUREAU</u>		
30.0	<u>End of Spoon Sample</u>		
			Well Development Notes
			<u>See accompanying well development field records</u>

MONITORING WELL INSTALLATION LOG

Job No. <u>263-9117</u>	Project <u>BCC/REF/IN</u>	Well No. <u>RFI-35</u>	Sheet <u>1</u> of <u>1</u>
GA Insp. <u>SAV</u>	Drilling Method <u>4.25" HOLLOW STEM AUGER</u>	Ground Elev. <u>585.30</u>	Water Depth <u>4.75 BTOR</u>
Weather <u>CLEAR</u>	Drilling Company <u>SIB SERVICES INC.</u>	Collar Elev. <u>584.77</u>	Date/Time <u>6-17-97 1050</u>
Temp. <u>65°</u>	Drill Rig <u>CME-45C</u>	Driller <u>J. JAKUBCZAK</u>	Started <u>1020</u> <u>6/4/97</u> Completed <u>1120</u> <u>6/4/97</u>

MATERIALS INVENTORY

Well Casing <u>2</u> in. dia. <u>9.5</u> l.f.	Well Screen <u>2</u> in. dia. <u>5</u> l.f.	Bentonite Seal <u>1/2" CHIPS</u>
Casing Type <u>SCH 40 PVC</u>	Screen Type <u>SCH 40 PVC</u>	Installation Method <u>GRAVITY</u>
Joint Type <u>FLUSH THREAD</u>	Slot Size <u>#10</u>	Filter Pack Qty. <u>200 lb</u>
Grout Quantity <u>~20 gal</u>	Centralizers <u>NA</u>	Filter Pack Type <u>#0 MORTAR</u>
Grout Type <u>CEMENT/BENTONITE</u>	Drilling Mud Type <u>NA</u>	Installation Method <u>GRAVITY</u>
<u>N 9604.21</u>	<u>E10222.08</u>	

Elev./Depth	Soil/Rock Description	WELL SKETCH	Installation Notes
0.0	Fill		
1			
2			
3			
4			
5			
6	6.0' Upper Till		
7			
8			
9			
10			
11			
12			
13			
14	14.0' GLACIOFLUVIAL CLAY		
15			
16	16.0' END OF BOREHOLE		
17			
18	18.0' END OF SPOON SAMPLE		

Well Development Notes

See accompanying well development field records.

MONITORING WELL INSTALLATION LOG

Job No. <u>963-9117</u>	Project <u>BCC/RFI/NY</u>	Well No. <u>RFI-36</u>	Sheet <u>1</u> of <u>1</u>
GA Insp. <u>SAV</u>	Drilling Method <u>4.25" Hollow Stem Auger</u>	Ground Elev. <u>585.20</u>	Water Depth <u>5.14 BTOR</u>
Weather <u>PTLY CLOUDY</u>	Drilling Company <u>SIB SERVICES INC.</u>	Collar Elev. <u>587.90</u>	Date/Time <u>6-17-97 1015</u>
Temp. <u>60°</u>	Drill Rig <u>CME-85</u>	Started <u>0945 6/3/97</u>	Completed <u>1025 6/3/97</u>
	Driller <u>C. ACKLEY</u>	TIME DATE	TIME DATE

MATERIALS INVENTORY

Well Casing	<u>2</u> in. dia.	<u>10.5</u> l.f.	Well Screen	<u>2</u> in. dia.	<u>5</u> l.f.	Bentonite Seal	<u>1/2" CHIPS</u>
Casing Type	<u>SCH 40 PVC</u>		Screen Type	<u>SCH 40 PVC</u>		Installation Method	<u>GRAVITY</u>
Joint Type	<u>FLUSH THREAD</u>		Slot Size	<u>#10</u>		Filter Pack Qty.	<u>200 lb</u>
Grout Quantity	<u>~15 gal</u>		Centralizers	<u>NA</u>		Filter Pack Type	<u>#0 MARIE</u>
Grout Type	<u>CEMENT/BENTONITE</u>		Drilling Mud Type	<u>NA</u>		Installation Method	<u>GRAVITY</u>
	<u>N 9697.99</u>			<u>E 10742.48</u>			

[illegible]

MONITORING WELL INSTALLATION LOG

Job No. 93-9117 Project RCC/REF/NY Well No. RF1-37 Sheet 1 of 1
 GA Insp. SAV Drilling Method 4.25" HOLLOW STEM AUGER Ground Elev. 584.60 Water Depth 1.80 BTR
 Weather RAIN Drilling Company SIB SERVICES INC. Collar Elev. 583.84 Date/Time 6-17-97 1300
 Temp. 60° Drill Rig CME-85 Driller C. ACKLEY Started 0850 6/2/97 Completed 0945 6/2/97

MATERIALS INVENTORY

Well Casing 2 in. dia. 10.5 l.f. Well Screen 2 in. dia. 10 l.f. Bentonite Seal 1/2" CHIPS
 Casing Type SCH 40 PVC Screen Type SCH 40 PVC Installation Method GRAVITY
 Joint Type FLUSH THREAD Slot Size #10 Filter Pack Qty. 375 lb
 Grout Quantity ~20 gal Centralizers N/A Filter Pack Type #0 MORTAR
 Grout Type CEMENT/BENTONITE Drilling Mud Type N/A Installation Method GRAVITY
N9519.94 E10411.49

Elev./Depth	Soil/Rock Description	WELL SKETCH	Installation Notes
0.0	<u>FILL</u>		
2			
4			
6	<u>4.3' Upper Tills</u>		
8			
10			
12			
14			
16			
18	<u>18.0' GLACIOFLUVIAL CLAY</u>		
20			
22	<u>22.0' END OF BUREAU</u>		
			Well Development Notes
			<u>See accompanying well development field records.</u>

MONITORING WELL INSTALLATION LOG

Job No. 963-9117 Project BCL/RFI/1NY Well No. RFI-38 Sheet 1 of 1
GA Insp. SAV Drilling Method 4 1/4" HSA Ground Elev. 582.90 Water Depth 7.91 BTOA
Weather CLEAR Drilling Company SIB SERVICES INC. Collar Elev. 582.76 Date/Time 6-17-97 1135
Temp. 65° Drill Rig CME-85 Driller C. A. KELLY Started 1000 5/28/97 Completed 1120 5/28/97
TIME / DATE TIME / DATE

MATERIALS INVENTORY

Well Casing	<u>2</u> in. dia.	l.f.	Well Screen	<u>2</u> in. dia.	<u>15</u> l.f.	Bentonite Seal	<u>1/2" CHIPS</u>
Casing Type	<u>SCH 40 PVC</u>		Screen Type	<u>SCH 40 PVC</u>		Installation Method	<u>GRAVITY</u>
Joint Type	<u>FLUEN THREADED</u>		Slot Size	<u>#10</u>		Filter Pack Qty.	<u>450 lb</u>
Grout Quantity	<u>~ 20 gal</u>		Centralizers	<u>NA</u>		Filter Pack Type	<u>#10 MORTAR</u>
Grout Type	<u>CEMENT / BENTONITE</u>		Drilling Mud Type	<u>NA</u>		Installation Method	<u>GRAVITY</u>
	<u>N 9123.15</u>			<u>E 10273.57</u>			

Elev./Depth	Soil/Rock Description	WELL SKETCH	Installation Notes
		Fiber Reinforced CONCRETE CAST IRON FIFTH MOUNT GROUND SURFACE 1.0 7.9' 10.9' 12' CONCRETE/PORTLAND CEMENT GROUT BENTONITE CHIPS MOORE #0 SANDPACK	
0.0	Fill		
2			
4			
6			
8			
10			
12			
14			
16	Alluvium		
18			
20			
22			
24			
24.5	OLIGOLACUSTRINE CLAY		
26			
28	28.0 END OF BOREHOLE		
30	30.0 END OF SPOON SAMPLES		
			Well Development Notes
			See accompanying well development field records.

MONITORING WELL INSTALLATION LOG

Job No. <u>963-9117</u>	Project <u>BCL/RFI/NY</u>	Well No. <u>RFI-39</u>	Sheet <u>1</u> of <u>1</u>
GA Insp. <u>SAV</u>	Drilling Method <u>4 1/4" HOLLOW STEM AUGER</u>	Ground Elev. <u>585.40</u>	Water Depth <u>8.12 B.T.O.R</u>
Weather <u>CLEAR</u>	Drilling Company <u>SIB SERVICES INC.</u>	Collar Elev. <u>585.29</u>	Date/Time <u>6-17-97 1348</u>
Temp. <u>75°</u>	Drill Rig <u>CME-85</u> Driller <u>C. AKLEY</u>	Started <u>0800 5/29/97</u>	Completed <u>0930 5/29/97</u>
		TIME DATE	TIME DATE

MATERIALS INVENTORY

Well Casing	<u>2</u> in. dia.	I.f.	Well Screen	<u>2</u> in. dia.	<u>10</u> I.f.	Bentonite Seal	<u>1/2" CHIPS</u>
Casing Type	<u>SH 40 PVC</u>		Screen Type	<u>SH 40 PVC</u>		Installation Method	<u>GRAVITY</u>
Joint Type	<u>FLUSH THREAD</u>		Slot Size	<u>#10</u>		Filter Pack Qty.	<u>350 lb</u>
Grout Quantity	<u>~ 25 gal</u>		Centralizers	<u>NA</u>		Filter Pack Type	<u>#0 MORTAR</u>
Grout Type	<u>CEMENT/BENTONITE</u>		Drilling Mud Type	<u>NA</u>		Installation Method	<u>GRAVITY</u>
	<u>N 9393.77</u>			<u>E 10769.64</u>			

Elev./Depth	Soil/Rock Description	WELL SKETCH	Installation Notes
0.0	GROUND SURFACE		
2	Fill		
4			
6			
8			
10			
12			
14			
16	16.0' Alluvium		
18			
20			
22	22.0' GLACIOFLUVIAL CLAY		
24	24.0' END OF BURSTOLE		
26	26.0' END OF SPON. SML		

2x2x10" FIBER
REINFORCED CONCRETE

CAST IRON
Flush Mount

CEMENT/
CEMENTITE
GROUT

BENTONITE
CHIPS

NO MORE
SANDPACK

• SIB SURVIVES WELLS
LOST 10' OF AUGER IN
THE HOLE @ 1530 ON
28 MAY 97. HAD TO
REMOVE WELL CASING
TO RETRIEVE AUGERS.
HAD PUT IN APPROX. 100 LB
OF SAND. RE-AUGURED
SAME HOLE AND
INSTALLED THE WELL
BY 0930 ON 29 MAY 97.

Well Development Notes

See accompanying well
development field records.

MONITORING WELL INSTALLATION LOG

Job No. <u>963-917</u>	Project <u>BCL/RFI/NY</u>	Well No. <u>RFI-10</u>	Sheet <u>1</u> of <u>1</u>
GA Insp. <u>SAV</u>	Drilling Method <u>4 1/4" HOLLOW STEM AUGER</u>	Ground Elev. <u>583.0</u>	Water Depth <u>11.72 BTD</u>
Weather <u>OVERCAST</u>	Drilling Company <u>SIB SERVICES INC.</u>	Collar Elev. <u>585.78</u>	Date/Time <u>6-17-97 1420</u>
Temp. <u>65°</u>	Drill Rig <u>CME-85</u>	Driller <u>C. ADLEY</u>	Started <u>1445</u> <u>5/29/97</u> Completed <u>1605</u> <u>5/29/97</u>

MATERIALS INVENTORY

Well Casing <u>2</u> in. dia. <u>17</u> l.f.	Well Screen <u>2</u> in. dia. <u>15</u> l.f.	Bentonite Seal <u>1/2" CHIPS</u>
Casing Type <u>SCH 40 PVC</u>	Screen Type <u>SCH 40 PVC</u>	Installation Method <u>TREMBLE</u>
Joint Type <u>FLUSH THREAD</u>	Slot Size <u>#10</u>	Filter Pack Qty. <u>500 lb</u>
Grout Quantity <u>~40 gal</u>	Centralizers <u>NA</u>	Filter Pack Type <u>#0 MORTAR</u>
Grout Type <u>CEMENT/BENTONITE</u>	Drilling Mud Type <u>NA</u>	Installation Method <u>TREMBLE</u>
<u>N9230.59</u>	<u>E11258.47</u>	

Elev./Depth	Soil/Rock Description	WELL SKETCH	Installation Notes
		3' — 2.8' — 6" inch Steel Protective Casing CEMENT/BENTONITE GROUT BENTONITE CHIPS #0 MORTAR SANDPACK	
0.0	Fill		
2			
4			
6			
8	8.0' ALLUVIUM		
10			
12			
14			
16			
18			
20			
22			
24			
26			
28	27.6' Glaciolacustrine Clay		
30	30.0' END OF BOREHOLE		
			Well Development Notes
			See accompanying well development field records.

MONITORING WELL INSTALLATION LOG

Job No. 963-9117 Project BCC/RFI/NY Well No. RFI-41 Sheet 1 of 1
GA Insp. SAV Drilling Method 4 1/4" HOLLOW STEM AUGER Ground Elev. 582.80 Water Depth 11.38 BTOB
Weather OVERCAST Drilling Company SIB SERVICES INC. Collar Elev. 585.40 Date/Time 6-17-97 1446
Temp. 62° Drill Rig CME-85 Driller C. ACKLIN Started 1045 5/30/97 Completed 1220 5/30/97
TIME DATE TIME DATE

MATERIALS INVENTORY

Well Casing	<u>2</u> in. dia.	<u>18</u> l.f.	Well Screen	<u>2</u> in. dia.	<u>10</u> l.f.	Bentonite Seal	<u>"1/2" CHIPS</u>
Casing Type	<u>SCH 40 PVC</u>		Screen Type	<u>SCH 40 PVC</u>		Installation Method	<u>GRAVITY</u>
Joint Type	<u>FLUSH THREAD</u>		Slot Size	<u># 10</u>		Filter Pack Qty.	<u>350 lb</u>
Grout Quantity	<u>~ 20 gal</u>		Centralizers	<u>N/A</u>		Filter Pack Type	<u>* 0 MORIE</u>
Grout Type	<u>BENTONITE/CEMENT</u>		Drilling Mud Type	<u>N/A</u>		Installation Method	<u>GRAVITY</u>
	<u>N9302.97</u>			<u>E11511.64</u>			

Elev./Depth	Soil/Rock Description	WELL SKETCH	Installation Notes
0.0	Fill		
2			
4			
6	Alluvium		
8			
10			
12			
14			
16			
18			
20			
22			
24			
24.7	GLACIOFLUVIAL CLAY		
26	END OF BUNDLE		
28	END OF SPOON SAMPLE		
			Well Development Notes
			See accompanying well development field records.

MONITORING WELL INSTALLATION LOG

Job No. 963-9117 Project BCL/REF/ NY Well No. REF-42 Sheet 1 of 1
 GA Insp. SAV Drilling Method 4.25" Hollow Stem Auger Ground Elev. 583.60 Water Depth 4.43 BTOA
 Weather SUNNY Drilling Company SJB SERVICES INC. Collar Elev. 582.89 Date/Time 6-17-92 0852
 Temp. 65° Drill Rig CME-85 Driller C. ACKLEY Started 1325 6/3/97 Completed 1545 4/3/97

MATERIALS INVENTORY

Well Casing 2 in. dia. 6 l.f. Well Screen 2 in. dia. 5 l.f. Bentonite Seal 1/2" CHIPS
 Casing Type SCH 40 PVC Screen Type SCH 40 PVC Installation Method GRAVITY
 Joint Type FLUSH THREAD Slot Size #10 Filter Pack Qty. 200 lb
 Grout Quantity 8 gal Centralizers NA Filter Pack Type #0 MORIE
 Grout Type CEMENT/BENTONITE Drilling Mud Type NA Installation Method GRAVITY
N 10116.38 E 11635.62

Elev./Depth	Soil/Rock Description	WELL SKETCH	Installation Notes
0.0	Fill	GROUND SURFACE	
1			
2			
3			
4			
5			
6	6.0' SANDY SAND BACKFILL		
7			
8	7.8' GLACIOFLUVIAL CLAY		
9			
10			
11			
12	12.0' END OF BOREHOLE		Well Development Notes See accompanying well development field records.

MONITORING WELL INSTALLATION LOG

Job No. <u>9/3-9117</u>	Project <u>BCL/REI/NY</u>	Well No. <u>RFI-43</u>	Sheet <u>1</u> of <u>1</u>
GA Insp. <u>SAV</u>	Drilling Method <u>4.25" Hollow Stem Auger</u>	Ground Elev. <u>584.40</u>	Water Depth <u>5.62 BTD</u>
Weather <u>RAIN</u>	Drilling Company <u>SUB SERVICES INC.</u>	Collar Elev. <u>587.01</u>	Date/Time <u>6-17-97 0915</u>
Temp. <u>60°</u>	Drill Rig <u>CME-85</u>	Driller <u>G. Acker</u>	Started <u>1325 6/2/97</u> Completed <u>1500 6/2/97</u>

MATERIALS INVENTORY

Well Casing <u>2</u> in. dia. <u>10.5</u> l.f.	Well Screen <u>2</u> in. dia. <u>5</u> l.f.	Bentonite Seal <u>1/2" CHIPS</u>
Casing Type <u>SCH 40 PVC</u>	Screen Type <u>SCH 40 PVC</u>	Installation Method <u>GRAVITY</u>
Joint Type <u>FLUSH THREAD</u>	Slot Size <u>#10</u>	Filter Pack Qty. <u>200 lb</u>
Grout Quantity <u>~15 gal</u>	Centralizers <u>NA</u>	Filter Pack Type <u>#0 MARIE</u>
Grout Type <u>CEMENT/BENTONITE</u>	Drilling Mud Type <u>NA</u>	Installation Method <u>GRAVITY</u>
<u>N9685.81</u>	<u>E11641.88</u>	

Elev./Depth	Soil/Rock Description	WELL SKETCH	Installation Notes	
2				
GROUND SURFACE				
0.0	Fill			
1				
2				
3	Upper Till			
4				
5				
6				
7				
8				
9				
10				
11	10.7' GLACIOFLUVIAL CLAY			Well Development Notes
12			See accompanying well development field records.	
13				
14	14.0' END OF BOREHOLE			