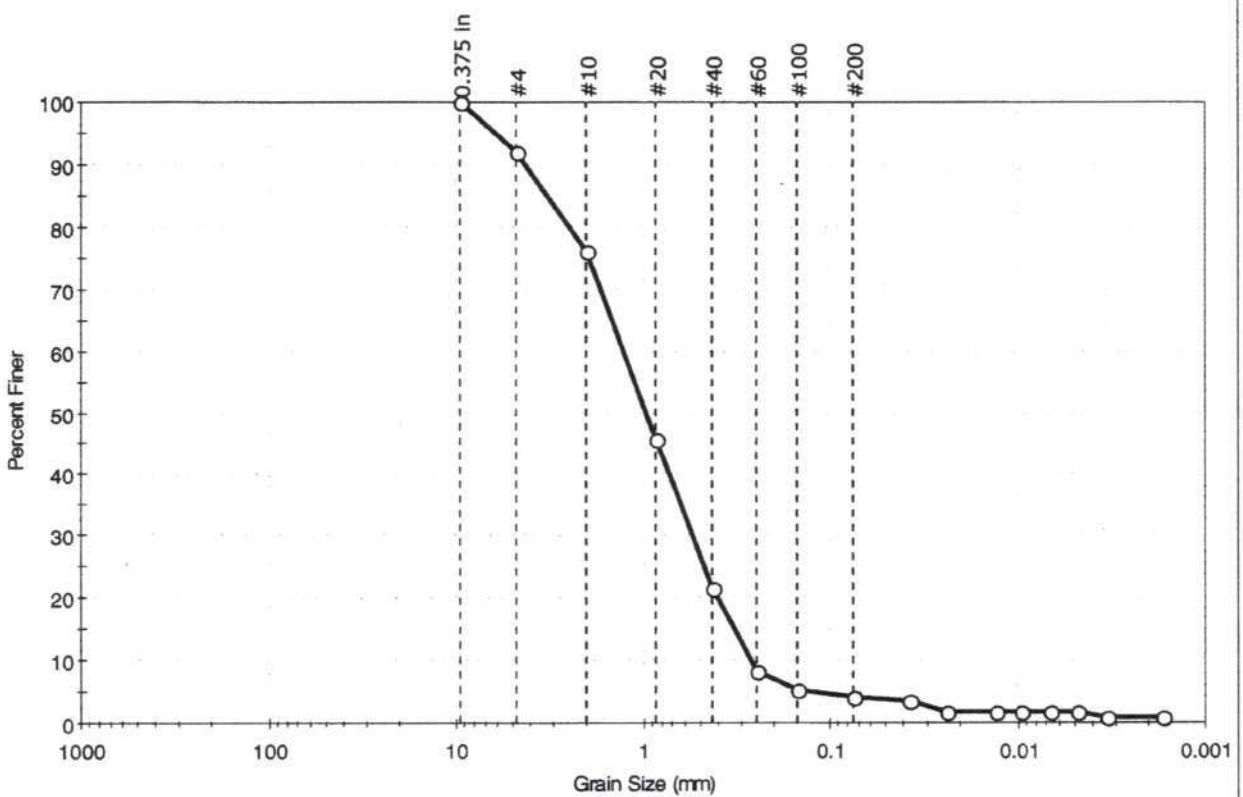
A-CAD3-2011-B1 18-20ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-1	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	18-20 ft	Test Id:	217463		
Test Comment:	---				
Sample Description:	Moist, olive sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
–	8.0	87.8	4.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	92		
#10	2.00	76		
#20	0.85	46		
#40	0.42	21		
#60	0.25	8		
#100	0.15	5		
#200	0.075	4		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0376	4		
---	0.0238	2		
---	0.0133	2		
---	0.0096	2		
---	0.0068	2		
---	0.0048	2		
---	0.0034	1		
---	0.0017	1		

Coefficients

D_{85} = 3.2346 mm	D_{30} = 0.5424 mm
D_{60} = 1.2689 mm	D_{15} = 0.3277 mm
D_{50} = 0.9589 mm	D_{10} = 0.2681 mm
C_u = 4.733	C_c = 0.865

Classification

ASTM Poorly graded sand (SP)

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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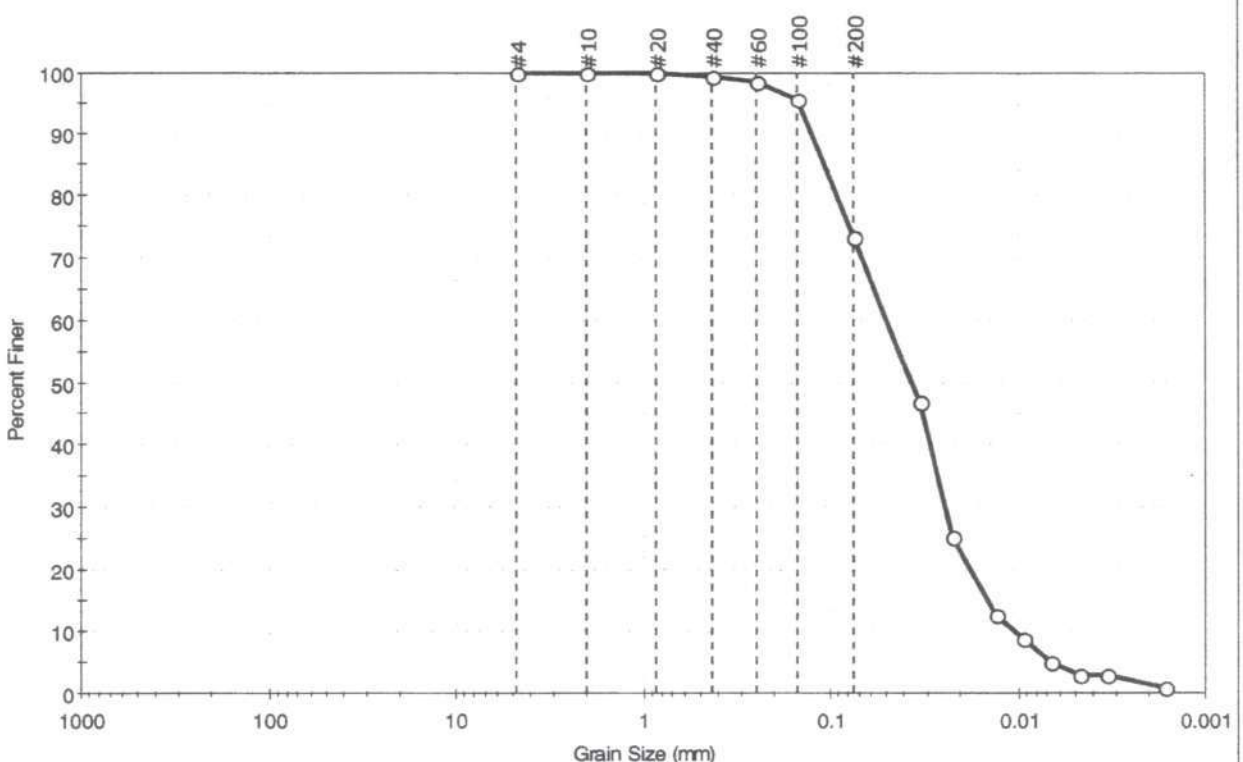
A-CAD3-2011-B1 18-20ft.

A-CAD3-2011-B1 44-46ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-1	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	44-46 ft	Test Id:	217464		
Test Comment:	---				
Sample Description:	Moist, greenish gray silt with sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	0.0	26.8	73.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	100		
#40	0.42	99		
#60	0.25	98		
#100	0.15	96		
#200	0.075	73		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0335	47		
---	0.0221	25		
---	0.0133	13		
---	0.0094	9		
---	0.0067	5		
---	0.0048	3		
---	0.0034	3		
---	0.0016	1		

Coefficients

D_{85} = 0.1079 mm D_{30} = 0.0242 mm
D_{60} = 0.0501 mm D_{15} = 0.0146 mm
D_{50} = 0.0368 mm D_{10} = 0.0105 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

A-CAD3-2011-B1 44-46ft

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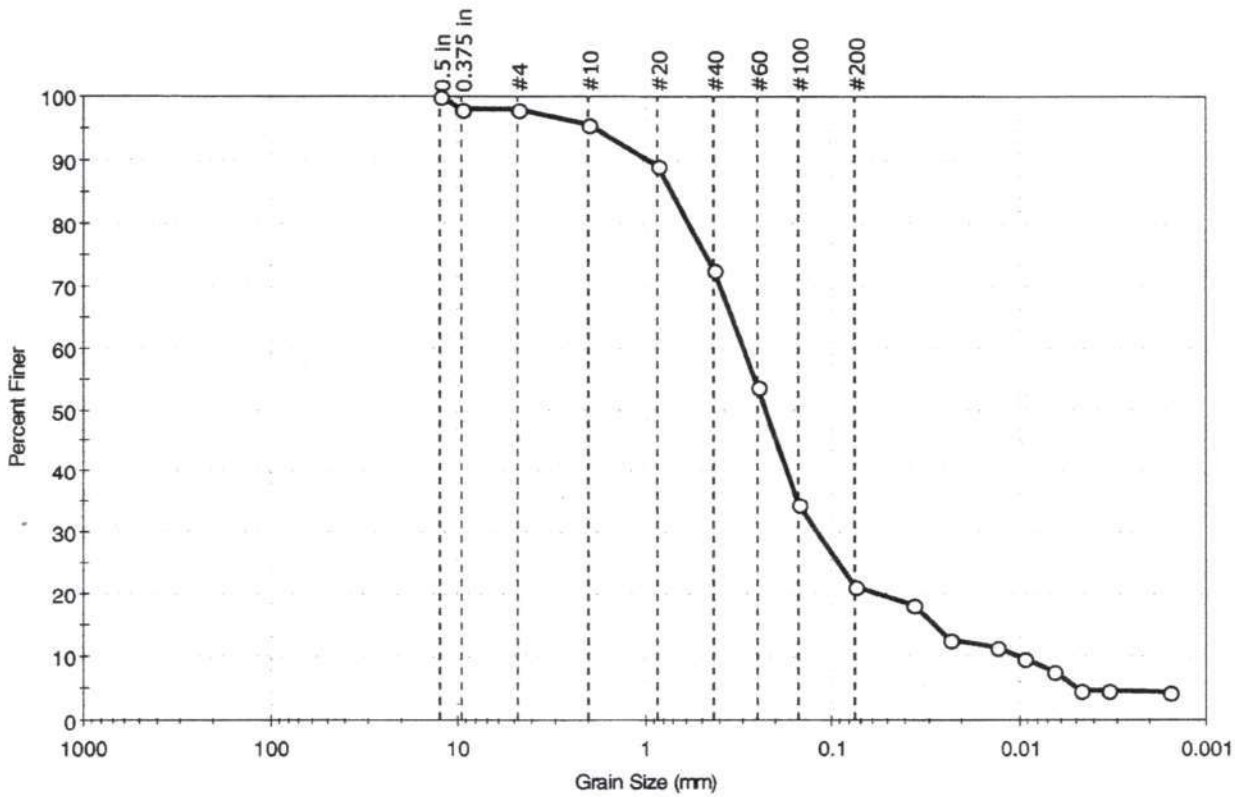
A-CAD3-2011-B2 0-6ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-2	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	0-6 ft	Test Id:	217465		
Test Comment:	---				
Sample Description:	Moist, very dark gray silty sand				
Sample Comment:	sample contains shells				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	2.0	76.8	21.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	98		
#4	4.75	98		
#10	2.00	96		
#20	0.85	89		
#40	0.42	73		
#60	0.25	54		
#100	0.15	35		
#200	0.075	21		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0367	18		
---	0.0231	13		
---	0.0133	12		
---	0.0094	10		
---	0.0066	8		
---	0.0047	5		
---	0.0034	5		
---	0.0016	4		

Coefficients

D_{85} = 0.7187 mm D_{30} = 0.1180 mm
D_{60} = 0.2988 mm D_{15} = 0.0280 mm
D_{50} = 0.2268 mm D_{10} = 0.0099 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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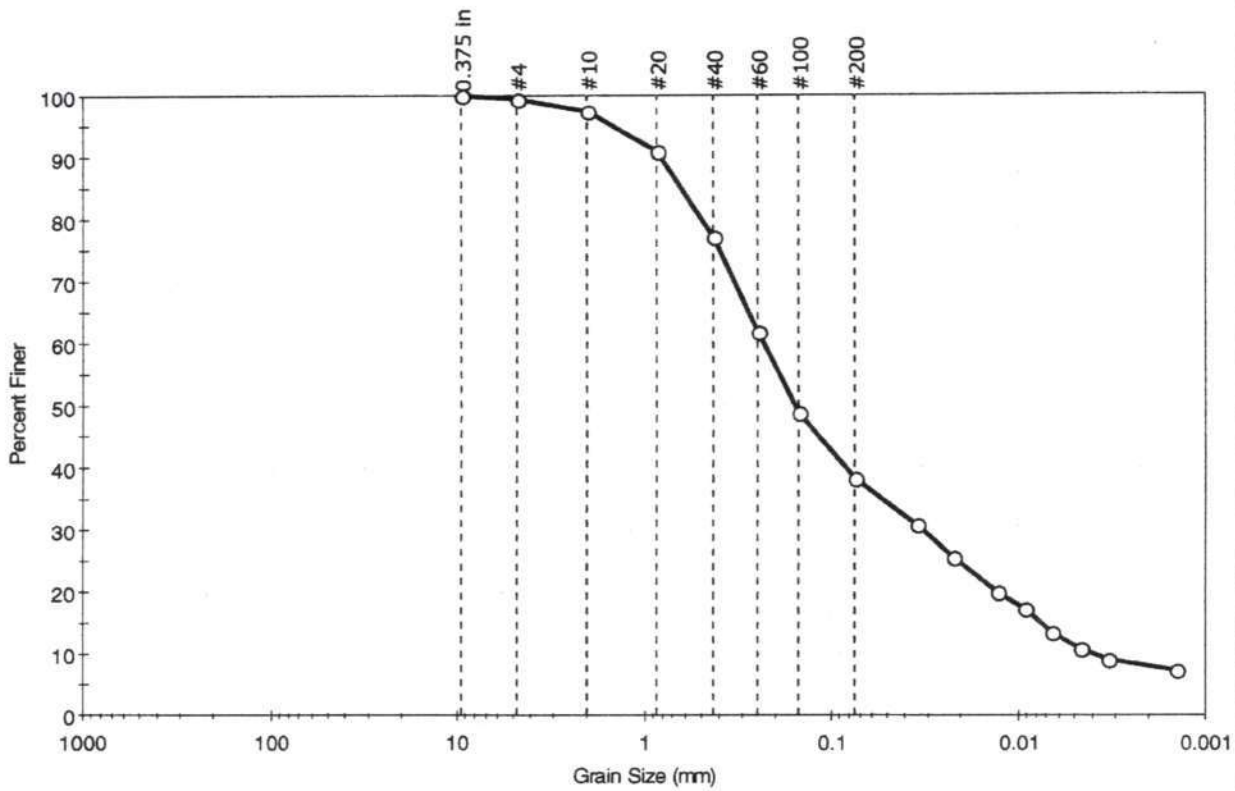
A-CAD3-2011-B2 0-6ft

A-CA03-2011-B2-2-4ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-2	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	08/03/11	Checked By:	jdt
Depth :	2-4	Test Id:	213833		
Test Comment:	---				
Sample Description:	Moist, dark greenish gray silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.5	61.1	38.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	100		
#10	2.00	97		
#20	0.85	91		
#40	0.42	77		
#60	0.25	62		
#100	0.15	49		
#200	0.075	38		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0348	31		
---	0.0221	26		
---	0.0128	20		
---	0.0091	17		
---	0.0065	14		
---	0.0047	11		
---	0.0033	9		
---	0.0014	7		

Coefficients

D_{85} = 0.6344 mm D_{30} = 0.0319 mm
D_{60} = 0.2340 mm D_{15} = 0.0074 mm
D_{50} = 0.1578 mm D_{10} = 0.0039 mm
C_U = N/A C_C = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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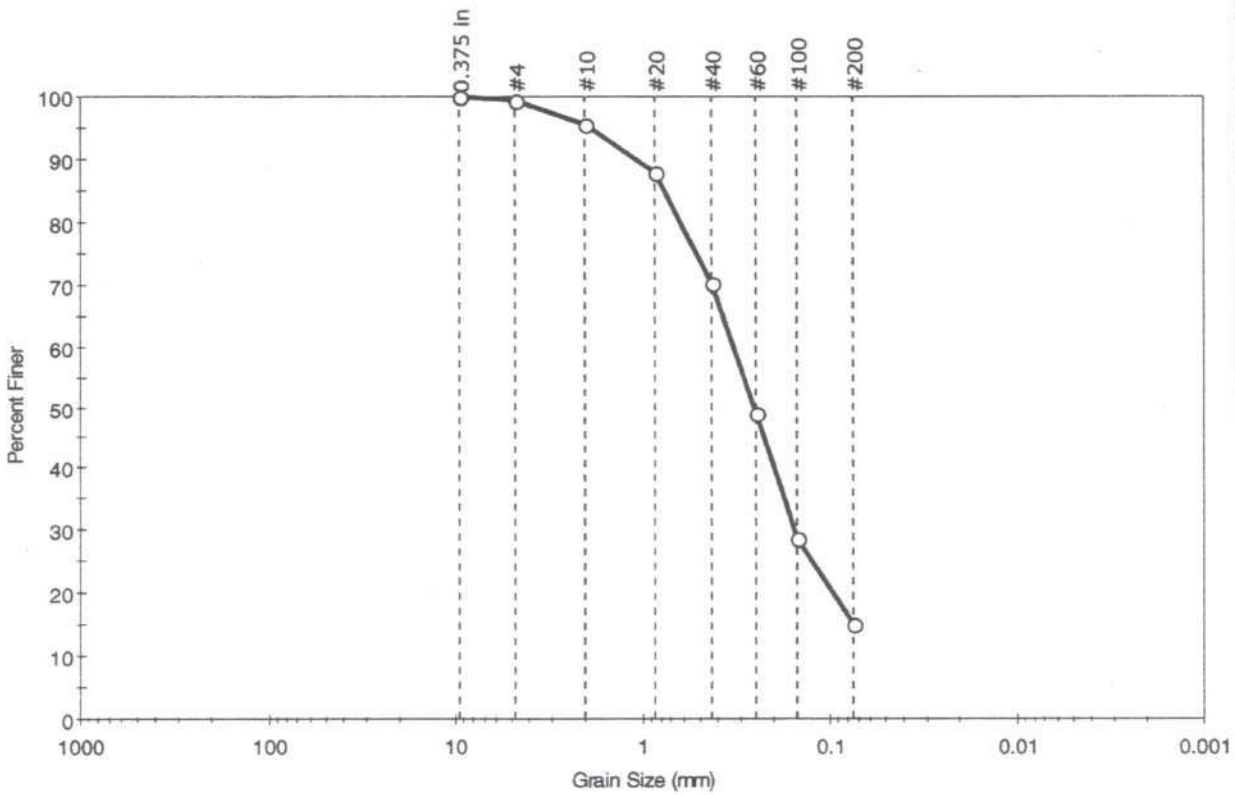
A-CA03-2011-B2-2-4ft.

A-CAD3-2011-B2 8-10ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-2	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	08/03/11	Checked By:	jdt
Depth :	8-10	Test Id:	213834		
Test Comment:	---				
Sample Description:	Moist, olive brown silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.6	84.4	15.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	95		
#20	0.85	88		
#40	0.42	70		
#60	0.25	49		
#100	0.15	29		
#200	0.075	15		

Coefficients

D_{85} = 0.7559 mm	D_{30} = 0.1556 mm
D_{60} = 0.3286 mm	D_{15} = 0.0751 mm
D_{50} = 0.2559 mm	D_{10} = 0.0582 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

A-CAD3-2011-B2 8-10ft

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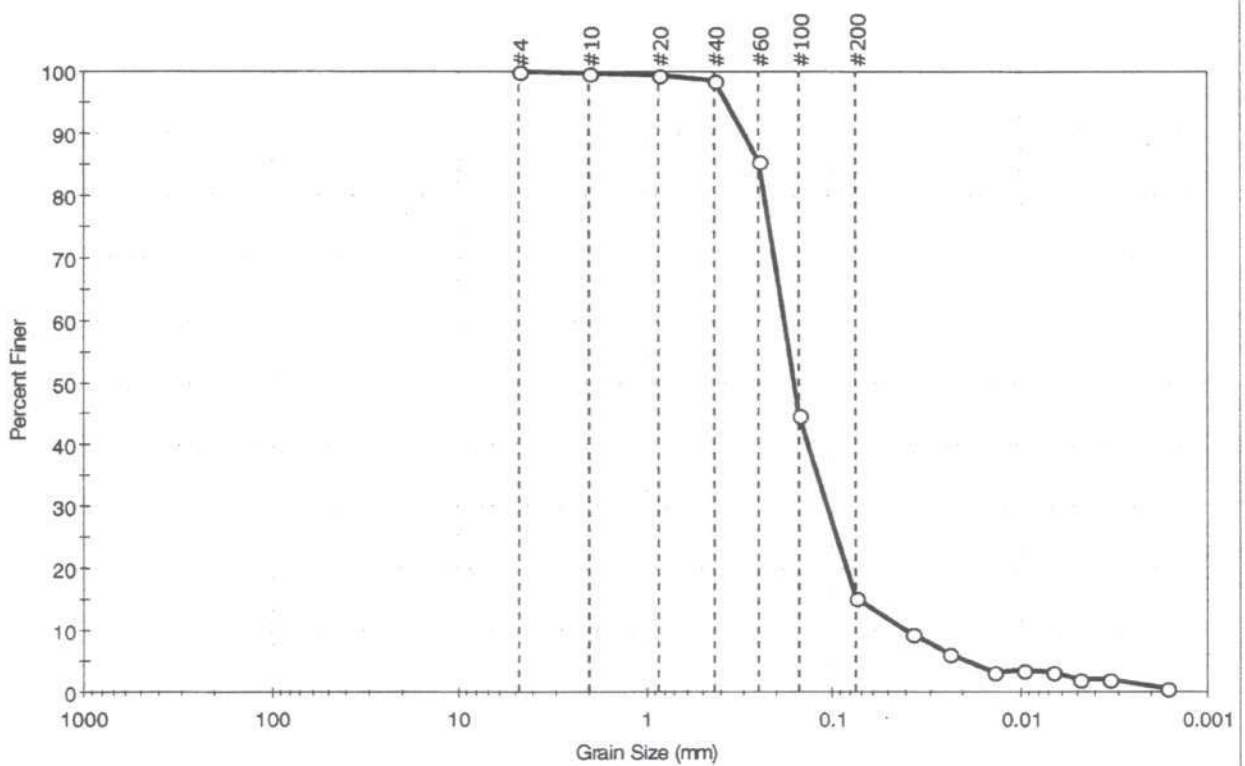
A-CAD3-2011-B2 14-16ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-2	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	14-16 ft	Test Id:	217466		
Test Comment:	---				
Sample Description:	Moist, dark gray silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	84.6	15.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	99		
#40	0.42	99		
#60	0.25	86		
#100	0.15	45		
#200	0.075	15		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0380	9		
---	0.0238	6		
---	0.0137	3		
---	0.0096	4		
---	0.0068	3		
---	0.0048	2		
---	0.0034	2		
---	0.0016	1		

Coefficients

D_{85} = 0.2481 mm D_{30} = 0.1059 mm
D_{60} = 0.1815 mm D_{15} = 0.0717 mm
D_{50} = 0.1602 mm D_{10} = 0.0410 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

A-CAD3-2011-B2 14-16ft

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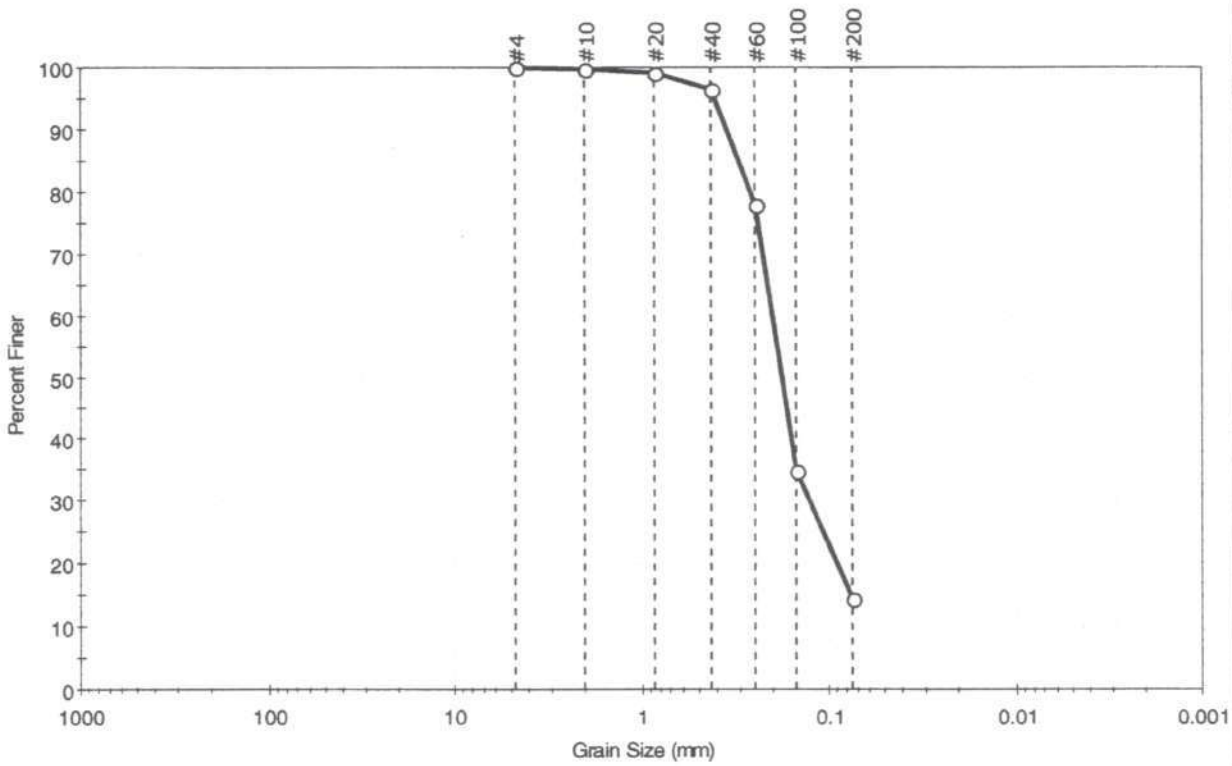
A-CAD3-2011-B2 22-24ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-2	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	08/03/11	Checked By:	jdt
Depth :	22-24	Test Id:	213835		
Test Comment:	---				
Sample Description:	Moist, olive silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	—	85.4	14.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	99		
#40	0.42	97		
#60	0.25	78		
#100	0.15	35		
#200	0.075	15		

Coefficients

D_{85} = 0.3063 mm D_{30} = 0.1272 mm
D_{60} = 0.2023 mm D_{15} = 0.0761 mm
D_{50} = 0.1796 mm D_{10} = 0.0641 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---
Sand/Gravel Hardness : ---

A-CAD3-2011-22-24ft.

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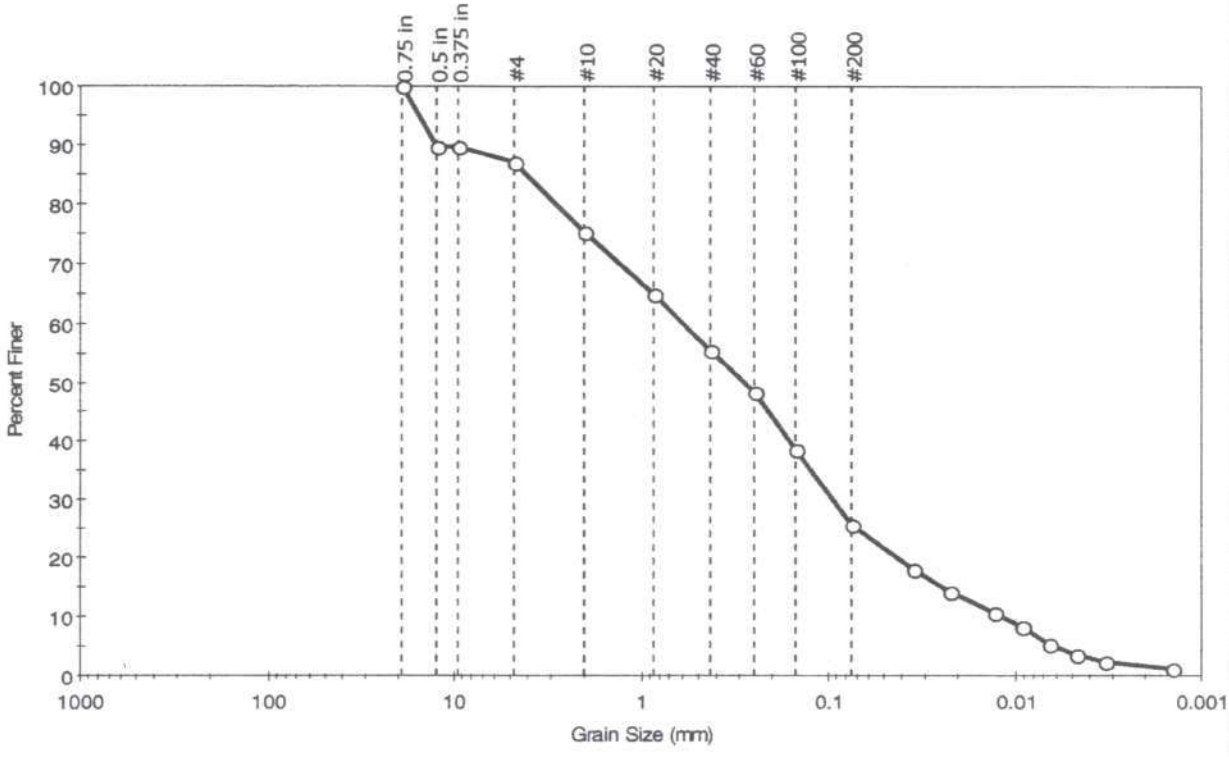
A-CAD3-2011-B2 42-44ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-2	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	08/03/11	Checked By:	jdt
Depth :	42-44	Test Id:	213836		
Test Comment:	---				
Sample Description:	Moist, greenish gray sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	12.9	61.5	25.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	90		
0.375 in	9.50	90		
#4	4.75	87		
#10	2.00	75		
#20	0.85	65		
#40	0.42	56		
#60	0.25	48		
#100	0.15	39		
#200	0.075	26		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0353	18		
---	0.0224	14		
---	0.0129	11		
---	0.0093	8		
---	0.0066	5		
---	0.0047	4		
---	0.0033	2		
---	0.0014	1		

Coefficients

D_{85} = 4.0836 mm	D_{30} = 0.0947 mm
D_{60} = 0.5916 mm	D_{15} = 0.0245 mm
D_{50} = 0.2823 mm	D_{10} = 0.0117 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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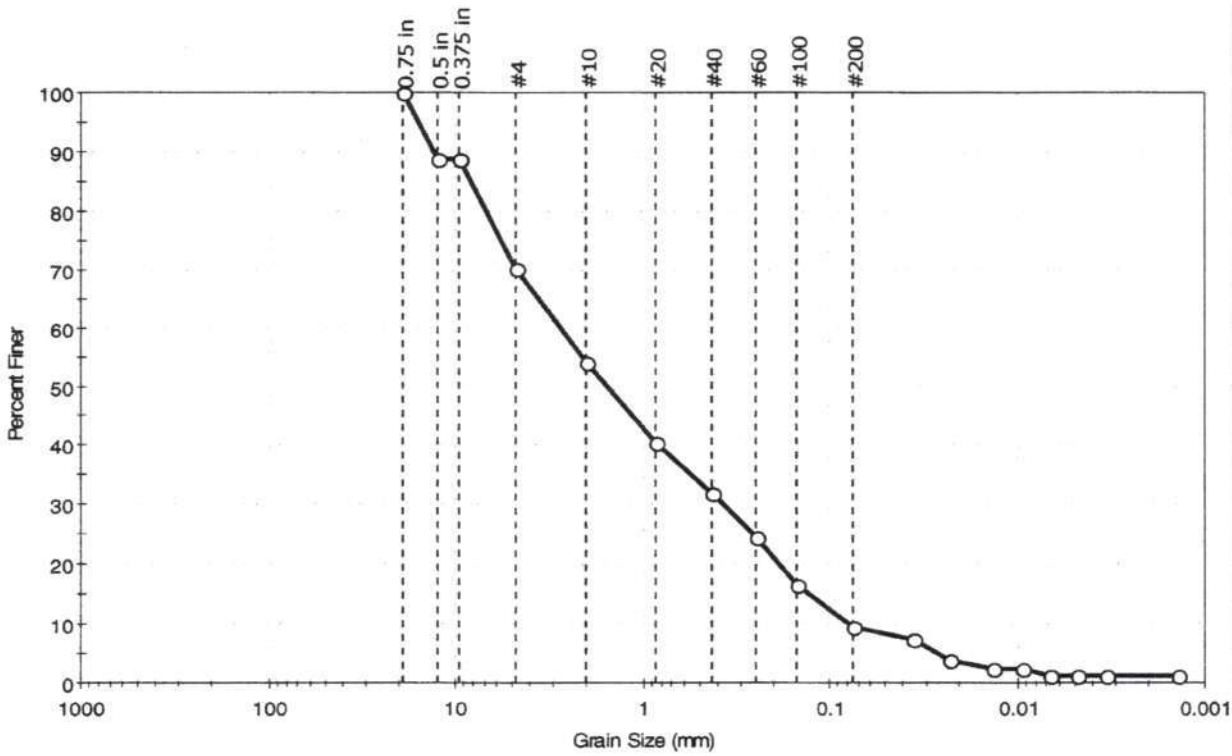
A-CAD3-2011-B2 42-44ft

A-CAD3-2011-B2- 44-46ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-2	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	44-46 ft	Test Id:	217468		
Test Comment:	---				
Sample Description:	Moist, olive green sand with silt and gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
–	29.8	60.7	9.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	89		
0.375 in	9.50	89		
#4	4.75	70		
#10	2.00	54		
#20	0.85	40		
#40	0.42	32		
#60	0.25	24		
#100	0.15	17		
#200	0.075	9		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0359	7		
---	0.0227	4		
---	0.0134	2		
---	0.0095	2		
---	0.0068	1		
---	0.0048	1		
---	0.0034	1		
---	0.0014	1		

Coefficients

D_{85} = 8.2607 mm	D_{30} = 0.3721 mm
D_{60} = 2.7627 mm	D_{15} = 0.1287 mm
D_{50} = 1.5582 mm	D_{10} = 0.0789 mm
C_u = 35.015	C_c = 0.635

Classification

ASTM N/A

AASHTO 'Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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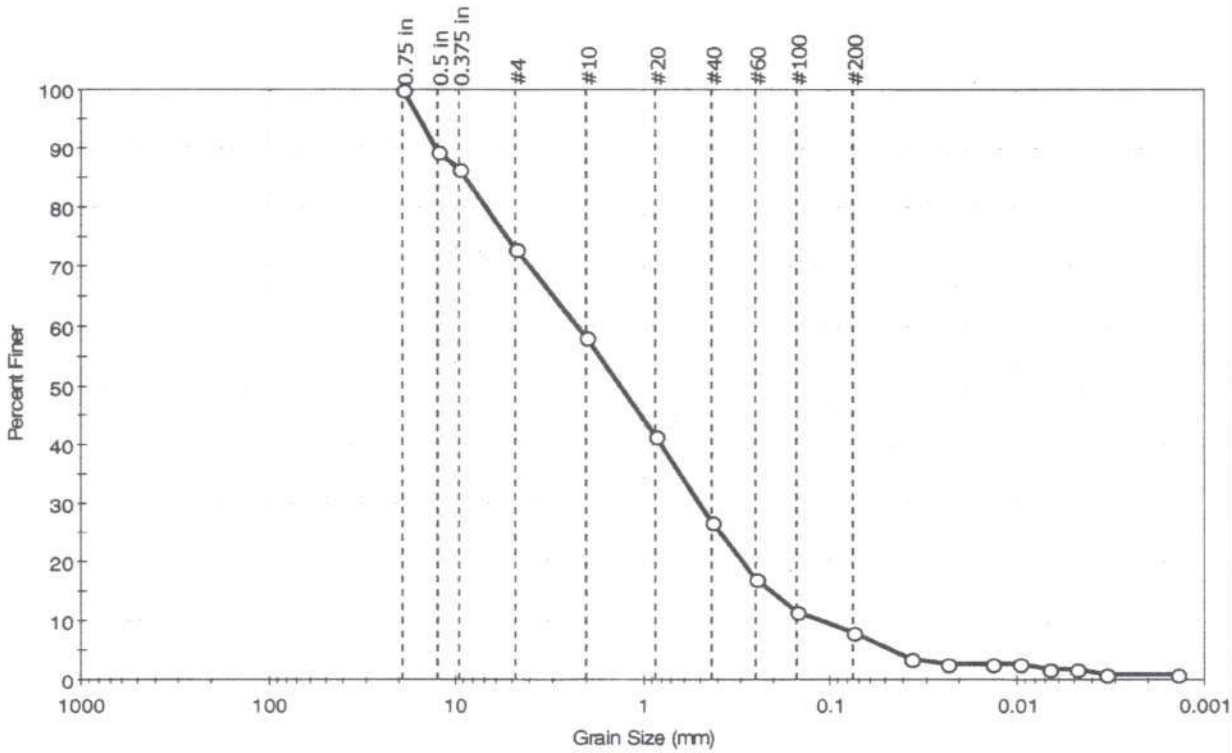
A CAD3-2011 B2 · 44-46ft

A-CA03-2011-B2 55-57ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-2	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	55-57 ft	Test Id:	217469		
Test Comment:	---				
Sample Description:	Moist, light olive sand with silt and gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	27.2	65.0	7.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	89		
0.375 in	9.50	86		
#4	4.75	73		
#10	2.00	58		
#20	0.85	42		
#40	0.42	27		
#60	0.25	17		
#100	0.15	12		
#200	0.075	8		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0370	4		
---	0.0235	3		
---	0.0135	3		
---	0.0096	3		
---	0.0068	2		
---	0.0048	2		
---	0.0034	1		
---	0.0014	1		

Coefficients

D_{85} = 8.8559 mm	D_{30} = 0.4936 mm
D_{60} = 2.2243 mm	D_{15} = 0.2069 mm
D_{50} = 1.3095 mm	D_{10} = 0.1122 mm
C_u = 19.824	C_c = 0.976

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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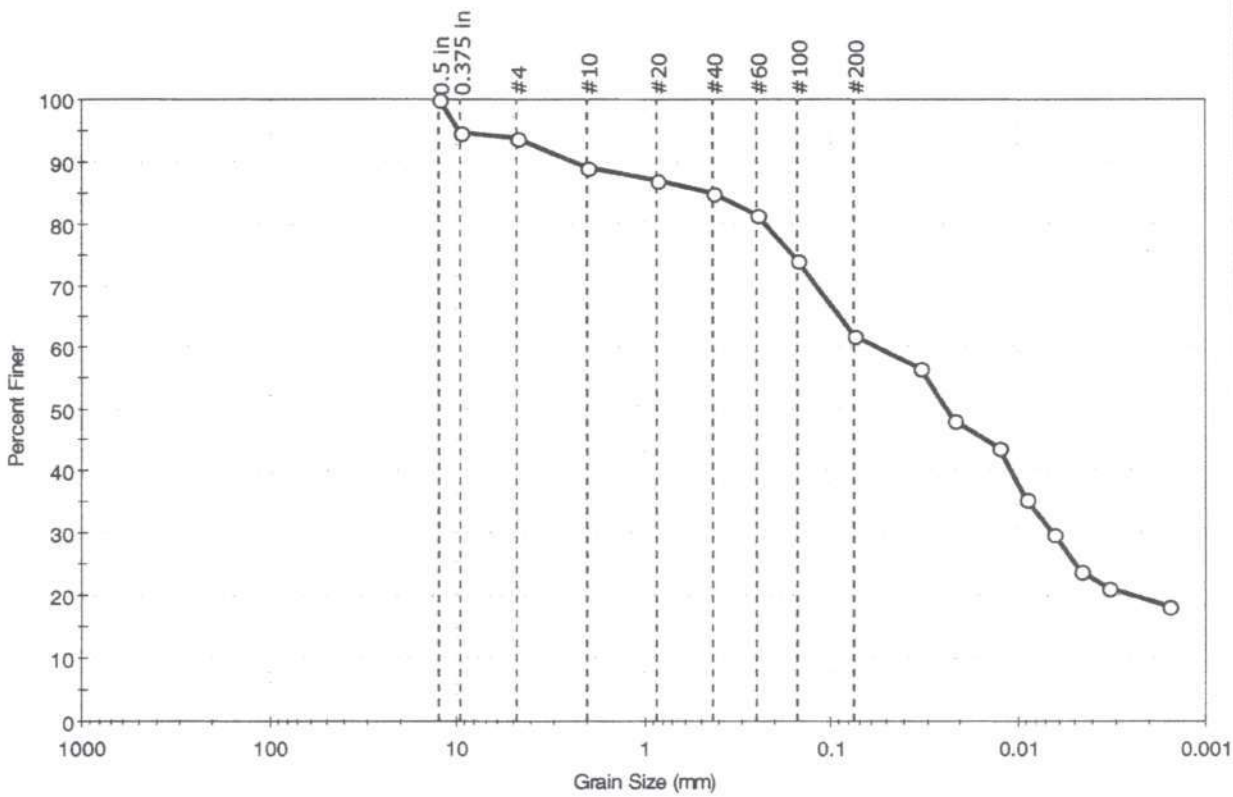
A-CA03-2011-B2 55-57ft

A-CAD3-2011-B3 0-2ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-3	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/28/11	Checked By:	jdt
Depth :	0-2 ft	Test Id:	217470		
Test Comment:	---				
Sample Description:	Moist, olive brown sandy silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	6.2	32.0	61.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	95		
#4	4.75	94		
#10	2.00	89		
#20	0.85	87		
#40	0.42	85		
#60	0.25	81		
#100	0.15	74		
#200	0.075	62		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0337	56		
---	0.0218	48		
---	0.0124	44		
---	0.0090	35		
---	0.0064	30		
---	0.0046	24		
---	0.0033	21		
---	0.0016	18		

Coefficients

D_{85} = 0.4442 mm	D_{30} = 0.0065 mm
D_{60} = 0.0572 mm	D_{15} = N/A
D_{50} = 0.0241 mm	D_{10} = N/A
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape :

Sand/Gravel Hardness :

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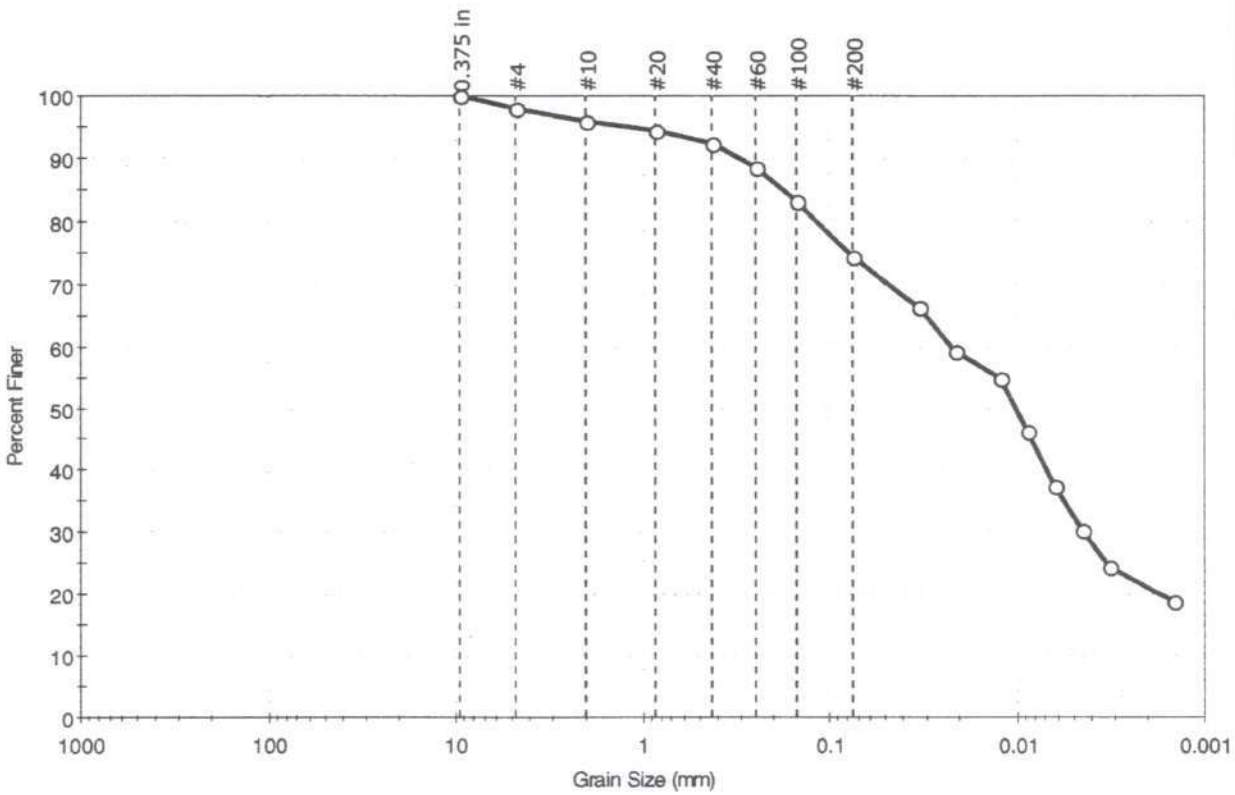
A-CAD3-2011-B3 0-2ft

A-CAD3-2011-B3 2-4ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-3	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/29/11	Checked By:	jdt
Depth :	2-4 ft	Test Id:	217497		
Test Comment:	---				
Sample Description:	Moist, olive green silt with sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	2.1	23.7	74.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	98		
#10	2.00	96		
#20	0.85	95		
#40	0.42	92		
#60	0.25	88		
#100	0.15	83		
#200	0.075	74		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0336	67		
---	0.0210	59		
---	0.0123	55		
---	0.0088	46		
---	0.0063	38		
---	0.0045	30		
---	0.0033	25		
---	0.0014	19		

Coefficients

D_{85} = 0.1799 mm	D_{30} = 0.0044 mm
D_{60} = 0.0220 mm	D_{15} = N/A
D_{50} = 0.0101 mm	D_{10} = N/A
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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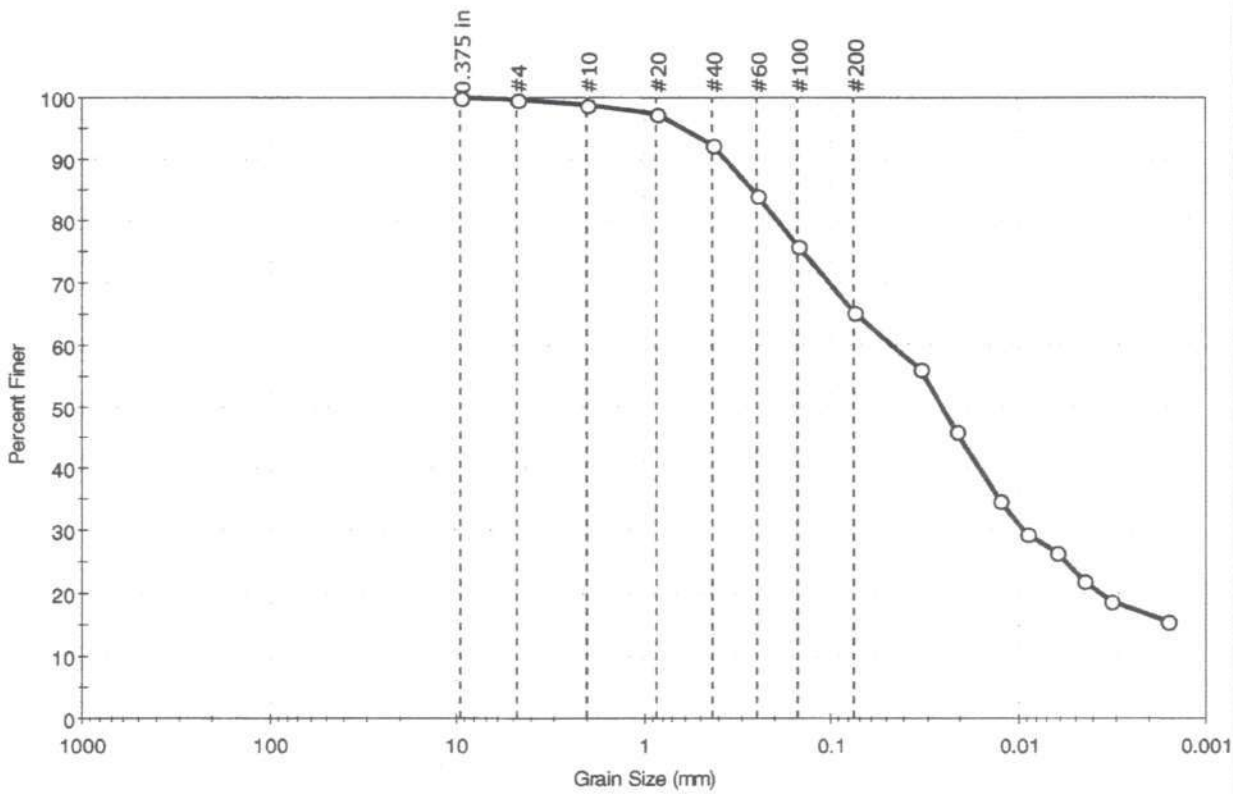
ACAD3-2011-B3 2-4ft

A-CAD3-2011-B3 10-12ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-3	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	10-12 ft	Test Id:	217471		
Test Comment:	---				
Sample Description:	Moist, dark greenish gray sandy clay				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	0.4	34.3	65.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	100		
#10	2.00	99		
#20	0.85	97		
#40	0.42	92		
#60	0.25	84		
#100	0.15	76		
#200	0.075	65		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0334	56		
---	0.0211	46		
---	0.0126	35		
---	0.0090	29		
---	0.0064	27		
---	0.0045	22		
---	0.0033	19		
---	0.0016	16		

Coefficients

D_{85} = 0.2640 mm	D_{30} = 0.0094 mm
D_{60} = 0.0475 mm	D_{15} = N/A
D_{50} = 0.0254 mm	D_{10} = N/A
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

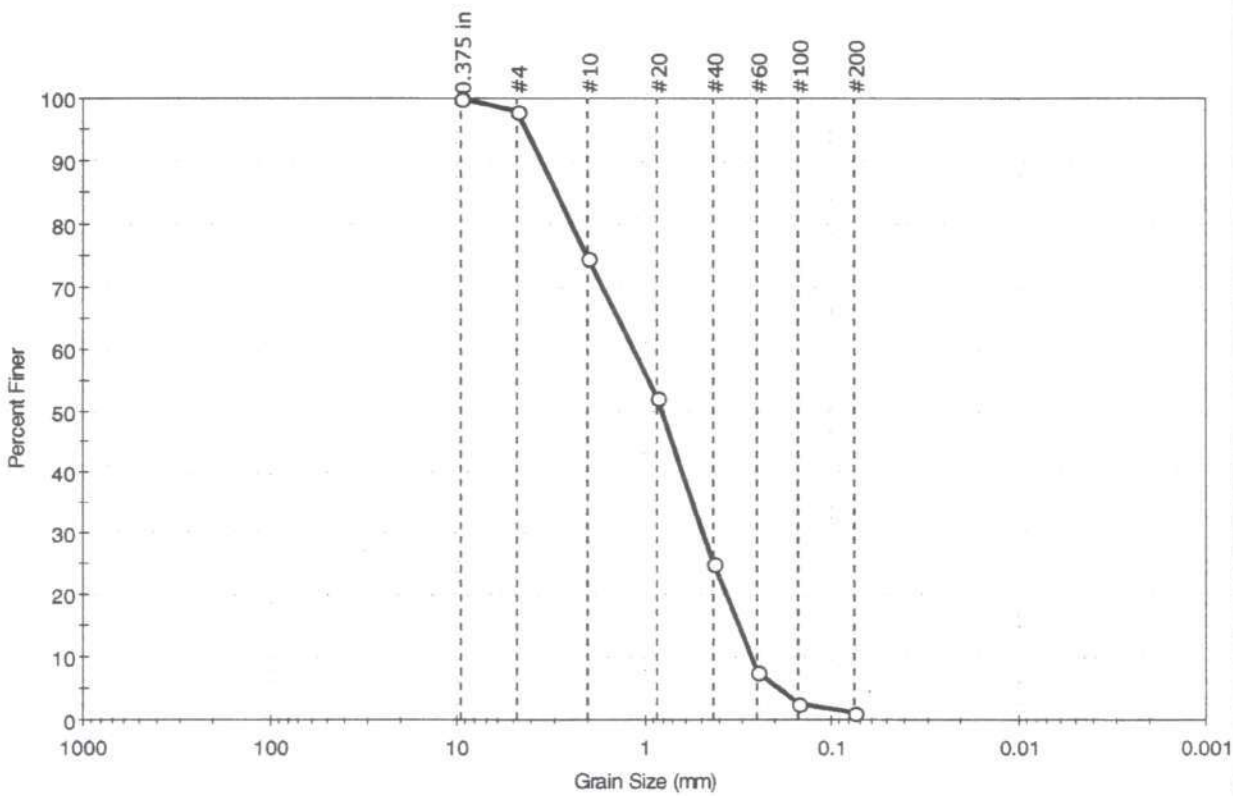
A-CAD3-2011-B3 10-12ft

A-CAD3-2011-B3 24-26ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-3	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	24-26 ft	Test Id:	217472		
Test Comment:	---				
Sample Description:	Moist, light olive brown sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	1.9	96.8	1.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	98		
#10	2.00	75		
#20	0.85	52		
#40	0.42	25		
#60	0.25	8		
#100	0.15	3		
#200	0.075	1		

Coefficients

D_{85} = 2.9378 mm	D_{30} = 0.4812 mm
D_{60} = 1.1433 mm	D_{15} = 0.3116 mm
D_{50} = 0.8020 mm	D_{10} = 0.2674 mm
C_u = 4.276	C_c = 0.757

Classification

ASTM Poorly graded sand (SP)

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

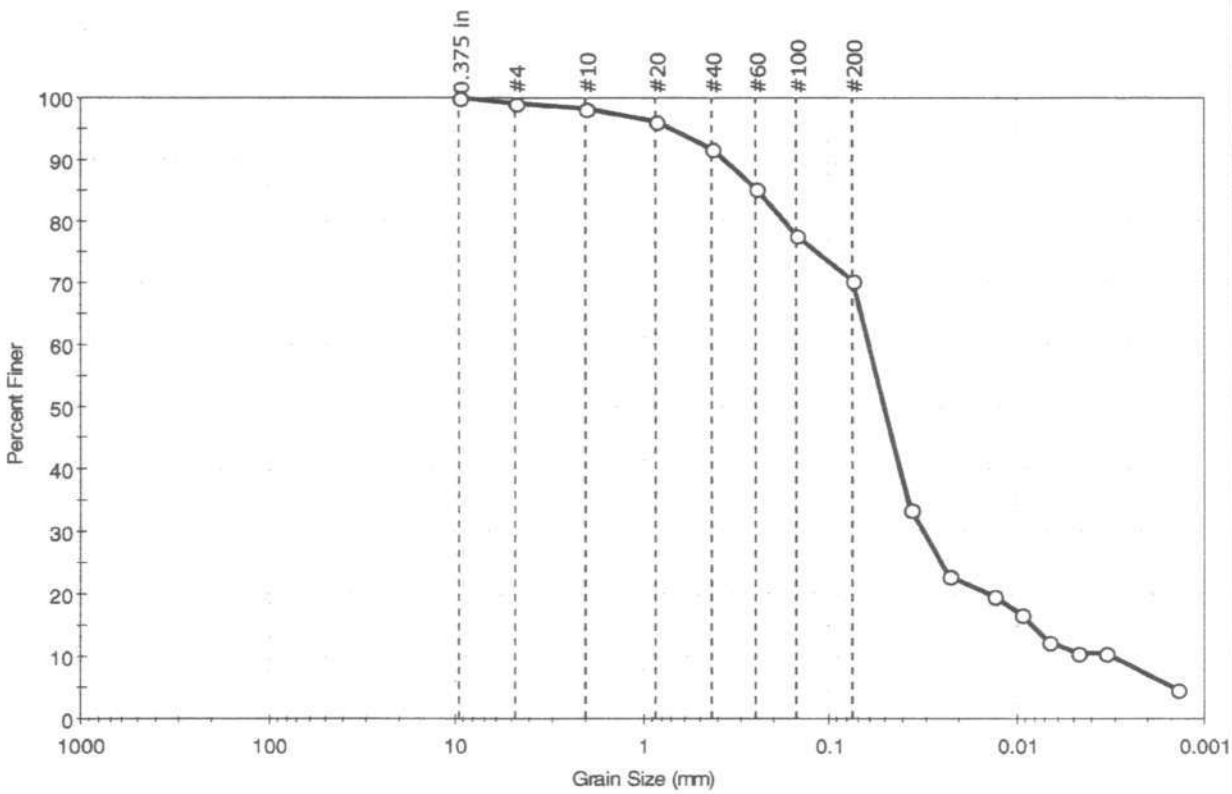
A-CAD3-2011-B3-24-26ft

A-CAD3-2011-B4 - 0-2ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-4	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	0-2 ft	Test Id:	217474		
Test Comment:	---				
Sample Description:	Moist, olive brown silt with sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.9	28.8	70.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	98		
#20	0.85	96		
#40	0.42	92		
#60	0.25	85		
#100	0.15	78		
#200	0.075	70		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0363	34		
---	0.0230	23		
---	0.0132	20		
---	0.0094	17		
---	0.0067	12		
---	0.0047	11		
---	0.0033	11		
---	0.0014	5		

Coefficients

D_{85} = 0.2451 mm	D_{30} = 0.0310 mm
D_{60} = 0.0612 mm	D_{15} = 0.0082 mm
D_{50} = 0.0502 mm	D_{10} = 0.0030 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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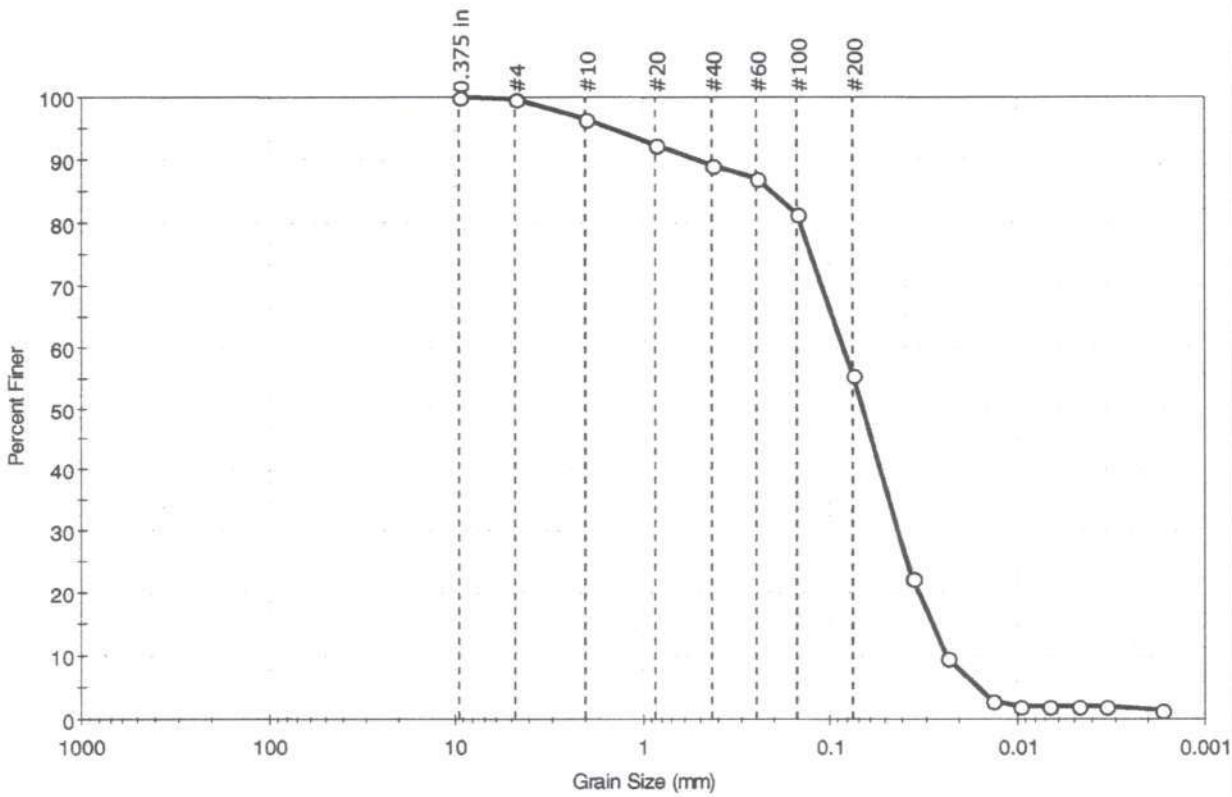
A-CAD3-2011 B4- 0-2ft

A-CAD3-2011-B4 16-18ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-4	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	16-18 ft	Test Id:	217475		
Test Comment:	---				
Sample Description:	Moist, dark gray sandy silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.4	44.2	55.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	100		
#10	2.00	96		
#20	0.85	92		
#40	0.42	89		
#60	0.25	87		
#100	0.15	82		
#200	0.075	55		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0362	22		
---	0.0234	10		
---	0.0136	3		
---	0.0096	2		
---	0.0068	2		
---	0.0048	2		
---	0.0034	2		
---	0.0017	1		

Coefficients

D_{85} = 0.2086 mm	D_{30} = 0.0428 mm
D_{60} = 0.0846 mm	D_{15} = 0.0280 mm
D_{50} = 0.0665 mm	D_{10} = 0.0236 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

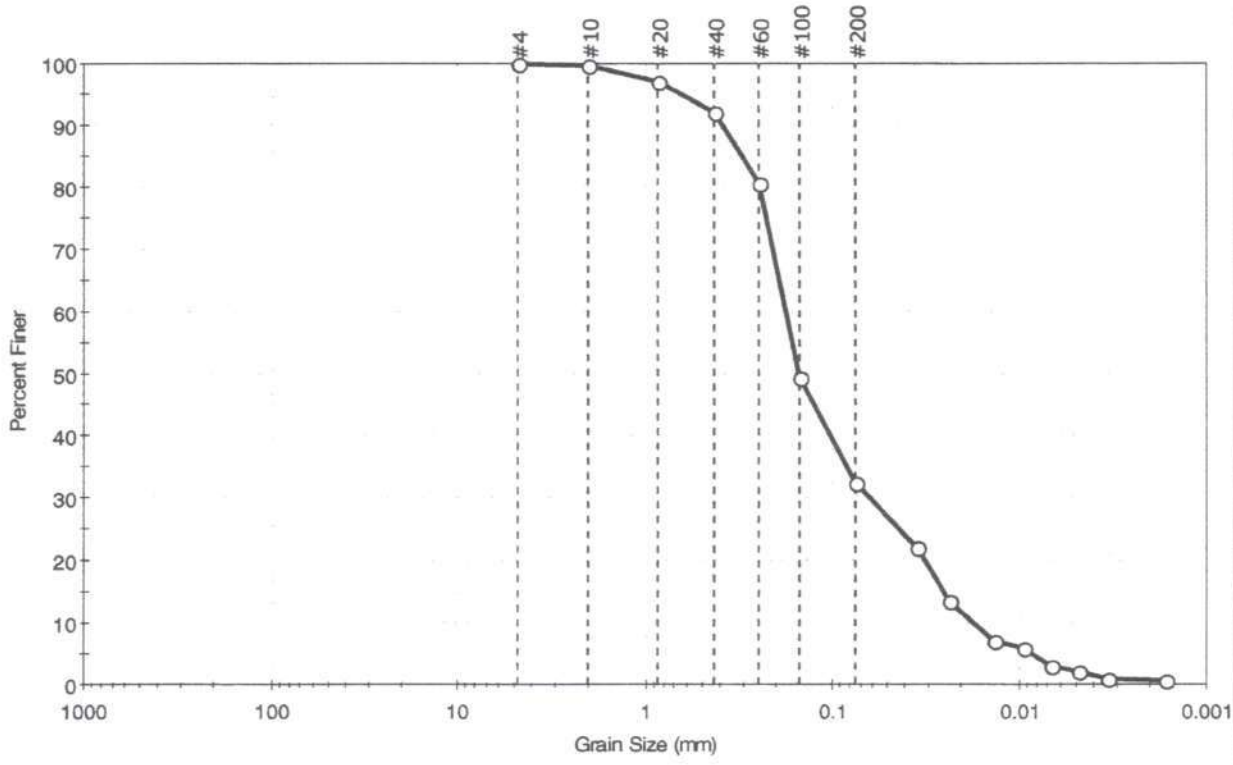
A-CAD3-2011-B4 16-18ft

A-CAD3-2011-B4- 50-52ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-4	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	50-52 ft	Test Id:	217476		
Test Comment:	---				
Sample Description:	Moist, dark gray silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	0.1	67.3	32.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	97		
#40	0.42	92		
#60	0.25	81		
#100	0.15	49		
#200	0.075	33		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0354	22		
---	0.0232	14		
---	0.0135	7		
---	0.0095	6		
---	0.0067	3		
---	0.0048	2		
---	0.0034	1		
---	0.0016	1		

Coefficients

D_{85} = 0.3070 mm D_{30} = 0.0622 mm
D_{60} = 0.1788 mm D_{15} = 0.0249 mm
D_{50} = 0.1519 mm D_{10} = 0.0172 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

A-CAD3-2011-B4- 50-52ft.

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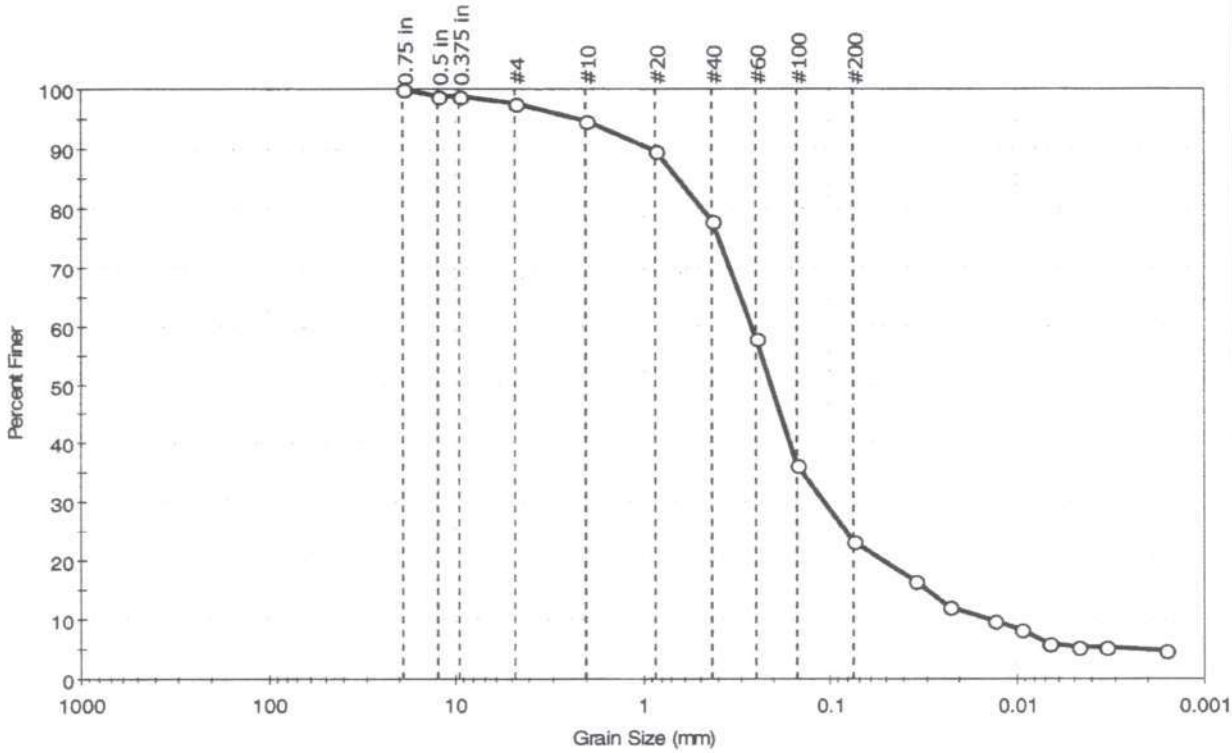
A-CAD3-2011-BS 0-2ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-5	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	0-2 ft	Test Id:	217477		
Test Comment:	---				
Sample Description:	Moist, olive green silty sand				
Sample Comment:	Sample contains shells				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	2.2	74.5	23.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	99		
0.375 in	9.50	99		
#4	4.75	98		
#10	2.00	95		
#20	0.85	90		
#40	0.42	78		
#60	0.25	58		
#100	0.15	36		
#200	0.075	23		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0351	16		
---	0.0226	12		
---	0.0132	10		
---	0.0094	8		
---	0.0067	6		
---	0.0047	5		
---	0.0033	5		
---	0.0016	5		

Coefficients

D_{85} = 0.6457 mm	D_{30} = 0.1070 mm
D_{60} = 0.2657 mm	D_{15} = 0.0304 mm
D_{50} = 0.2079 mm	D_{10} = 0.0141 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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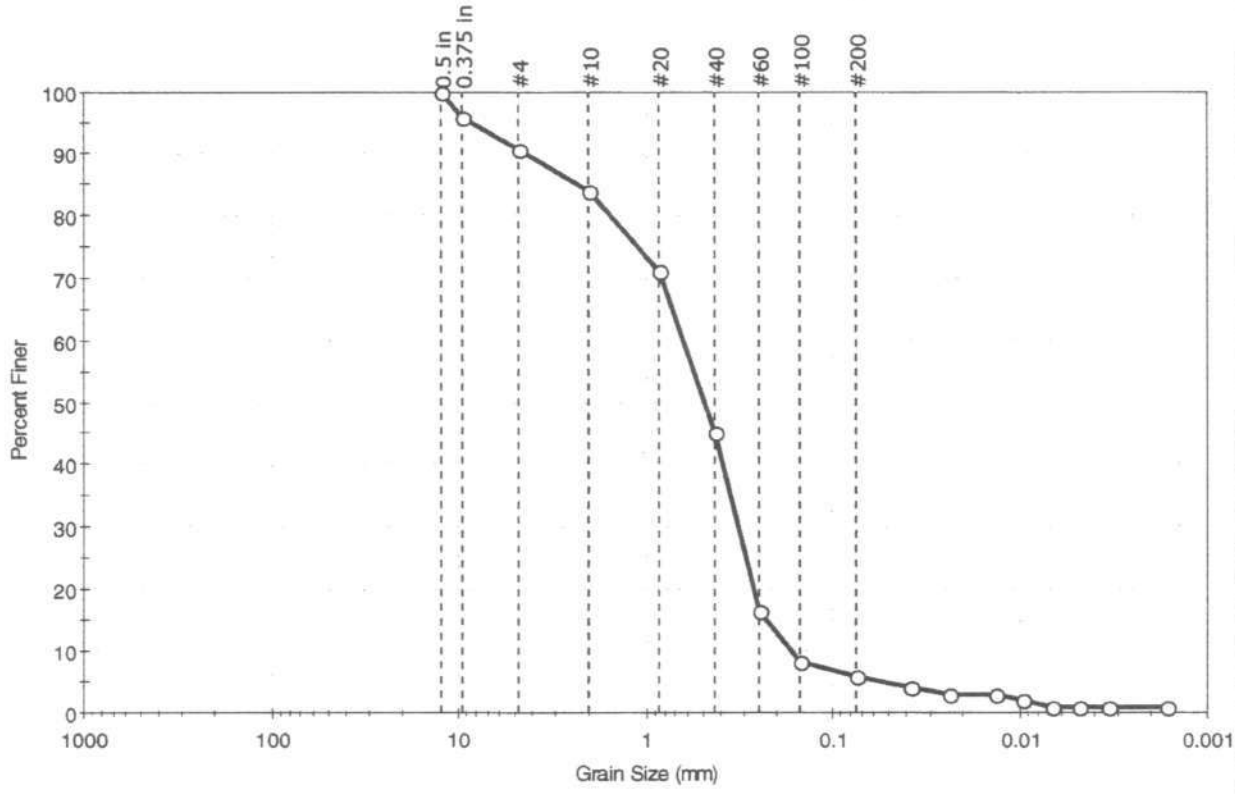
A-CAD3-2011-BS 0-2ft

A-CAD3-2011-B5-8-10ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-5	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	8-10 ft	Test Id:	217478		
Test Comment:	---				
Sample Description:	Moist, dark brown sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	9.6	84.6	5.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	96		
#4	4.75	90		
#10	2.00	84		
#20	0.85	71		
#40	0.42	45		
#60	0.25	16		
#100	0.15	8		
#200	0.075	6		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0386	4		
---	0.0238	3		
---	0.0136	3		
---	0.0096	2		
---	0.0068	1		
---	0.0048	1		
---	0.0034	1		
---	0.0016	1		

Coefficients

D_{85} = 2.3375 mm	D_{30} = 0.3217 mm
D_{60} = 0.6331 mm	D_{15} = 0.2293 mm
D_{50} = 0.4851 mm	D_{10} = 0.1677 mm
C_u = 3.775	C_c = 0.975

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

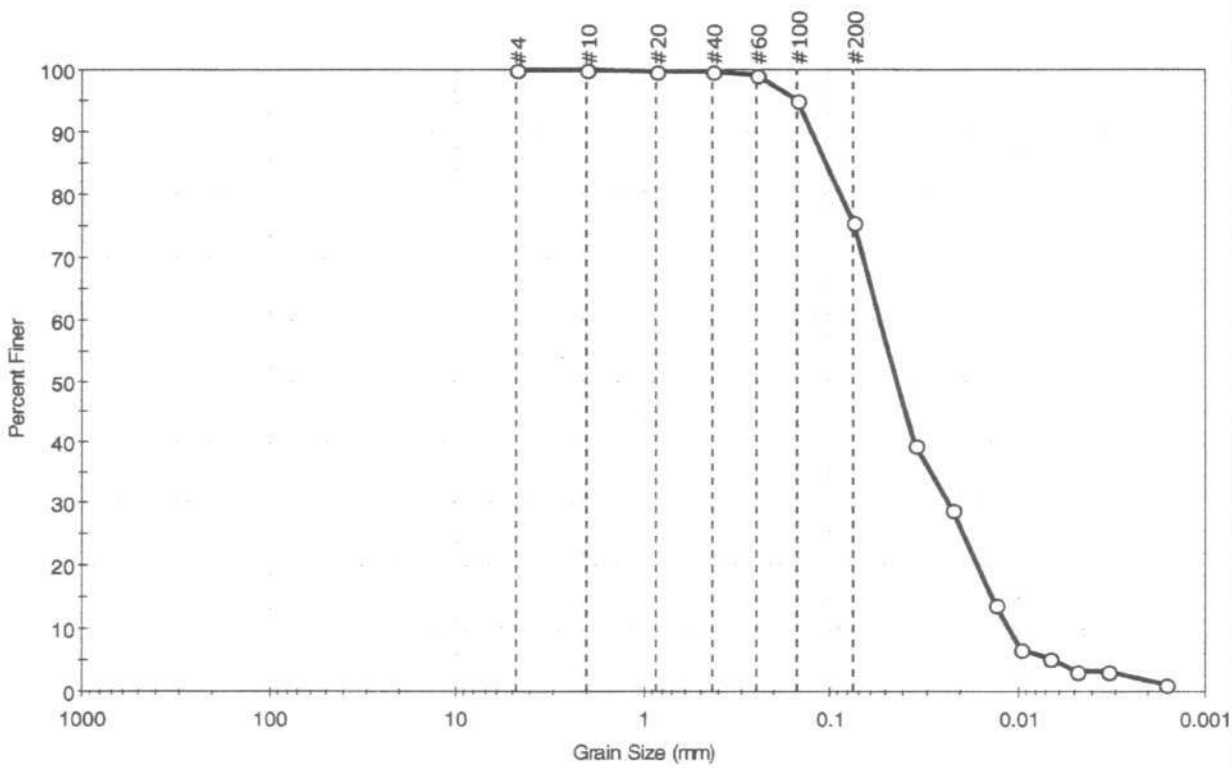
A-CAD3-2011-B5 8-10ft

A-CAD3-2011-B5 · 28-30ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-5	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	28-30 ft	Test Id:	217479		
Test Comment:	---				
Sample Description:	Moist, light yellowish brown silt with sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	0.0	24.5	75.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	100		
#40	0.42	100		
#60	0.25	99		
#100	0.15	95		
#200	0.075	76		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0350	39		
---	0.0222	29		
---	0.0133	14		
---	0.0095	7		
---	0.0067	5		
---	0.0048	3		
---	0.0033	3		
---	0.0016	1		

Coefficients

D_{85} = 0.1051 mm D_{30} = 0.0232 mm
D_{60} = 0.0541 mm D_{15} = 0.0137 mm
D_{50} = 0.0438 mm D_{10} = 0.0111 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

A-CAD3-2011B5-28-30ft

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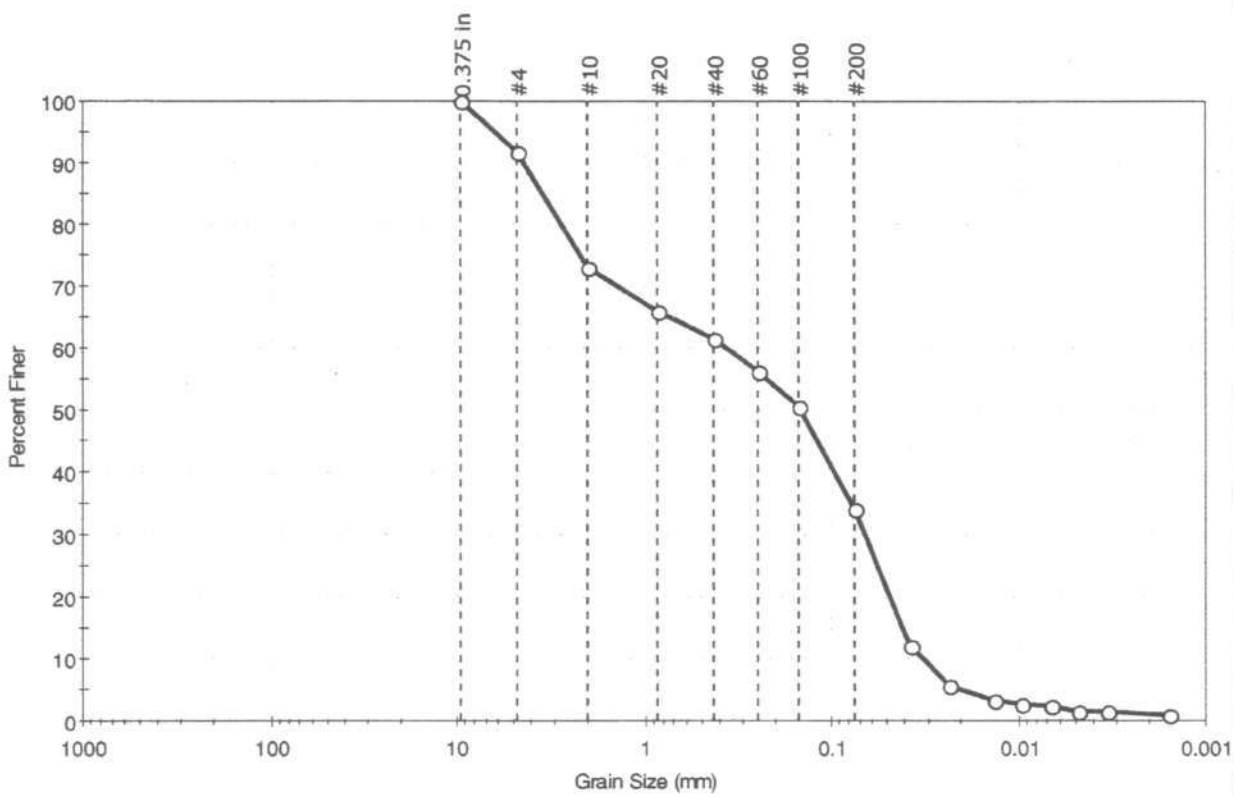
A-CAD3-2011-BS-48-50ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-5	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	48-50 ft	Test Id:	217480		
Test Comment:	---				
Sample Description:	Moist, olive yellow silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	8.3	57.4	34.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	92		
#10	2.00	73		
#20	0.85	66		
#40	0.42	61		
#60	0.25	56		
#100	0.15	50		
#200	0.075	34		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0373	12		
---	0.0235	6		
---	0.0136	3		
---	0.0096	3		
---	0.0068	2		
---	0.0048	2		
---	0.0034	2		
---	0.0016	1		

Coefficients

D_{85} = 3.4891 mm	D_{30} = 0.0655 mm
D_{60} = 0.3735 mm	D_{15} = 0.0410 mm
D_{50} = 0.1472 mm	D_{10} = 0.0322 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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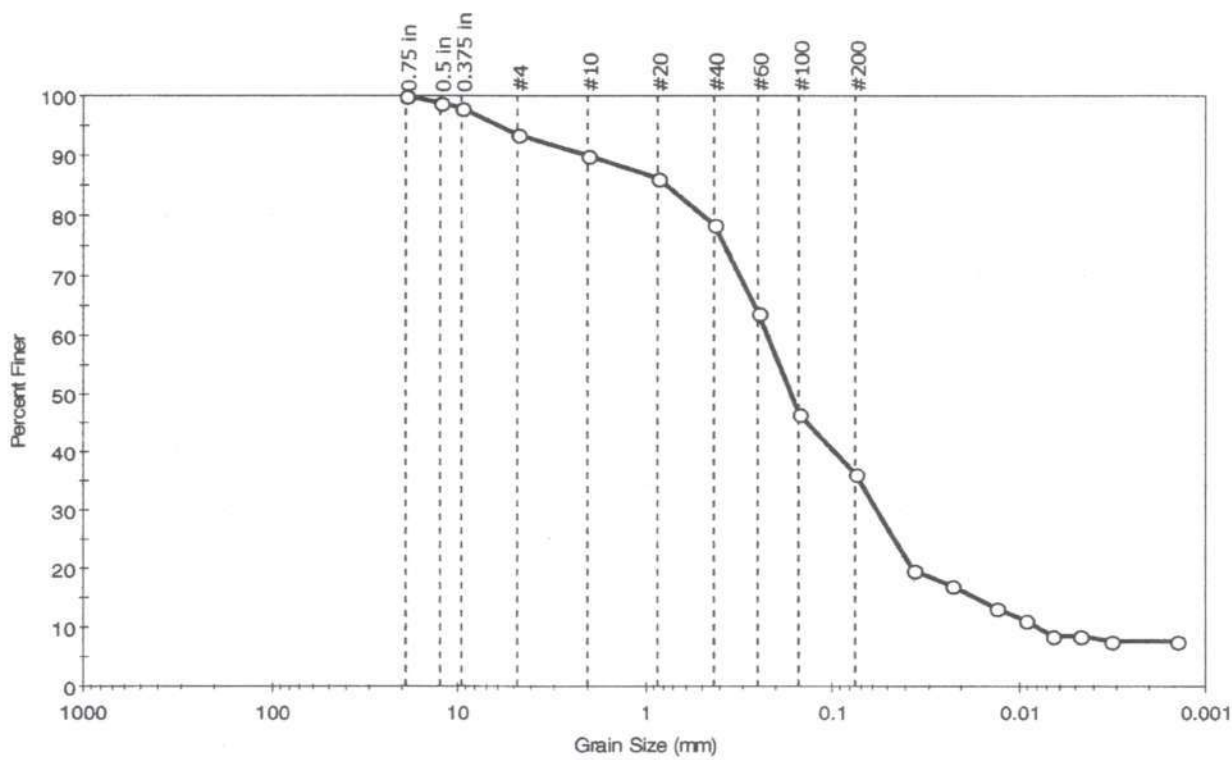
A-CAD3-2011-BS 48-50 ft

A-CAD3-2011-B6 0-2ft.

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-6	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	08/03/11	Checked By:	jdt
Depth :	0-2	Test Id:	213837		
Test Comment:	---				
Sample Description:	Moist, olive green silty sand				
Sample Comment:	sample contains shell fragments				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	6.5	57.1	36.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	99		
0.375 in	9.50	98		
#4	4.75	94		
#10	2.00	90		
#20	0.85	86		
#40	0.42	79		
#60	0.25	64		
#100	0.15	47		
#200	0.075	36		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0363	20		
---	0.0227	17		
---	0.0132	13		
---	0.0093	11		
---	0.0066	9		
---	0.0047	9		
---	0.0033	8		
---	0.0014	8		

Coefficients

D_{85} = 0.7615 mm	D_{30} = 0.0567 mm
D_{60} = 0.2238 mm	D_{15} = 0.0170 mm
D_{50} = 0.1655 mm	D_{10} = 0.0079 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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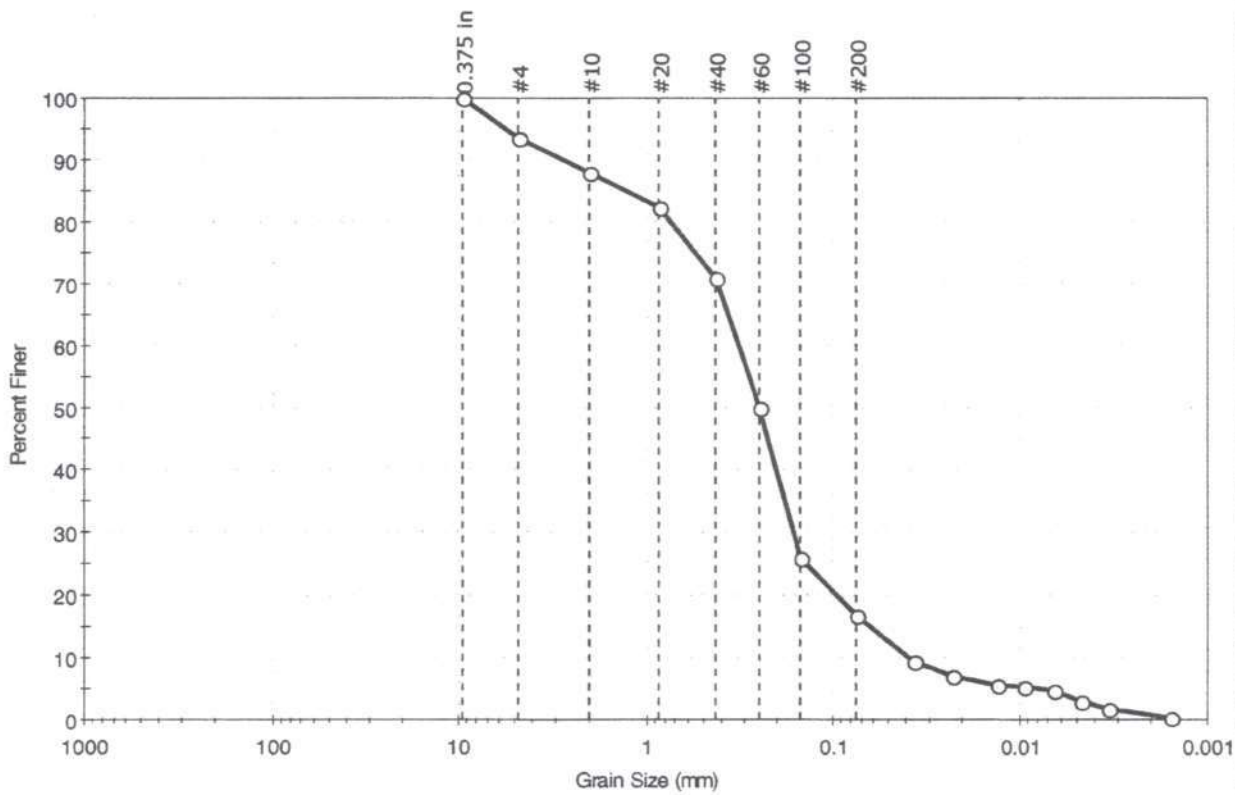
A-CAD3-2011-B6 0-2ft.

A-CAD3-2011-B6 - 2-3ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-6	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	2-3 ft	Test Id:	217481		
Test Comment:	---				
Sample Description:	Moist, olive green silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	6.3	76.8	16.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	94		
#10	2.00	88		
#20	0.85	82		
#40	0.42	71		
#60	0.25	50		
#100	0.15	26		
#200	0.075	17		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0368	10		
---	0.0229	7		
---	0.0132	6		
---	0.0094	5		
---	0.0066	5		
---	0.0047	3		
---	0.0034	2		
---	0.0016	0		

Coefficients

D_{85} = 1.2884 mm D_{30} = 0.1639 mm
D_{60} = 0.3230 mm D_{15} = 0.0625 mm
D_{50} = 0.2512 mm D_{10} = 0.0385 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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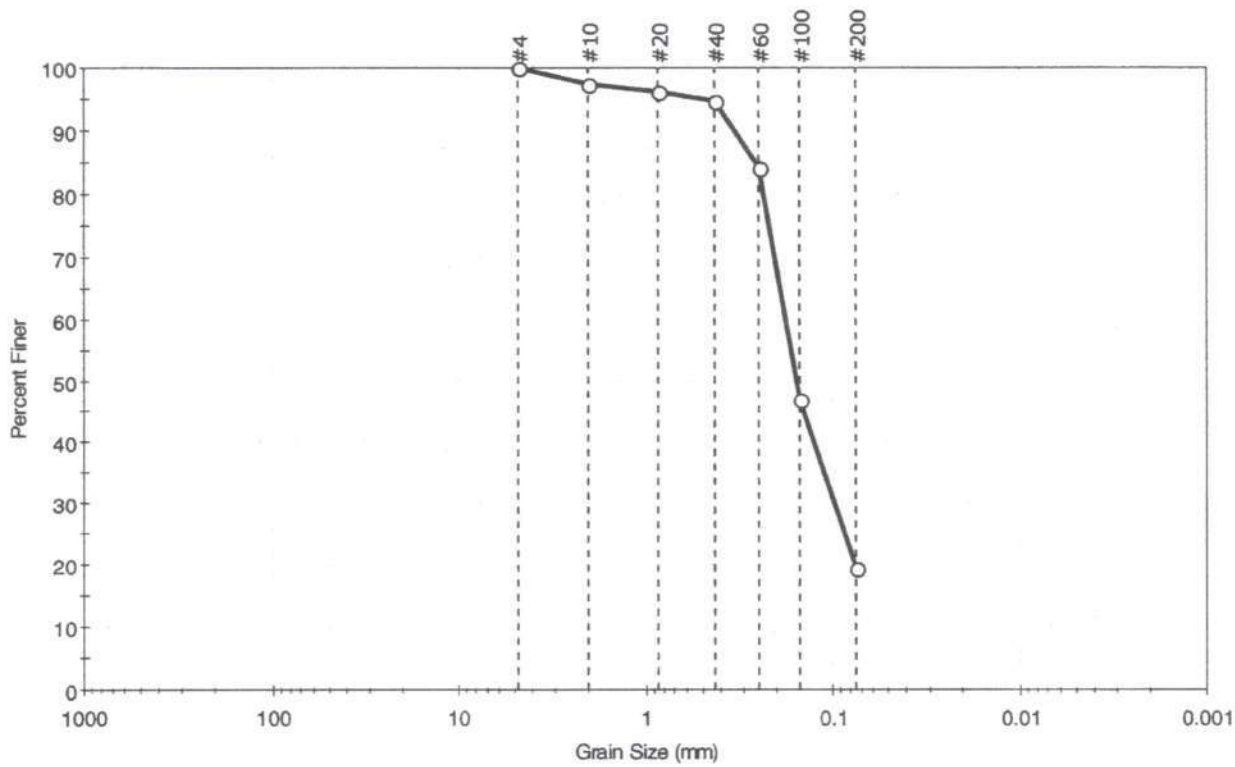
A-CAD-2011-B6 2-3ft

A-CAD3-2011-B6-4-6ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-6	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	08/04/11	Checked By:	jdt
Depth :	4-6	Test Id:	213838		
Test Comment:	---				
Sample Description:	Moist, olive gray silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	80.6	19.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	97		
#20	0.85	96		
#40	0.42	95		
#60	0.25	84		
#100	0.15	47		
#200	0.075	19		

Coefficients

D_{85} = 0.2618 mm D_{30} = 0.0980 mm
D_{60} = 0.1796 mm D_{15} = N/A
D_{50} = 0.1566 mm D_{10} = N/A
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---
Sand/Gravel Hardness : ---

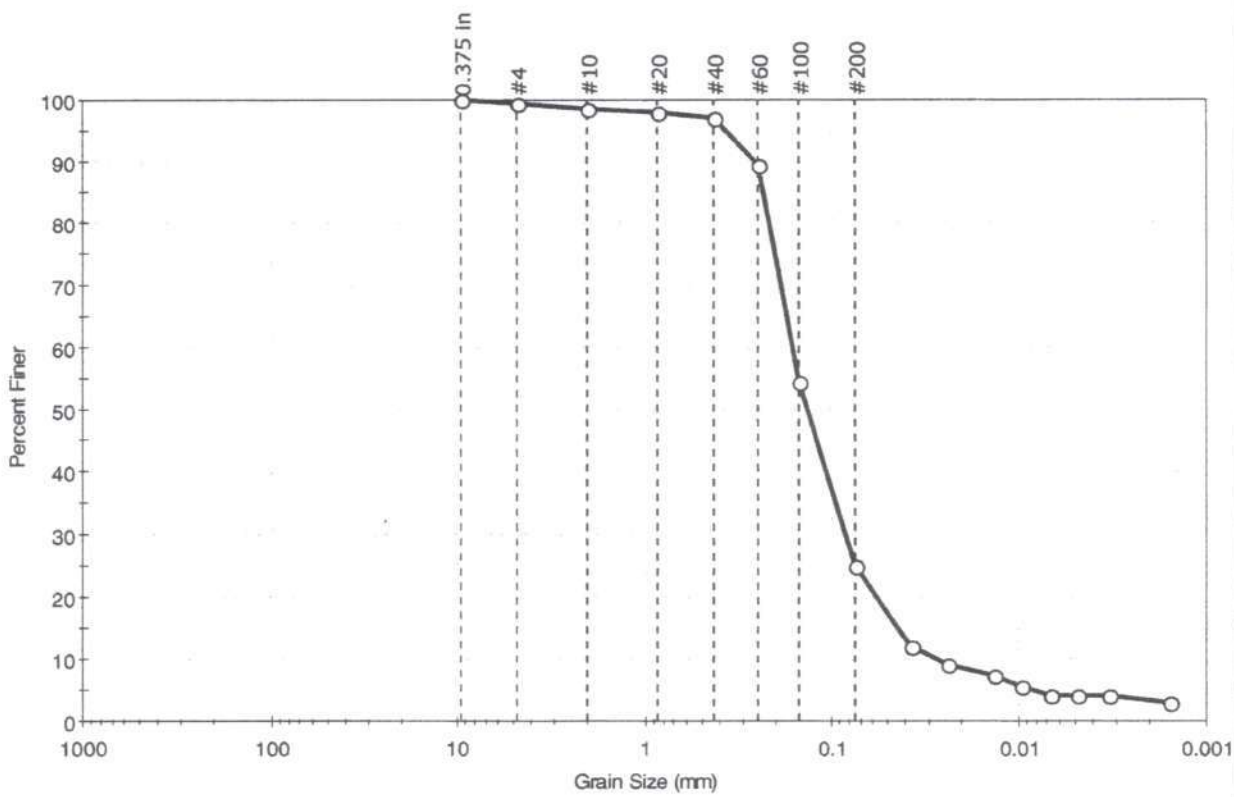
A-CAD3-2011-B6-4-6ft

A-CAD3-2011-B6-8-10ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-6	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	8-10 ft	Test Id:	217482		
Test Comment:	---				
Sample Description:	Moist, light brownish gray silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.7	74.1	25.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	98		
#20	0.85	98		
#40	0.42	97		
#60	0.25	89		
#100	0.15	54		
#200	0.075	25		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0378	12		
---	0.0236	9		
---	0.0135	8		
---	0.0096	6		
---	0.0067	4		
---	0.0048	4		
---	0.0033	4		
---	0.0016	3		

Coefficients

D_{85} = 0.2343 mm D_{30} = 0.0841 mm
D_{60} = 0.1630 mm D_{15} = 0.0441 mm
D_{50} = 0.1355 mm D_{10} = 0.0276 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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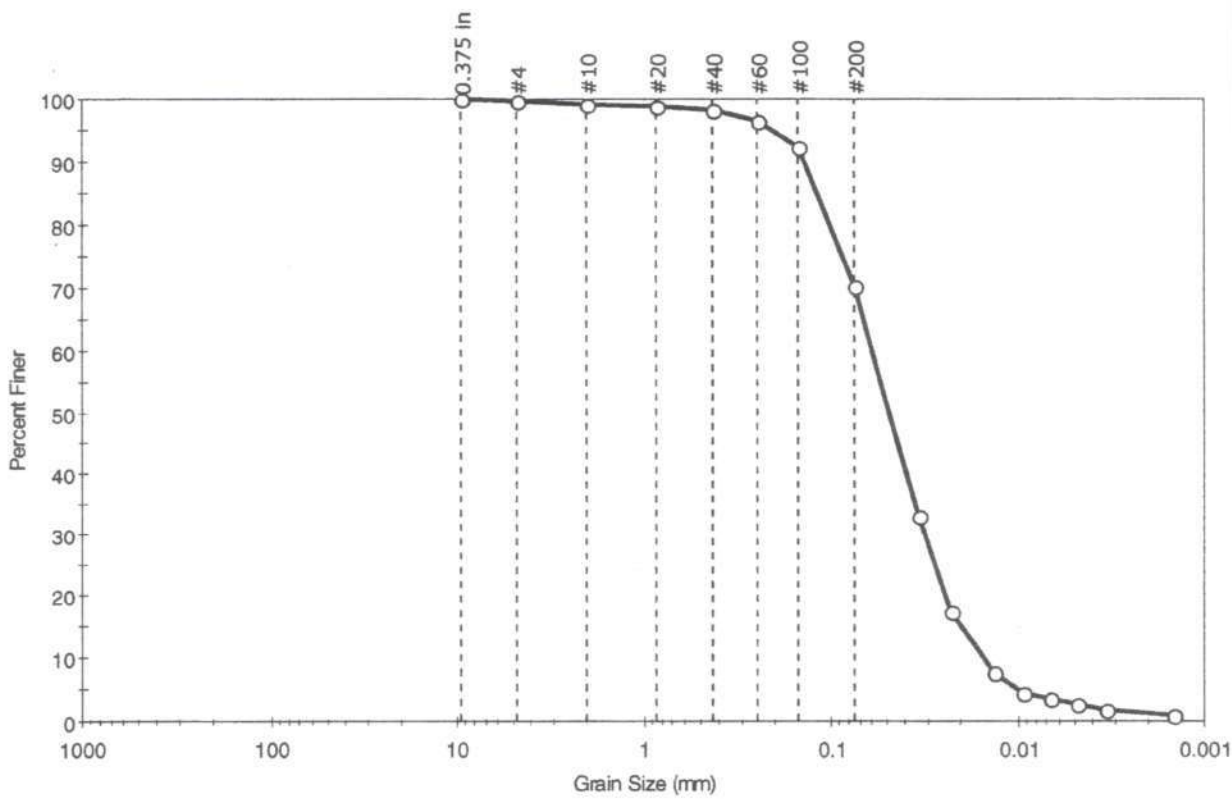
A-CAD3-2011-B6-8-10ft

A-CAD3-2011-B6 20-22ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-6	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	08/03/11	Checked By:	jdt
Depth :	20-22	Test Id:	213839		
Test Comment:	---				
Sample Description:	Moist, light yellowish brown silt with sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.3	29.5	70.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	100		
#10	2.00	99		
#20	0.85	99		
#40	0.42	98		
#60	0.25	97		
#100	0.15	92		
#200	0.075	70		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0344	33		
---	0.0225	17		
---	0.0133	8		
---	0.0094	4		
---	0.0067	3		
---	0.0048	3		
---	0.0034	2		
---	0.0014	1		

Coefficients

D_{85} = 0.1192 mm	D_{30} = 0.0317 mm
D_{60} = 0.0606 mm	D_{15} = 0.0198 mm
D_{50} = 0.0491 mm	D_{10} = 0.0150 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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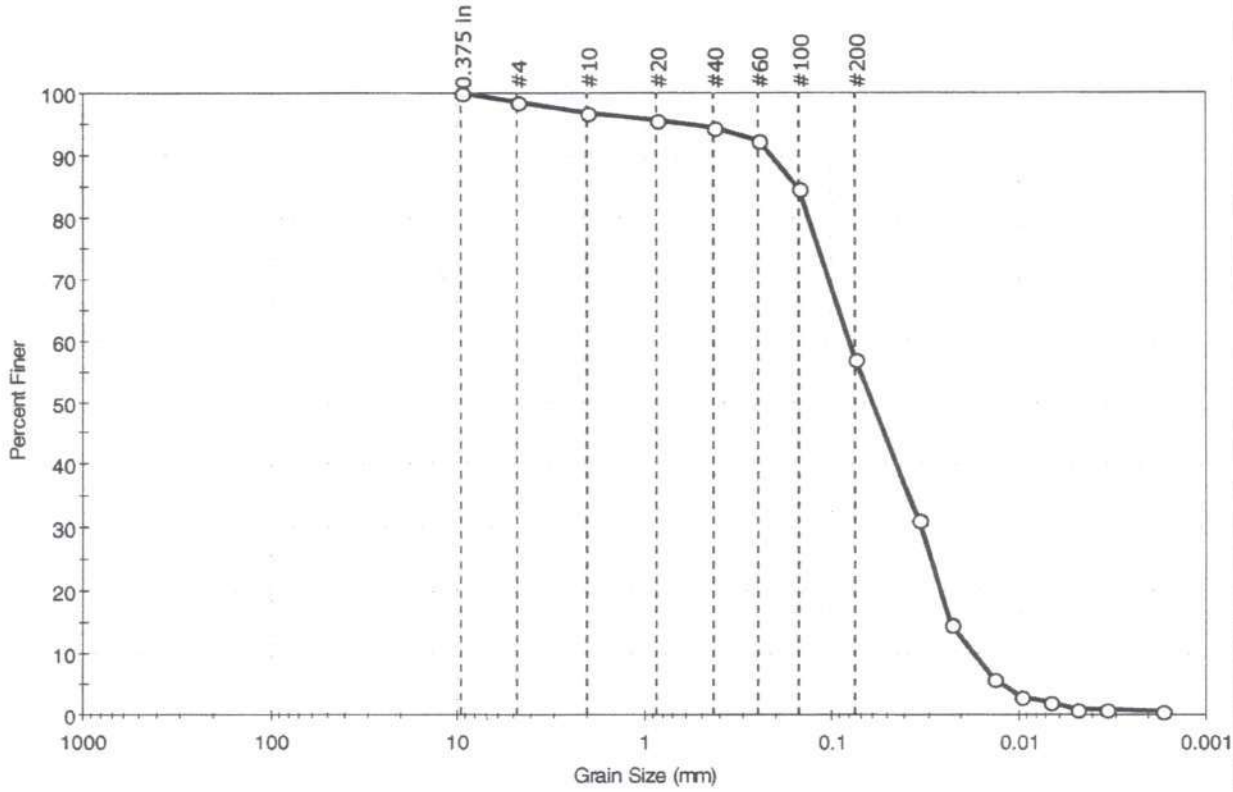
A-CAD3-2011-B6 20-22ft.

A-CAD3-2011-B6 28-30ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-6	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	28-30 ft	Test Id:	217483		
Test Comment:	---				
Sample Description:	Moist, light olive gray sandy silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
--	1.3	41.6	57.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	97		
#20	0.85	95		
#40	0.42	94		
#60	0.25	92		
#100	0.15	85		
#200	0.075	57		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0343	31		
---	0.0229	15		
---	0.0135	6		
---	0.0096	3		
---	0.0068	2		
---	0.0048	1		
---	0.0034	1		
---	0.0017	0		

Coefficients

D_{85} = 0.1530 mm	D_{30} = 0.0333 mm
D_{60} = 0.0808 mm	D_{15} = 0.0231 mm
D_{50} = 0.0606 mm	D_{10} = 0.0173 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

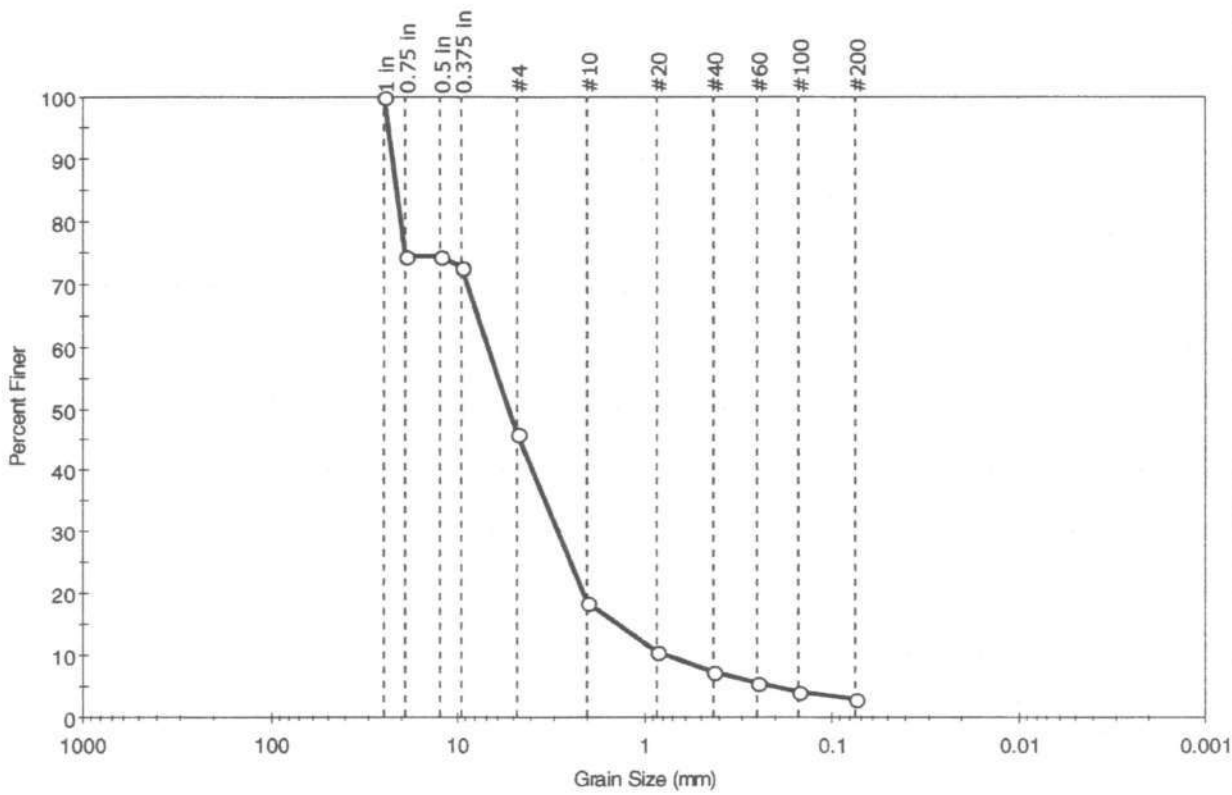
A-CAD3-2011 B6 · 28-30ft

A-CAD3-2011-B6 48-50ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-6	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	08/03/11	Checked By:	jdt
Depth :	48-50	Test Id:	213841		
Test Comment:	---				
Sample Description:	Moist, olive gravel with sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	54.1	42.9	3.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	74		
0.5 in	12.50	74		
0.375 in	9.50	73		
#4	4.75	46		
#10	2.00	19		
#20	0.85	11		
#40	0.42	7		
#60	0.25	6		
#100	0.15	4		
#200	0.075	3		

Coefficients

D_{85} = 21.2882 mm	D_{30} = 2.8719 mm
D_{60} = 6.8427 mm	D_{15} = 1.3626 mm
D_{50} = 5.2838 mm	D_{10} = 0.7461 mm
C_u = 9.171	C_c = 1.616

Classification

ASTM: Well-graded gravel with sand (GW)

AASHTO: Stone Fragments, Gravel and Sand (A-1-a (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

A-CAD3-2011-B6 48-50ft.

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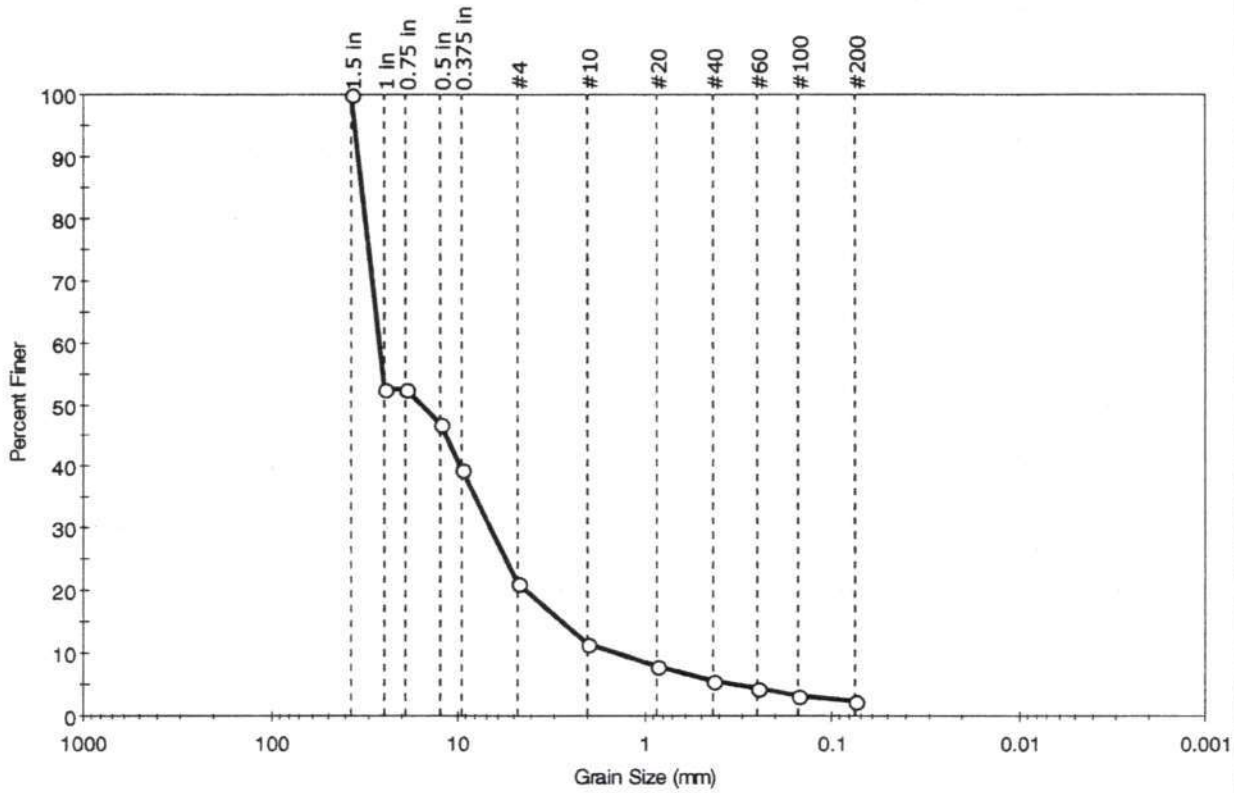
A-CAD3-2011-B6 · 46-48ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-6	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	08/03/11	Checked By:	jdt
Depth :	46-48	Test Id:	213840		
Test Comment:	---				
Sample Description:	Moist, gray gravel with sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	78.8	18.9	2.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	52		
0.75 in	19.00	52		
0.5 in	12.50	47		
0.375 in	9.50	39		
#4	4.75	21		
#10	2.00	12		
#20	0.85	8		
#40	0.42	6		
#60	0.25	4		
#100	0.15	3		
#200	0.075	2		

Coefficients

D_{85} = 32.9990 mm	D_{30} = 6.6224 mm
D_{60} = 26.6654 mm	D_{15} = 2.7221 mm
D_{50} = 15.8248 mm	D_{10} = 1.3898 mm
C_u = 19.187	C_c = 1.183

Classification

ASTM: Well-graded gravel with sand (GW)

AASHTO: Stone Fragments, Gravel and Sand (A-1-a (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

A-CAD3-2011-B6 46-48ft.

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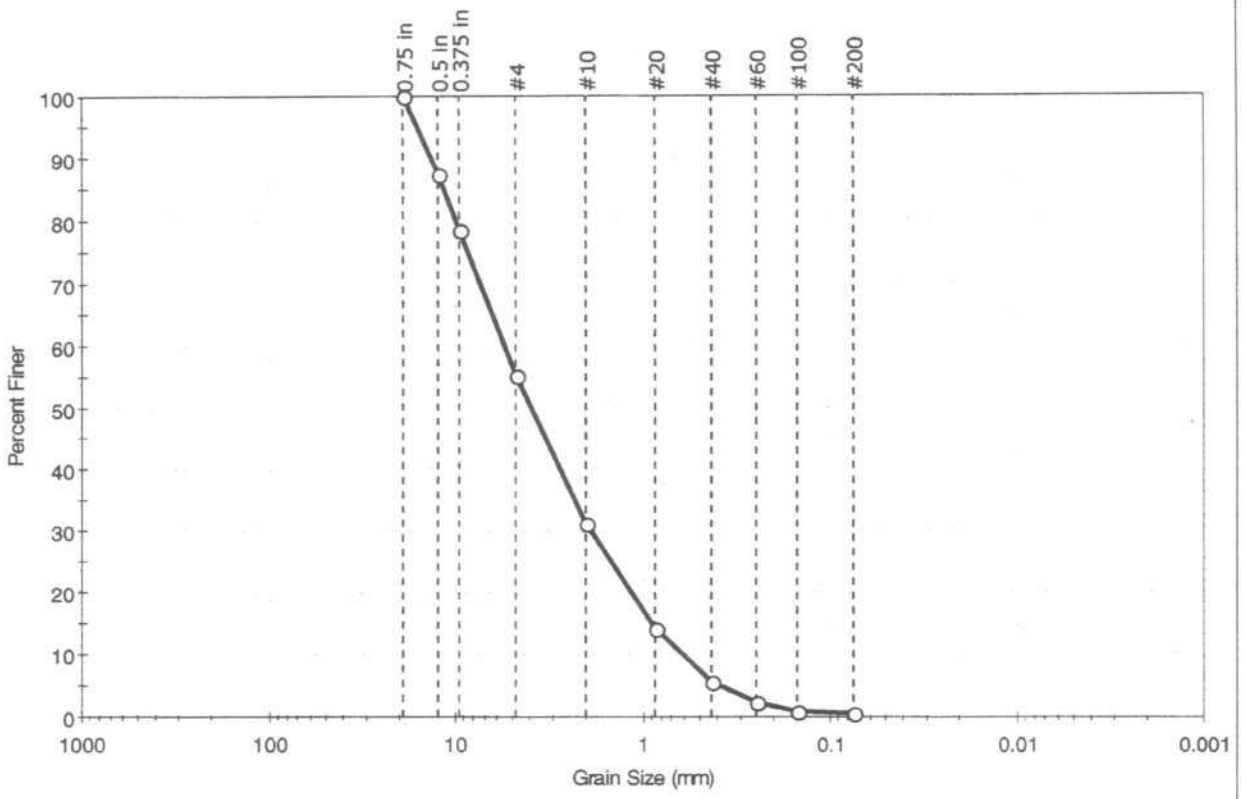
A-CAD3-2011-B6-53-55ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC		
Project:	South Terminal Extension		
Location:	New Bedford, MA	Project No:	GTX-10697
Boring ID:	B-6	Sample Type: bag	Tested By: jbr
Sample ID:	---	Test Date: 09/26/11	Checked By: jdt
Depth :	53-55 ft	Test Id: 217484	
Test Comment:	---		
Sample Description:	Moist, olive sand with gravel		
Sample Comment:	---		

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
–	44.8	54.5	0.7

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	87		
0.375 in	9.50	78		
#4	4.75	55		
#10	2.00	31		
#20	0.85	14		
#40	0.42	6		
#60	0.25	2		
#100	0.15	1		
#200	0.075	1		

Coefficients

D_{85} = 11.6627 mm	D_{30} = 1.8670 mm
D_{60} = 5.4894 mm	D_{15} = 0.8887 mm
D_{50} = 3.9373 mm	D_{10} = 0.6079 mm
C_u = 9.030	C_c = 1.045

Classification

ASTM: Well-graded sand with gravel (SW)

AASHTO: Stone Fragments, Gravel and Sand (A-1-a (0))

Sample/Test Description

Sand/Gravel Particle Shape :

Sand/Gravel Hardness :

A CAD3-2011-B6-53-55ft

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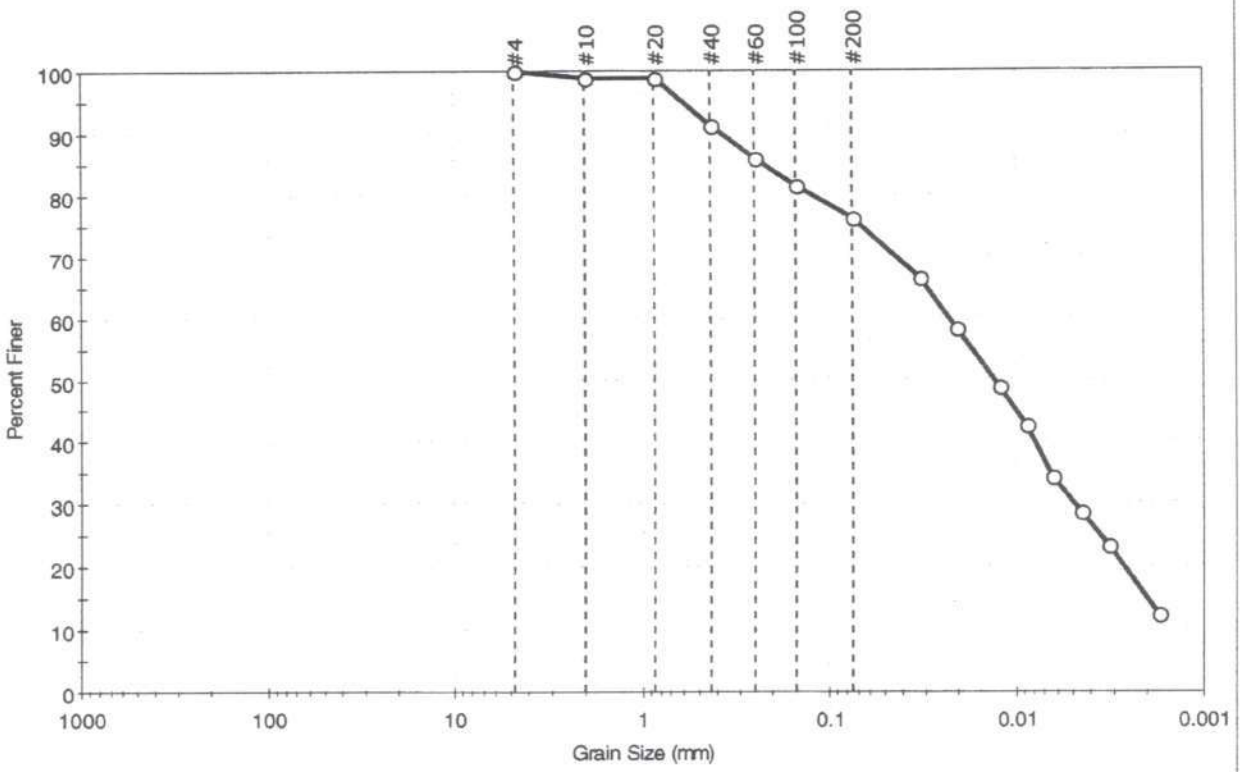
ACAD3-2011-B7-0-2ft.

GeoTesting EXPRESS

Client:	Apex Companies, LLC		
Project:	South Terminal Extension		
Location:	New Bedford, MA	Project No:	GTX-10697
Boring ID:	B-7	Sample Type: bag	Tested By: jbr
Sample ID:	---	Test Date: 09/28/11	Checked By: jdt
Depth :	0-2 ft	Test Id: 217485	
Test Comment:	---		
Sample Description:	Moist, olive green silt with sand		
Sample Comment:	---		

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	24.0	76.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	99		
#20	0.85	99		
#40	0.42	91		
#60	0.25	86		
#100	0.15	82		
#200	0.075	76		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0324	66		
---	0.0209	58		
---	0.0124	49		
---	0.0088	42		
---	0.0064	34		
---	0.0045	29		
---	0.0033	23		
---	0.0017	12		

Coefficients

D_{85} = 0.2270 mm D_{30} = 0.0049 mm
D_{60} = 0.0230 mm D_{15} = 0.0020 mm
D_{50} = 0.0133 mm D_{10} = 0.0015 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

A CAD3-2011-B7-0-2ft.

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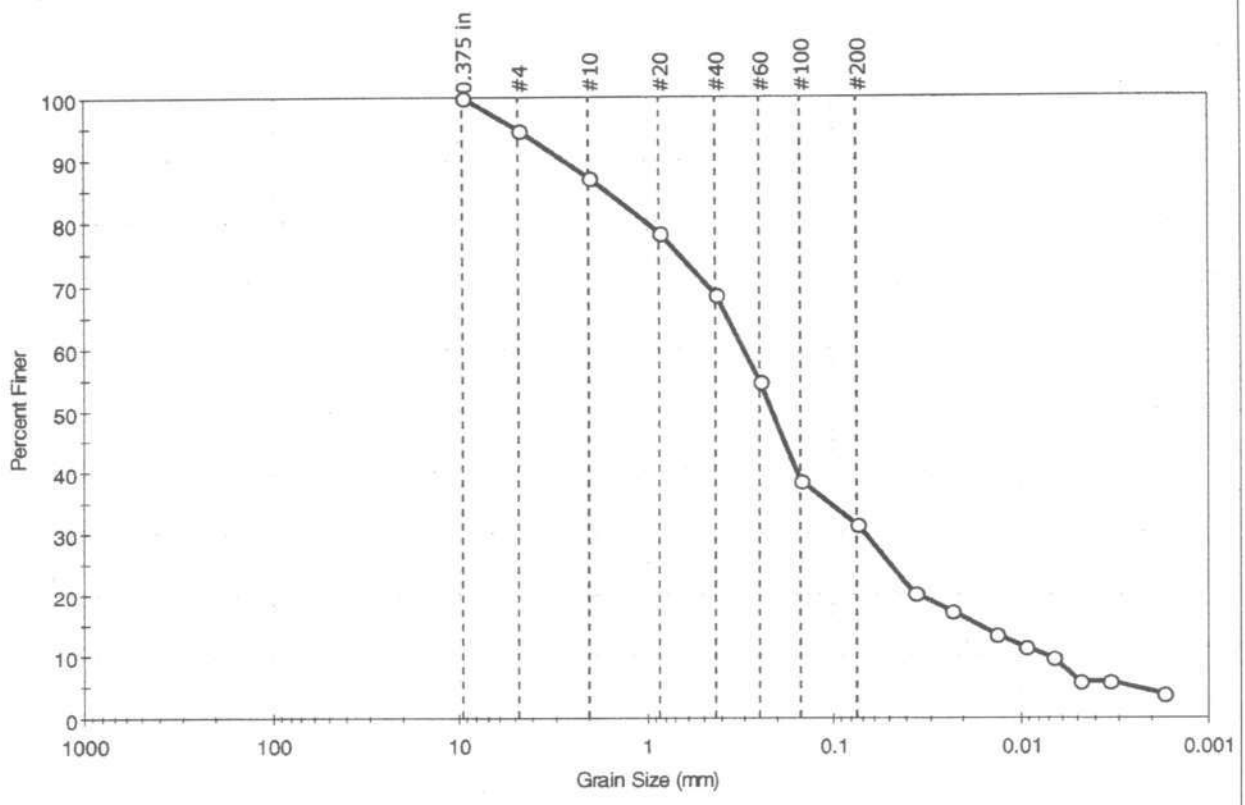
A-CAD3 2011 B7-12:14ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC		
Project:	South Terminal Extension		
Location:	New Bedford, MA	Project No:	GTX-10697
Boring ID:	B-7	Sample Type: bag	Tested By: jbr
Sample ID:	---	Test Date: 09/26/11	Checked By: jdt
Depth :	12-14 ft	Test Id: 217486	
Test Comment:	---		
Sample Description:	Moist, olive green silty sand		
Sample Comment:	---		

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
--	5.2	63.1	31.7

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	95		
#10	2.00	87		
#20	0.85	78		
#40	0.42	69		
#60	0.25	55		
#100	0.15	39		
#200	0.075	32		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0365	20		
---	0.0231	17		
---	0.0134	13		
---	0.0095	12		
---	0.0067	10		
---	0.0048	6		
---	0.0034	6		
---	0.0017	4		

Coefficients

D_{85} = 1.6445 mm D_{30} = 0.0674 mm
D_{60} = 0.3065 mm D_{15} = 0.0166 mm
D_{50} = 0.2156 mm D_{10} = 0.0072 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

A CAD3 2011 B7 - 12-14 ft

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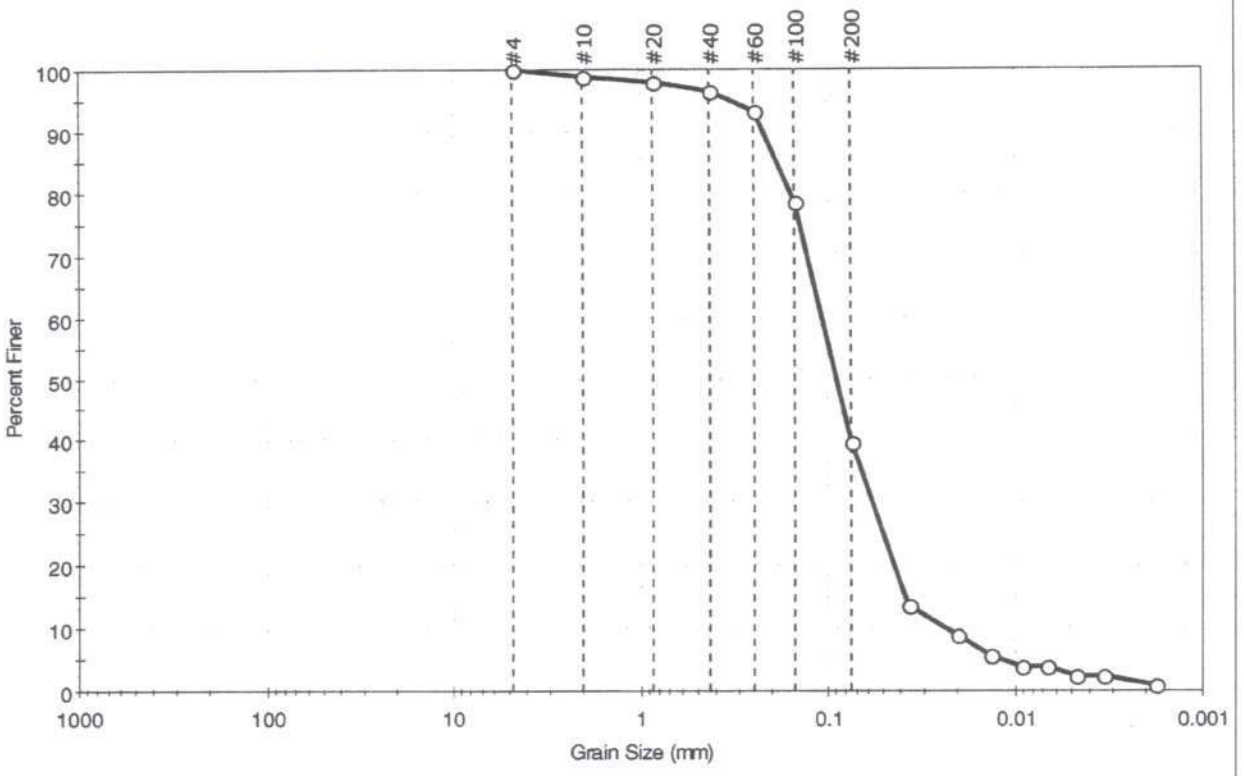
A-CAD3-201-B7 20-22ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-7	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	20-22 ft	Test Id:	217487		
Test Comment:	---				
Sample Description:	Moist, olive green silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	60.6	39.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	99		
#20	0.85	98		
#40	0.42	96		
#60	0.25	93		
#100	0.15	79		
#200	0.075	39		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0369	13		
---	0.0204	9		
---	0.0134	6		
---	0.0092	4		
---	0.0067	4		
---	0.0048	2		
---	0.0034	2		
---	0.0018	1		

Coefficients

D_{85} = 0.1878 mm D_{30} = 0.0580 mm
D_{60} = 0.1080 mm D_{15} = 0.0384 mm
D_{50} = 0.0905 mm D_{10} = 0.0239 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---
Sand/Gravel Hardness : ---

A CAD3-201 B7- 20-22ft

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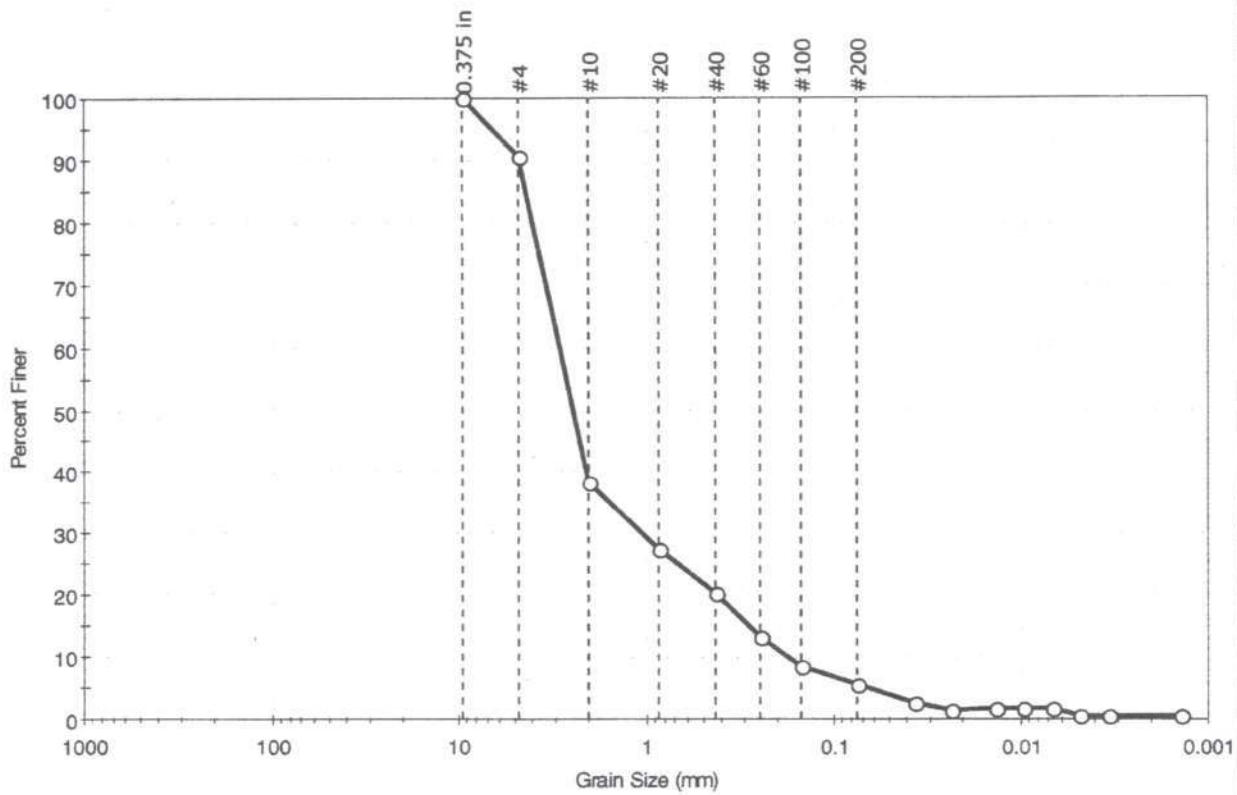
ACAD3 204- B7. 24-28ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC		
Project:	South Terminal Extension		
Location:	New Bedford, MA	Project No:	GTX-10697
Boring ID:	B-7	Sample Type: bag	Tested By: jbr
Sample ID:	---	Test Date: 09/26/11	Checked By: jdt
Depth :	24-28 ft	Test Id: 217488	
Test Comment:	---		
Sample Description:	Moist, olive brown sand with silt		
Sample Comment:	---		

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	9.5	84.7	5.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	90		
#10	2.00	38		
#20	0.85	27		
#40	0.42	20		
#60	0.25	13		
#100	0.15	8		
#200	0.075	6		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0371	3		
---	0.0236	1		
---	0.0135	2		
---	0.0096	2		
---	0.0068	2		
---	0.0048	1		
---	0.0034	1		
---	0.0014	1		

Coefficients

D_{85} = 4.3354 mm D_{30} = 1.0435 mm
D_{60} = 2.8624 mm D_{15} = 0.2836 mm
D_{50} = 2.4245 mm D_{10} = 0.1765 mm
C_u = 16.218 C_c = 2.155

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-a (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

A CAD3 201 B7. 24-28ft

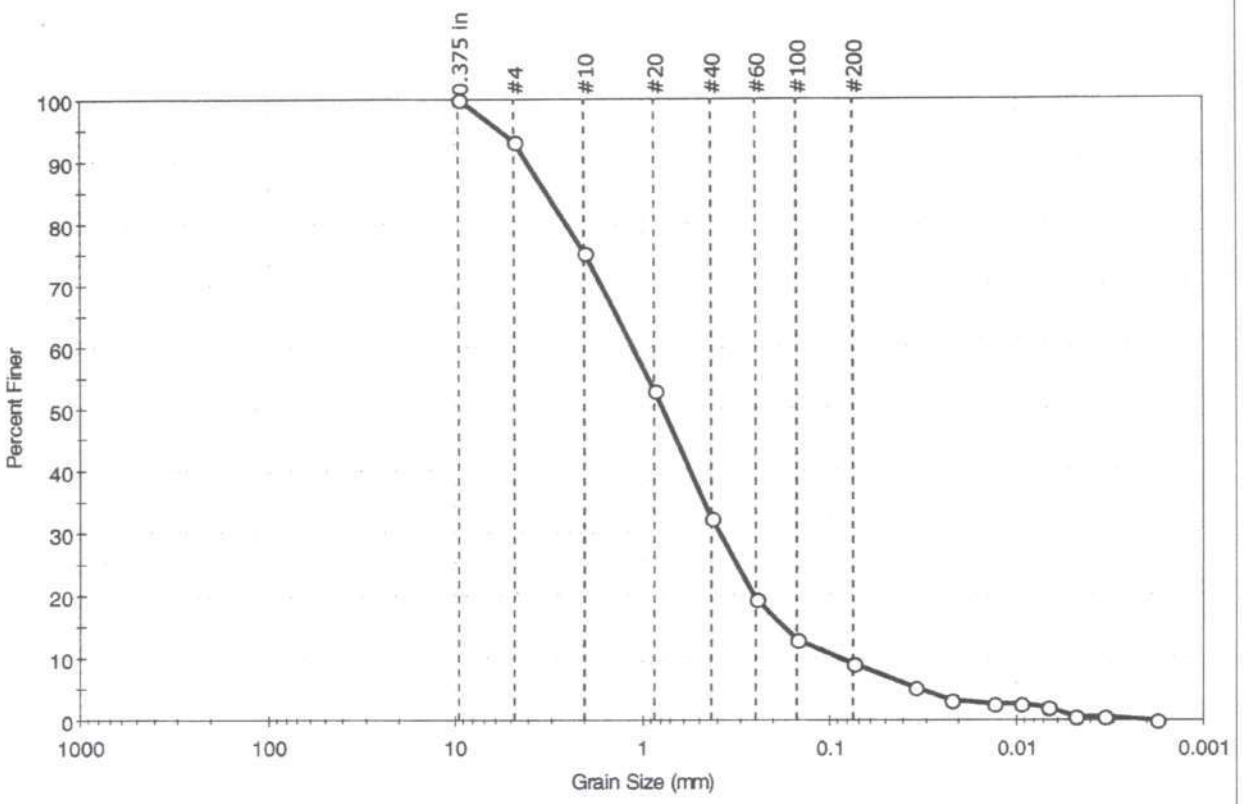
printed 9/29/2011 2:48:40 PM

A CAD3-2011-B7-46-48ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC		
Project:	South Terminal Extension		
Location:	New Bedford, MA	Project No:	GTX-10697
Boring ID:	B-7	Sample Type: bag	Tested By: jbr
Sample ID:	---	Test Date: 09/26/11	Checked By: jdt
Depth :	46-48 ft	Test Id: 217489	
Test Comment:	---		
Sample Description:	Moist, olive green sand with silt		
Sample Comment:	---		

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	6.8	84.1	9.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	93		
#10	2.00	75		
#20	0.85	53		
#40	0.42	32		
#60	0.25	20		
#100	0.15	13		
#200	0.075	9		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0347	5		
---	0.0222	3		
---	0.0131	3		
---	0.0095	3		
---	0.0067	2		
---	0.0048	1		
---	0.0034	1		
---	0.0018	0		

Coefficients

D_{85} = 3.1971 mm	D_{30} = 0.3851 mm
D_{60} = 1.1217 mm	D_{15} = 0.1760 mm
D_{50} = 0.7760 mm	D_{10} = 0.0889 mm
C_u = 12.618	C_c = 1.487

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

A CA03 2011 B7 46-48 ft

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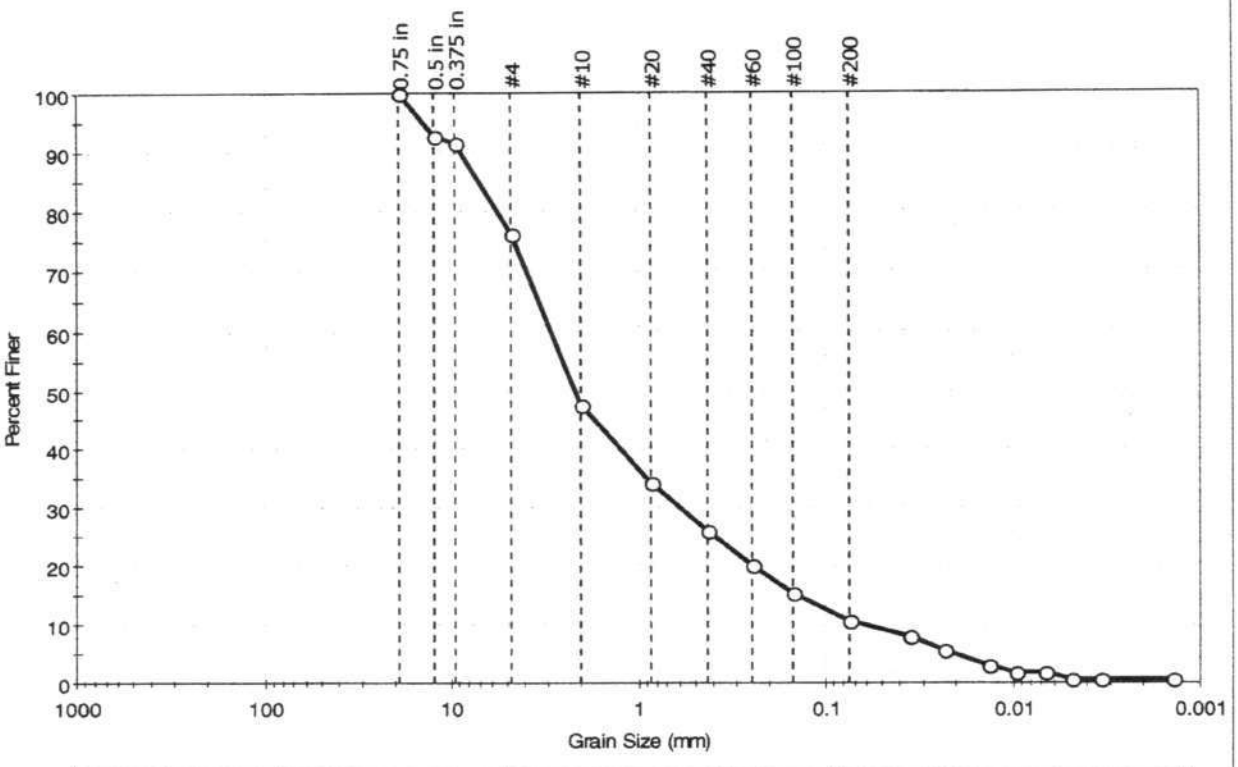
A CAD3 2011 - B7 - 56-58ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC		
Project:	South Terminal Extension		
Location:	New Bedford, MA	Project No:	GTX-10697
Boring ID:	B-7	Sample Type: bag	Tested By: jbr
Sample ID:	---	Test Date: 09/26/11	Checked By: jdt
Depth :	56-58 ft	Test Id: 217490	
Test Comment:	---		
Sample Description:	Moist, olive green sand with silt and gravel		
Sample Comment:	---		

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	23.8	65.7	10.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	93		
0.375 in	9.50	92		
#4	4.75	76		
#10	2.00	47		
#20	0.85	34		
#40	0.42	26		
#60	0.25	20		
#100	0.15	15		
#200	0.075	11		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0361	8		
---	0.0231	6		
---	0.0135	3		
---	0.0096	2		
---	0.0068	2		
---	0.0048	1		
---	0.0034	1		
---	0.0014	1		

Coefficients

D_{85} = 7.0617 mm	D_{30} = 0.5953 mm
D_{60} = 2.9167 mm	D_{15} = 0.1431 mm
D_{50} = 2.1592 mm	D_{10} = 0.0643 mm
C_u = 45.361	C_c = 1.890

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-a (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

A CAD3 2011 B7 56-58ft

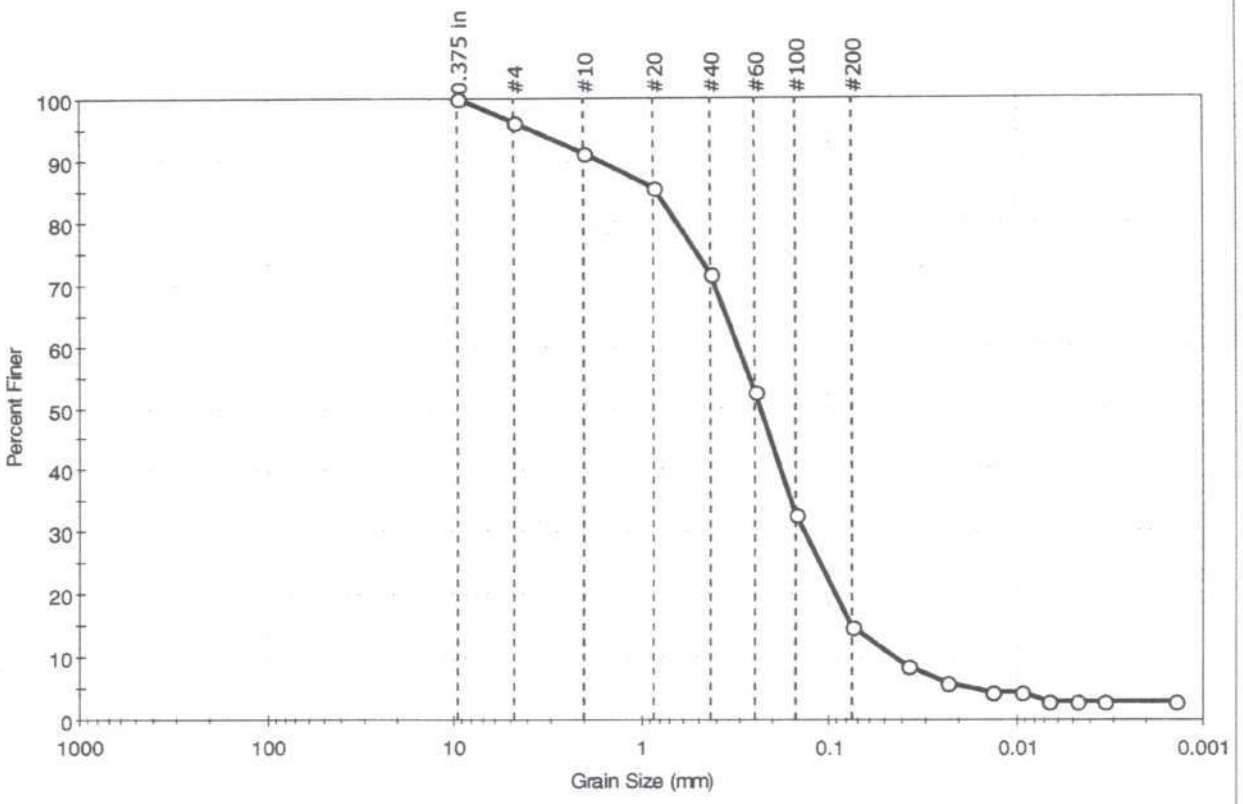
printed 9/29/2011 2:49:08 PM

ACAD3 2011 B8 0-2ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-8	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	0-2 ft	Test Id:	217491		
Test Comment:	---				
Sample Description:	Moist, black silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
–	3.9	81.3	14.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	96		
#10	2.00	91		
#20	0.85	86		
#40	0.42	72		
#60	0.25	52		
#100	0.15	33		
#200	0.075	15		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0377	9		
---	0.0236	6		
---	0.0135	4		
---	0.0095	4		
---	0.0067	3		
---	0.0047	3		
---	0.0034	3		
---	0.0014	3		

Coefficients

D_{85} = 0.8288 mm D_{30} = 0.1347 mm
D_{60} = 0.3081 mm D_{15} = 0.0756 mm
D_{50} = 0.2344 mm D_{10} = 0.0439 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED
Sand/Gravel Hardness : HARD

ACAD3 2011 B8 0-2ft

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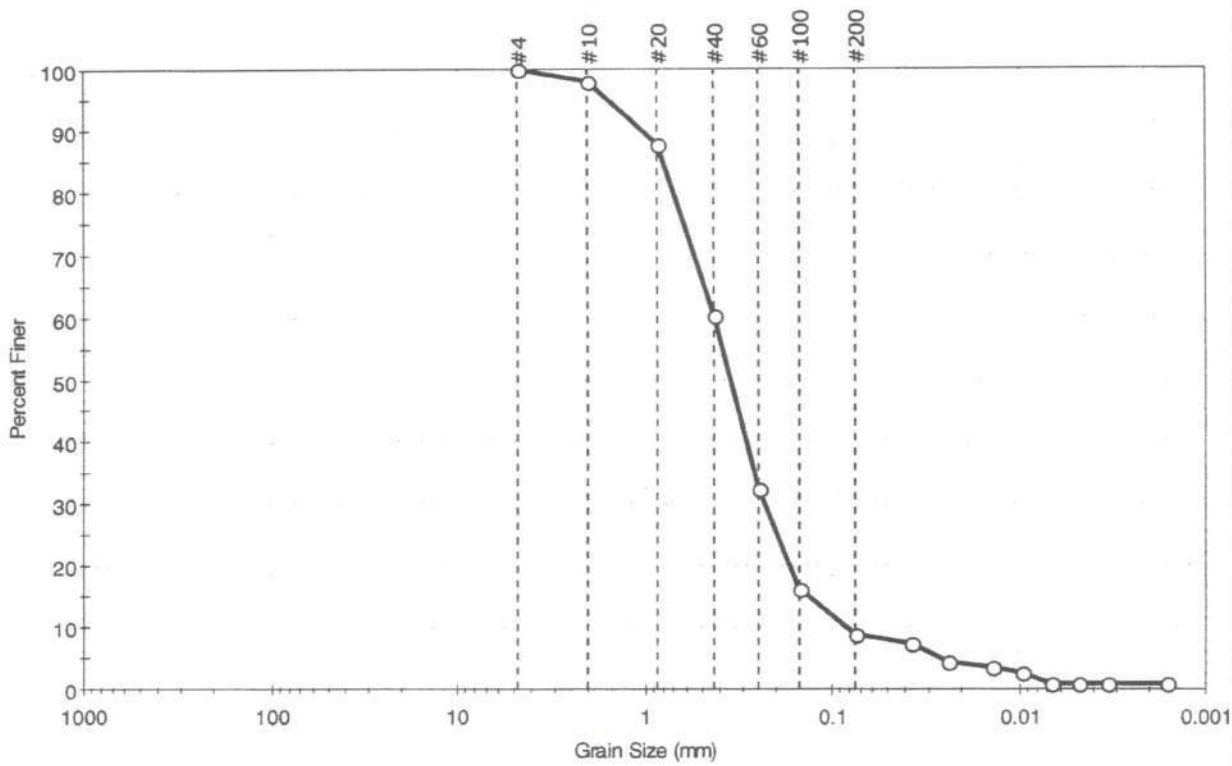
A CAD3-2011-B8-6-8ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC		
Project:	South Terminal Extension		
Location:	New Bedford, MA	Project No:	GTX-10697
Boring ID:	B-8	Sample Type: bag	Tested By: jbr
Sample ID:	---	Test Date: 09/27/11	Checked By: jdt
Depth :	6-8 ft	Test Id: 217492	
Test Comment:	---		
Sample Description:	Moist, grayish brown sand with silt		
Sample Comment:	---		

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	91.1	8.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	98		
#20	0.85	88		
#40	0.42	60		
#60	0.25	32		
#100	0.15	16		
#200	0.075	9		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0372	7		
---	0.0236	5		
---	0.0137	4		
---	0.0096	3		
---	0.0068	1		
---	0.0048	1		
---	0.0034	1		
---	0.0016	1		

Coefficients

D_{85} = 0.7931 mm D_{30} = 0.2316 mm
D_{60} = 0.4229 mm D_{15} = 0.1331 mm
D_{50} = 0.3495 mm D_{10} = 0.0832 mm
C_u = 5.083 C_c = 1.524

Classification

ASTM N/A

AASHTO Fine Sand (A-3 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

A-CAD3-2011-B8 6-8ft

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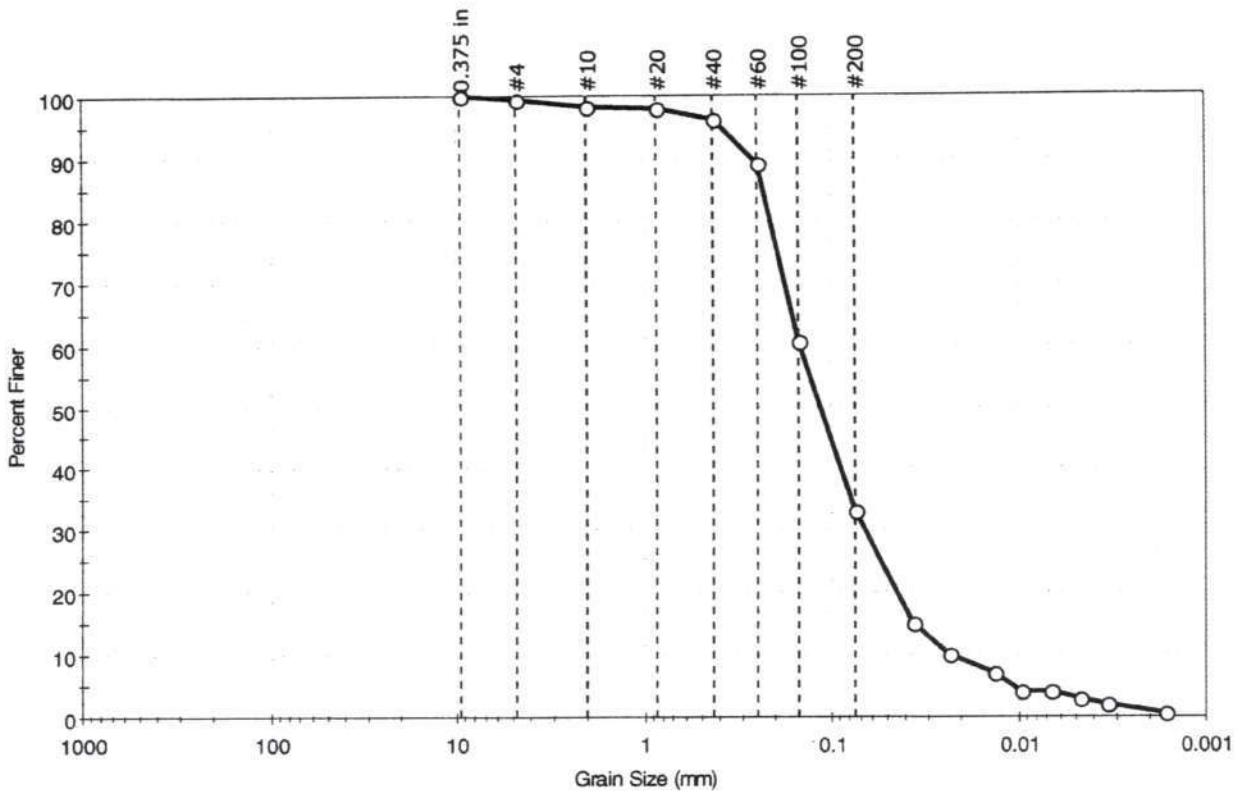
A-CAD3-2011 - B8 22-24ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC		
Project:	South Terminal Extension		
Location:	New Bedford, MA	Project No:	GTX-10697
Boring ID: B-8	Sample Type: bag	Tested By:	jbr
Sample ID:---	Test Date: 09/27/11	Checked By:	jdt
Depth : 22-24 ft	Test Id: 217493		
Test Comment: ---			
Sample Description: Moist, olive gray silty sand			
Sample Comment:			

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	0.5	66.5	33.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	98		
#20	0.85	98		
#40	0.42	96		
#60	0.25	89		
#100	0.15	60		
#200	0.075	33		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0365	15		
---	0.0232	10		
---	0.0135	7		
---	0.0095	4		
---	0.0067	4		
---	0.0047	3		
---	0.0034	2		
---	0.0016	1		

Coefficients

D_{85} = 0.2328 mm D_{30} = 0.0666 mm
D_{60} = 0.1482 mm D_{15} = 0.0362 mm
D_{50} = 0.1152 mm D_{10} = 0.0230 mm
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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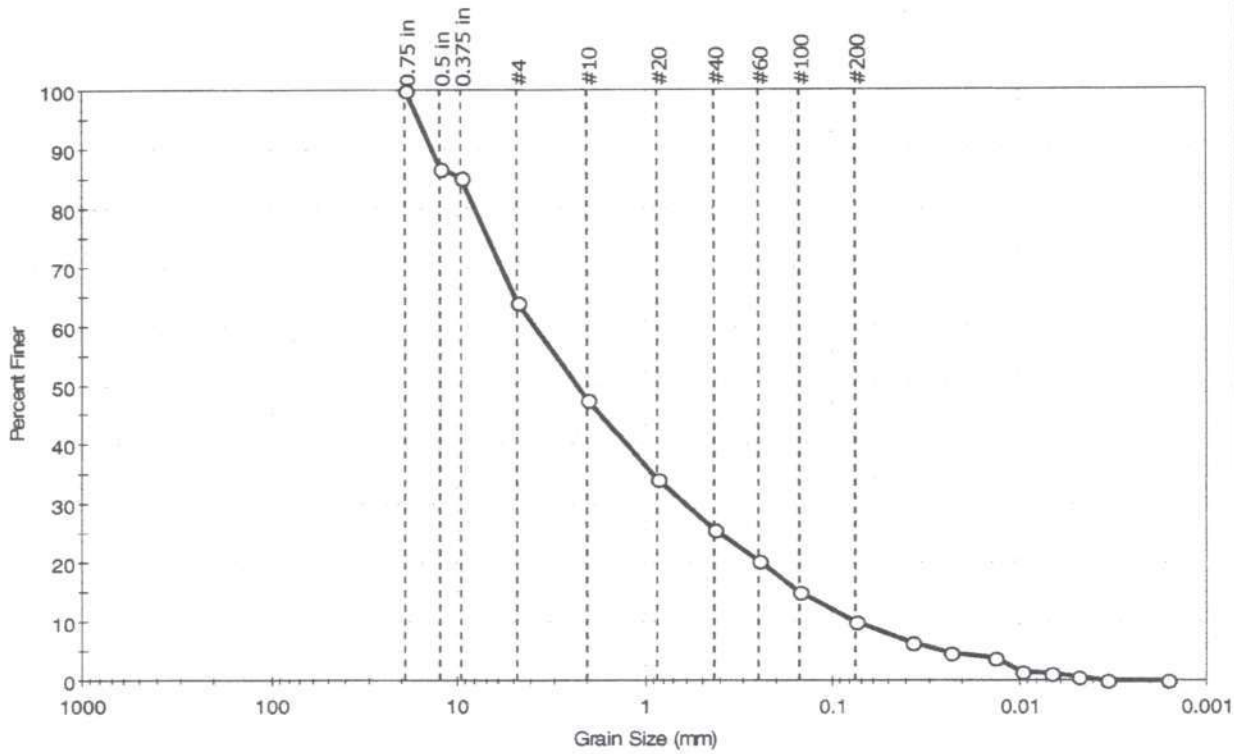
ACAD3 2011 B8 22-24ft

A-CAD3-2011-B8 44-46ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-8	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	44-46 ft	Test Id:	217494		
Test Comment:	---				
Sample Description:	Moist, light olive green sand with silt and gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	36.2	53.7	10.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	87		
0.375 in	9.50	85		
#4	4.75	64		
#10	2.00	48		
#20	0.85	34		
#40	0.42	26		
#60	0.25	20		
#100	0.15	15		
#200	0.075	10		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0375	6		
---	0.0236	5		
---	0.0136	4		
---	0.0096	2		
---	0.0068	1		
---	0.0048	1		
---	0.0034	0		
---	0.0016	0		

Coefficients

D_{85} = 9.4588 mm	D_{30} = 0.6032 mm
D_{60} = 3.8686 mm	D_{15} = 0.1479 mm
D_{50} = 2.2753 mm	D_{10} = 0.0730 mm
C_u = 52.995	C_c = 1.288

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-a (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

A-CAD3 2011 B8 44-46ft.

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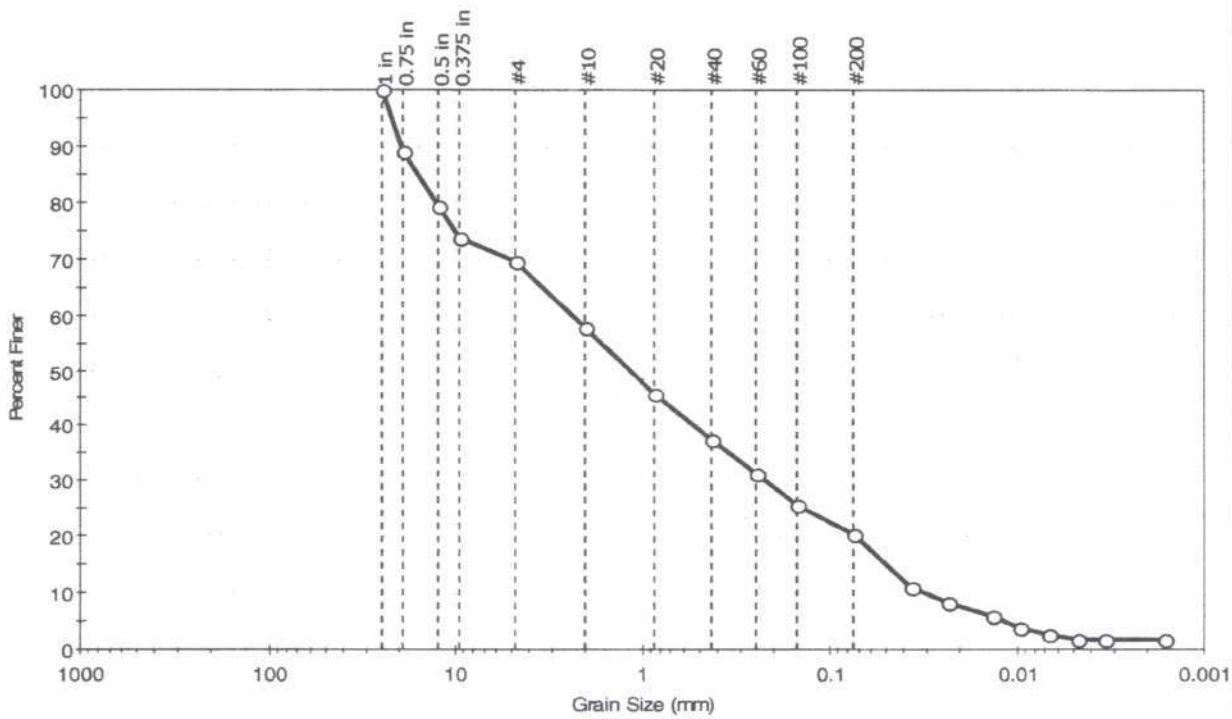
A-CAB3-2011-B8-52-54ft

GeoTesting EXPRESS

Client:	Apex Companies, LLC				
Project:	South Terminal Extension				
Location:	New Bedford, MA			Project No:	GTX-10697
Boring ID:	B-8	Sample Type:	bag	Tested By:	jbr
Sample ID:	---	Test Date:	09/27/11	Checked By:	jdt
Depth :	52-54 ft	Test Id:	217495		
Test Comment:	---				
Sample Description:	Moist, light olive green silty sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	30.2	49.3	20.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	89		
0.5 in	12.50	79		
0.375 in	9.50	74		
#4	4.75	70		
#10	2.00	58		
#20	0.85	46		
#40	0.42	37		
#60	0.25	31		
#100	0.15	26		
#200	0.075	20		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0371	11		
---	0.0231	8		
---	0.0134	6		
---	0.0096	4		
---	0.0068	3		
---	0.0048	2		
---	0.0034	2		
---	0.0016	2		

Coefficients

D_{85} = 15.9232 mm	D_{30} = 0.2227 mm
D_{60} = 2.3450 mm	D_{15} = 0.0502 mm
D_{50} = 1.1539 mm	D_{10} = 0.0318 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

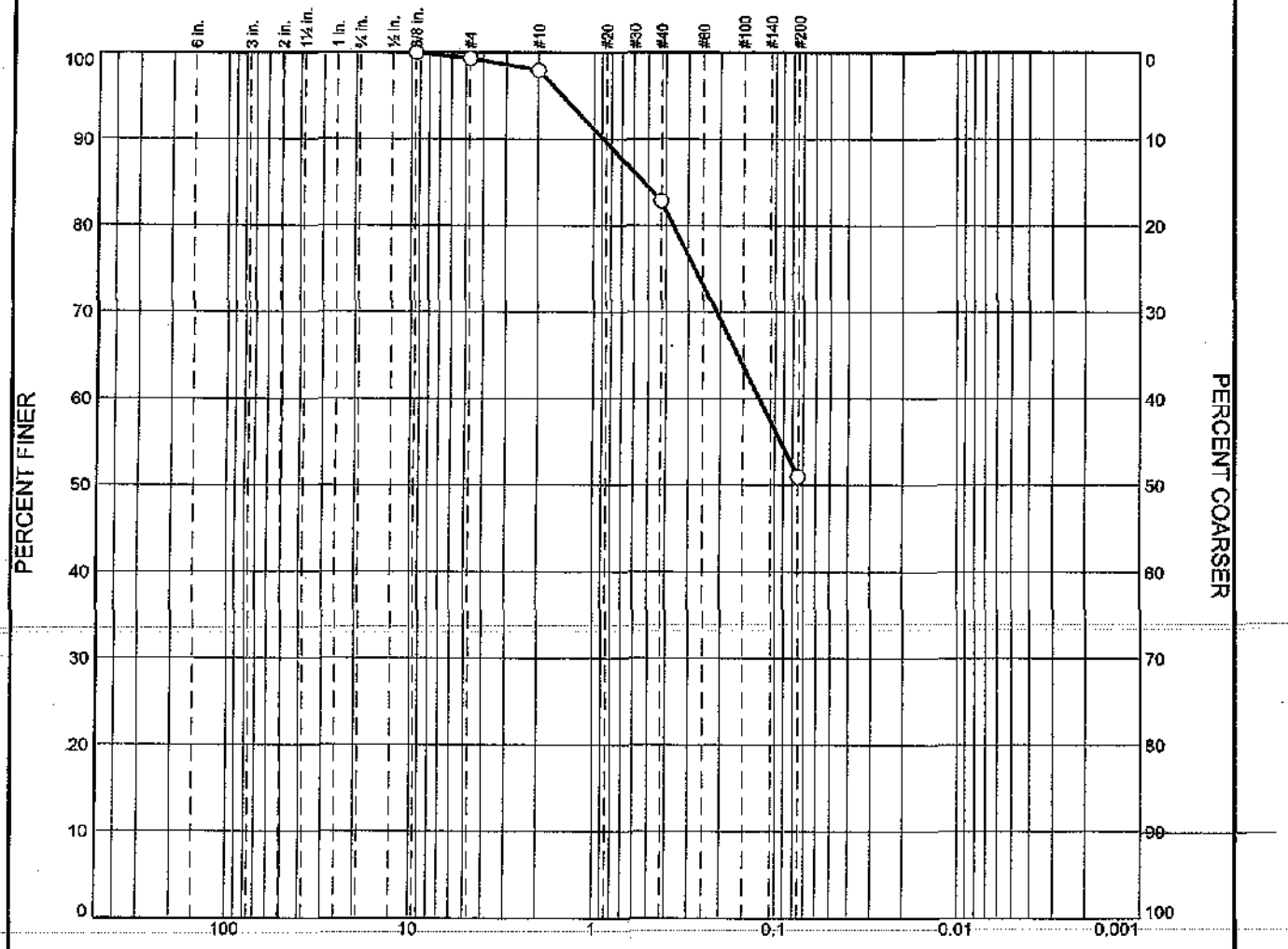
Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

A CAD3 2011 B8 52-54ft

printed 9/29/2011 2:59:59 PM

Particle Size Distribution Report



	% Cobbles	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.6	48.4	51.0	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5294	0.1225						

	Material Description	USCS	AASHTO
○		ML	A-4(0)

Project No. 0801006 **Client:** Apex Companies, LLC

Project: CAD II Area

○ **Source of Sample:** VC 2007-101 4-5 **Sample Number:** 0801006-05

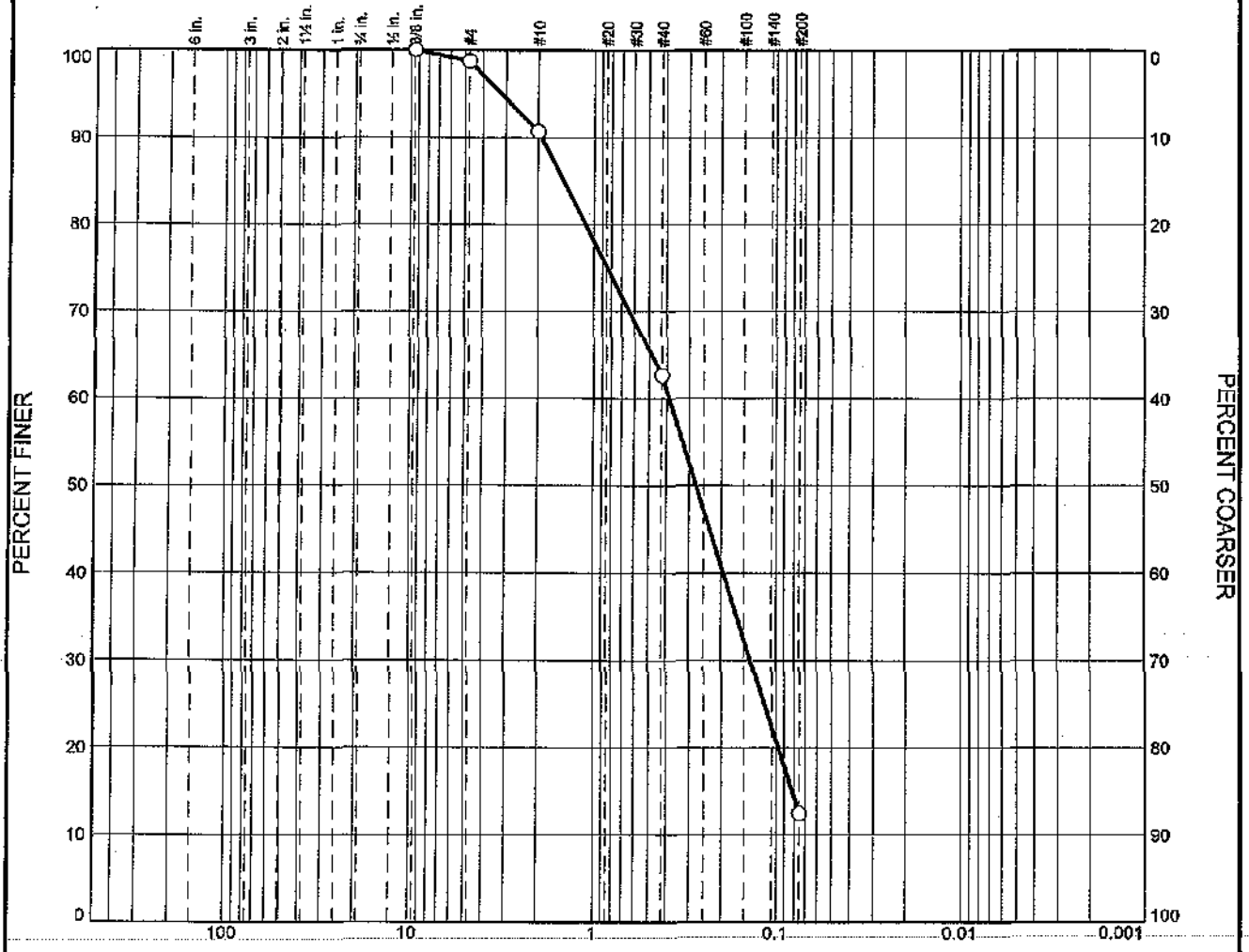
Remarks:

ALPHA WOODS HOLE LABS

Raynham, MA

Project

Particle Size Distribution Report



	% Cobbles	% Gravel	% Sand	% Silt	% Clay
○	0.0	1.3	86.3	12.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.4594	0.3872	0.2742	0.1375	0.0820			

	Material Description	USCS	AASHTO
○		SM	A-2-4(0)

Project No. 0801006 **Client:** Apex Companies, LLC

Project: CAD II Area

○ **Sample Source:** VC 2007-102 3-4 & 4-5 COMP **Sample No.:** 0801006-13

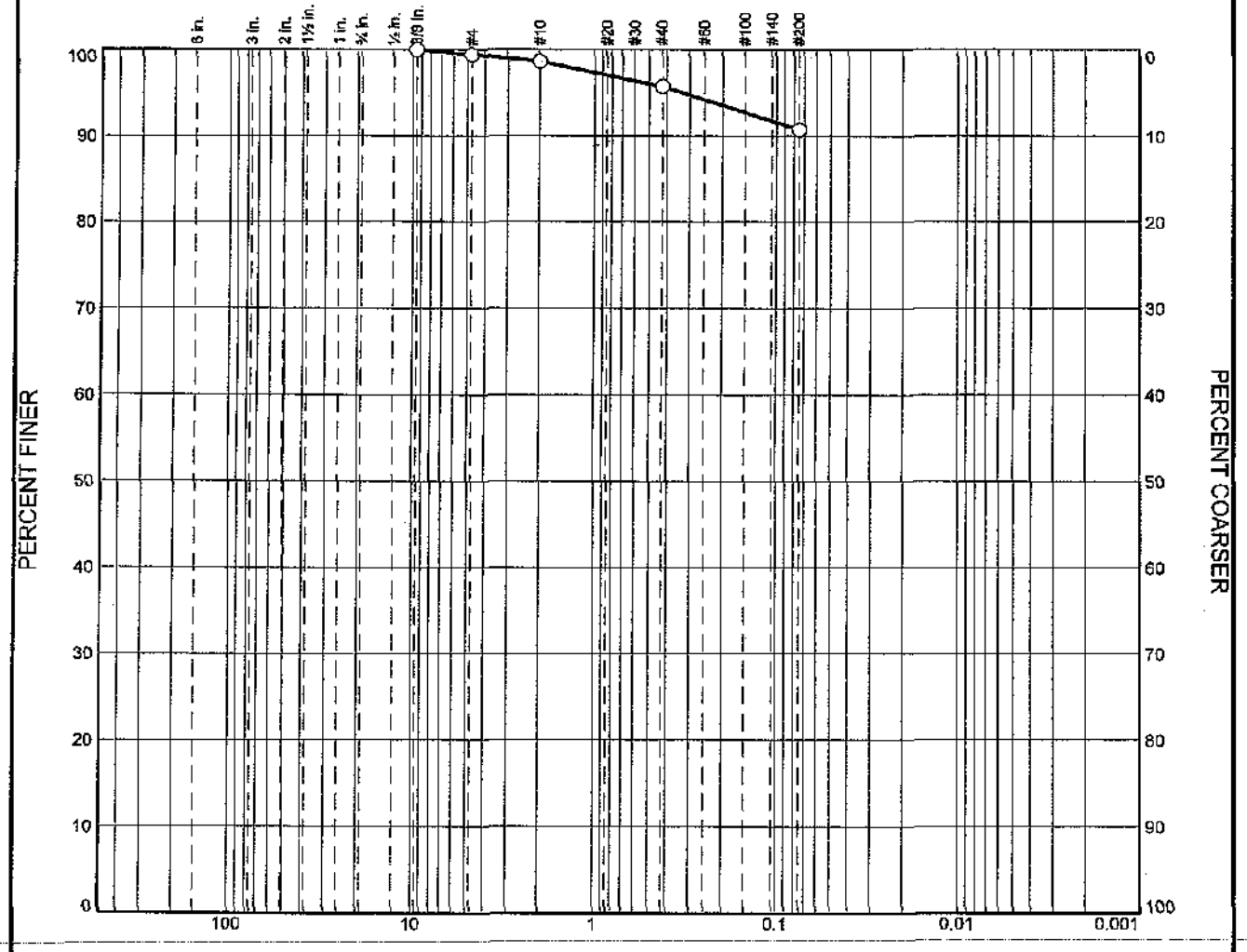
Remarks:

ALPHA WOODS HOLE LABS

Raynham, MA

Project

Particle Size Distribution Report



	% Cobbles	% Gravel	% Sand	% Silt	% Clay
○	0.0	0.6	8.6	90.8	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○										

Material Description	USCS	AASHTO
○	ML	A-4(0)

Project No. 0801007 **Client:** Apex Companies, LLC

Project: CAD II Area

○ **Source of Sample:** VC 2007-103 1-2 **Sample Number:** 0801007-02

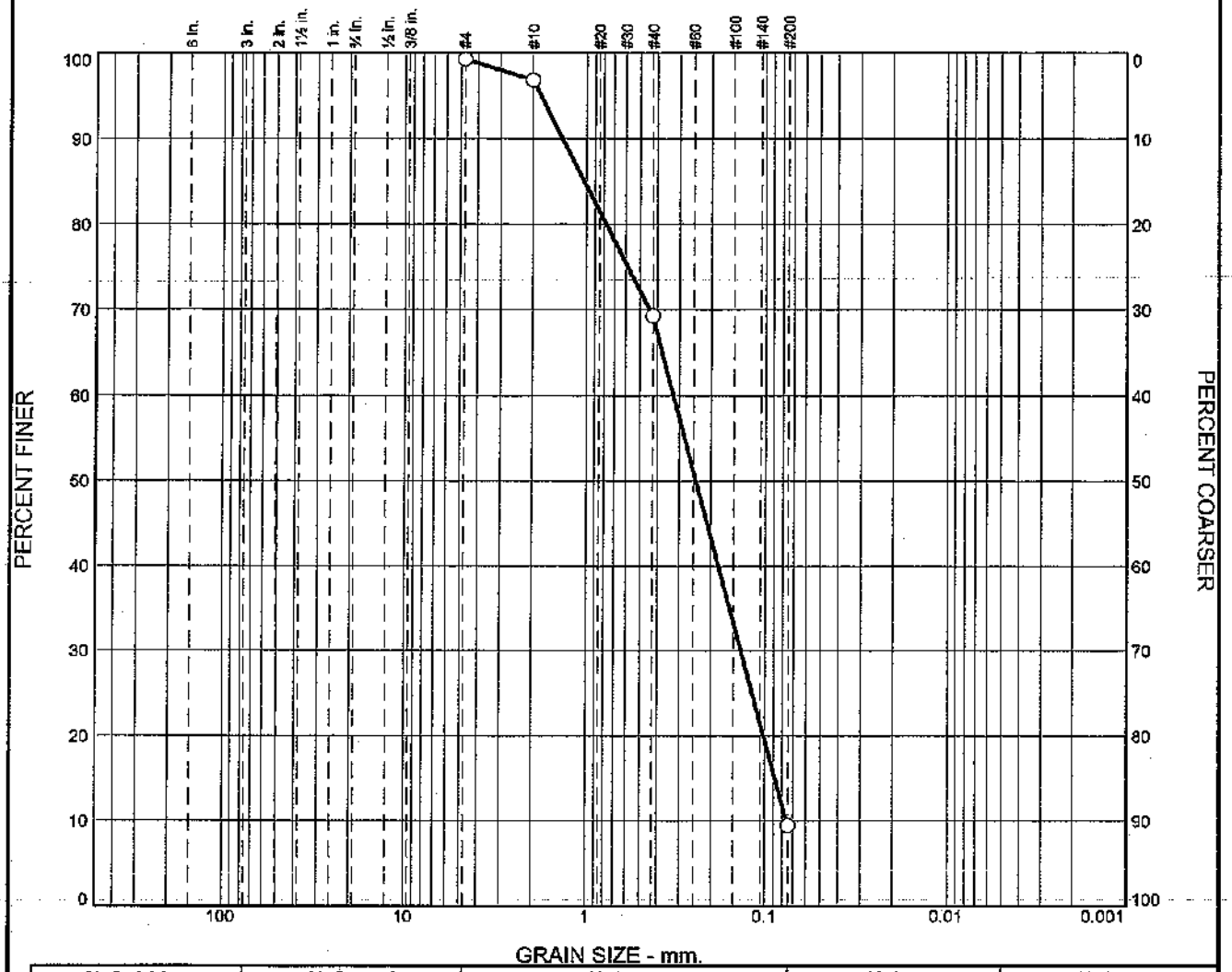
Remarks:

ALPHA WOODS HOLE LABS

Raynham, MA

Project

Particle Size Distribution Report



	% Cobbles	% Gravel	% Sand	% Silt	% Clay
O			89.9	9.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
O			1.0271	0.3248	0.2431	0.1362	0.0882	0.0763	0.75	4.26

	Material Description	USCS	AASHTO
O		SP-SM	A-3

Project No. 0801008 **Client:** Apex Companies, LLC.

Project: CAD II Area

O **Source of Sample:** VC 2007-104 1-2 **Sample Number:** 0801008-02

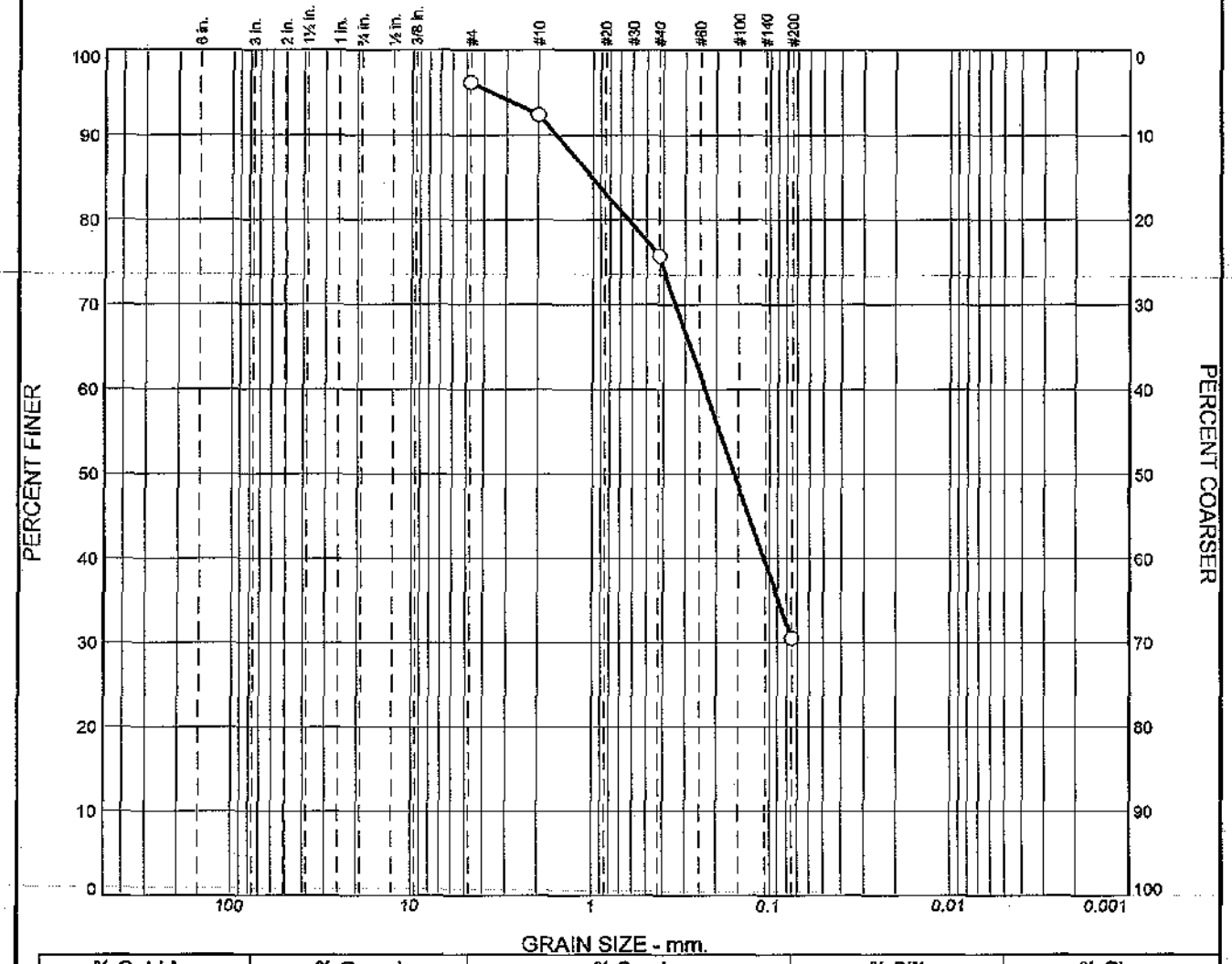
Remarks:

ALPHA WOODS HOLE LABS

Raynham, MA

Project

Particle Size Distribution Report



	% Cobbles	% Gravel	% Sand	% Silt	% Clay
○			65.6	30.6	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.0039	0.2323	0.1582					

	Material Description	USCS	AASHTO
○		SM	A-2-4(0)

Project No. 0801008 **Client:** Apex Companies, LLC.

Project: CAD II Area

○ **Source of Sample:** VC 2007-105 2-3 **Sample Number:** 0801008-05

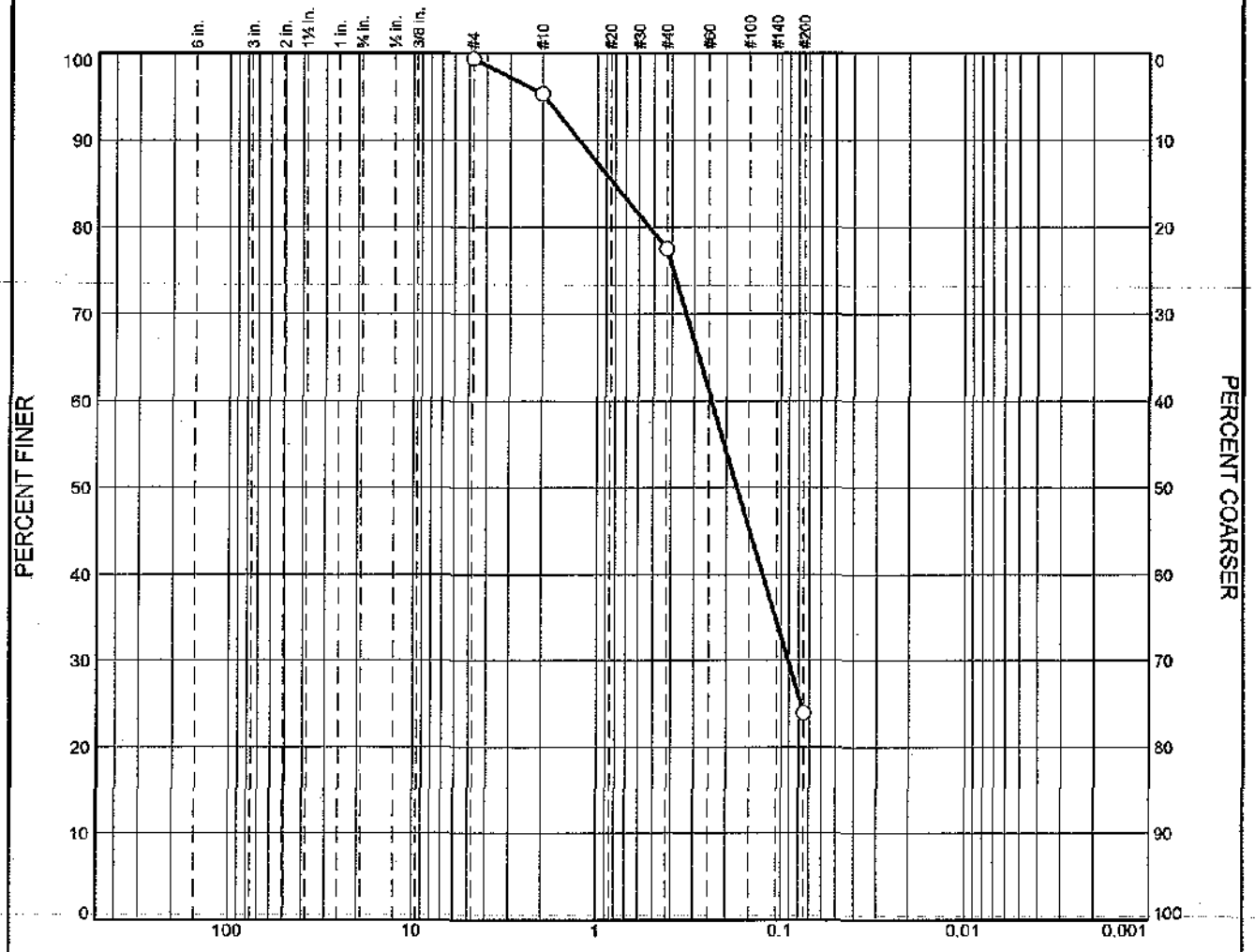
Remarks:

ALPHA WOODS HOLE LABS

Raynham, MA

Project

Particle Size Distribution Report



	% Cobbles	% Gravel	% Sand	% Silt	% Clay
o			75.5	23.9	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
o			0.8133	0.2409	0.1744	0.0913				

	Material Description	USCS	AASHTO
o		SM	A-2-4(0)

Project No. 0801008 **Client:** Apex Companies, LLC.

Project: CAD II Area

o **Sample Source:** VC 2007-105 5-6 & 6-7 COMP **Sample No.:** 0801008-07

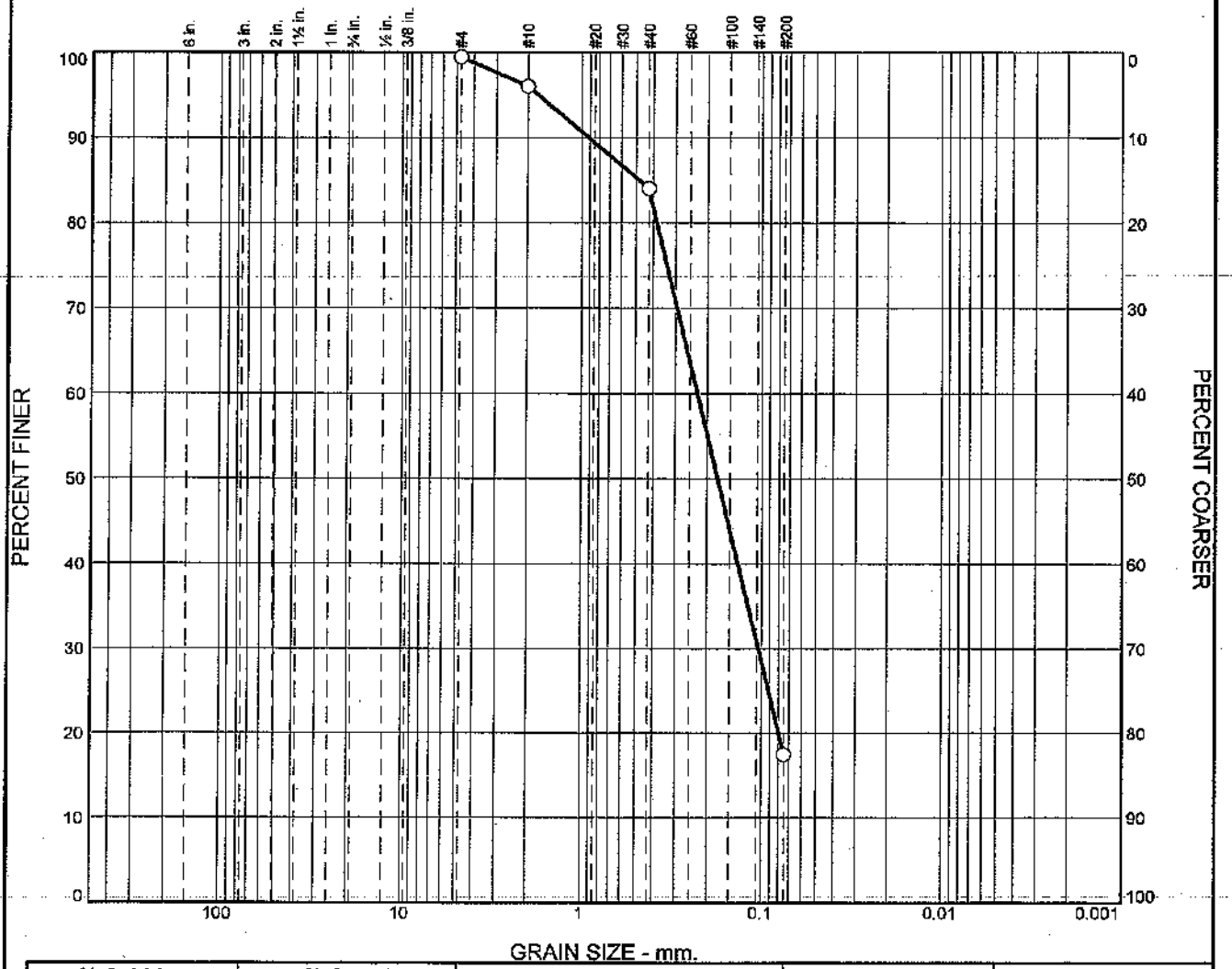
Remarks:

ALPHA WOODS HOLE LABS

Raynham, MA

Project

Particle Size Distribution Report



	% Cobbles	% Gravel	% Sand	% Silt	% Clay
○			82.0	17.5	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4782	0.2270	0.1749	0.1039				

	Material Description	USCS	AASHTO
○		SM	A-2-4(0)

Project No. 0801008 **Client:** Apex Companies, LLC.

Project: CAD II Area

○ **Source of Sample:** VC 2007-118 1-2 **Sample Number:** 0801008-09

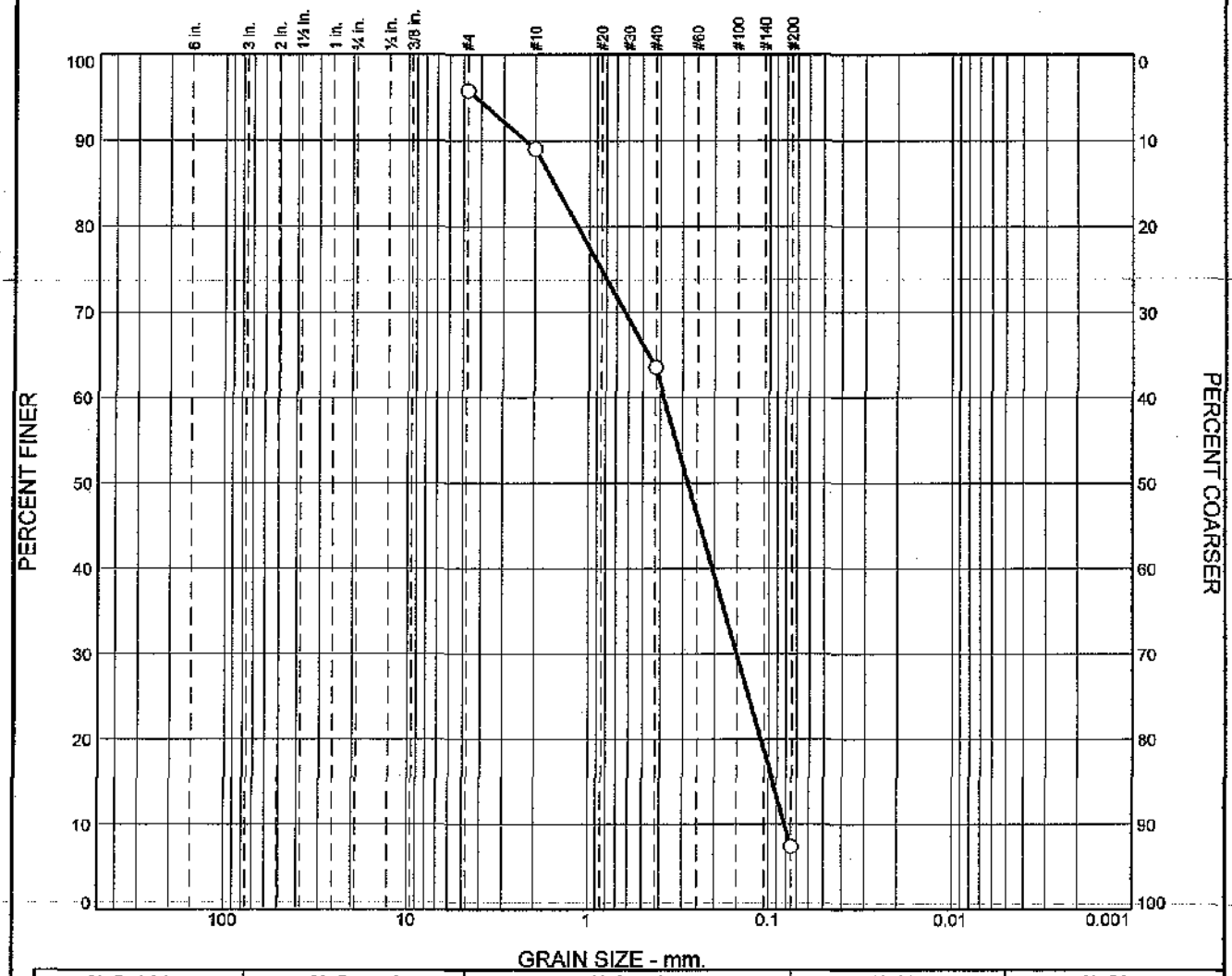
Remarks:

ALPHA WOODS HOLE LABS

Raynham, MA

Project

Particle Size Distribution Report



	% Cobbles	% Gravel	% Sand	% Silt	% Clay
○			88.4	7.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			1.5650	0.3807	0.2795	0.1507	0.0948	0.0812	0.73	4.69

	Material Description	USCS	AASHTO
○		SP-SM	A-3

Project No. 0801008 **Client:** Apex Companies, LLC.

Project: CAD II Area

○ **Source of Sample:** VC 2007-119 0-1 **Sample Number:** 0801008-11

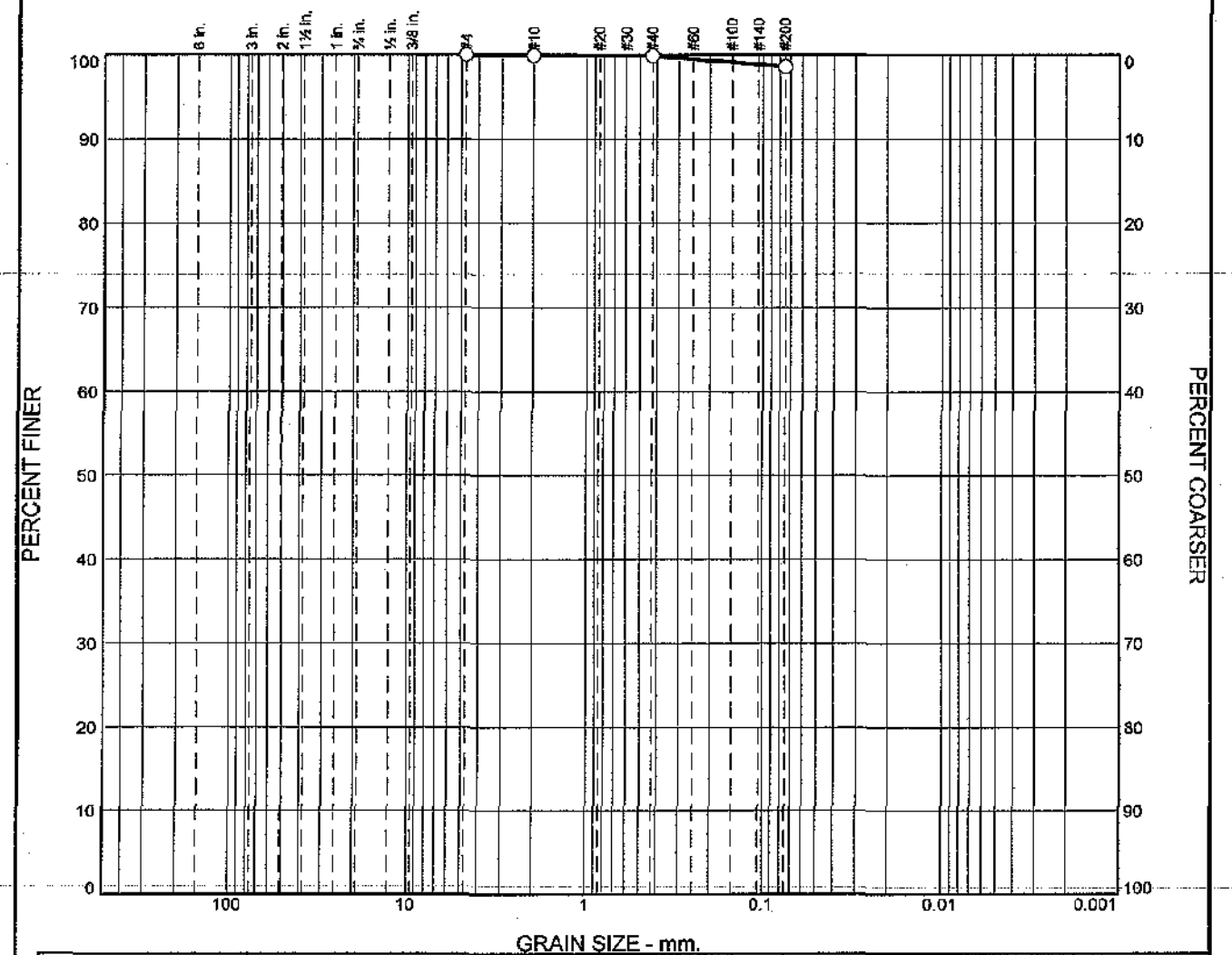
Remarks:

ALPHA WOODS HOLE LABS

Raynham, MA

Project

Particle Size Distribution Report



	% Cobbles	% Gravel	% Sand	% Silt	% Clay
o	0.0	0.0	1.4	98.6	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
o										

	Material Description	USCS	AASHTO
o		ML	A-4(0)

Project No. 0801008 **Client:** Apex Companies, LLC.

Project: CAD II Area

o **Source of Sample:** VC 2007-119 2-3 **Sample Number:** 0801008-13

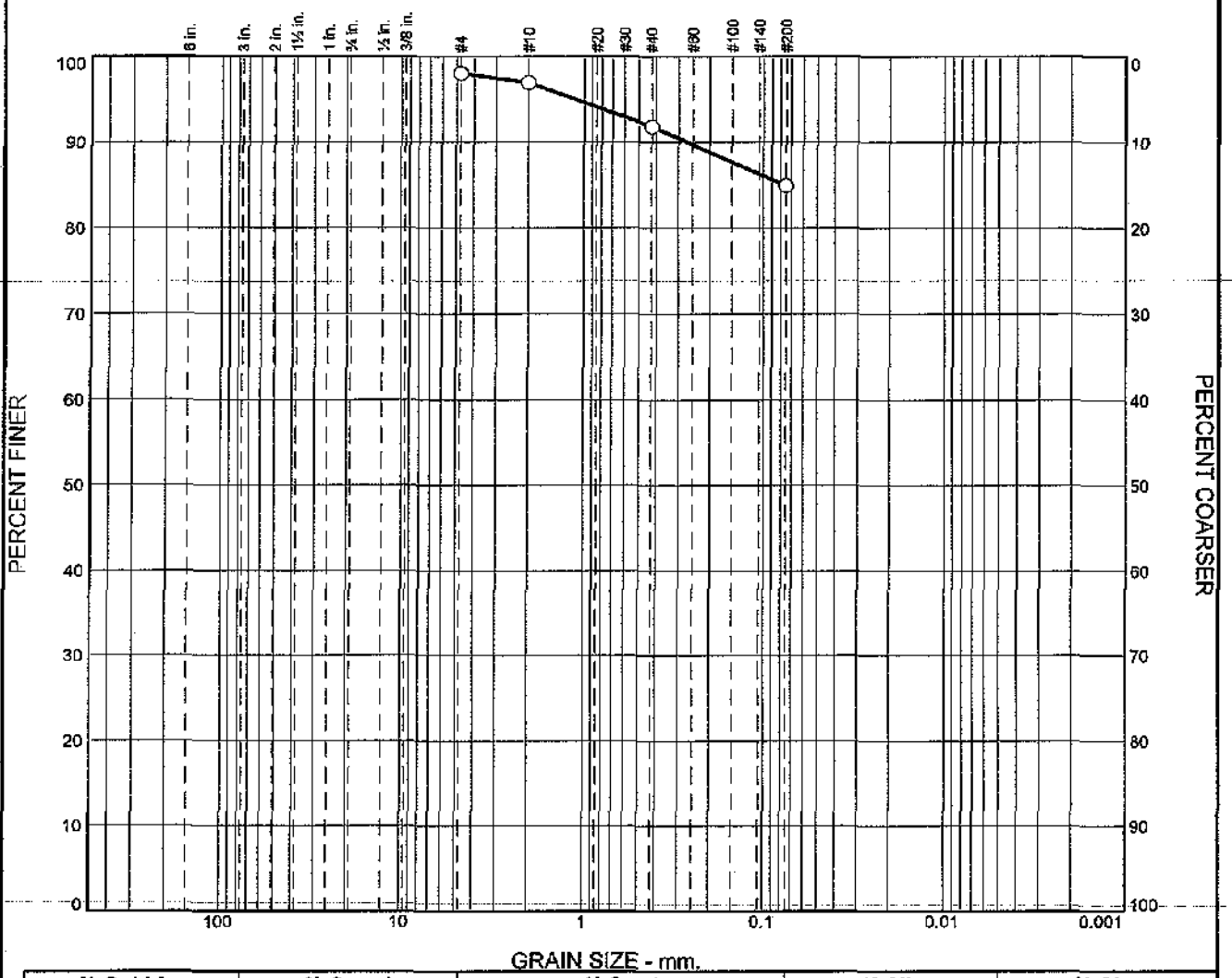
ALPHA WOODS HOLE LABS

Raynham, MA

Remarks:

Project

Particle Size Distribution Report



	% Cobbles	% Gravel	% Sand	% Silt	% Clay
○			13.1	85.0	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0756							

	Material Description	USCS	AASHTO
○		ML	A-4(0)

Project No. 0801008 **Client:** Apex Companies, LLC.

Project: CAD II Area

○ **Sample Source:** VC 2007-120 2-3 & 3-4 COMP **Sample No.:** 0801008-16

Remarks:

ALPHA WOODS HOLE LABS

Raynham, MA

Project

GRAIN SIZE DISTRIBUTION TEST DATA

1/24/2008

Client: Apex Companies, LLC.
Project: CAD II Area
Project Number: 0801008
Location: VC 2007-104 1-2
Sample Number: 0801008-02
USCS Classification: SP-SM **AASHTO Classification:** A-3
Sieve opening list: BS Bulk Sieve

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 125.47
Tare Wt. = 0.00
Minus #200 from wash = 8.9%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
137.70	0.00	#4	515.82	514.83	99.3
		#10	487.92	484.60	96.9
		#40	414.27	376.28	69.3
		#200	424.71	342.28	9.4

Fractional Components

Cobbles	Gravel	Sand	Silt	Clay
		89.9		

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0763	0.0882	0.1019	0.1362	0.2431	0.3248	0.7758	1.0271	1.3600	1.8007

Fineness Modulus	C_u	C_c
1.50	4.26	0.75

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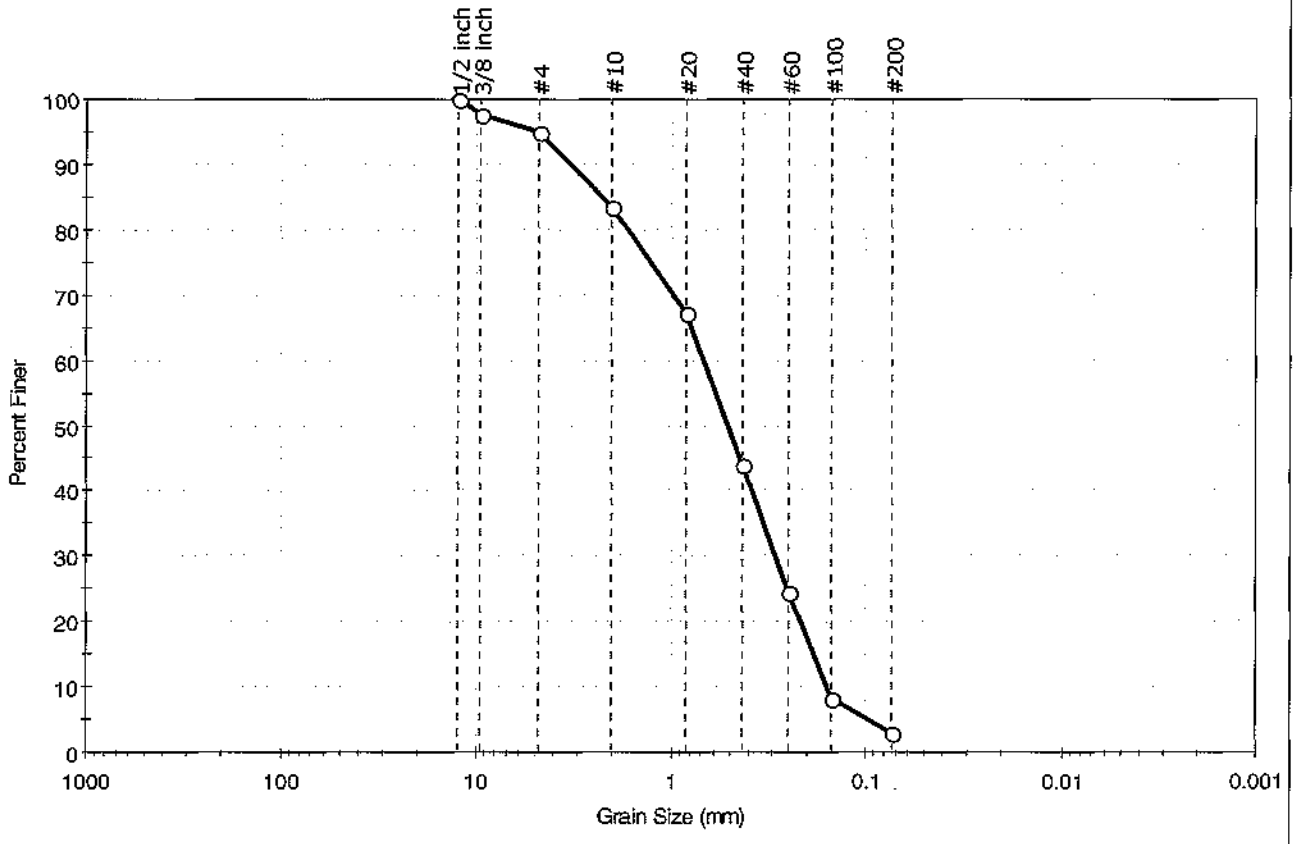
Client:	Apex Companies, LLC				
Project:	New Bedford CAD II (6615.003)				
Location:	New Bedford, MA			Project No:	GTX-7817
Boring ID: ---		Sample Type:	bag	Tested By:	ap
Sample ID:	B01-CAD-072007	Test Date:	10/24/07	Checked By:	jdt
Depth :	4-6 ft	Test Id:	121641		
Test Comment:	---				
Sample Description:	Moist, dark grayish brown sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	4.9	92.2	2.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1/2 inch	12.50	100		
3/8 inch	9.51	98		
#4	4.75	95		
#10	2.00	83		
#20	0.84	67		
#40	0.42	44		
#60	0.25	25		
#100	0.15	8		
#200	0.074	3		

Coefficients

D_{85} = 2.2572 mm	D_{30} = 0.2894 mm
D_{60} = 0.6797 mm	D_{15} = 0.1847 mm
D_{50} = 0.5061 mm	D_{10} = 0.1578 mm
C_u = 4.307	C_c = 0.781

Classification

ASTM: Poorly graded sand (SP)

AASHTO: Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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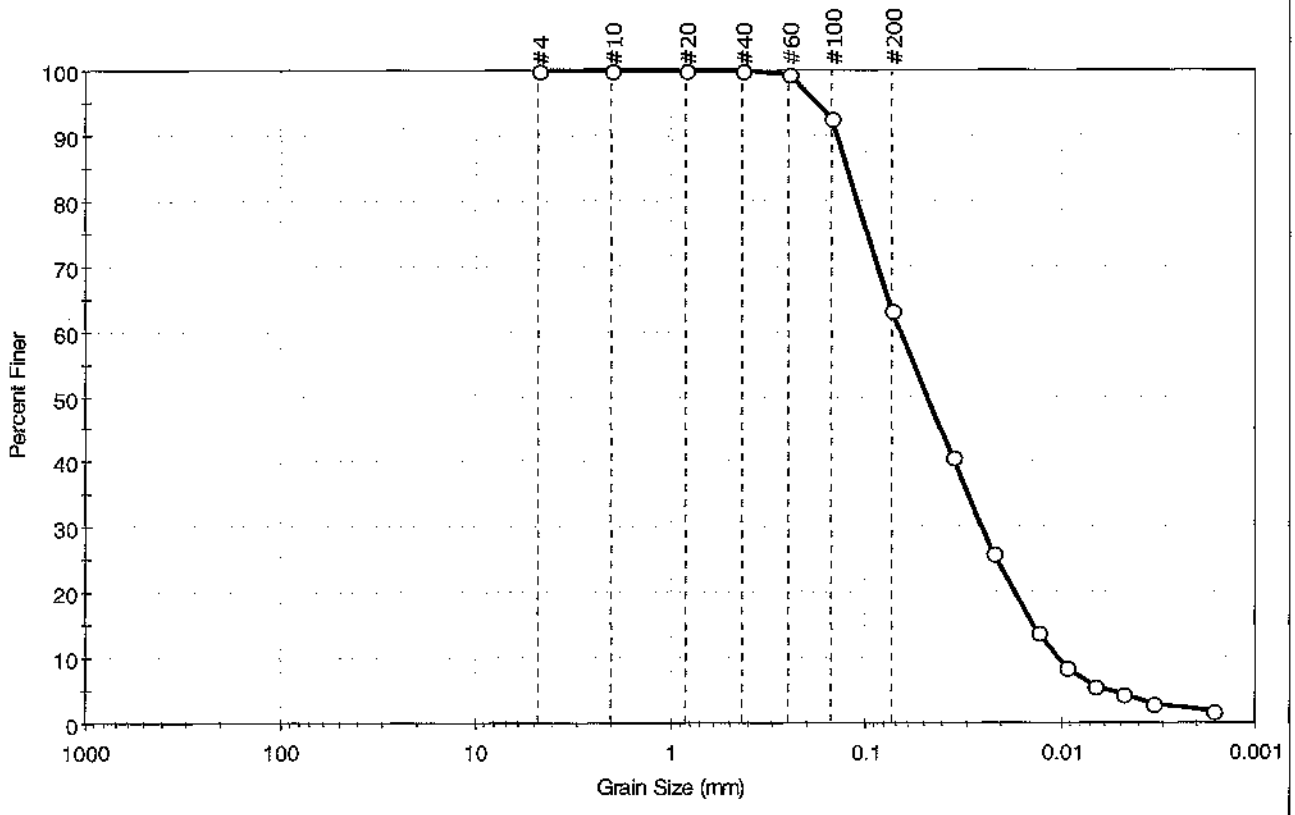
Client:	Apex Companies, LLC				
Project:	New Bedford CAD II (6615.003)				
Location:	New Bedford, MA			Project No:	GTX-7817
Boring ID: ---		Sample Type: bag		Tested By:	ap
Sample ID:	B01-CAD-072007	Test Date:	10/25/07	Checked By:	jdt
Depth :	26-28 ft	Test Id:	121646		
Test Comment:	---				
Sample Description:	Moist, light olive brown sandy silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
---	0.0	36.8	63.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.84	100		
#40	0.42	100		
#60	0.25	99		
#100	0.15	93		
#200	0.074	63		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0355	41		
---	0.0220	26		
---	0.0133	14		
---	0.0095	8		
---	0.0068	6		
---	0.0048	4		
---	0.0034	3		
---	0.0017	2		

Coefficients

D_{85} =0.1244 mm	D_{30} =0.0250 mm
D_{60} =0.0667 mm	D_{15} =0.0139 mm
D_{50} =0.0480 mm	D_{10} =0.0104 mm
C_u =N/A	C_c =N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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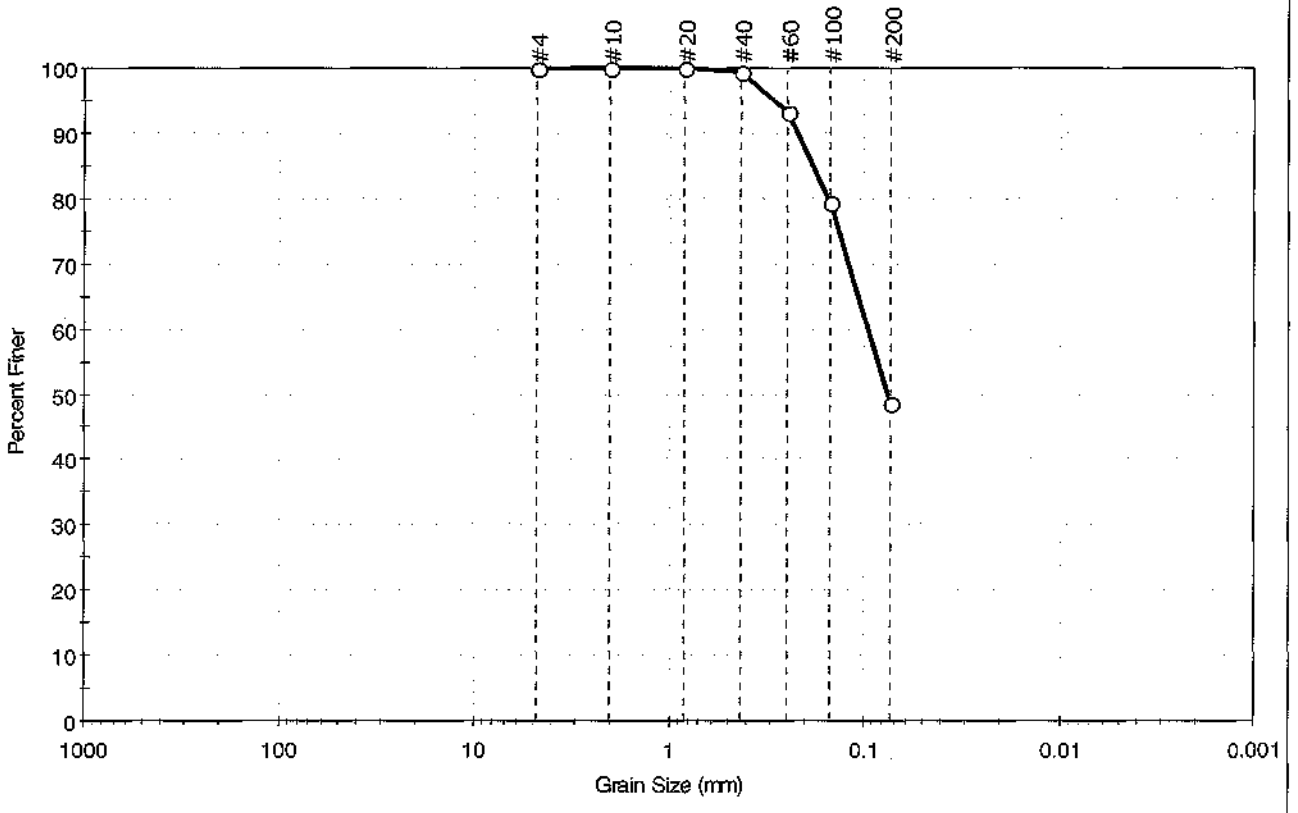
Client:	Apex Companies, LLC				
Project:	New Bedford CAD II (6615.003)				
Location:	New Bedford, MA			Project No:	GTX-7817
Boring ID:	---	Sample Type:	bag	Tested By:	ap
Sample ID:	B01-CAD-072007	Test Date:	10/24/07	Checked By:	jdt
Depth :	44-46 ft	Test Id:	121642		
Test Comment:	---				
Sample Description:	Moist, greenish gray silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
—	0.0	51.5	48.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.84	100		
#40	0.42	99		
#60	0.25	93		
#100	0.15	79		
#200	0.074	49		

Coefficients

D_{85} = 0.1841 mm	D_{30} = N/A
D_{60} = 0.0960 mm	D_{15} = N/A
D_{50} = 0.0765 mm	D_{10} = N/A
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

GeoTesting express
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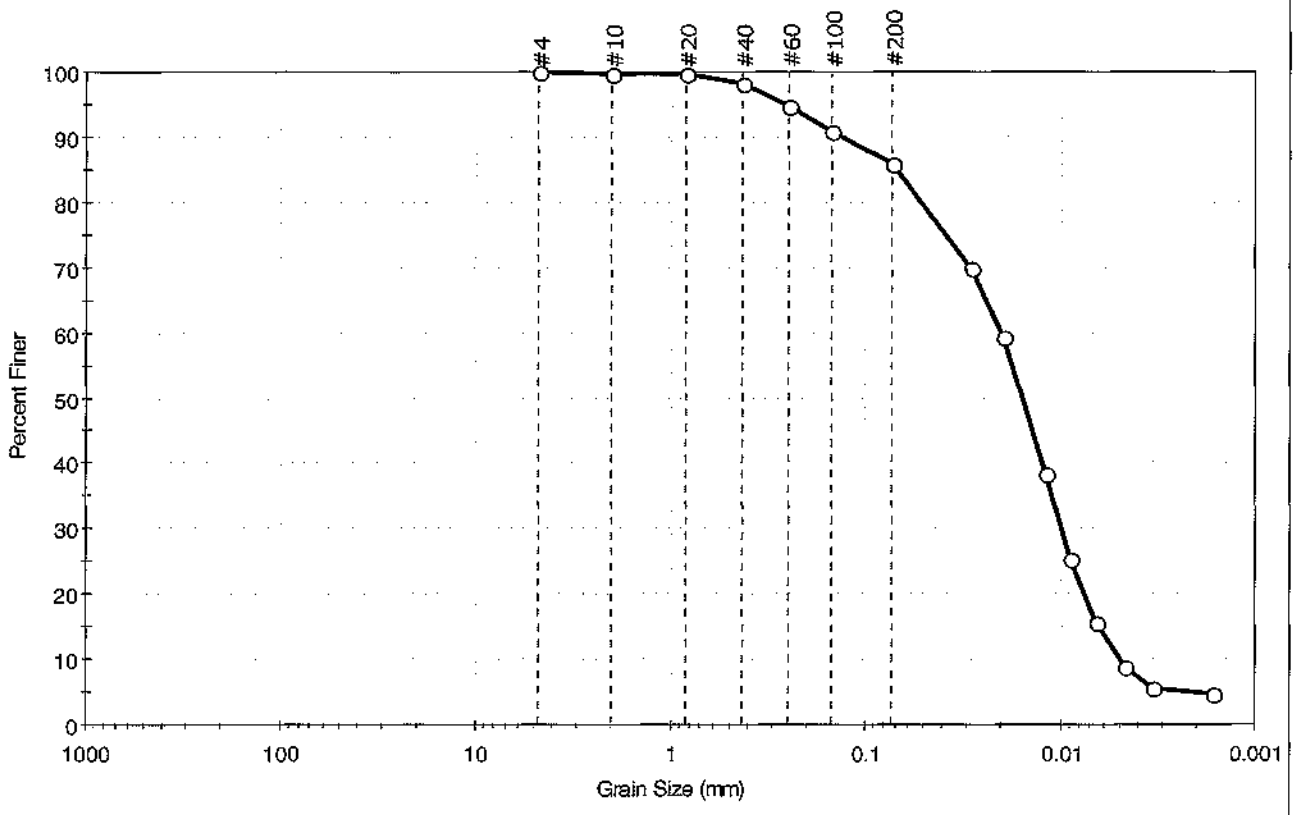
Client:	Apex Companies, LLC				
Project:	New Bedford CAD II (6615.003)				
Location:	New Bedford, MA			Project No:	GTX-7817
Boring ID:	---	Sample Type:	bag	Tested By:	ap
Sample ID:	B01-CAD-072007	Test Date:	10/25/07	Checked By:	jdt
Depth :	60-62 ft	Test Id:	121647		
Test Comment:	---				
Sample Description:	Moist, gray silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	0.0	14.1	85.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.84	100		
#40	0.42	98		
#60	0.25	95		
#100	0.15	91		
#200	0.074	86		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0290	70		
---	0.0198	59		
---	0.0119	38		
---	0.0091	25		
---	0.0066	16		
---	0.0047	9		
---	0.0034	6		
---	0.0017	5		

Coefficients

D_{85} = 0.0702 mm	D_{30} = 0.0100 mm
D_{60} = 0.0204 mm	D_{15} = 0.0064 mm
D_{50} = 0.0158 mm	D_{10} = 0.0050 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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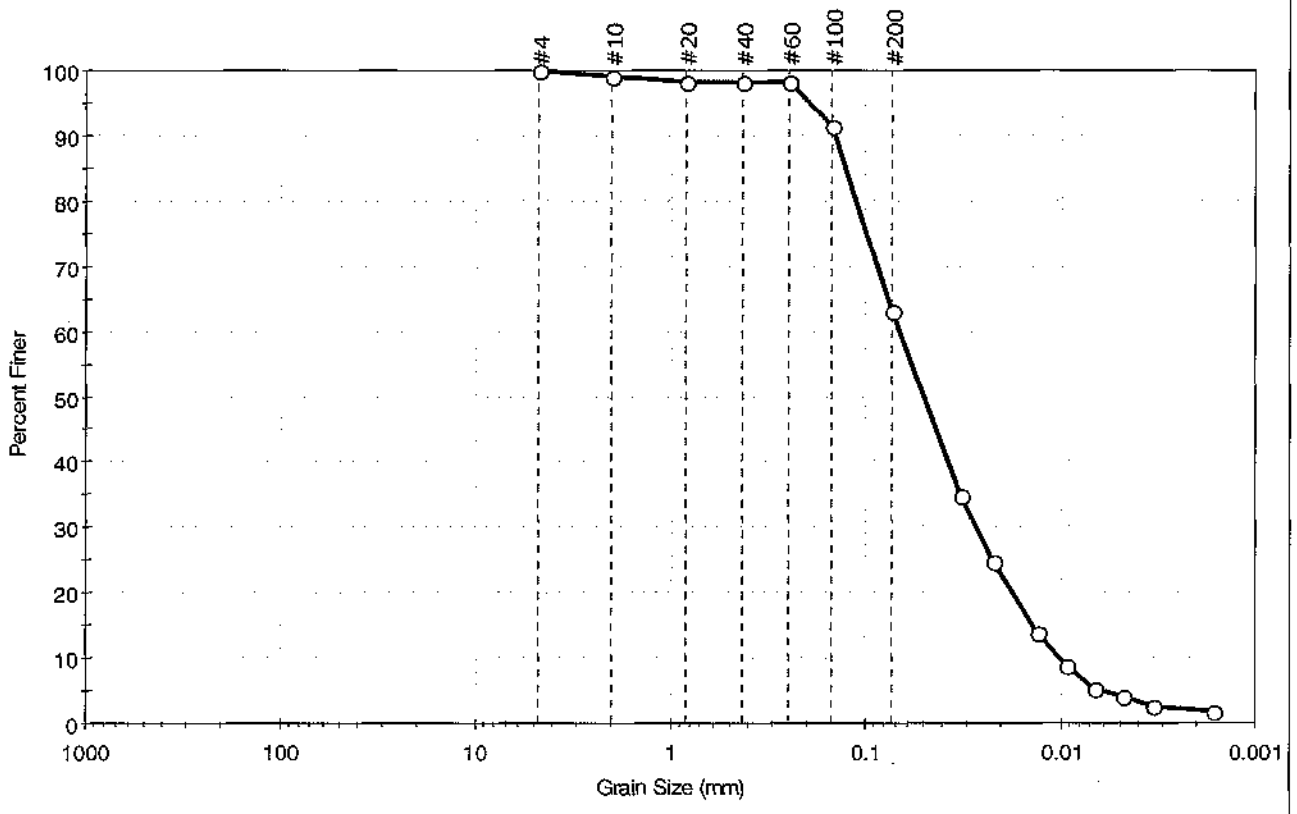
Client:	Apex Companies, LLC				
Project:	New Bedford CAD II (6615.003)				
Location:	New Bedford, MA			Project No:	GTX-7817
Boring ID:	---	Sample Type:	bag	Tested By:	ap
Sample ID:	B04-CAD-072007	Test Date:	10/25/07	Checked By:	jdt
Depth :	9-11 ft	Test Id:	121648		

Test Comment: ---
Sample Description: Moist, light olive gray sandy silt
Sample Comment: ---

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	0.0	36.7	63.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	99		
#20	0.84	98		
#40	0.42	98		
#60	0.25	98		
#100	0.15	91		
#200	0.074	63		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0325	35		
---	0.0223	25		
---	0.0132	14		
---	0.0094	9		
---	0.0068	5		
---	0.0048	4		
---	0.0034	3		
---	0.0017	2		

Coefficients

D_{85} =0.1271 mm	D_{30} =0.0271 mm
D_{60} =0.0674 mm	D_{15} =0.0139 mm
D_{50} =0.0505 mm	D_{10} =0.0102 mm
C_u =N/A	C_c =N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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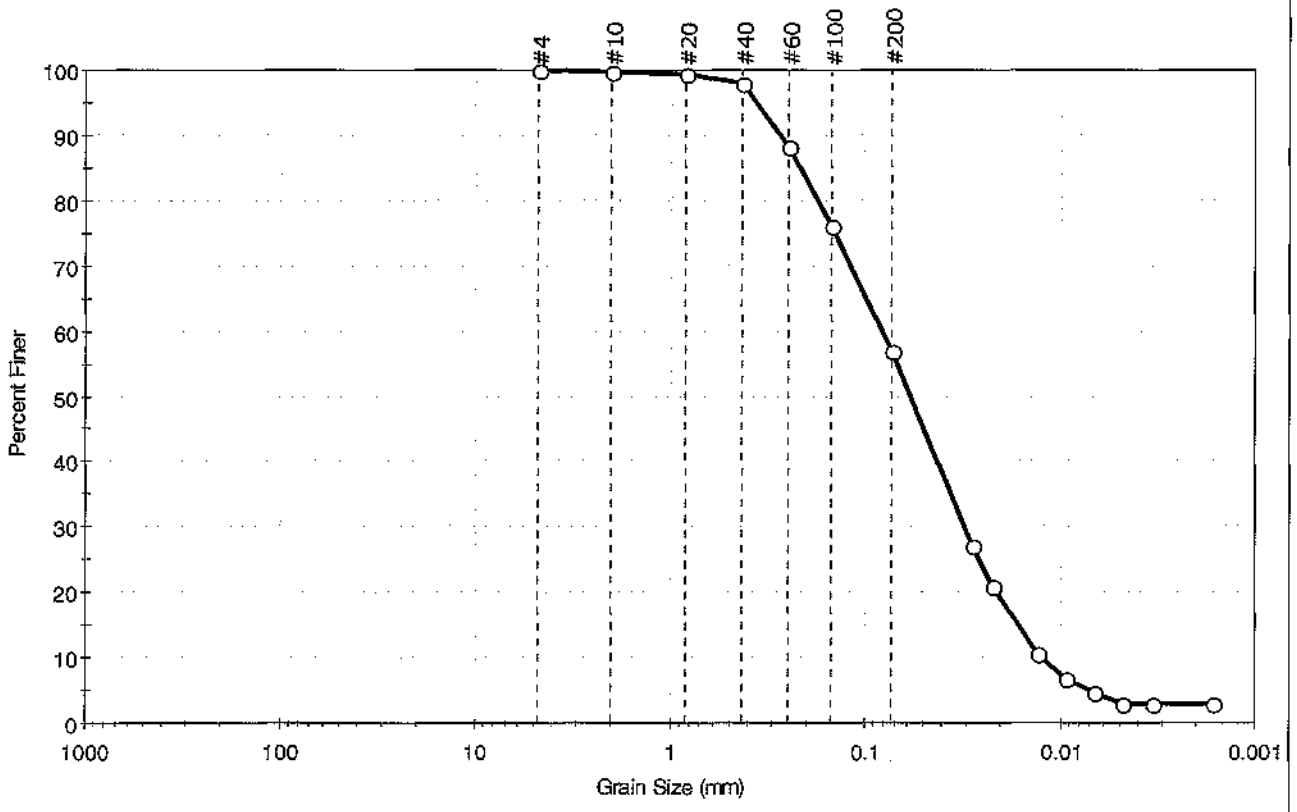
Client:	Apex Companies, LLC				
Project:	New Bedford CAD II (6615.003)				
Location:	New Bedford, MA			Project No:	GTX-7817
Boring ID:	---	Sample Type:	bag	Tested By:	ap
Sample ID:	B04-CAD-072007	Test Date:	10/25/07	Checked By:	jdt
Depth :	25-27 ft	Test Id:	121649		
Test Comment:	---				
Sample Description:	Moist, mottled light olive brown and red sandy silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	0.0	43.0	57.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.84	99		
#40	0.42	98		
#60	0.25	88		
#100	0.15	76		
#200	0.074	57		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0283	27		
---	0.0223	21		
---	0.0130	11		
---	0.0095	7		
---	0.0067	5		
---	0.0048	3		
---	0.0034	3		
---	0.0017	3		

Coefficients

D_{85} =0.2184 mm	D_{30} =0.0309 mm
D_{60} =0.0826 mm	D_{15} =0.0164 mm
D_{50} =0.0590 mm	D_{10} =0.0124 mm
C_u =N/A	C_c =N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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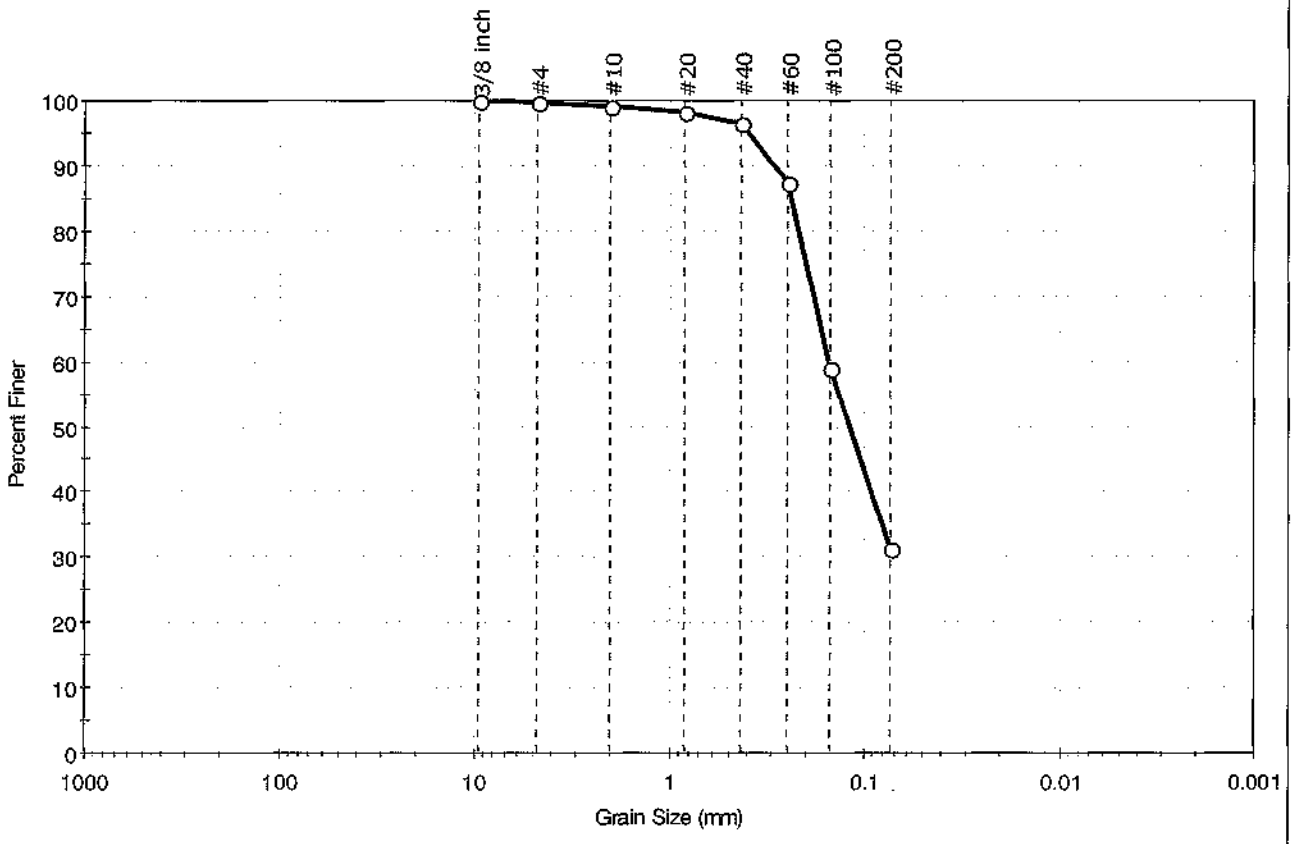
Client:	Apex Companies, LLC		
Project:	New Bedford CAD II (6615.003)		
Location:	New Bedford, MA	Project No:	GTX-7817
Boring ID: ---	Sample Type: bag	Tested By:	ap
Sample ID:B04-CAD-072007	Test Date: 10/24/07	Checked By:	jdt
Depth : 30-32 ft	Test Id: 121643		
Test Comment: ---			
Sample Description: Moist, light yellowish brown silty sand			
Sample Comment: ---			

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	0.4	68.3	31.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
3/8 inch	9.51	100		
#4	4.75	100		
#10	2.00	99		
#20	0.84	98		
#40	0.42	97		
#60	0.25	87		
#100	0.15	59		
#200	0.074	31		

Coefficients

D_{85} =0.2394 mm	D_{30} =N/A
D_{60} =0.1515 mm	D_{15} =N/A
D_{50} =0.1185 mm	D_{10} =N/A
C_u =N/A	C_c =N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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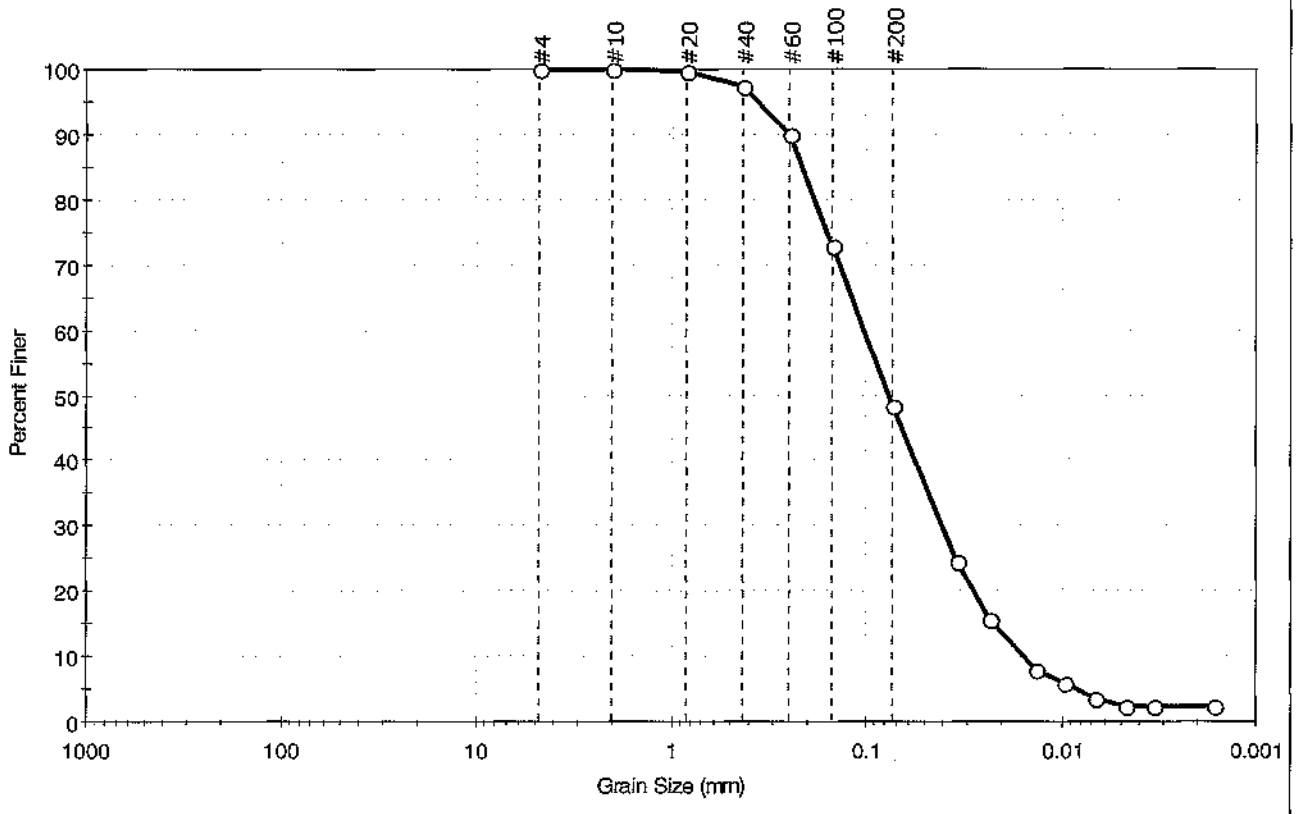
Client:	Apex Companies, LLC				
Project:	New Bedford CAD II (6615.003)				
Location:	New Bedford, MA			Project No:	GTX-7817
Boring ID:	---	Sample Type:	bag	Tested By:	ap
Sample ID:	B04-CAD-072007	Test Date:	10/25/07	Checked By:	jdt
Depth :	45-47 ft	Test Id:	121650		
Test Comment:	---				
Sample Description:	Moist, gray silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



%Cobble	%Gravel	%Sand	%Silt & Clay Size
---	0.0	51.6	48.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.84	100		
#40	0.42	97		
#60	0.25	90		
#100	0.15	73		
#200	0.074	48		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0342	24		
---	0.0231	16		
---	0.0133	8		
---	0.0095	6		
---	0.0068	4		
---	0.0048	2		
---	0.0034	2		
---	0.0017	2		

Coefficients

D_{85} =0.2148 mm	D_{30} =0.0409 mm
D_{60} =0.1034 mm	D_{15} =0.0220 mm
D_{50} =0.0775 mm	D_{10} =0.0154 mm
C_u =N/A	C_c =N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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GeoTesting express
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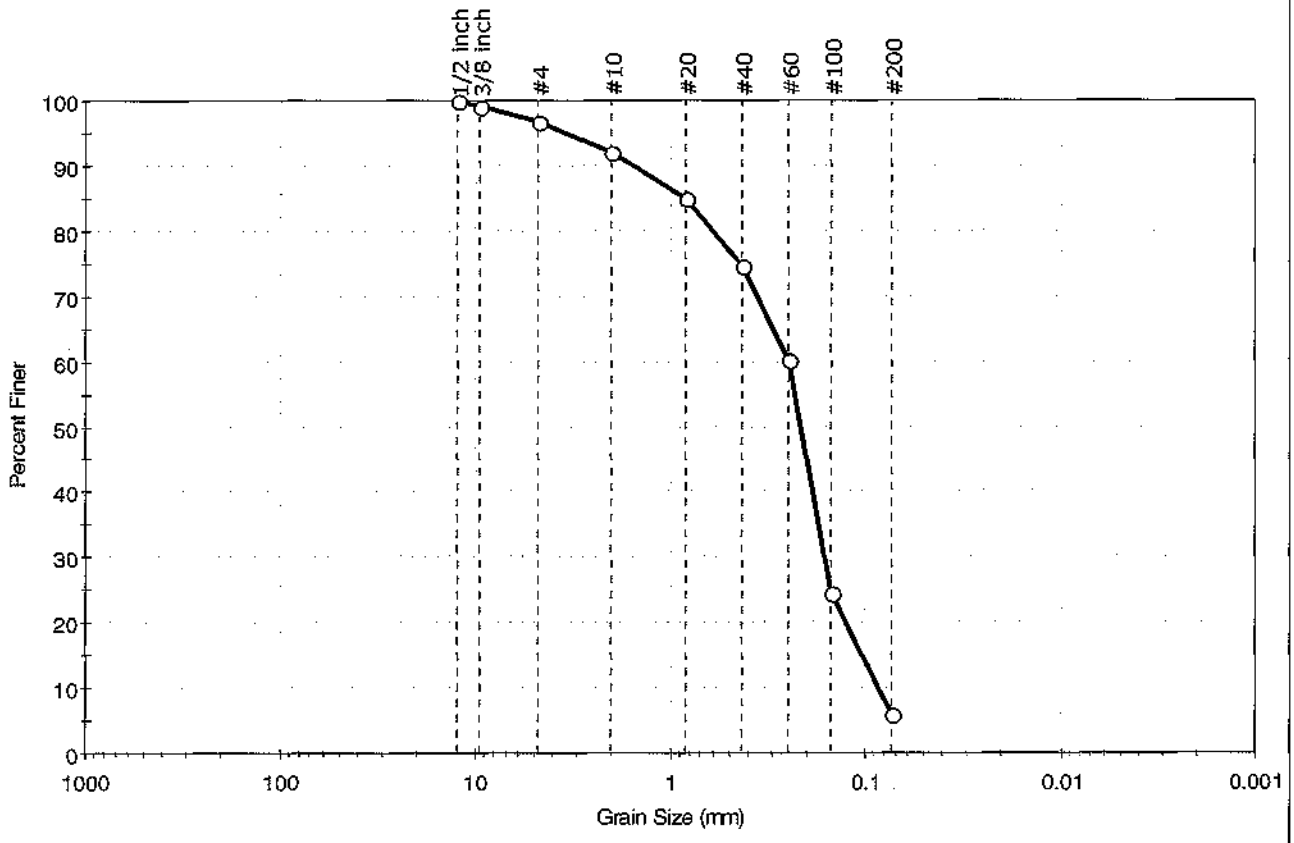
Client:	Apex Companies, LLC				
Project:	New Bedford CAD II (6615.003)				
Location:	New Bedford, MA			Project No:	GTX-7817
Boring ID:	---	Sample Type:	bag	Tested By:	ap
Sample ID:	B03-CAD-072007	Test Date:	10/24/07	Checked By:	jdt
Depth :	35-37 ft	Test Id:	121644		
Test Comment:	---				
Sample Description:	Moist, greenish gray sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	3.2	90.8	6.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1/2 inch	12.50	100		
3/8 inch	9.51	99		
#4	4.75	97		
#10	2.00	92		
#20	0.84	85		
#40	0.42	75		
#60	0.25	60		
#100	0.15	25		
#200	0.074	6		

Coefficients

D_{85} = 0.8530 mm	D_{30} = 0.1612 mm
D_{60} = 0.2494 mm	D_{15} = 0.1038 mm
D_{50} = 0.2156 mm	D_{10} = 0.0860 mm
C_u = 2.900	C_c = 1.212

Classification

ASTM N/A

AASHTO Fine Sand (A-3 (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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GeoTesting express
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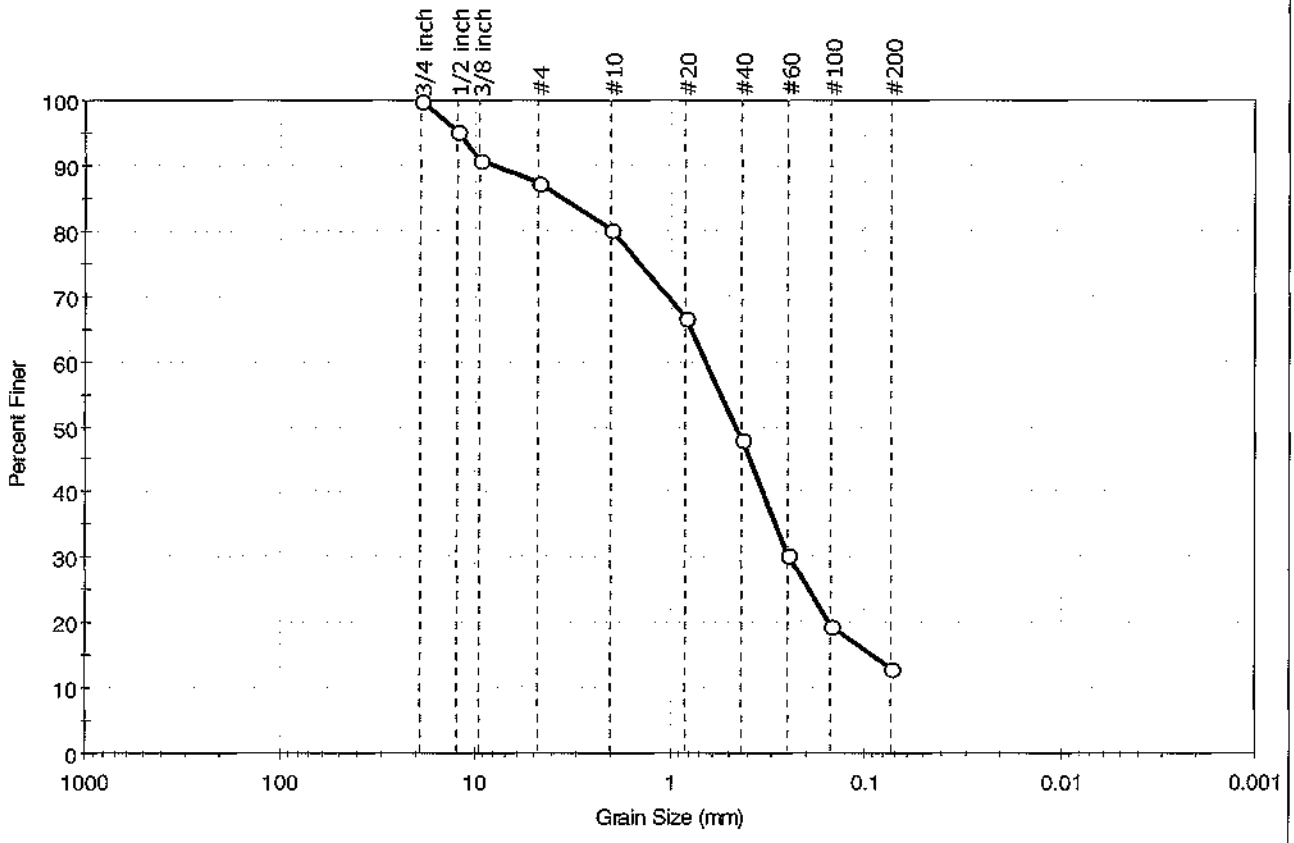
Client:	Apex Companies, LLC				
Project:	New Bedford CAD II (6615.003)				
Location:	New Bedford, MA			Project No:	GTX-7817
Boring ID:	---	Sample Type:	bag	Tested By:	ap
Sample ID:	B02-CAD-072007	Test Date:	10/24/07	Checked By:	jdt
Depth :	70-72 ft	Test Id:	121645		

Test Comment: ---
Sample Description: Dry, yellowish brown silty sand
Sample Comment: ---

Particle Size Analysis - ASTM D 422-63 (reapproved 2002)



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	12.6	74.5	12.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
3/4 inch	19.00	100		
1/2 inch	12.50	95		
3/8 inch	9.51	91		
#4	4.75	87		
#10	2.00	80		
#20	0.84	67		
#40	0.42	48		
#60	0.25	30		
#100	0.15	20		
#200	0.074	13		

Coefficients

D_{85} = 3.5619 mm	D_{30} = 0.2462 mm
D_{60} = 0.6586 mm	D_{15} = 0.0920 mm
D_{50} = 0.4575 mm	D_{10} = 0.0544 mm
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample/Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : HARD

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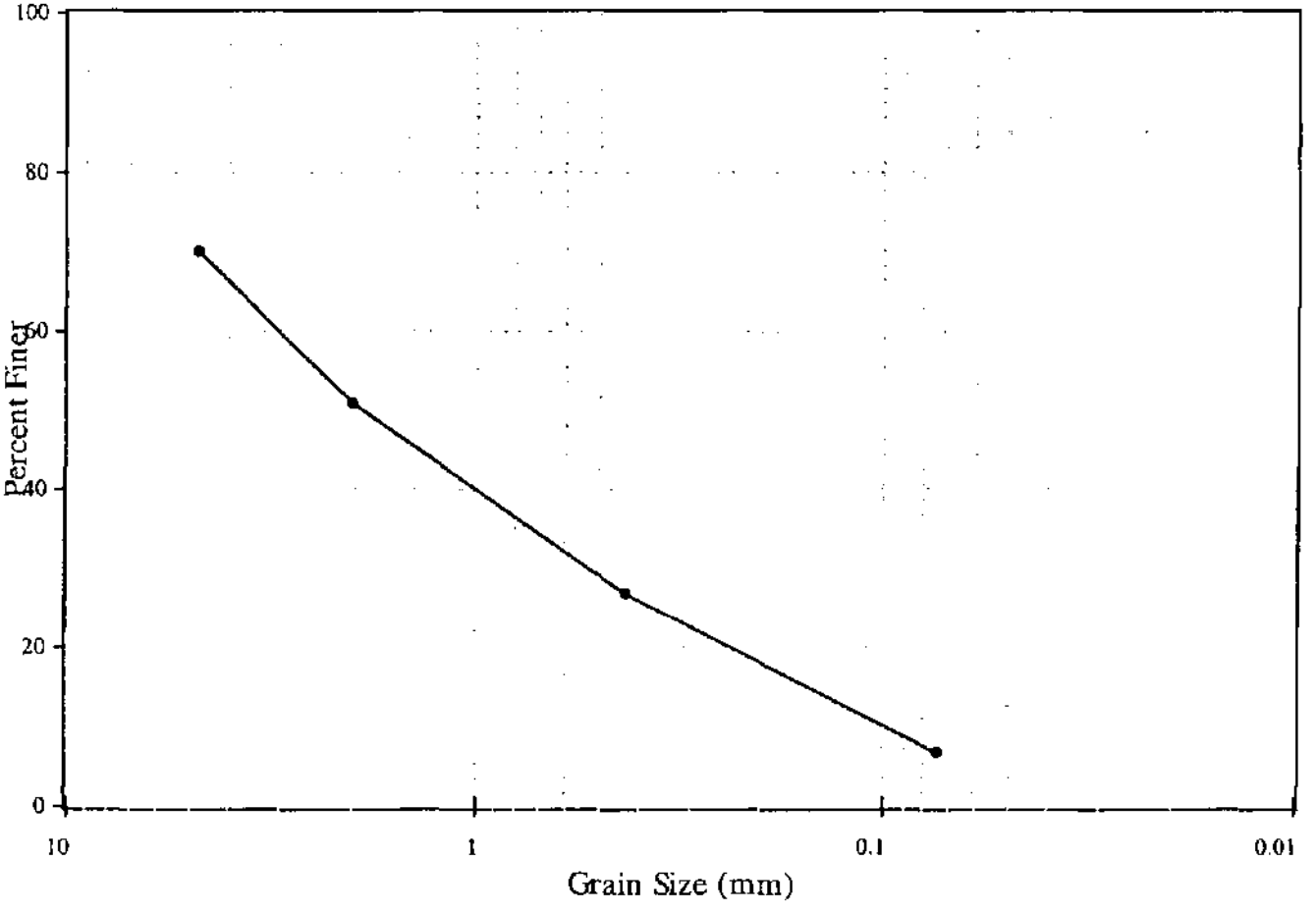
Sieve Analysis

Client: **Apex Environmental, Inc.**
Project: **NBHDC - COM-97**
Case: **N/A** SDG: **N/A**
Client ID: **CAD-2 6'-8'**
Matrix: **Sediment**
Collection Date: **9/23/04**

Lab Code: **MA00030**
ETR: **0409167**
Lab ID: **0409167-02**
Concentration Units: **%**
Received Date: **9/24/04**
Analysis Date: **10/6/04**



Sieve Number	Diameter Range	Percent Retained	Description
#4	>4.76 mm	29.87	Gravel
#10	<4.76 mm - 2 mm	19.30	Coarse Sand
#40	<2 mm - 0.425 mm	24.04	Medium Sand
#200	<0.425 mm - 0.074 mm	20.06	Fine Sand
Passing #200	<0.074 mm	6.74	Silt/Clay

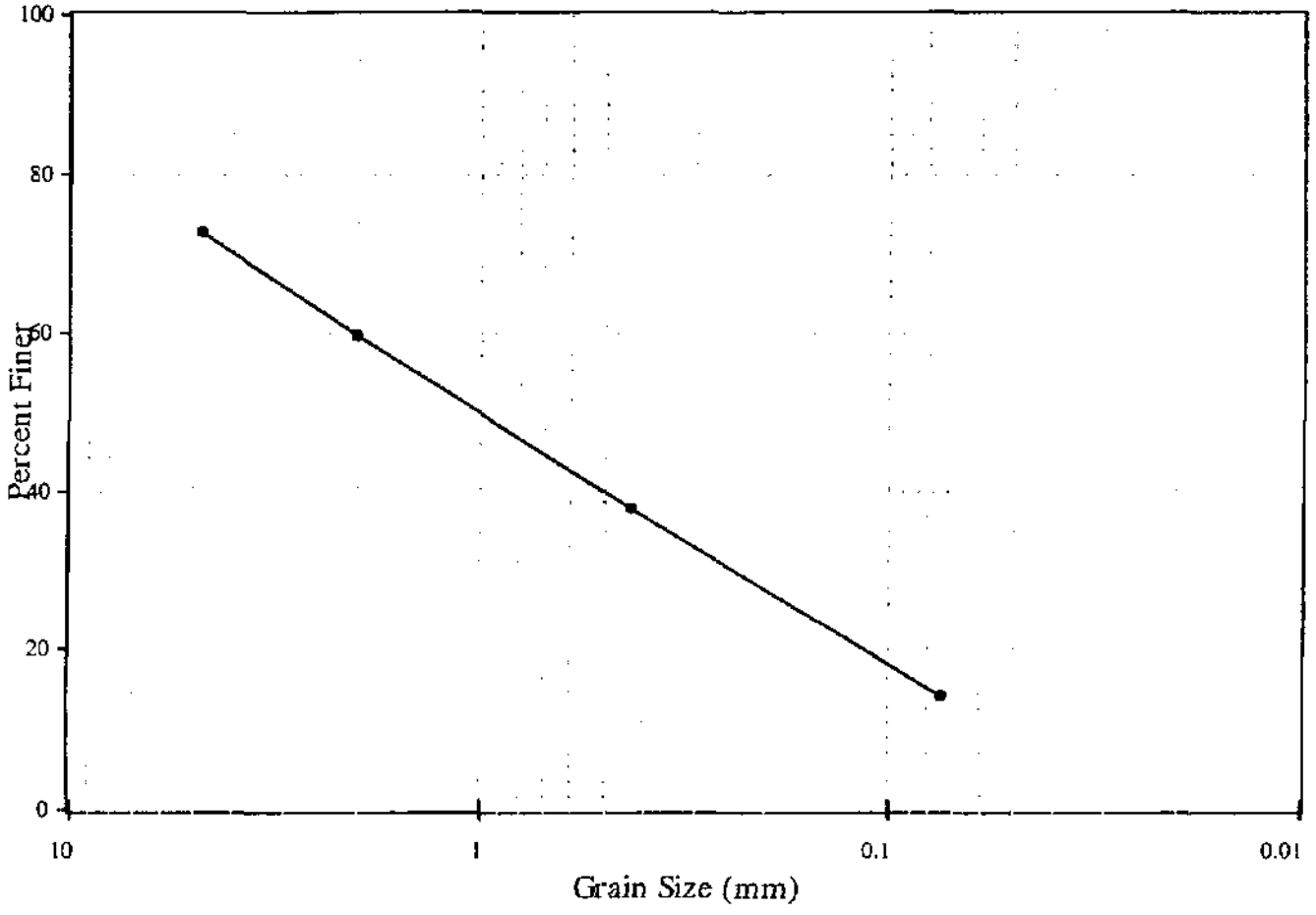
N/A - Not Applicable

375 Paramount Drive, Suite 2, Raynham, Massachusetts, 02767 (508) 822-9300, Fax (508) 822-3288, whale@whgrp.com

Sieve Analysis

Client: **Apex Environmental, Inc.**
Project: **NBHDC - COM-97**
Case: **N/A** SDG: **N/A**
Client ID: **CAD-2 11'-13'**
Matrix: **Sediment**
Collection Date: **9/23/04**

Lab Code: **MA00030**
ETR: **0409167**
Lab ID: **0409167-04**
Concentration Units: **%**
Received Date: **9/24/04**
Analysis Date: **10/6/04**



Sieve Number	Diameter Range	Percent Retained	Description
#4	>4.76 mm	27.59	Gravel
#10	<4.76 mm - 2 mm	12.76	Coarse Sand
#40	<2 mm - 0.425 mm	21.96	Medium Sand
#200	<0.425 mm - 0.074 mm	23.52	Fine Sand
Passing #200	<0.074 mm	14.24	Silt/Clay

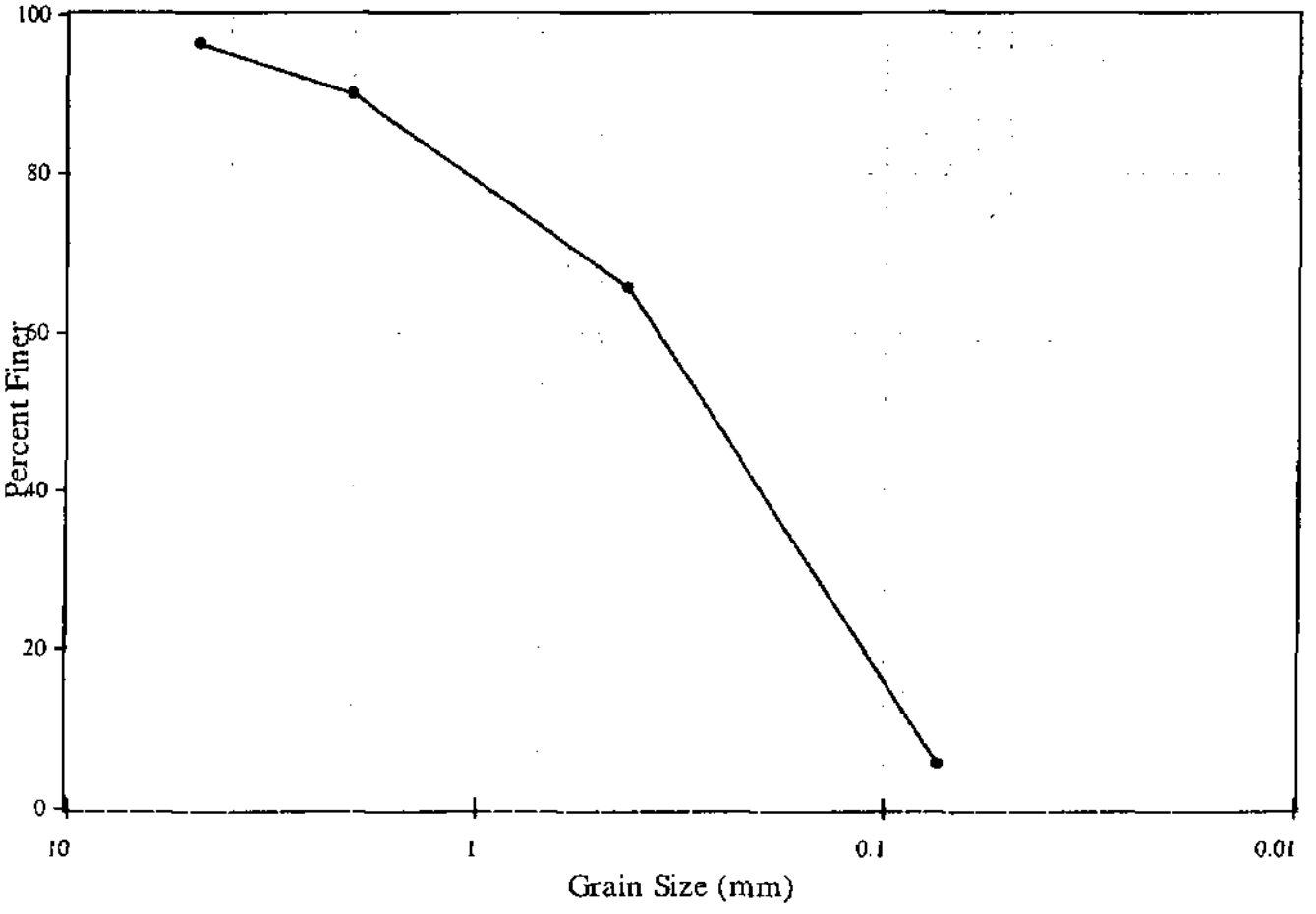
N/A - Not Applicable

375 Paramount Drive, Suite 2, Raynham, Massachusetts, 02767, (508) 822-9300, Fax (508) 822-3288, whale@whgrp.com

Sieve Analysis

Client: **Apex Environmental, Inc.**
Project: **NBHDC - COM-97**
Case: **N/A** SDG: **N/A**
Client ID: **CAD-2 16'-18'**
Matrix: **Sediment**
Collection Date: **9/23/04**

Lab Code: **MA00030**
ETR: **0409167**
Lab ID: **0409167-06**
Concentration Units: **%**
Received Date: **9/24/04**
Analysis Date: **10/6/04**



Sieve Number	Diameter Range	Percent Retained	Description
#4	>4.76 mm	3.59	Gravel
#10	<4.76 mm - 2 mm	6.48	Coarse Sand
#40	<2 mm - 0.425 mm	24.47	Medium Sand
#200	<0.425 mm - 0.074 mm	59.97	Fine Sand
Passing #200	<0.074 mm	5.48	Silt/Clay

N/A - Not Applicable

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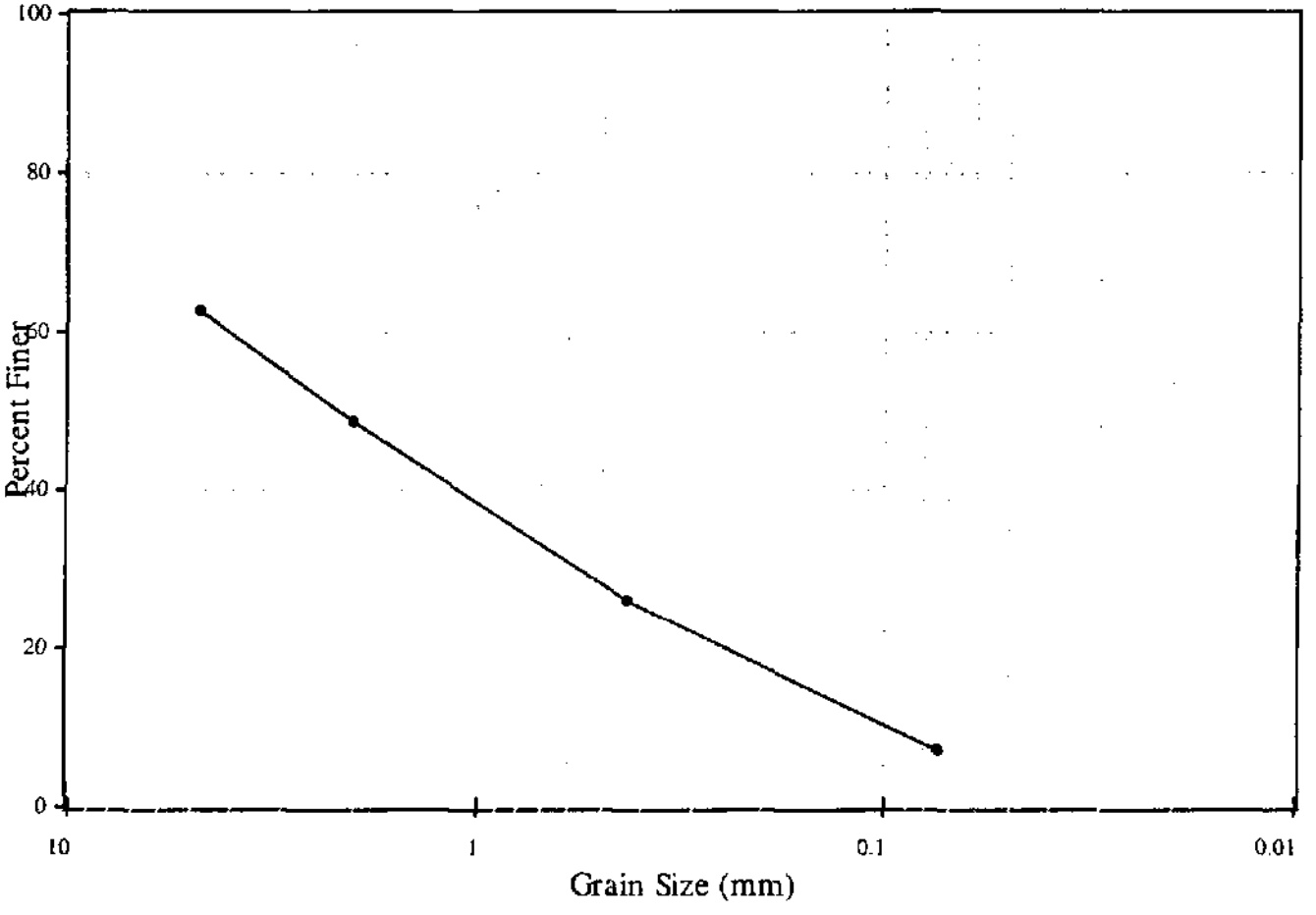
Sieve Analysis

Client: **Apex Environmental, Inc.**
Project: **NBHDC - COM-97**
Case: **N/A** SDG: **N/A**
Client ID: **CAD-2 24'-26'**
Matrix: **Sediment**
Collection Date: **9/24/04**

Lab Code: **MA00030**
ETR: **0409167**
Lab ID: **0409167-07**
Concentration Units: **%**
Received Date: **9/24/04**
Analysis Date: **10/6/04**



Sieve Number	Diameter Range	Percent Retained	Description
#4	>4.76 mm	37.38	Gravel
#10	<4.76 mm - 2 mm	14.19	Coarse Sand
#40	<2 mm - 0.425 mm	22.42	Medium Sand
#200	<0.425 mm - 0.074 mm	18.85	Fine Sand
Passing #200	<0.074 mm	7.17	Silt/Clay

N/A - Not Applicable

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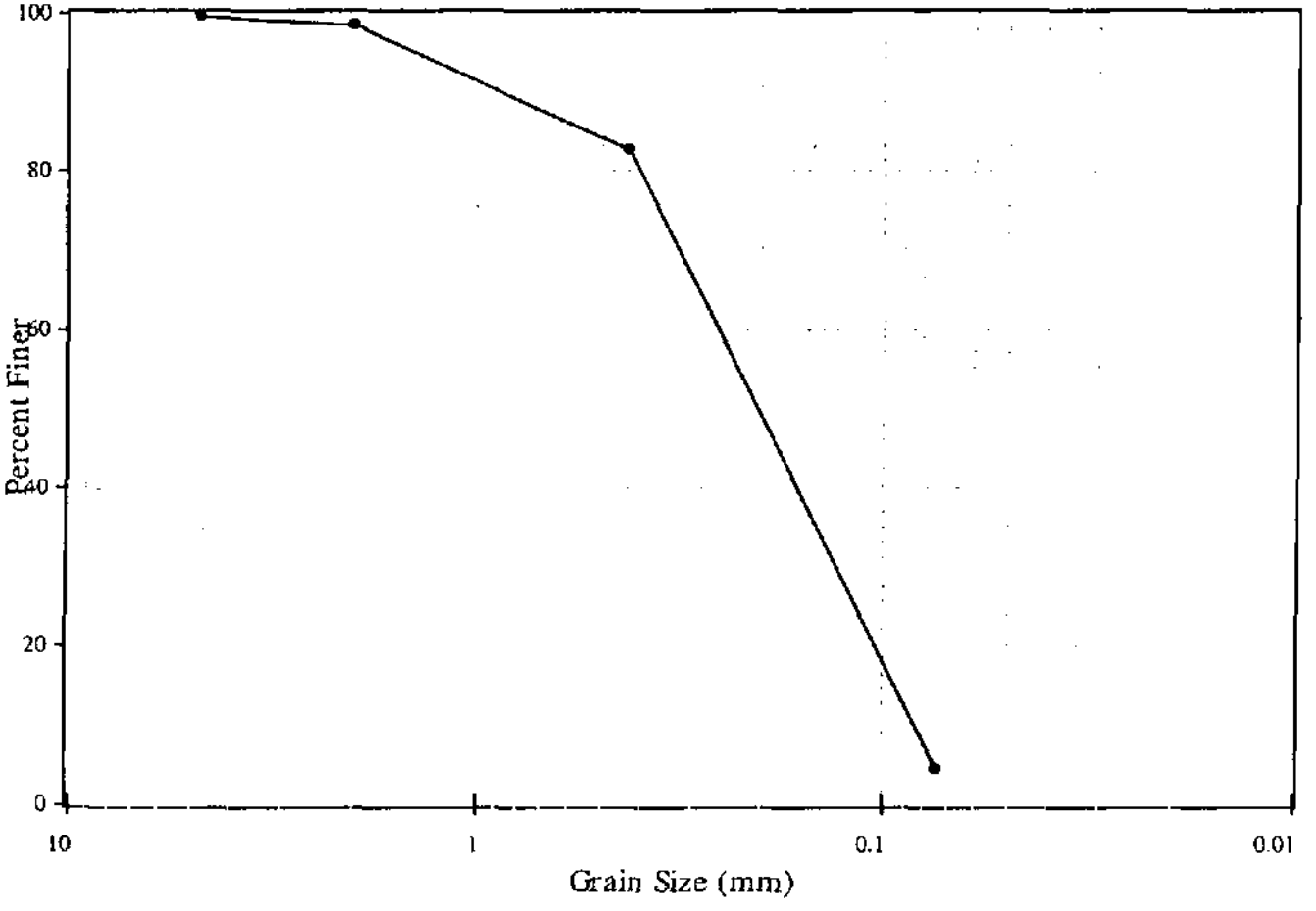
Sieve Analysis

Client: **Apex Environmental, Inc.**
Project: **NBHDC - COM-97**
Case: **N/A** SDG: **N/A**
Client ID: **CAD-3A 4'-6'**
Matrix: **Sediment**
Collection Date: **9/13/04**

Lab Code: **MA00030**
ETR: **0409167**
Lab ID: **0409167-08**
Concentration Units: **%**
Received Date: **9/14/04**
Analysis Date: **10/6/04**



Sieve Number	Diameter Range	Percent Retained	Description
#4	>4.76 mm	0.19	Gravel
#10	<4.76 mm - 2 mm	1.26	Coarse Sand
#40	<2 mm - 0.425 mm	15.85	Medium Sand
#200	<0.425 mm - 0.074 mm	78.41	Fine Sand
Passing #200	<0.074 mm	4.11	Silt/Clay

N/A - Not Applicable

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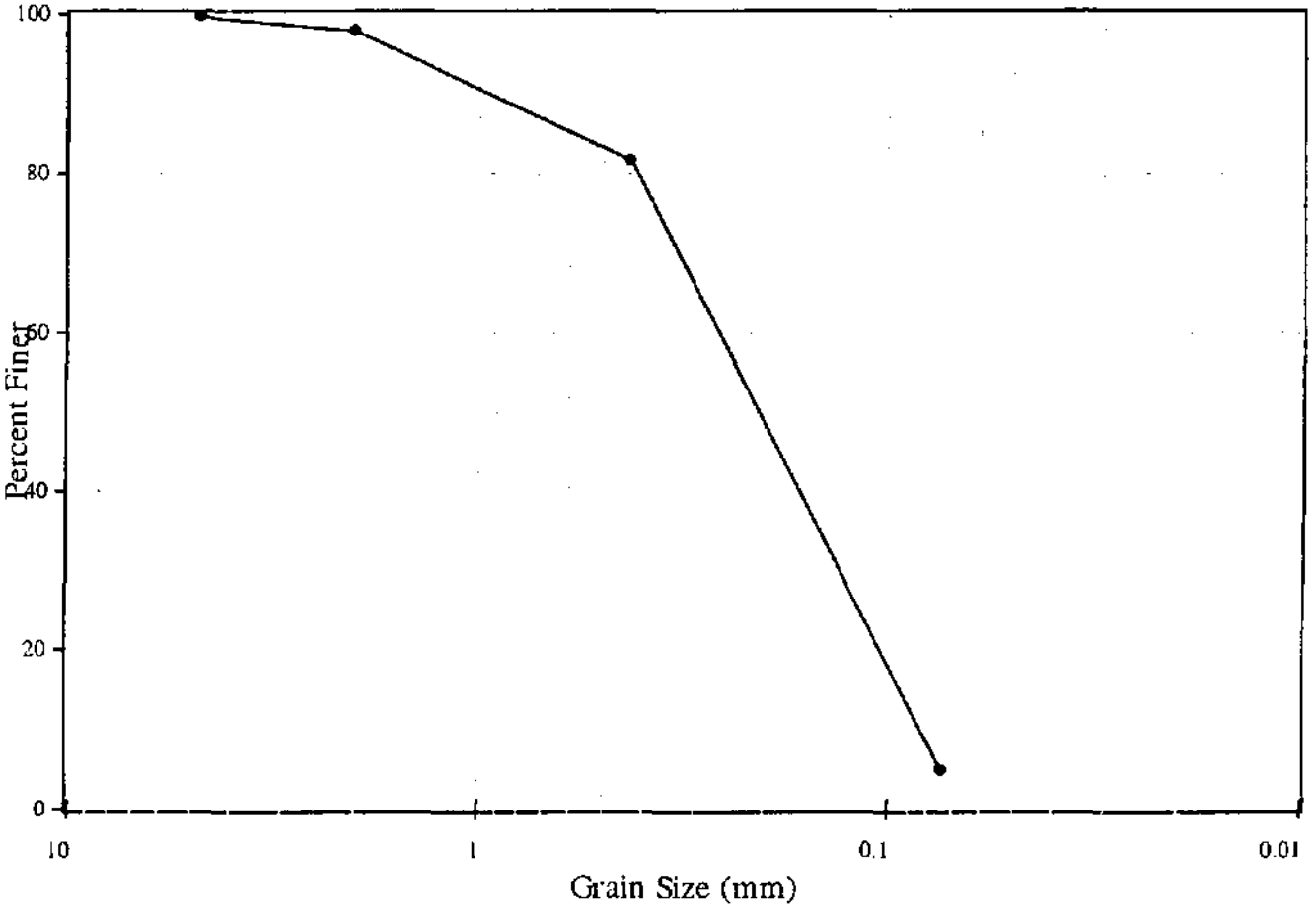
Sieve Analysis

Client: **Apex Environmental, Inc.**
Project: **NBHDC - COM-97**
Case: **N/A** SDG: **N/A**
Client ID: **CAD-3A 4'-6'**
Matrix: **Sediment**
Collection Date: **9/13/04**

Lab Code: **MA00030**
ETR: **0409167**
Lab ID: **0409167-08 D**
Concentration Units: **%**
Received Date: **9/14/04**
Analysis Date: **10/6/04**



Sieve Number	Diameter Range	Percent Retained	Description
#4	>4.76 mm	0.28	Gravel
#10	<4.76 mm - 2 mm	1.94	Coarse Sand
#40	<2 mm - 0.425 mm	16.18	Medium Sand
#200	<0.425 mm - 0.074 mm	76.81	Fine Sand
Passing #200	<0.074 mm	4.87	Silt/Clay

N/A - Not Applicable

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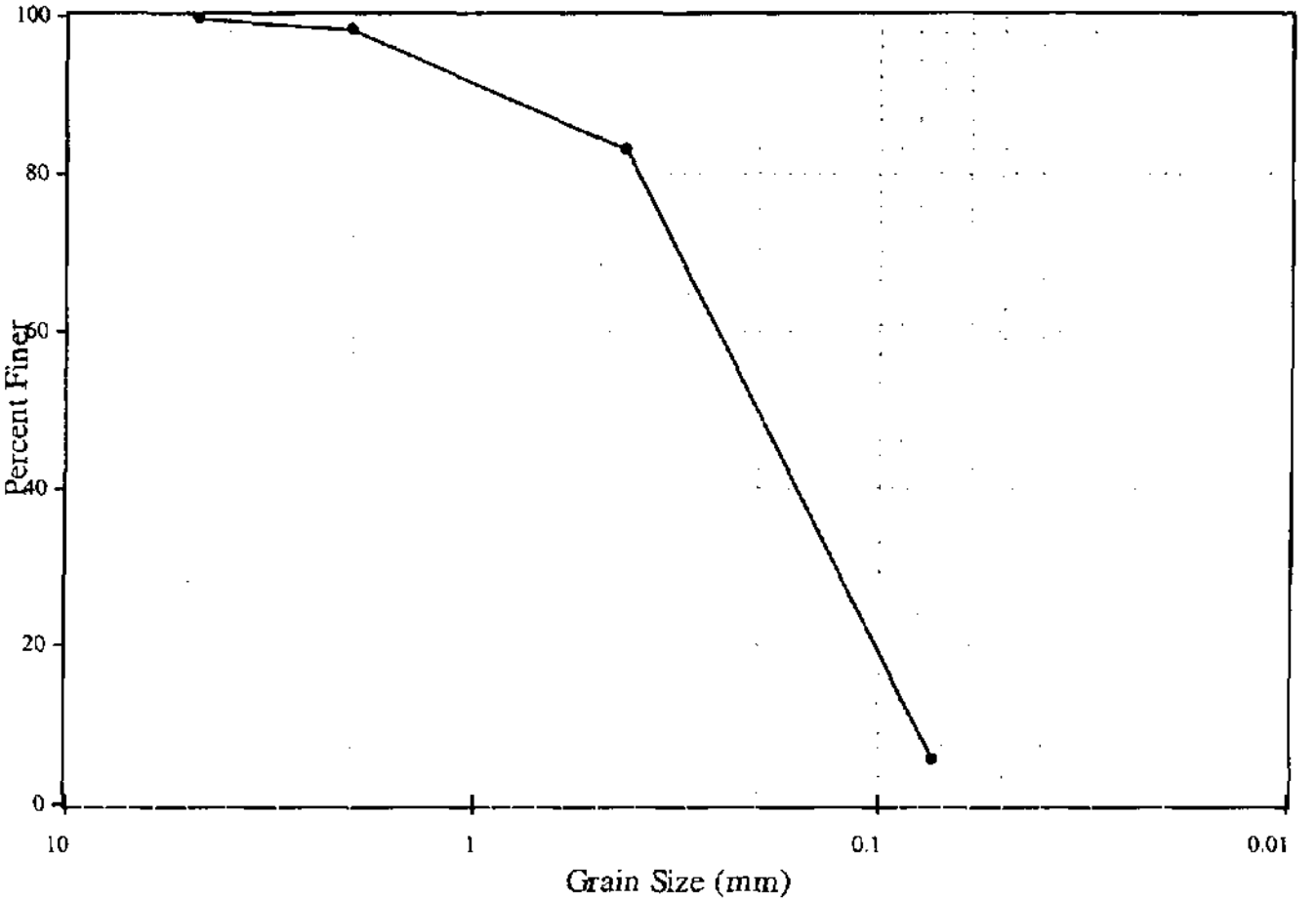
Sieve Analysis

Client: **Apex Environmental, Inc.**
Project: **NBHDC - COM-97**
Case: *N/A* SDG: *N/A*
Client ID: **CAD-3A 8'-10'**
Matrix: **Sediment**
Collection Date: **9/13/04**

Lab Code: **MA00030**
ETR: **0409167**
Lab ID: **0409167-09**
Concentration Units: **%**
Received Date: **9/14/04**
Analysis Date: **10/6/04**



Sieve Number	*Diameter Range*	*Percent Retained*	*Description*
#4	>4.76 mm	0.41	Gravel
#10	<4.76 mm - 2 mm	1.29	Coarse Sand
#40	<2 mm - 0.425 mm	15.37	Medium Sand
#200	<0.425 mm - 0.074 mm	77.35	Fine Sand
Passing #200	<0.074 mm	5.56	Silt/Clay

N/A - Not Applicable

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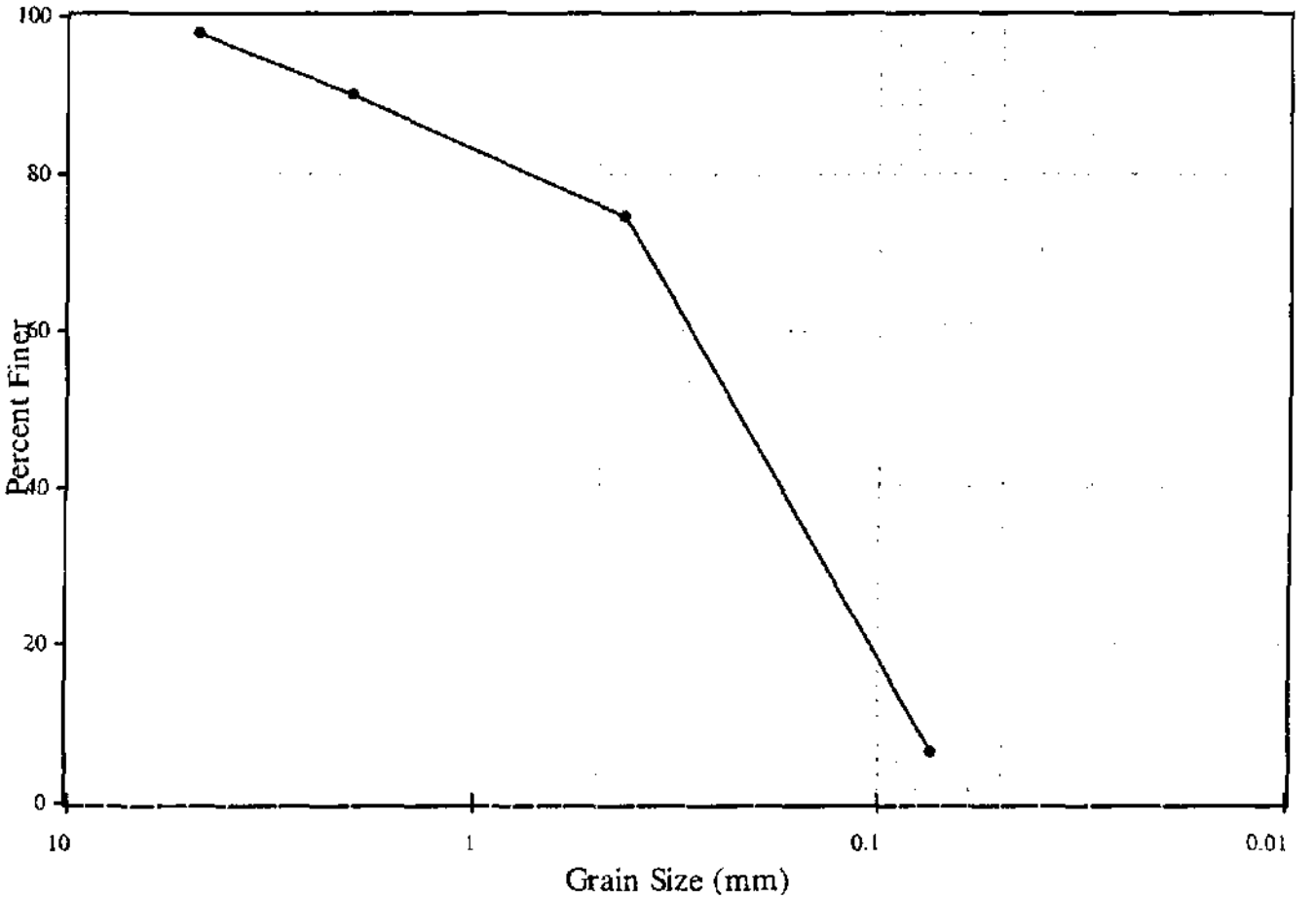
Sieve Analysis

Client: **Apex Environmental, Inc.**
Project: **NBHDC - COM-97**
Case: **N/A** SDG: **N/A**
Client ID: **CAD-3A 26'-28'**
Matrix: ***Sediment***
Collection Date: **9/13/04**

Lab Code: **MA00030**
ETR: **0409167**
Lab ID: **0409167-10**
Concentration Units: **%**
Received Date: **9/14/04**
Analysis Date: **10/6/04**



Sieve Number	Diameter Range	Percent Retained	Description
#4	>4.76 mm	2.15	Gravel
#10	<4.76 mm - 2 mm	7.67	Coarse Sand
#40	<2 mm - 0.425 mm	15.88	Medium Sand
#200	<0.425 mm - 0.074 mm	67.99	Fine Sand
Passing #200	<0.074 mm	6.25	Silt/Clay

N/A - Not Applicable

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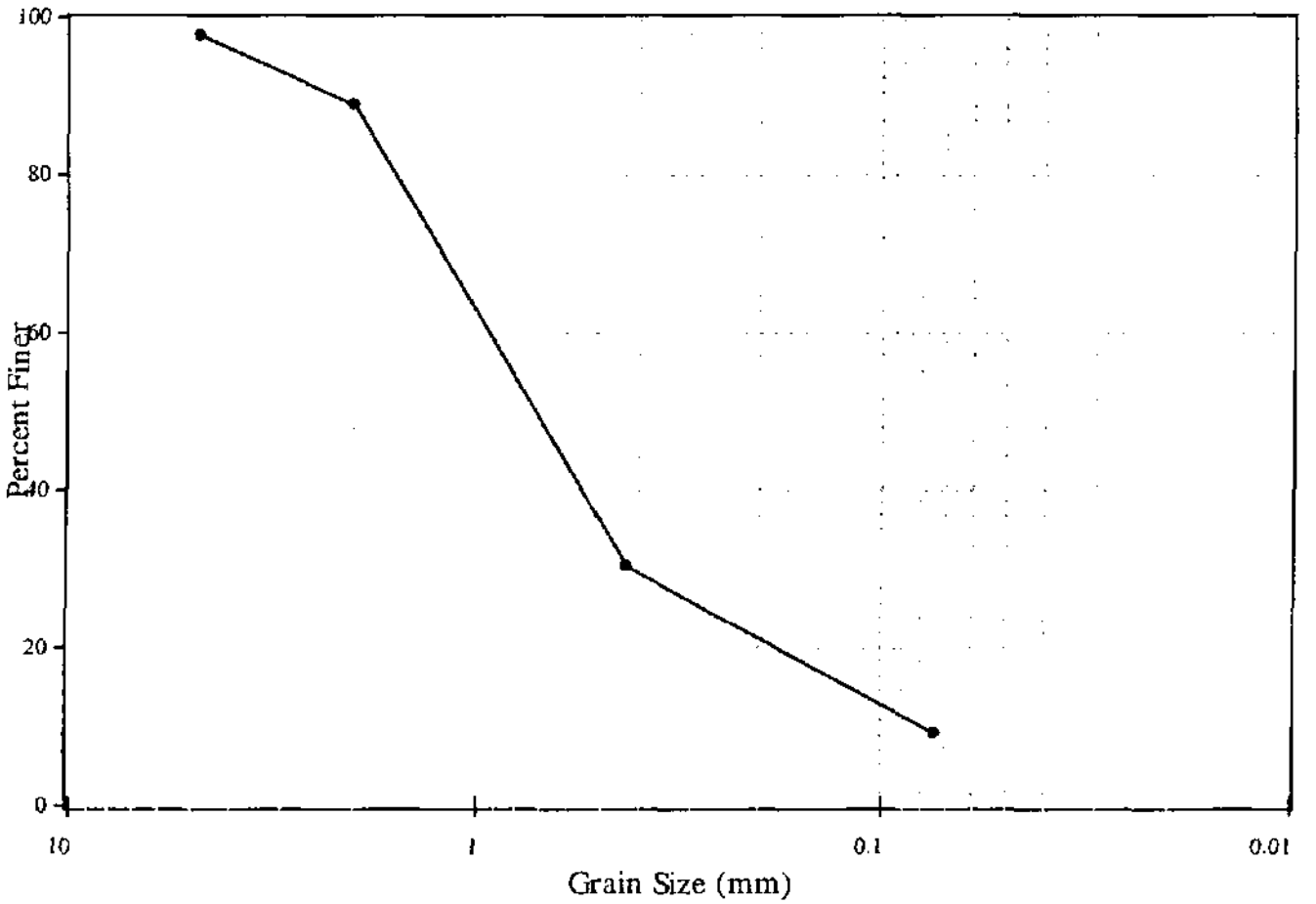
Sieve Analysis

Client: **Apex Environmental, Inc.**
Project: **NBHDC - COM-97**
Case: **N/A** SDG: **N/A**
Client ID: **CAD-3 13'-14.5'**
Matrix: **Sediment**
Collection Date: **9/2/04**

Lab Code: **MA00030**
ETR: **0409167**
Lab ID: **0409167-13**
Concentration Units: **%**
Received Date: **9/3/04**
Analysis Date: **10/6/04**



Sieve Number	Diameter Range	Percent Retained	Description
#4	>4.76 mm	2.38	Gravel
#10	<4.76 mm - 2 mm	8.58	Coarse Sand
#40	<2 mm - 0.425 mm	58.61	Medium Sand
#200	<0.425 mm - 0.074 mm	21.13	Fine Sand
Passing #200	<0.074 mm	9.28	Silt/Clay

N/A - Not Applicable

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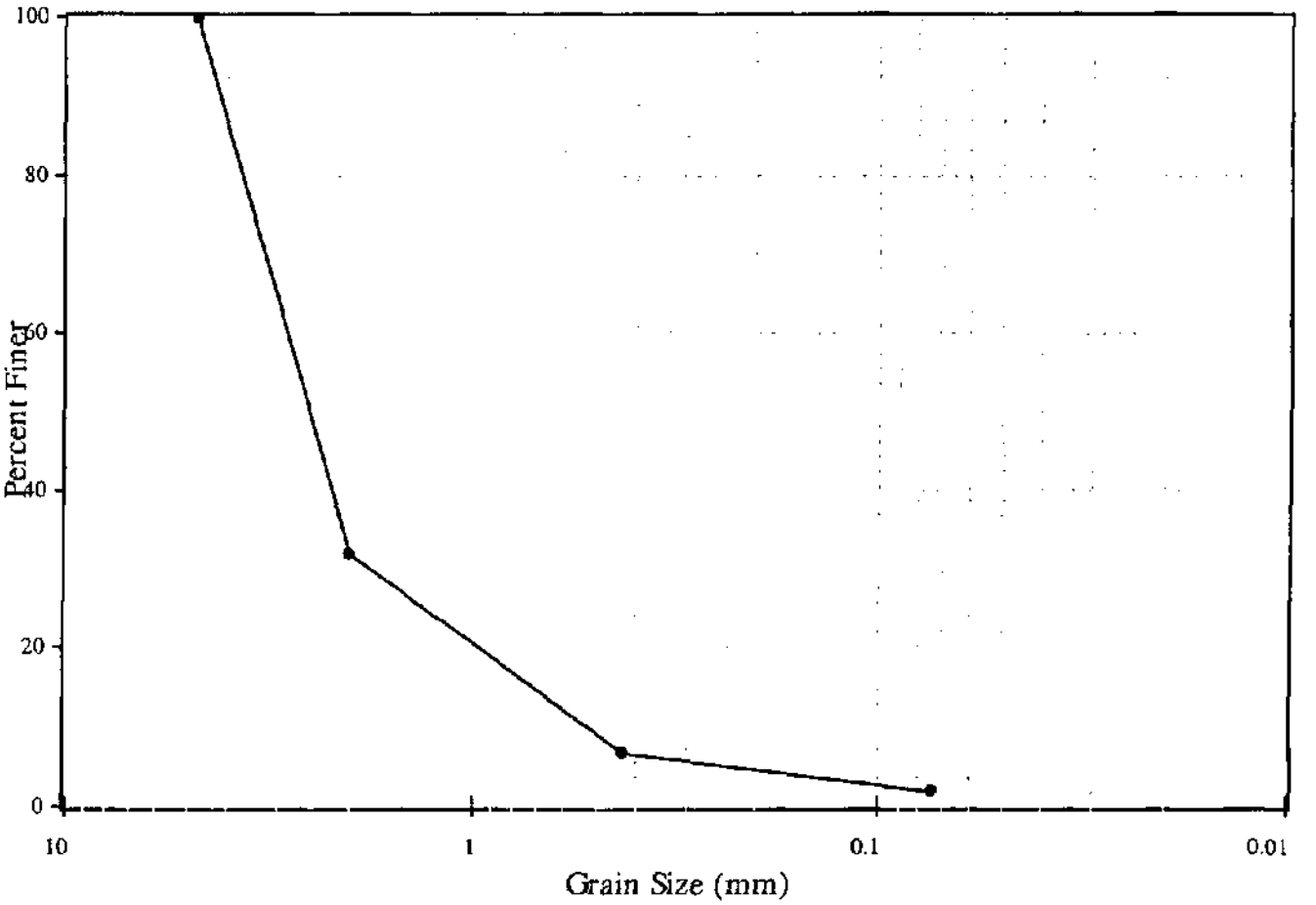
Sieve Analysis

Client: **Apex Environmental, Inc.**
Project: **NBHDC - COM-97**
Case: N/A SDG: N/A
Client ID: **CAD-3 23'-24'**
Matrix: **Sediment**
Collection Date: **9/3/04**

Lab Code: **MA00030**
ETR: **0409167**
Lab ID: **0409167-14**
Concentration Units: **%**
Received Date: **9/3/04**
Analysis Date: **10/6/04**



Sieve Number	Diameter Range	Percent Retained	Description
#4	>4.76 mm	0.48	Gravel
#10	<4.76 mm - 2 mm	67.76	Coarse Sand
#40	<2 mm - 0.425 mm	25.17	Medium Sand
#200	<0.425 mm - 0.074 mm	4.89	Fine Sand
Passing #200	<0.074 mm	1.66	Silt/Clay

N/A - Not Applicable

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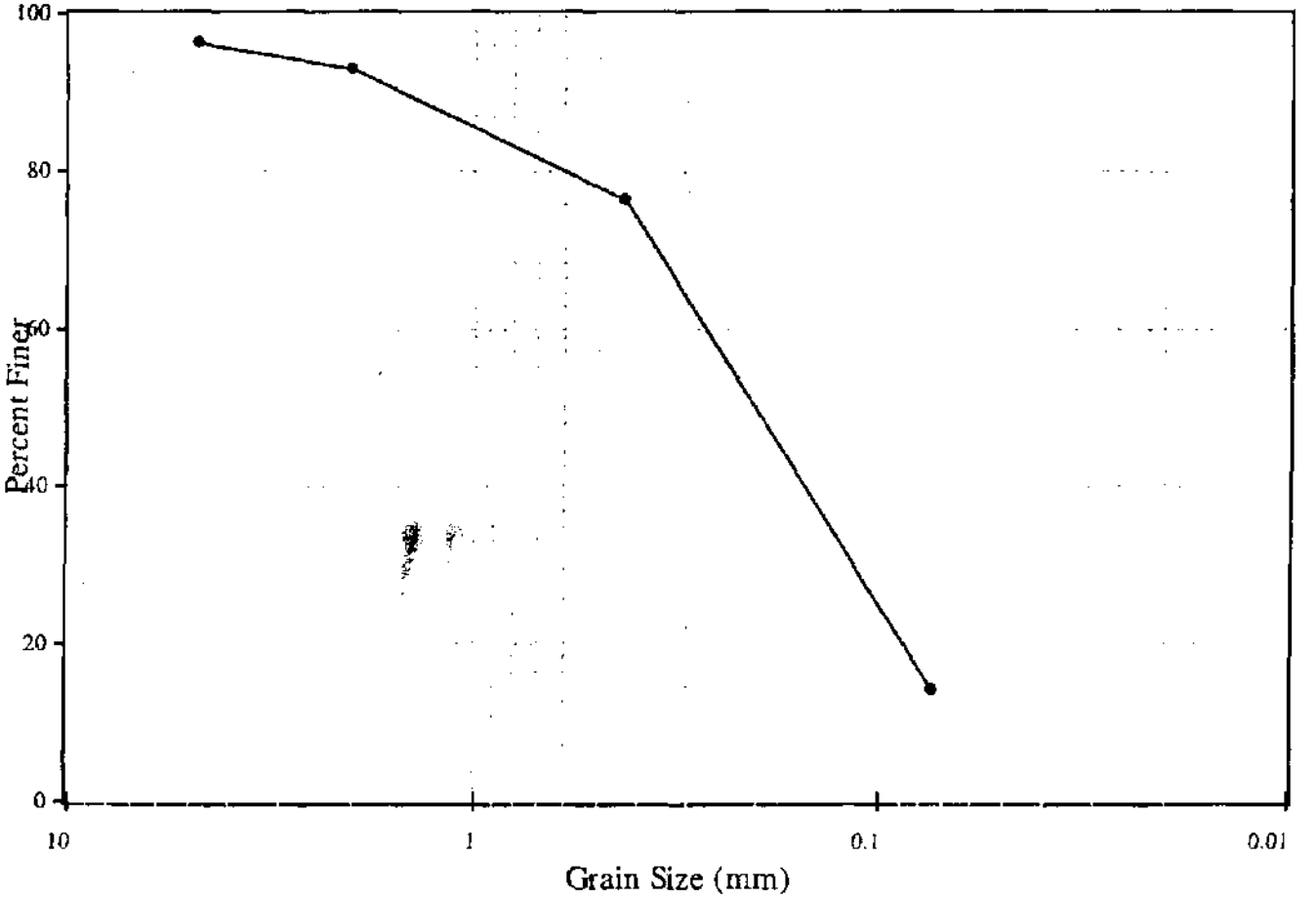
Sieve Analysis

Client: **Apex Environmental, Inc.**
Project: **NBHDC - COM-97**
Case: **N/A** SDG: **N/A**
Client ID: **CAD-6 2'-4'**
Matrix: **Sediment**
Collection Date: **9/8/04**

Lab Code: **MA00030**
ETR: **0409167**
Lab ID: **0409167-15**
Concentration Units: **%**
Received Date: **9/10/04**
Analysis Date: **10/6/04**



Sieve Number	Diameter Range	Percent Retained	Description
#4	>4.76 mm	3.81	Gravel
#10	<4.76 mm - 2 mm	3.34	Coarse Sand
#40	<2 mm - 0.425 mm	16.54	Medium Sand
#200	<0.425 mm - 0.074 mm	62.22	Fine Sand
Passing #200	<0.074 mm	14.02	Silt/Clay

N/A - Not Applicable

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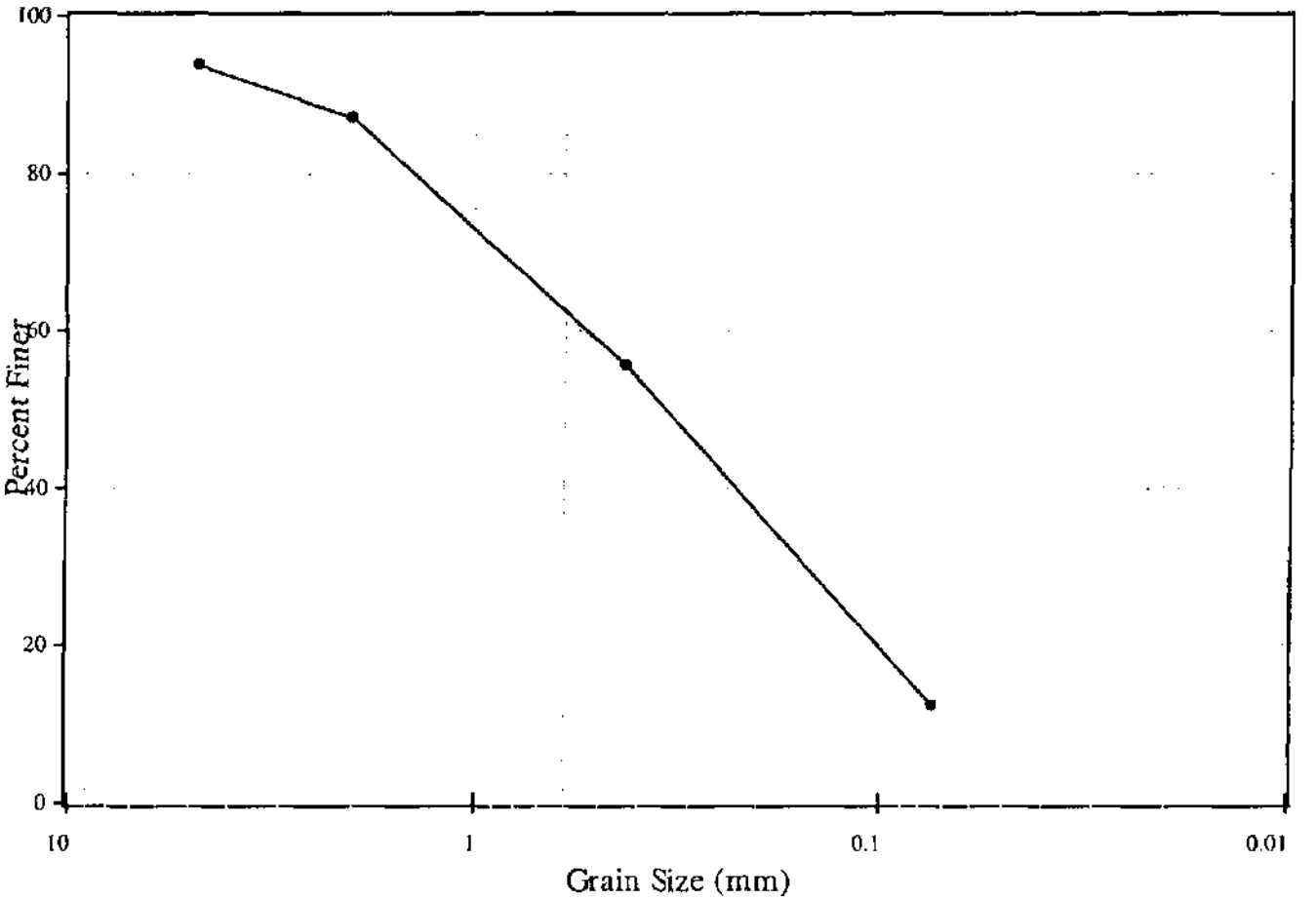
Sieve Analysis

Client: **Apex Environmental, Inc.**
Project: **NBHDC - COM-97**
Case: N/A SDG: N/A
Client ID: **CAD-6 4'-6'**
Matrix: **Sediment**
Collection Date: **9/8/04**

Lab Code: **MA00030**
ETR: **0409167**
Lab ID: **0409167-16**
Concentration Units: **%**
Received Date: **9/10/04**
Analysis Date: **10/6/04**



Sieve Number	Diameter Range	Percent Retained	Description
#4	>4.76 mm	6.33	Gravel
#10	<4.76 mm - 2 mm	6.73	Coarse Sand
#40	<2 mm - 0.425 mm	31.46	Medium Sand
#200	<0.425 mm - 0.074 mm	43.37	Fine Sand
Passing #200	<0.074 mm	12.12	Silt/Clay

N/A - Not Applicable

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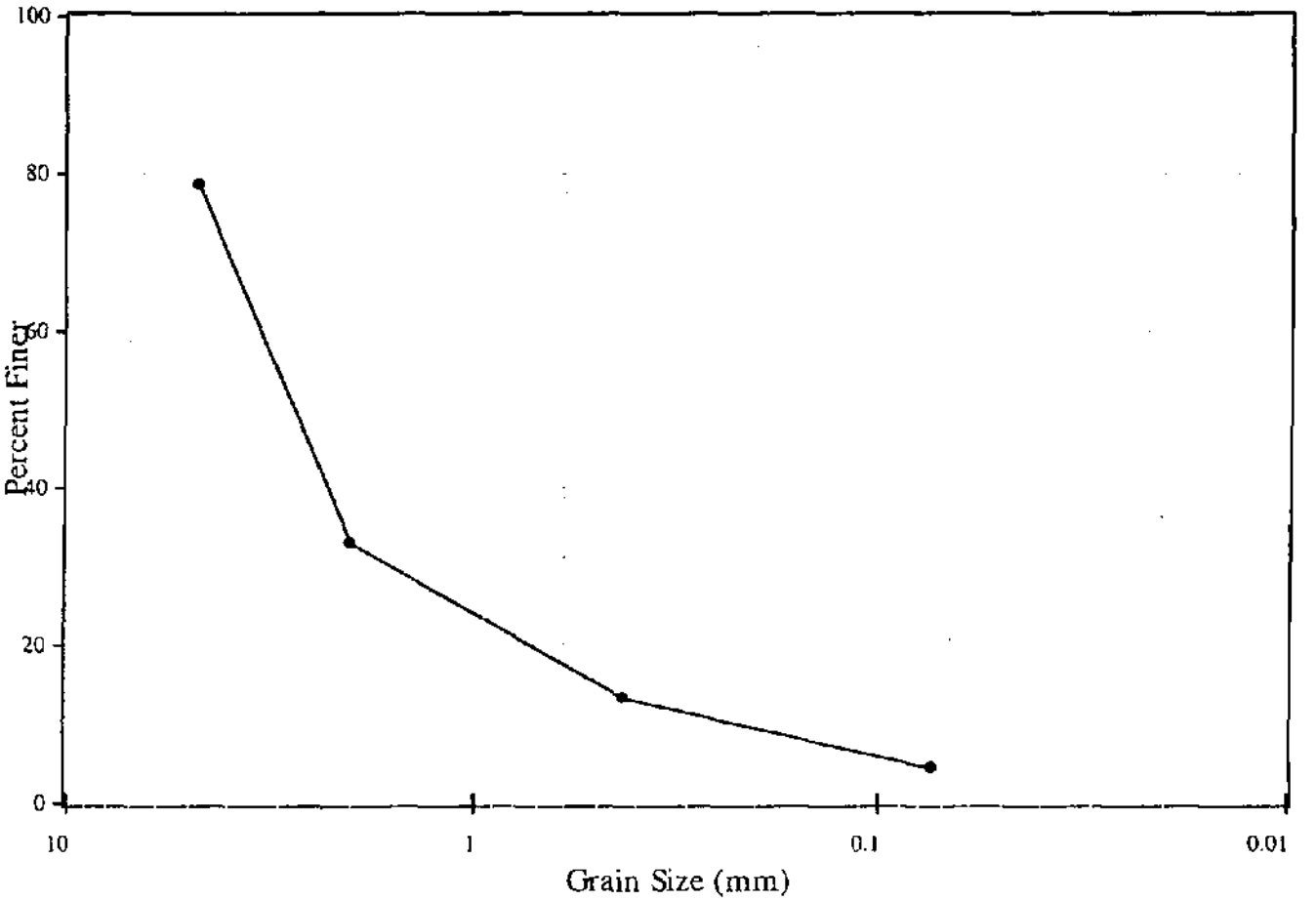
Sieve Analysis

Client: **Apex Environmental, Inc.**
Project: **NBHDC - COM-97**
Case: N/A SDG: N/A
Client ID: **CAD-6 10'-12'**
Matrix: **Sediment**
Collection Date: **9/8/04**

Lab Code: **MA00030**
ETR: **0409167**
Lab ID: **0409167-18**
Concentration Units: **%**
Received Date: **9/10/04**
Analysis Date: **10/6/04**



Sieve Number	Diameter Range	Percent Retained	Description
#4	>4.76 mm	21.37	Gravel
#10	<4.76 mm - 2 mm	45.60	Coarse Sand
#40	<2 mm - 0.425 mm	19.52	Medium Sand
#200	<0.425 mm - 0.074 mm	8.89	Fine Sand
Passing #200	<0.074 mm	4.59	Silt/Clay

N/A - Not Applicable

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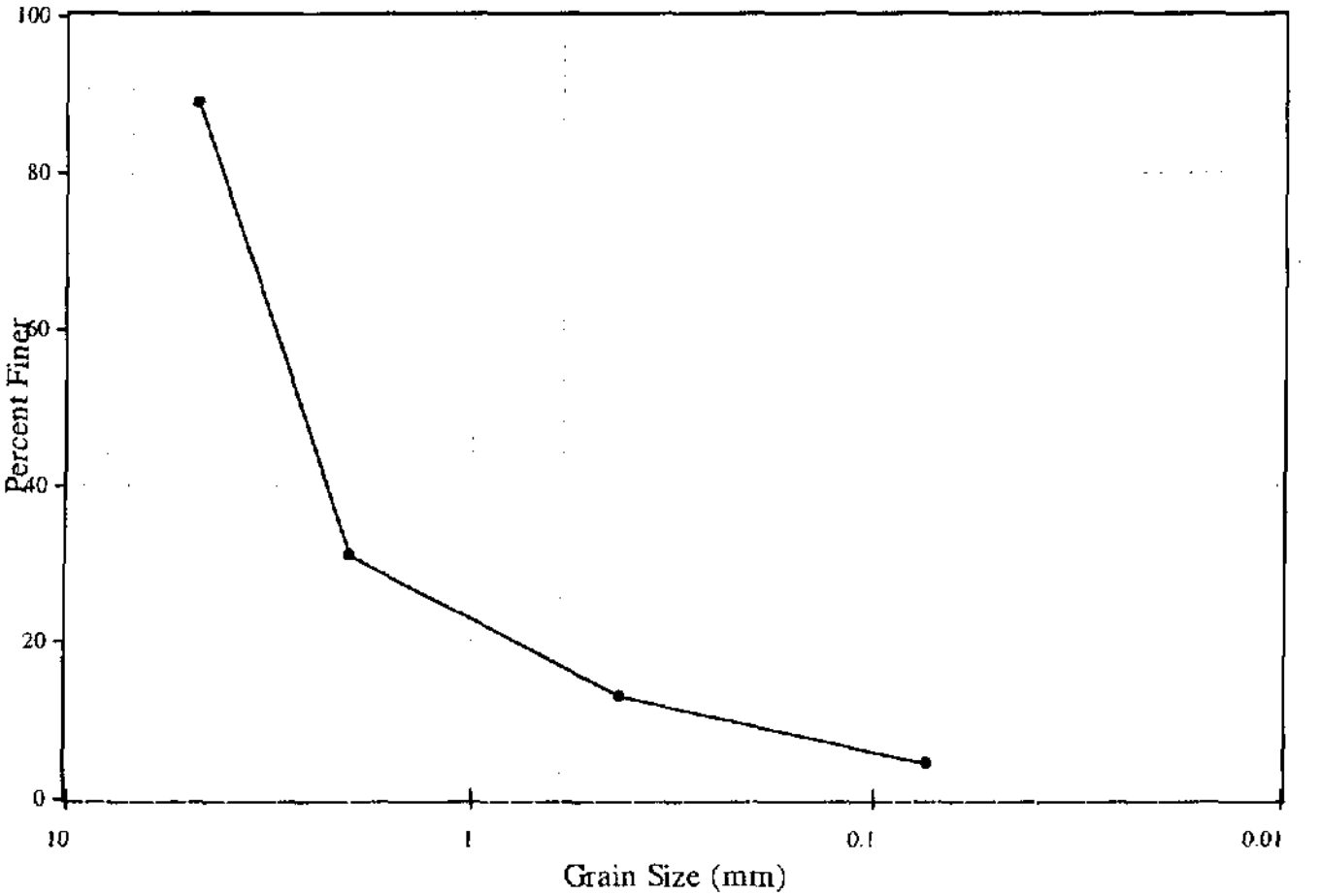
Sieve Analysis

Client: **Apex Environmental, Inc.**
Project: **NBHDC - COM-97**
Case: N/A SDG: N/A
Client ID: **CAD-6 14'-16'**
Matrix: **Sediment**
Collection Date: **9/8/04**

Lab Code: **MA00030**
ETR: **0409167**
Lab ID: **0409167-20**
Concentration Units: **%**
Received Date: **9/10/04**
Analysis Date: **10/6/04**



Sieve Number	Diameter Range	Percent Retained	Description
#4	>4.76 mm	11.27	Gravel
#10	<4.76 mm - 2 mm	57.75	Coarse Sand
#40	<2 mm - 0.425 mm	17.98	Medium Sand
#200	<0.425 mm - 0.074 mm	8.58	Fine Sand
Passing #200	<0.074 mm	4.75	Silt/Clay

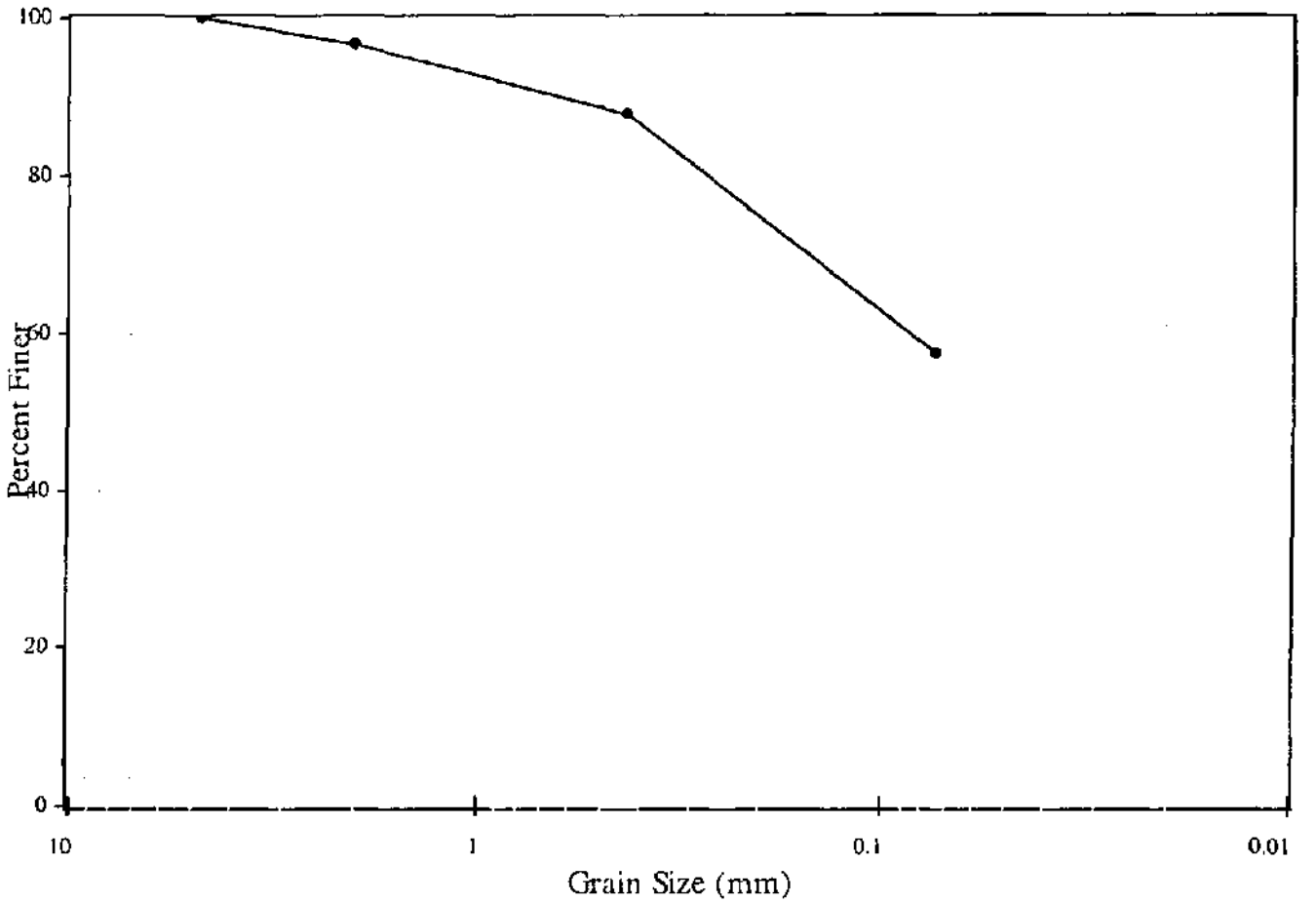
N/A - Not Applicable

175 Paramount Drive, Suite 2, Raynham, Massachusetts 02767, (508) 822-9300, Fax (508) 822-3288, whale@whgrp.com

Sieve Analysis

Client: **Apex Environmental, Inc.**
Project: **NBHDC - COM-97**
Case: **N/A** SDG: **N/A**
Client ID: **CAD-3 14.5'-15'**
Matrix: **Sediment**
Collection Date: **9/8/04**

Lab Code: **MA00030**
ETR: **0409167**
Lab ID: **0409167-21**
Concentration Units: **%**
Received Date: **9/10/04**
Analysis Date: **10/6/04**



Sieve Number	Diameter Range	Percent Retained	Description
#4	>4.76 mm	0.14	Gravel
#10	<4.76 mm - 2 mm	3.15	Coarse Sand
#40	<2 mm - 0.425 mm	8.87	Medium Sand
#200	<0.425 mm - 0.074 mm	30.37	Fine Sand
Passing #200	<0.074 mm	57.54	Silt/Clay

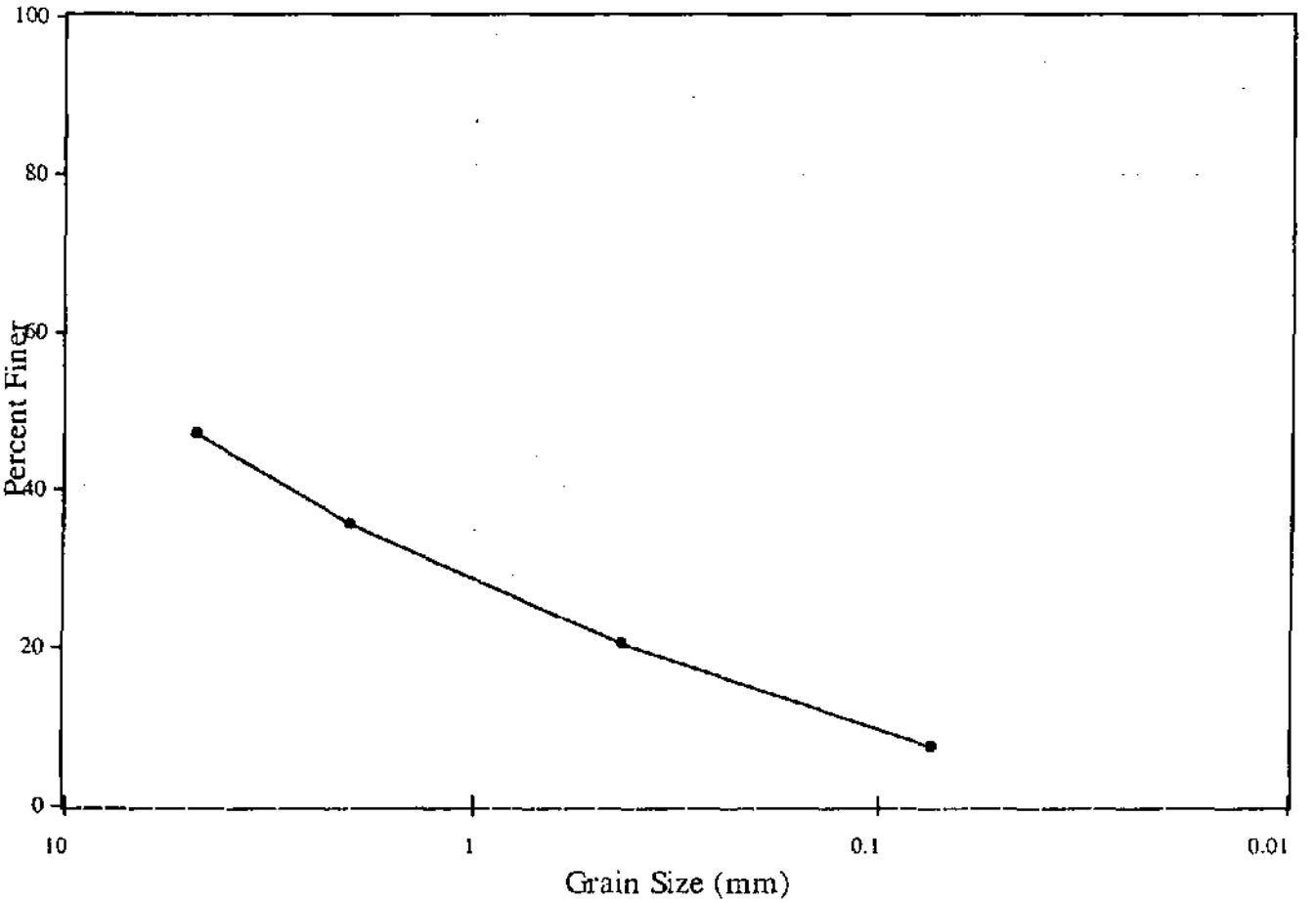
N/A - Not Applicable

375 Paramount Drive, Suite 2, Raynham, Massachusetts 02767, (508) 822-9300, Fax (508) 822-3288, whale@whgrp.com

Sieve Analysis

Client: **Apex Environmental, Inc.**
Project: **NBHDC - COM-97**
Case: N/A SDG: N/A
Client ID: **CAD-3 24'-25'**
Matrix: **Sediment**
Collection Date: **9/8/04**

Lab Code: **MA00030**
ETR: **0409167**
Lab ID: **0409167-22**
Concentration Units: **%**
Received Date: **9/10/04**
Analysis Date: **10/6/04**



Sieve Number	Diameter Range	Percent Retained	Description
#4	>4.76 mm	53.05	Gravel
#10	<4.76 mm - 2 mm	11.56	Coarse Sand
#40	<2 mm - 0.425 mm	14.98	Medium Sand
#200	<0.425 mm - 0.074 mm	13.01	Fine Sand
Passing #200	<0.074 mm	7.41	Silt/Clay

N/A - Not Applicable

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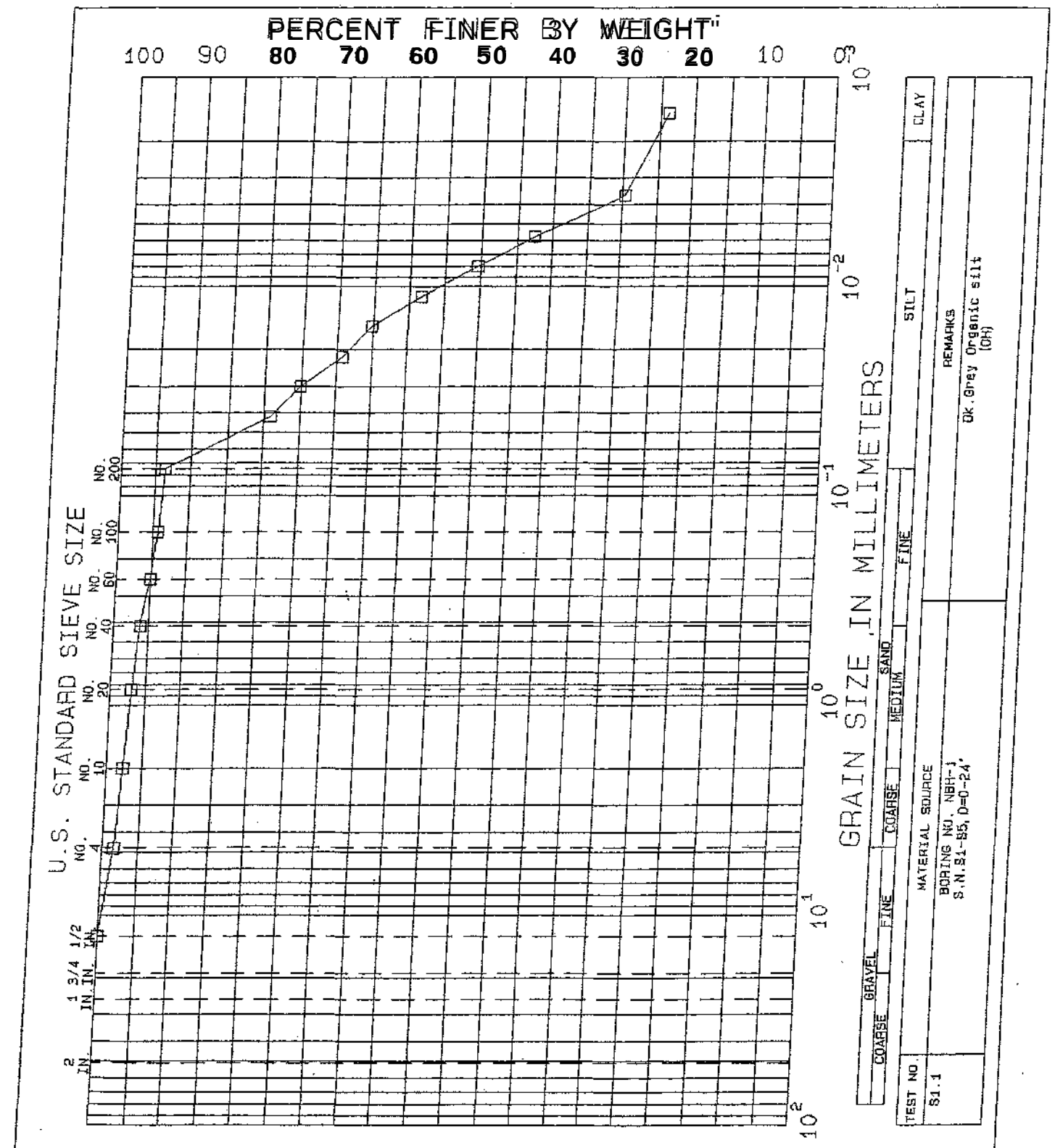
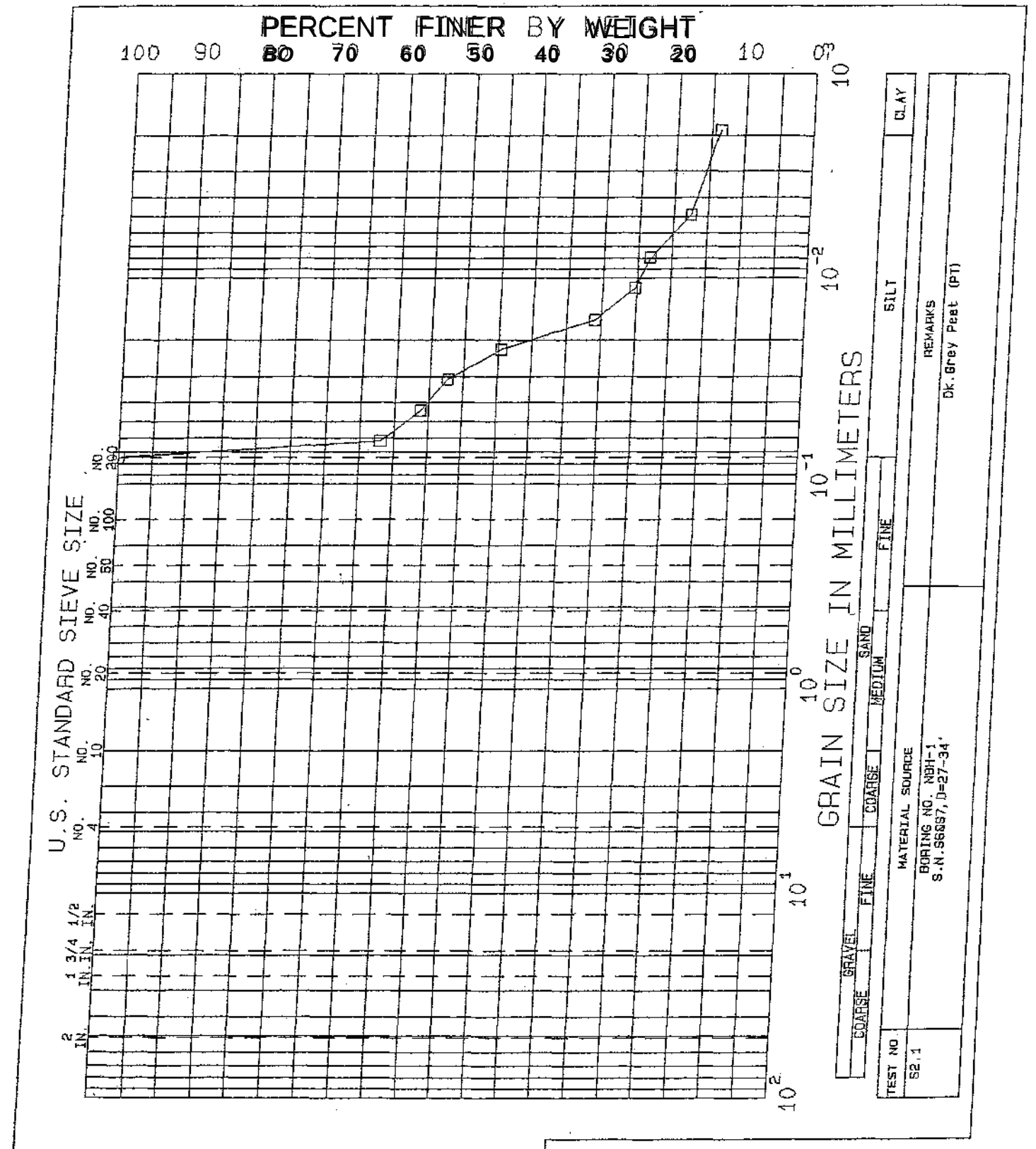


NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

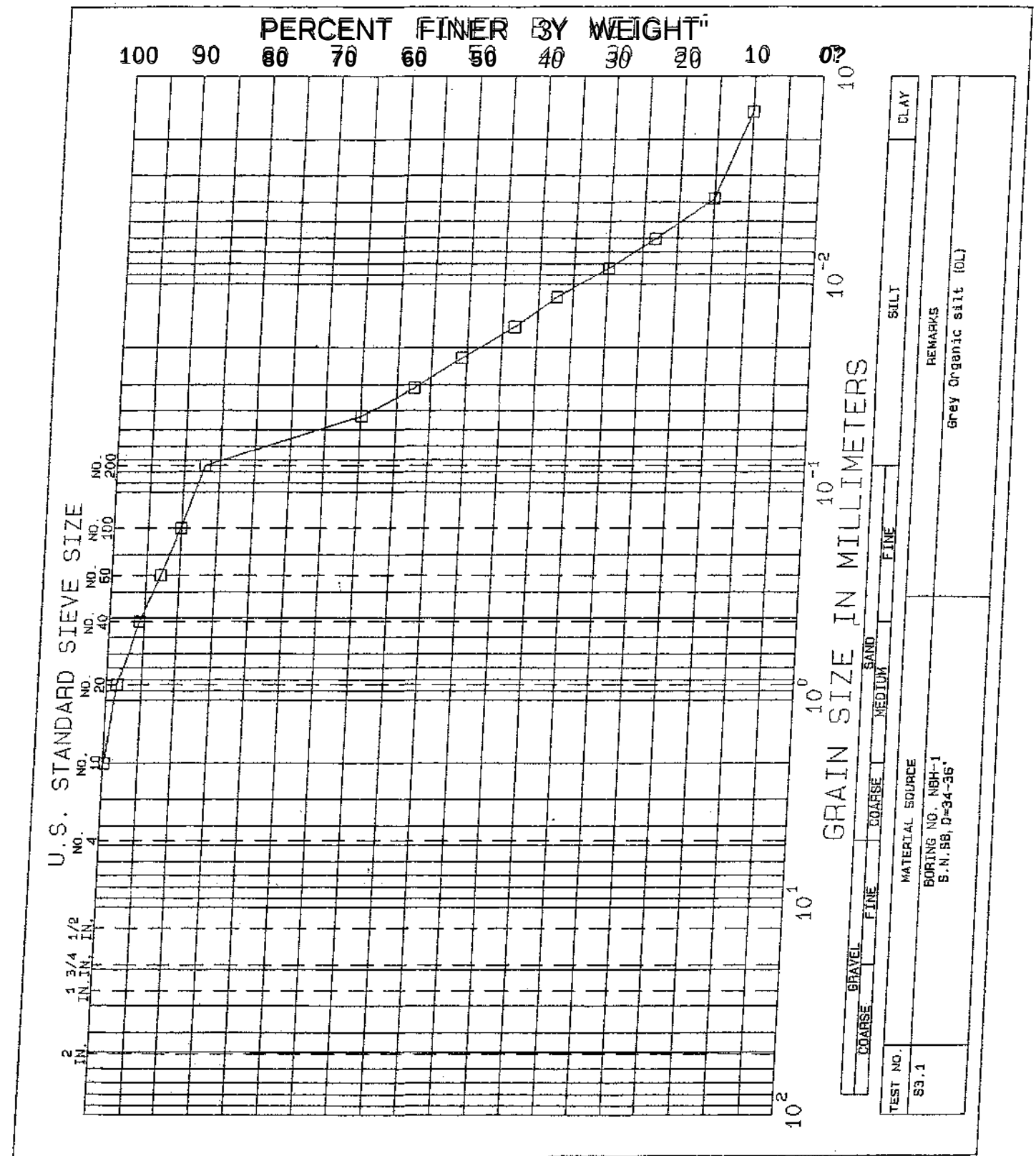
BORING NO. NBH-1	TEST SERIES
SAMPLE S1-S-5	NO. 1
DEPTH 0-24'	DATE SEPT. 01
TECH, mst	
REVIEWER MCH	FILE L16928



NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

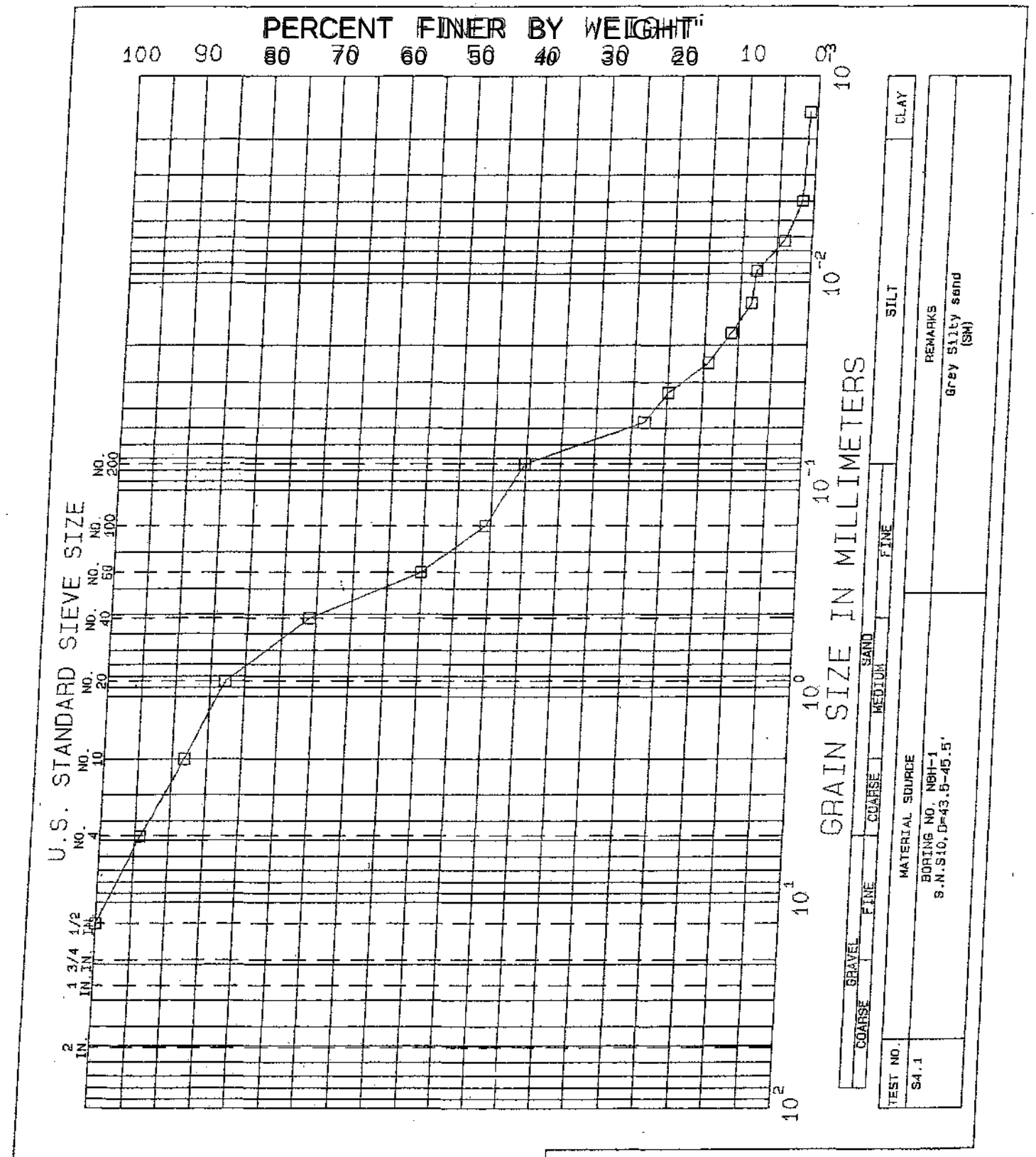
BORING NO.	NBH-1	TEST SERIES NO.	2
SAMPLE	S6&S7	DATE	SEPT. 01
DEPTH	27-34'		
TECH.	mst		
REVIEWER	MCM	FILE	L18928



NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

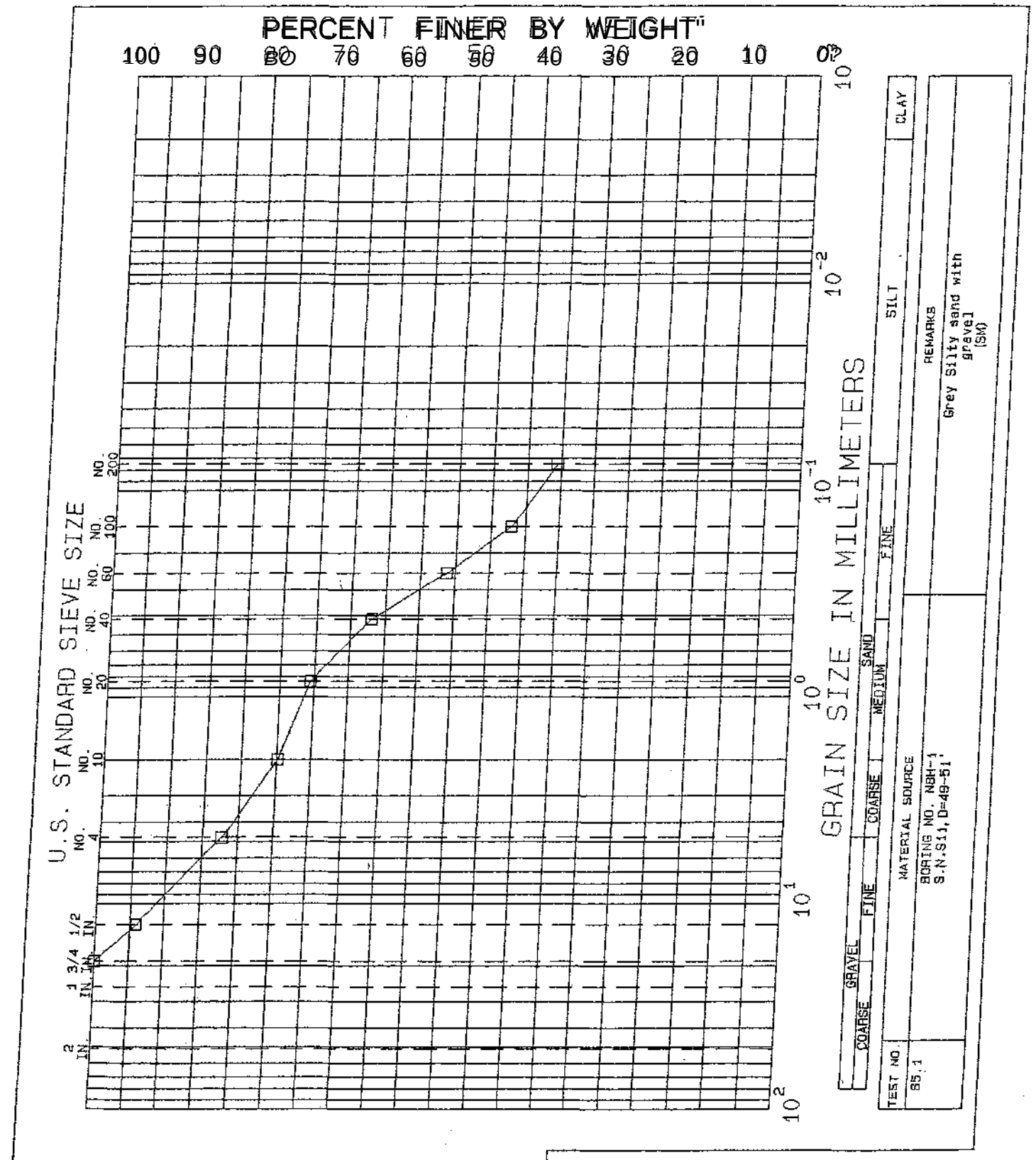
BORING NO. NBH-1	TEST SERIES NO. 3
SAMPLE S8	DATE SEPT. 01
DEPTH 34-36'	
TECH. rmst	
REVIEWER MCM	FILE L15926



NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

BORING NO.	NBH-1	TEST SERIES NO.	4
SAMPLE	S10	DATE	SEPT. 01
DEPTH	43.5-45.5'		
TECH.	mst		
REVIEWER	MCM	FILE	LI6928



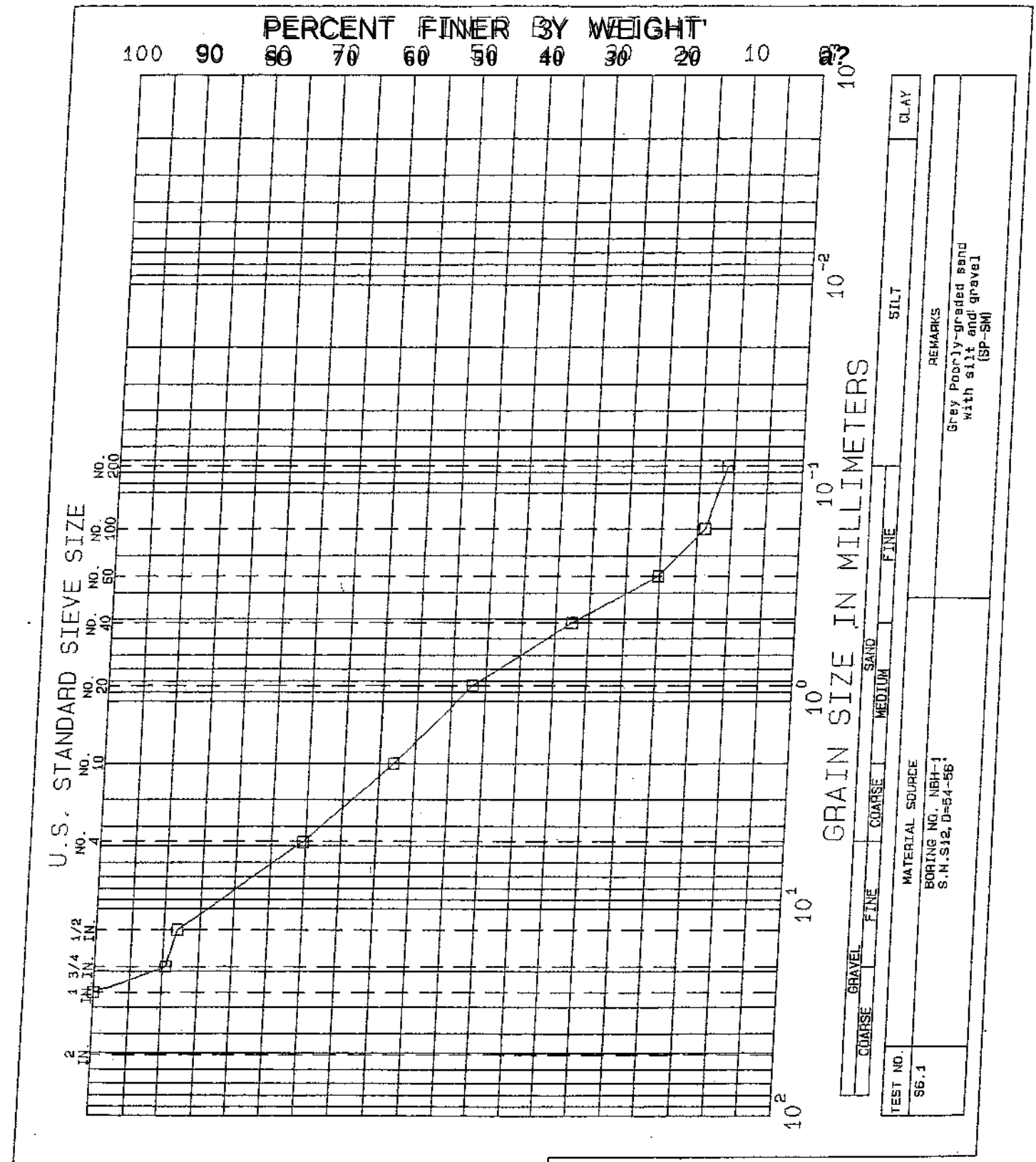
NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

BORING NO. NBH-1
SAMPLE S11
DEPTH 49-51'
TECH. ffmst
REVIEWER MCM

TEST SERIES NO. 5
DATE SEPT. 01

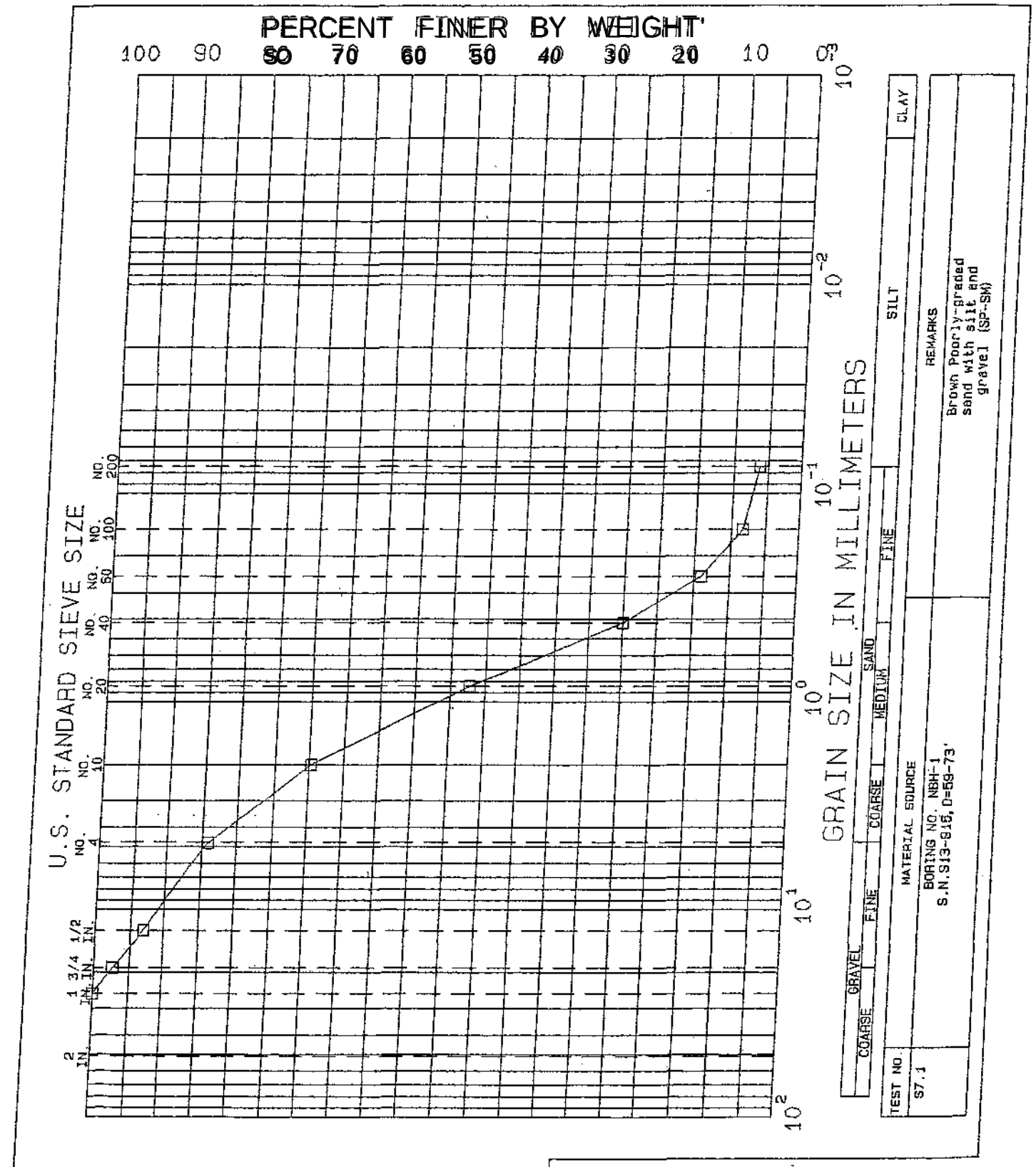
FILE L16928



NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

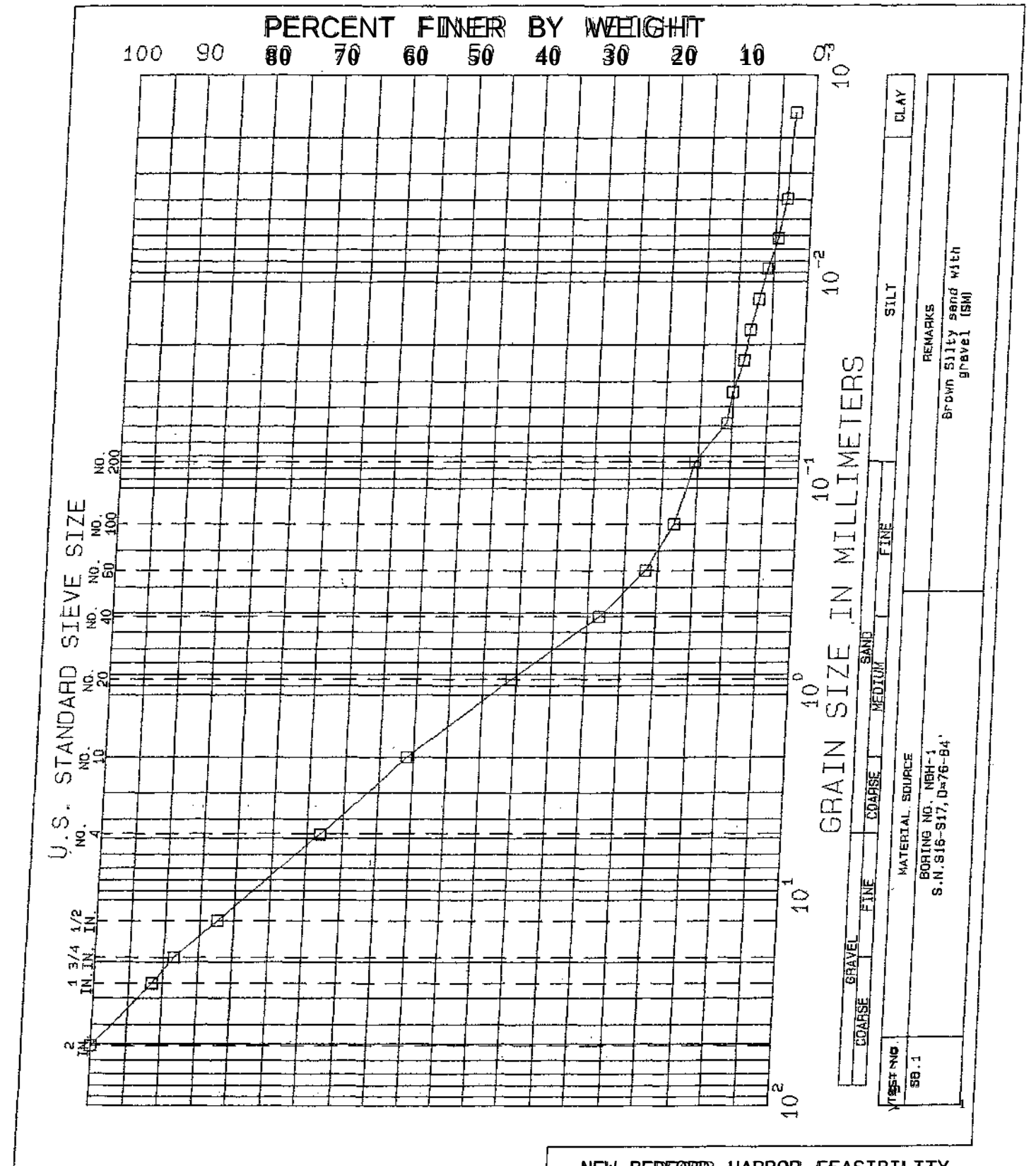
BORING NO.	NBH-1	TEST SERIES NO.	5
SAMPLE	S12	DATE	SEPT. 01
DEPTH	54-56'		
TECH.	mst		
REVIEWER	MCM	FILE	L1692B



NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

BORING NO.	NBH-1	TEST SERIES NO.	7
SAMPLE	S13-15	DATE	SEPT. 01
DEPTH	59-73'		
TECH.	mst		
REVIEWER	MCM	FILE	L18926



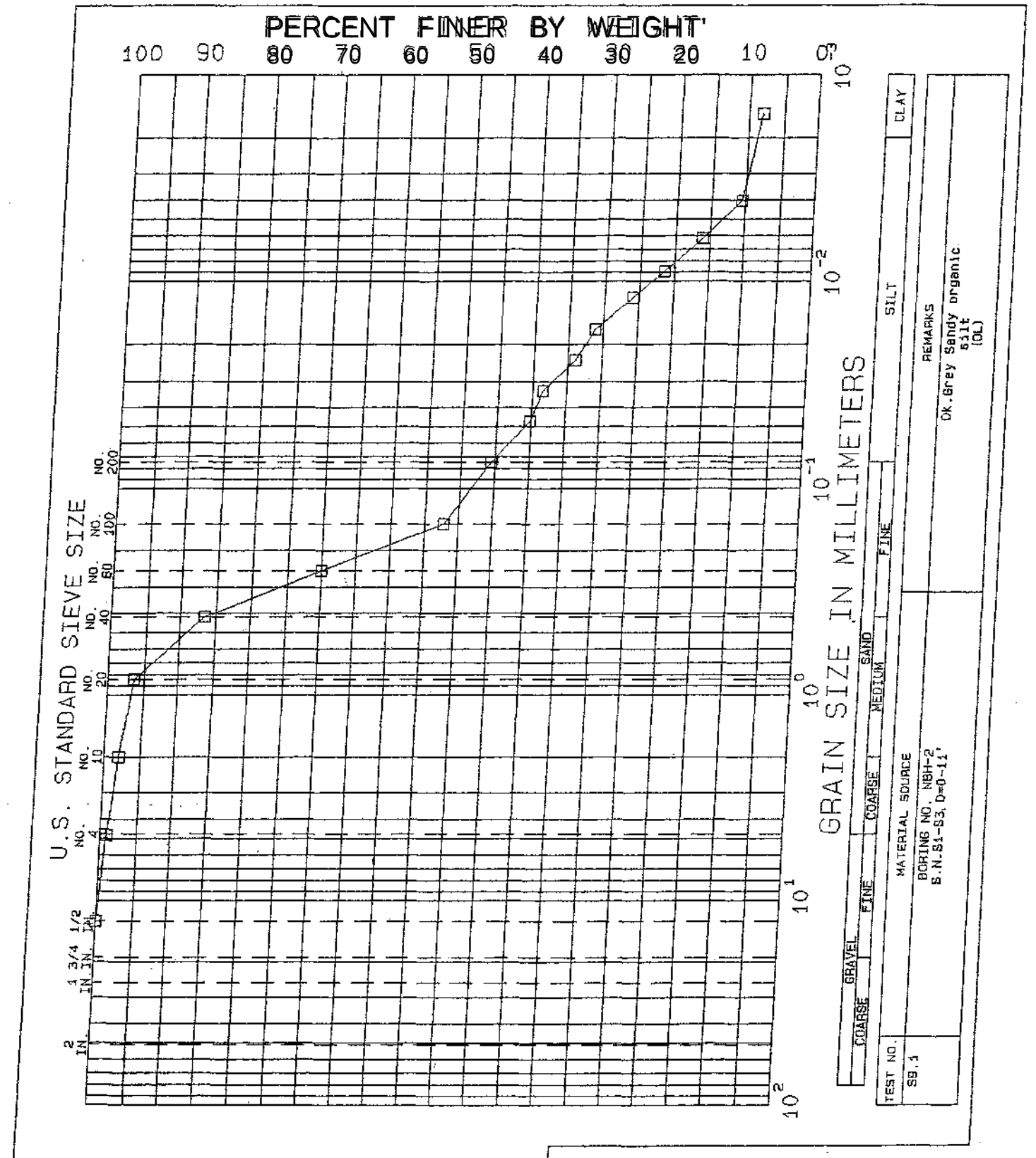
NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

BORING NO.	NBH-1
SAMPLE	S36&37
DEPTH	76-84'
TECH.	mst
REVIEWER	MCM.

TEST SERIES NO. 8
DATE SEPT. 01

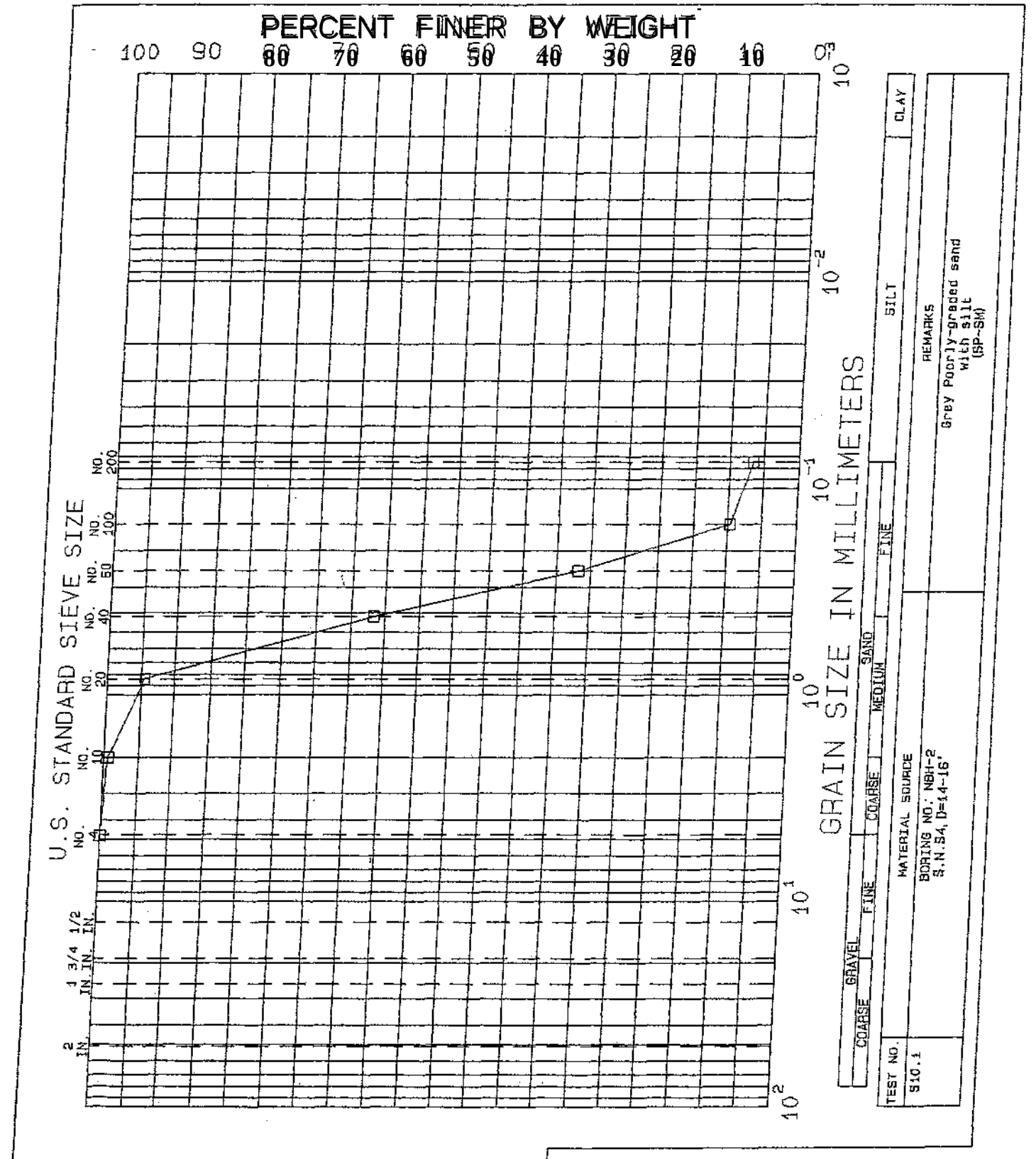
FILE L16S2B



NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

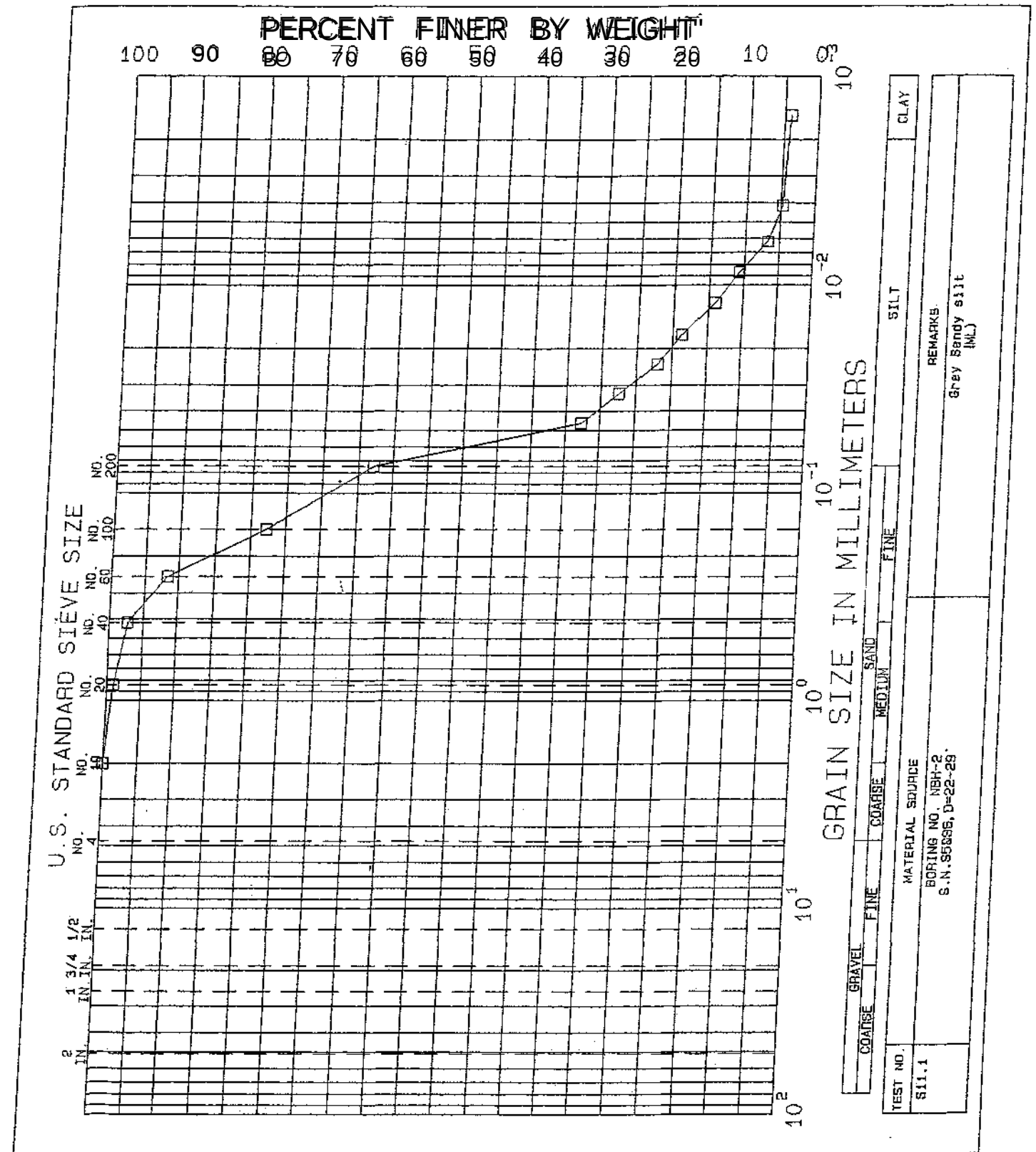
BORING NO.	NBH-2	TEST SERIES NO.	9
SAMPLE	S3-S3	DATE	SEPT. 01
DEPTH	0-11'		
TECH.	mst		
REVIEWER	MCH	FILE	L16928



NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

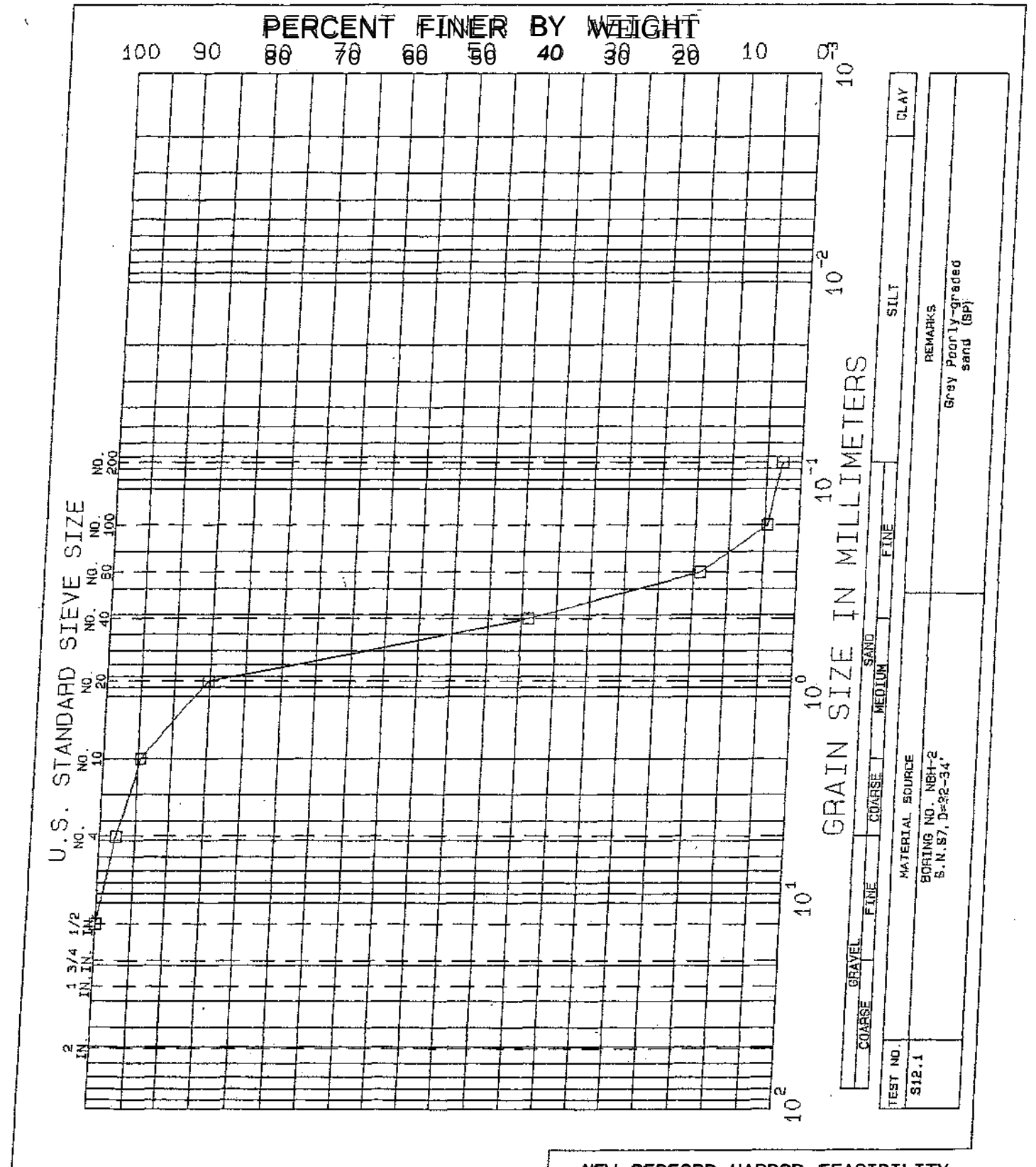
BORING NO. NBH-2	TEST SERIES NO. 10
SAMPLE S4	DATE SEPT. 01
DEPTH 14-16'	
TECH. mst	
REVIEWER MCM	FILE L16928



NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

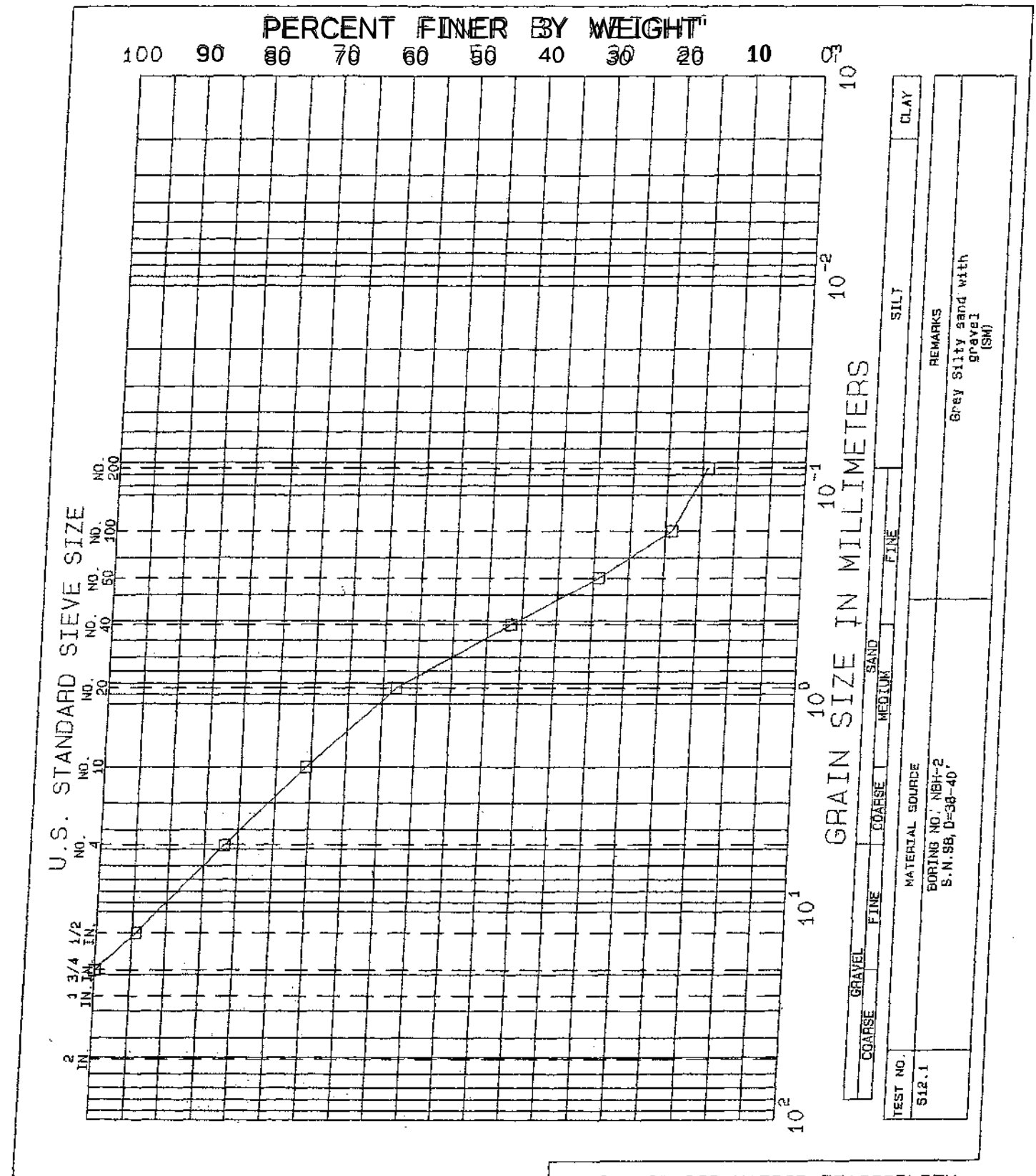
BORING NO. NBH-2	TEST SERIES NO. 11
SAMPLE S5&S6	DATE SEPT. 01
DEPTH 22-29"	
TECH. mst	
REVIEWER MCM	FILE L1BS2B



NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

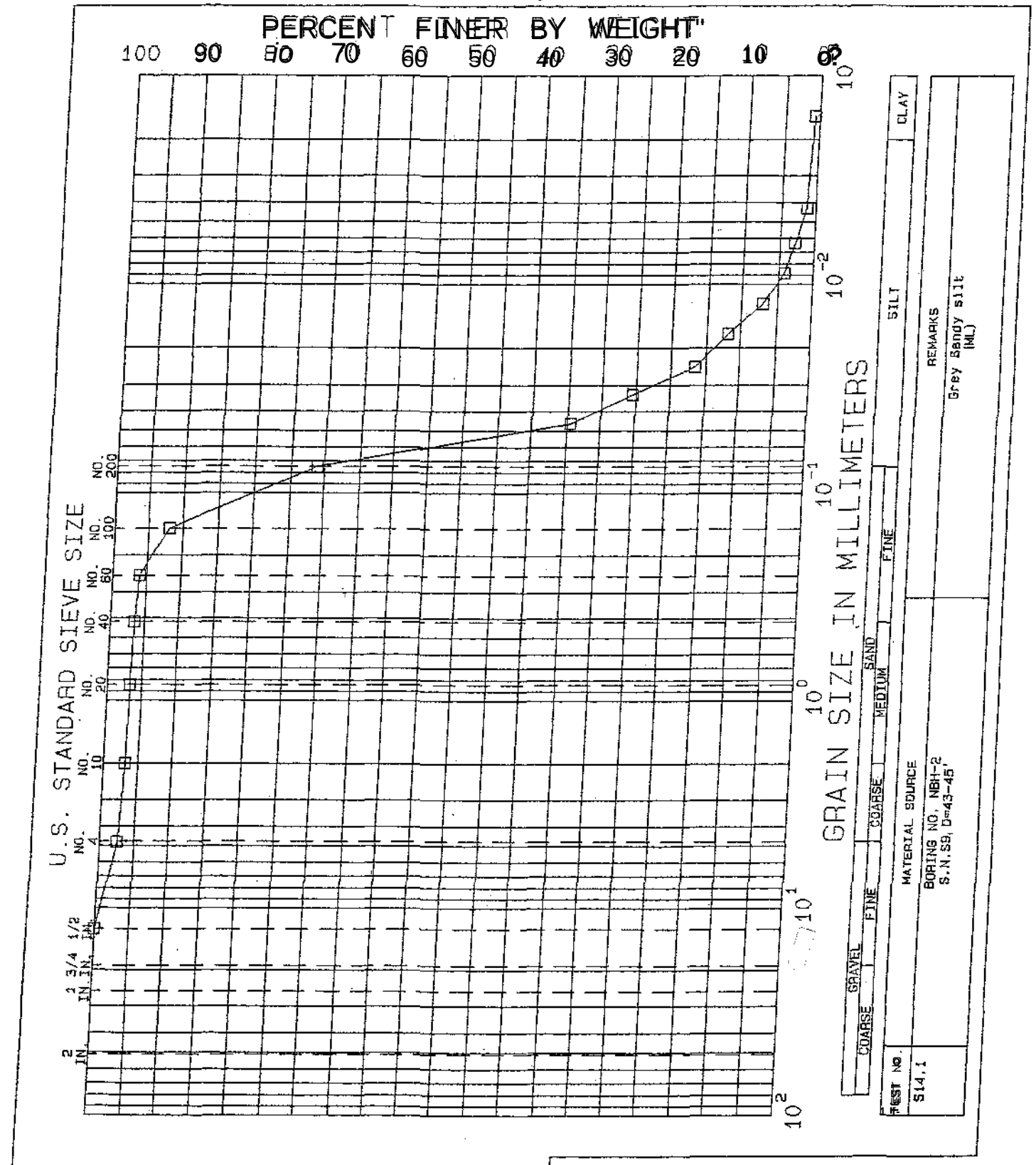
BORING NO. NBH-2	TEST SERIES NO. 12
SAMPLE S7	DATE SEPT. 01
DEPTH 32-34'	
TECH. mst	
REVIEWER MCM	FILE L1692B



NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

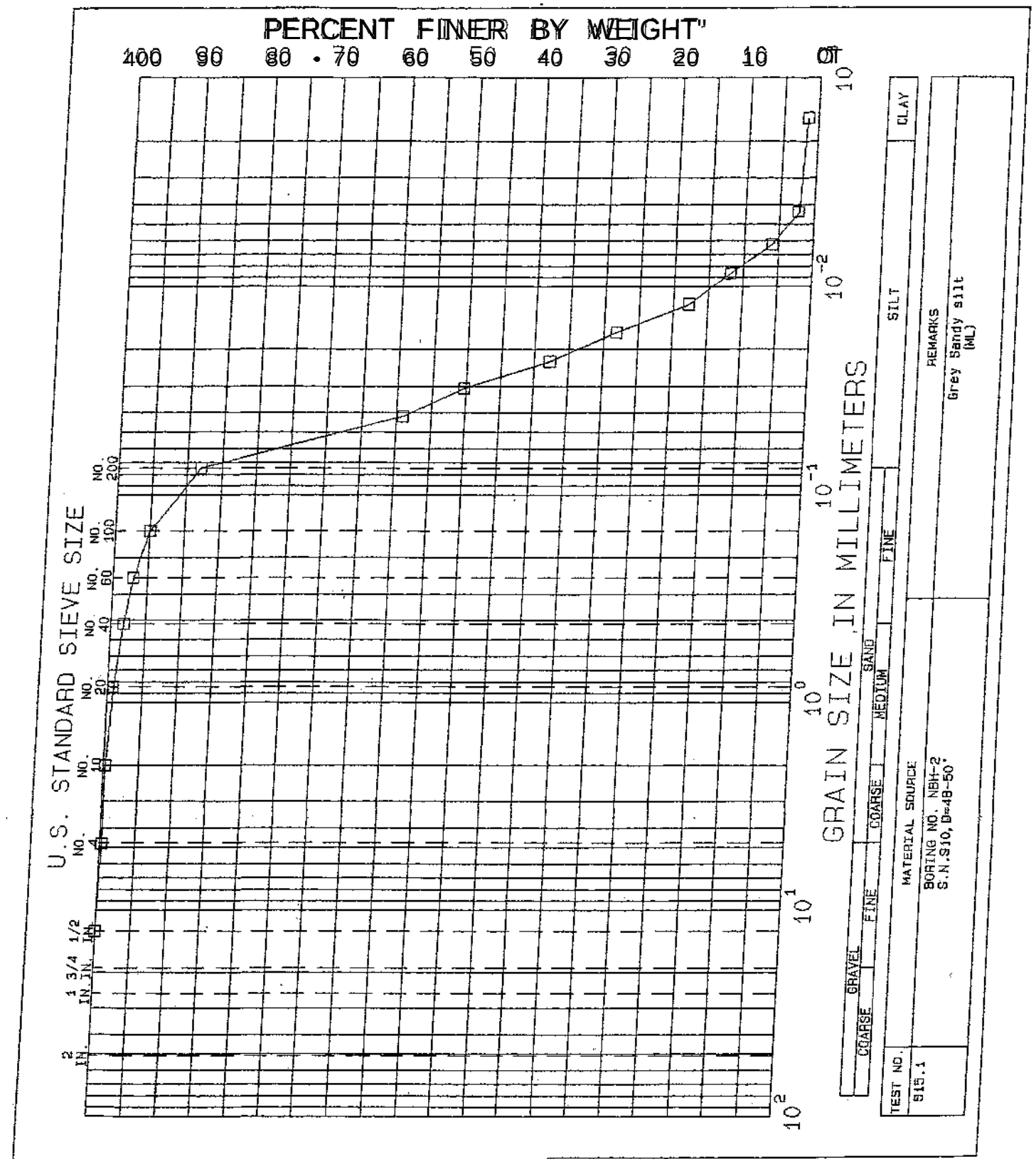
BORING NO.	NBH-2	TEST SERIES NO.	13
SAMPLE	S8	DATE	SEPT. 01
DEPTH	38-40'		
TECH.	mst		
REVIEWER	MCM	FILE	L16528



NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

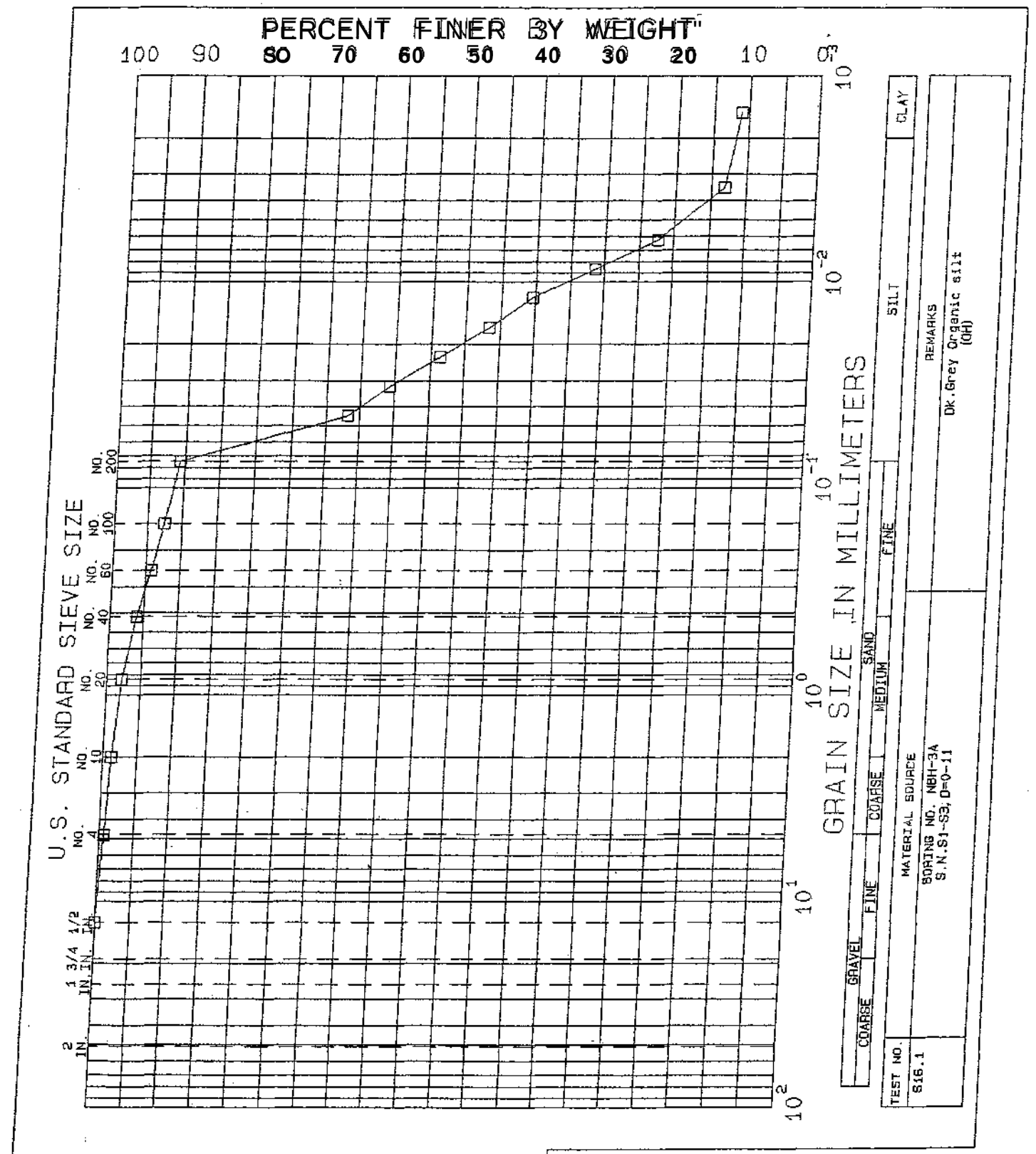
BORING NO.	NBH-2	TEST SERIES NO.	14
SAMPLE	S8	DATE	SEPT. 01
DEPTH	43-45'		
TECH.	Hist		
REVIEWER	MCM	FILE	L15928



NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

BORING NO.	NBH-2	TEST SERIES NO.	15
SAMPLE	S10	DATE	SEPT. 01
DEPTH	48-50'		
TECH.	mst		
REVIEWER	MCM	FILE	L1B82B



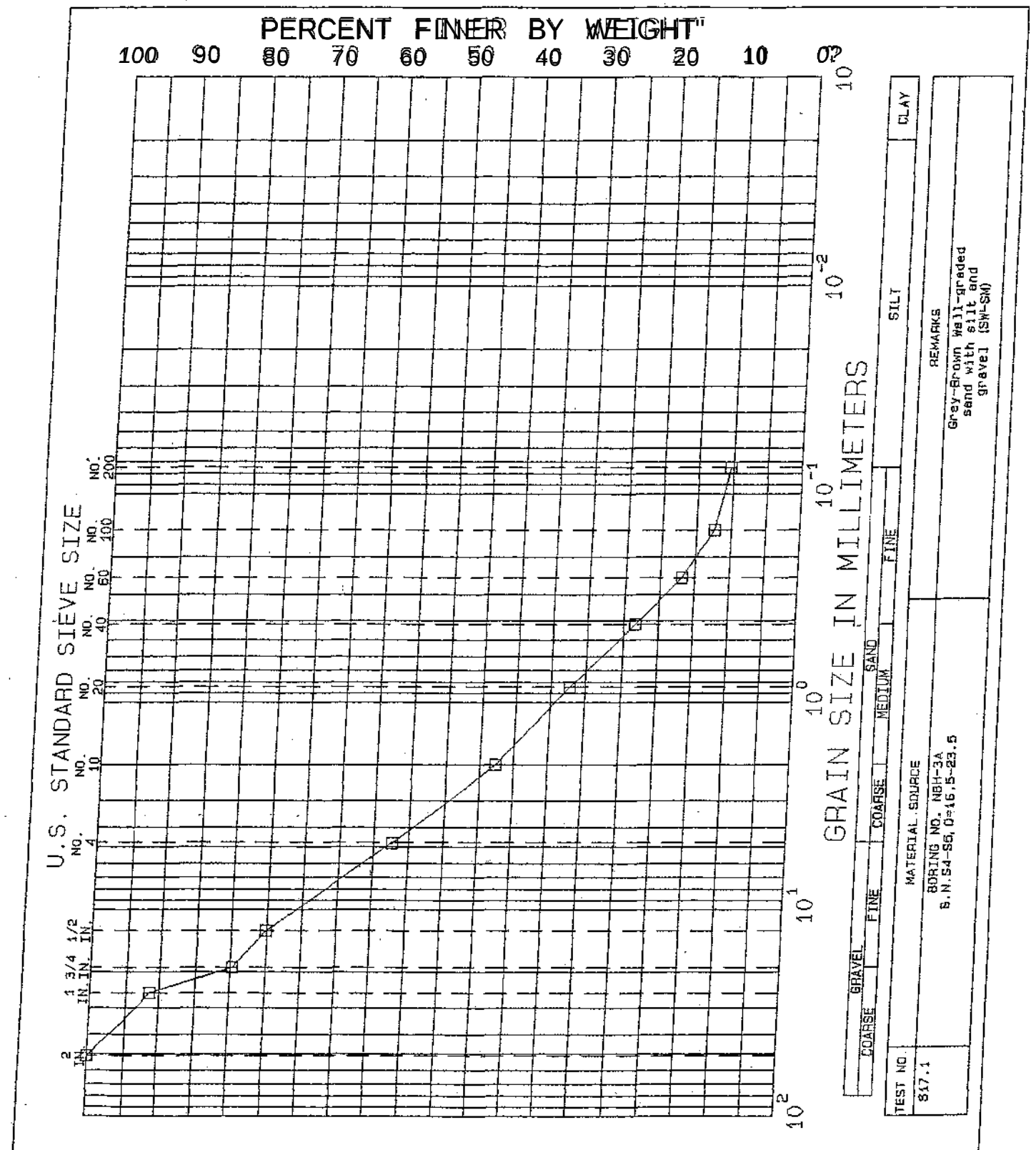
NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

BORING NO. NBH-3A
SAMPLE S1-S3
DEPTH 0-11'
TECH. mst
REVIEWER MCM

TEST SERIES NO. 16
DATE SEPT. 01

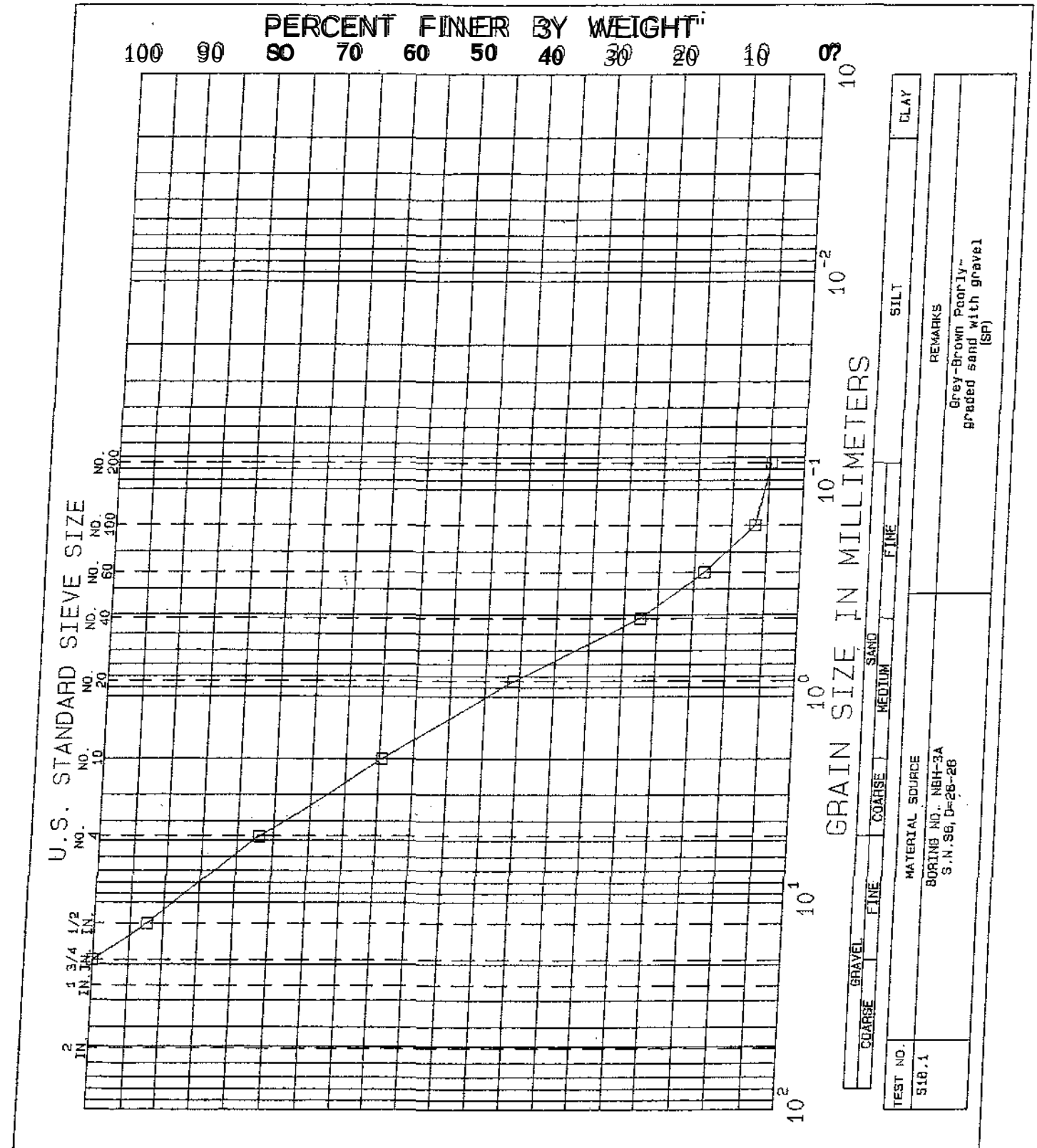
FILE LI6328



NEW BEDFORD HARBOR FEASIBILITY STUDY/ NEW BEDFORD, MA.

GRADATION TESTS

BORING NO.	NBH-3A	TEST SERIES NO.	17
SAMPLE	S4-S5	DATE	SEPT. 03
DEPTH	36.5-23.5'		
TECH.	mst		
REVIEWER	MCM	FILE	L1BS2B



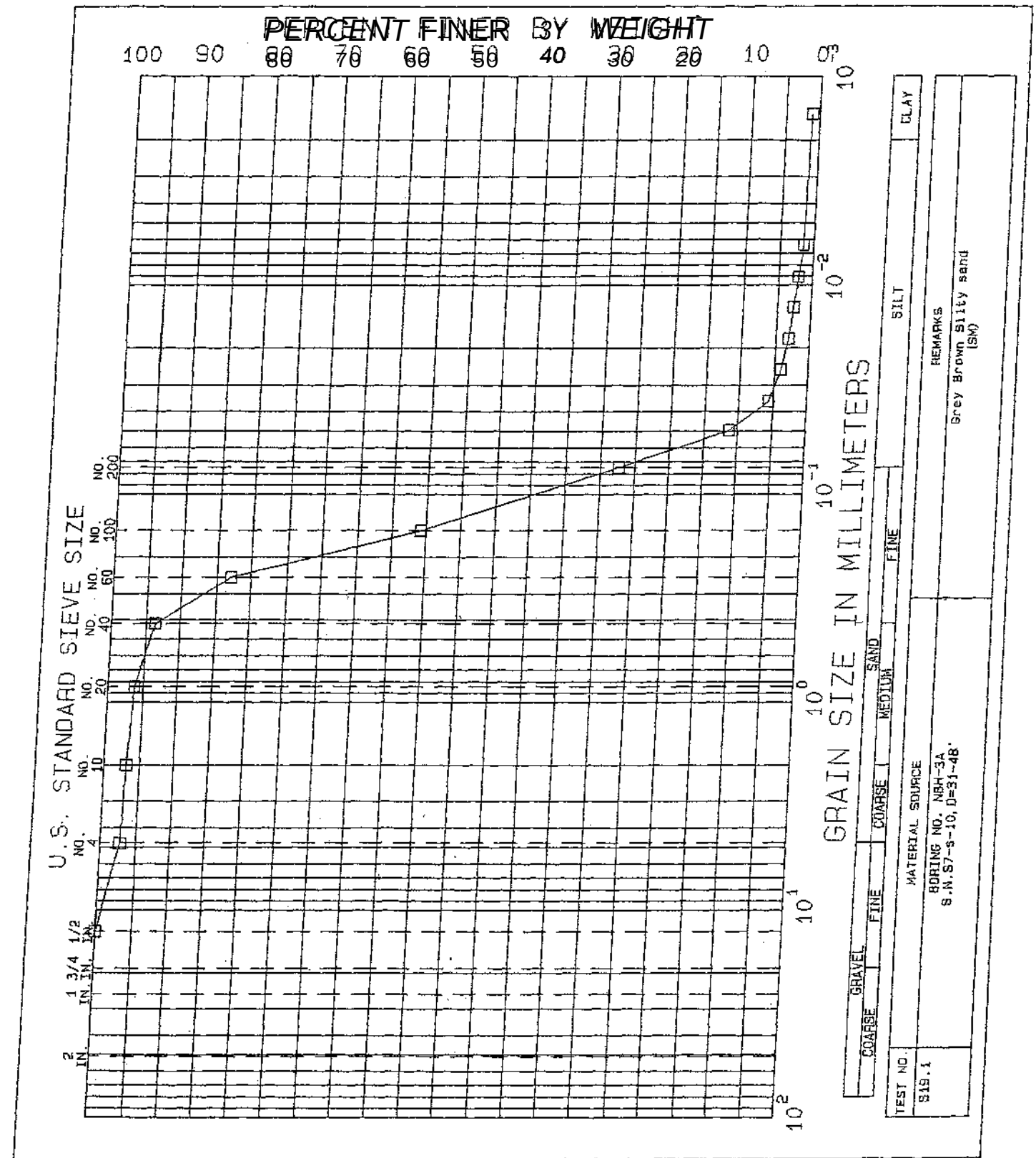
NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

BORING NO.	NBH-3A
SAMPLE	S6
DEPTH	26-28'
TECH.	met
REVIEWER	MCM

TEST SERIES NO. I8
DATE SEPT. 01

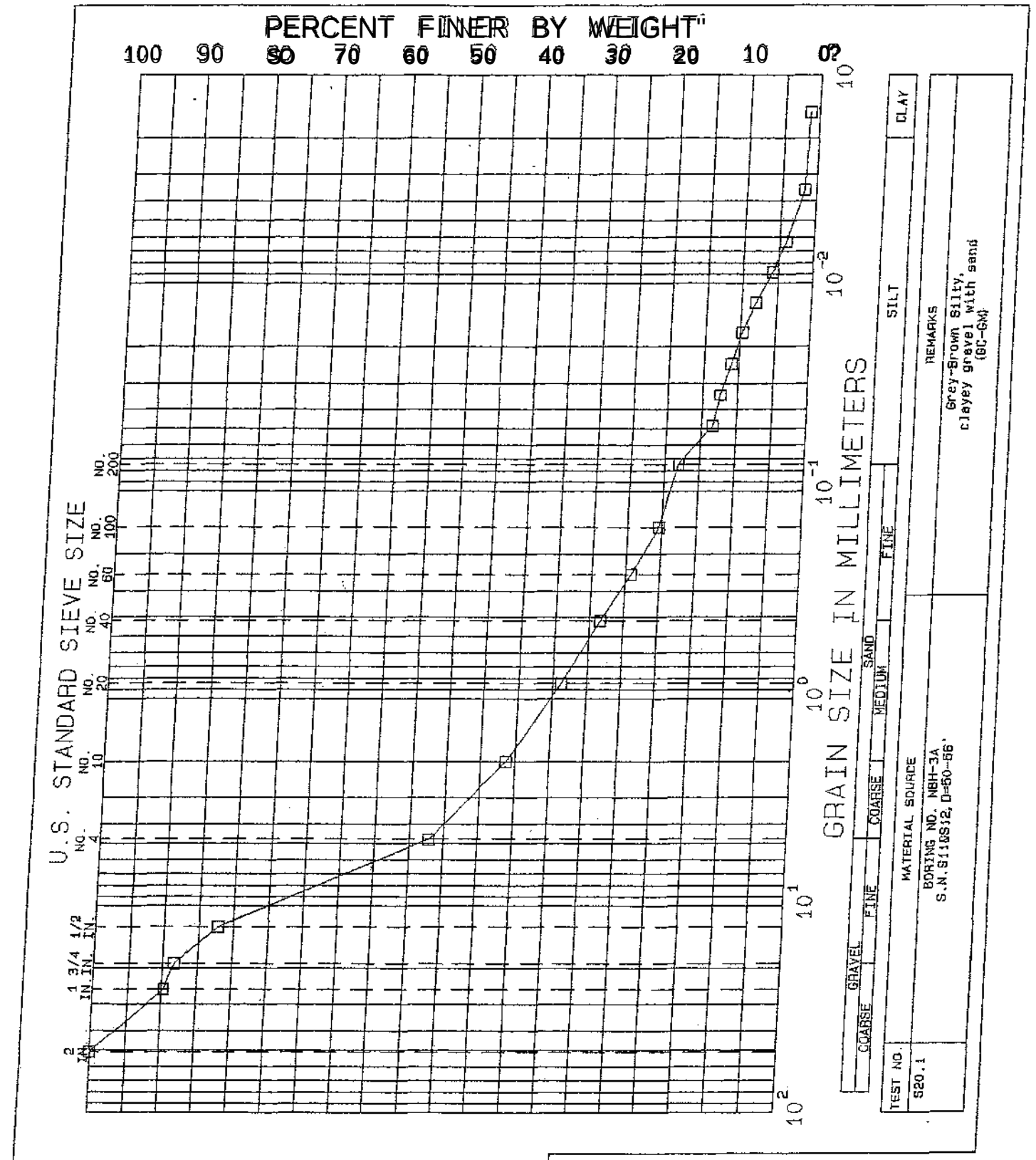
FILE L16828



NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

BORING NO.	NBH-3A	TEST SERIES NO.	19
SAMPLE	S7-S10	DATE	SEPT. 01
DEPTH	31-48'		
TECH.	mst		
REVIEWER	MCM	FILE	L16S28



NEW BEDFORD HARBOR FEASIBILITY STUDY, NEW BEDFORD, MA.

GRADATION TESTS

BORING NO.	NBH-3A	TEST SERIES NO.	20
SAMPLE	S11, S12	DATE	SEPT. 01
DEPTH	50-56'		
TECH.	mst		
REVIEWER	MCM	FILE	L16928

LABORATORY TESTING DATA SHEET

Project Name: NEW BEDFORD HARBOR
NEW BEDFORD, MASS.
Project No.: L17571 Assigned By: D. NACCI Reviewed By:
Project Engineer: D. SCHULZE Date: DEC.02 Date Reviewed:

Boring/ Test Pit No.	Sample No.	Depth ft.	Lab No.	Identification Tests: Water Content %	LL %	PL %	Sieve -200 %	Hyd -2μ %	ORG %	G_s	Dry Unit wt. pcf	Density: γ_d MAX (pcf) W_{opt} (%)	Permeability cm/sec	Strength Tests: Torvane or Type Test	$\bar{\sigma}_c$ psf	Failure Criteria	$\sigma_1 - \sigma_3$ or τ psf	Strain %	Consol. $\frac{e}{1+e_0}$	Laboratory Log and Soil Description
NBH-8	UP-1	5-7	21	Average Total Unit Weight (5.0-6.8') = 127.7 Pcf																
		5.1		20.4																Brown fine SAND, little (-) Silt
		5.1-5.6		21.5							105.3									
		5.6		17.3																
		5.6-5.9		18.4	non-plastic		11	<1	0.4											
		5.9-6.4		21.1							105.9									
		6.4		20.1																

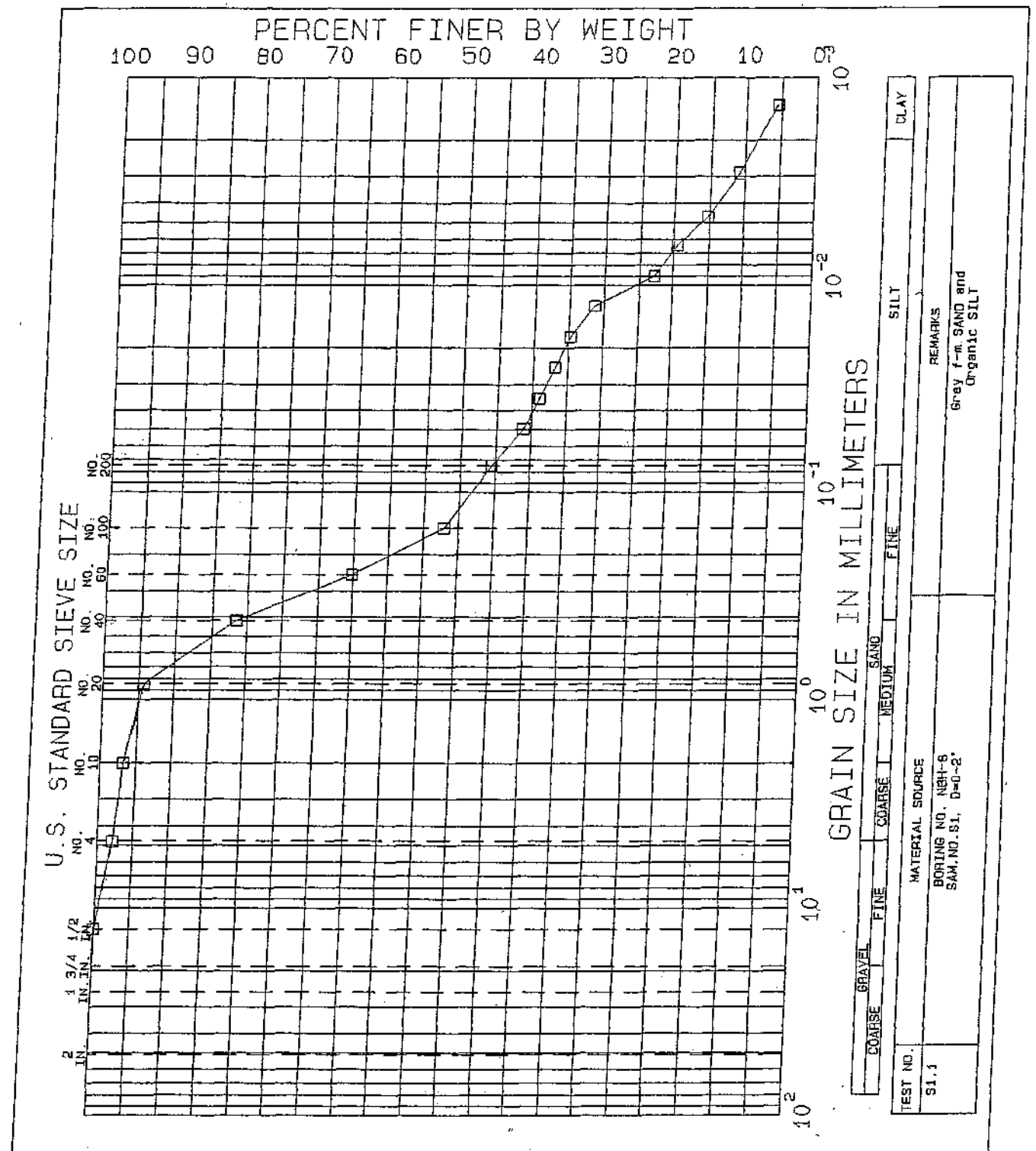
LABORATORY TESTING DATA SHEET

Project Name: NEW BEDFORD HARBOR
NEW BEDFORD, MA.

Project No.: L17571 — Assigned By: D. NACCI — Reviewed By:

Project Engineer: D. SCHULZE — Date: DEC.02 — Date Reviewed:

Boring/ Test Pit No.	Sample No.	Depth ft.	Lab No.	Identification Tests: Water Content %	LL %	PL %	Sieve -200 %	Hyd -2μ %	ORG %	G_s	Dry unit wt. pcf	Density: γ_d MAX (pcf) W_{opt} (%)	Permeability cm/sec	Strength Tests: Torvane or Type Test	$\bar{\sigma}_c$ psf	Failure Criteria	$\sigma_1 - \sigma_3$ or τ psf	Strain %	Consol. $\frac{\Delta e}{1+e_0}$	Laboratory Log and Soil Description
NBH-8	S-1	0-2	1	47.5	38	19	46	8	2.6											Grey f-m SAND and Organic SILT
	S-2	7-9	2				11													Brown f-c SAND, little (+) Gravel, little (-) Silt
	S-3-S-6	10-27	3				6													Brown f-c GRAVEL and m-c SAND trace Silt
	S-8 S-9	41.5-49.5	4				3													Grey-Brown f-c SAND, little (-) Gravel, trace Silt
	S-10	52.5-54.5	5				3													Brown fine SAND, trace Silt
	S-11 S-12	57.5-64.5	6				4													Grey-f-c SAND and f-c GRAVEL, trace Silt
	S-14	75.5-77.5	7				6													Grey f-m SAND, little Gravel, trace Silt
	S-15 S-16	80.5-87.5	8				9													Grey-Brown f-c SAND, little (-) Gravel, trace (+) Silt
NBH-9	S-1	0-2	9	114	100	47	86	14	10.4											Grey Organic SILT, little Sand
	S-2	12-14	10				11	1												Brown f-c GRAVEL and f-m SAND, little (-) Silt
	S-3	18-20	11				15	1												Brown f-m SAND and f-c GRAVEL, little Silt

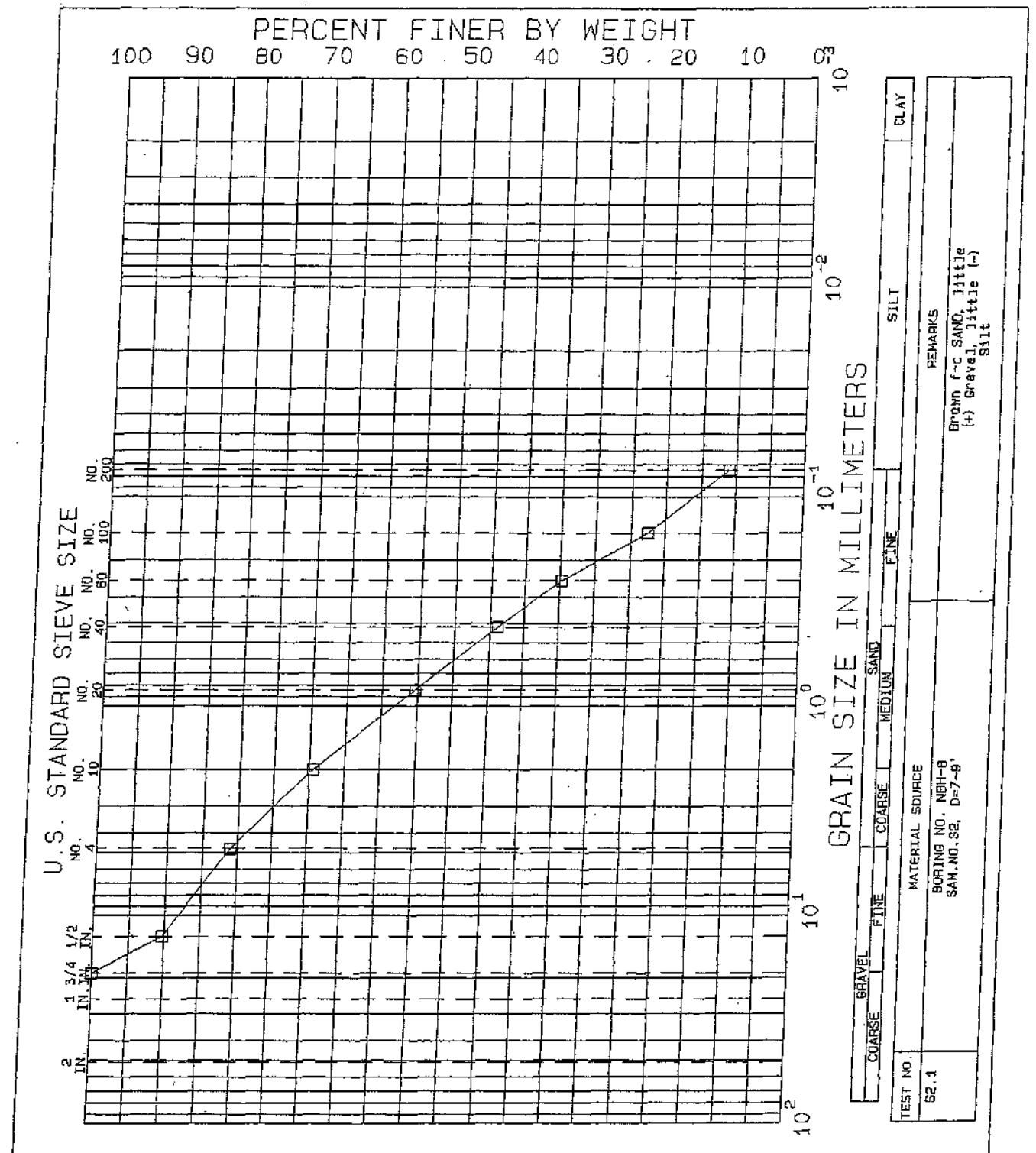


NEW BEDFORD HARBOR

NEW BEDFORD, MA.

GRADATION TESTS

BORING NO.	NBH-8	TEST SERIES NO.	1
SAMPLE	S-1	DATE	Jan.03
DEPTH	0-2'		
TECH.	MST		
REVIEWER	MCM	FILE	L17571

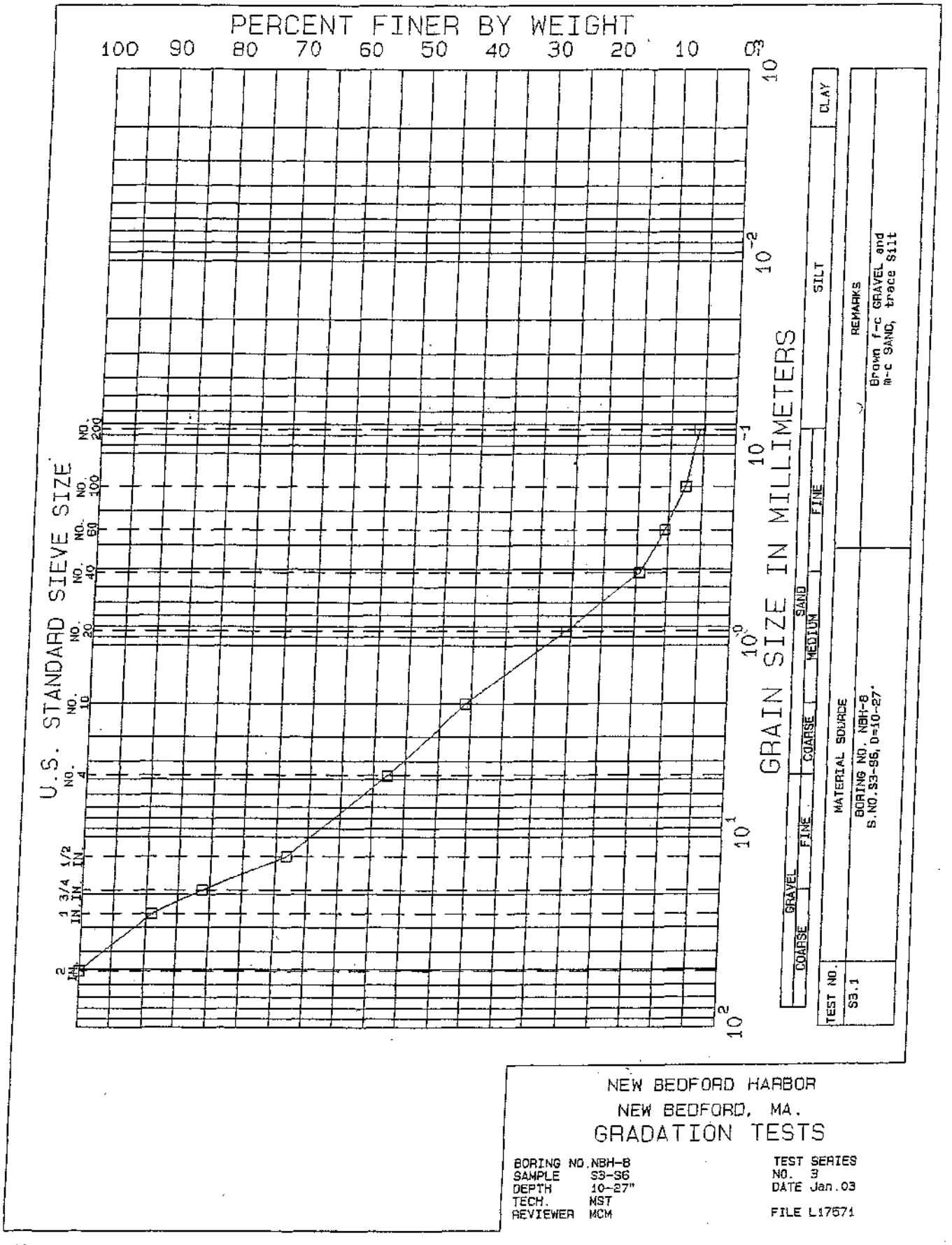


NEW BEDFORD HARBOR
NEW BEDFORD, MA.
GRADATION TESTS

BORING NO.	NBH-8
SAMPLE	S-2
DEPTH	7-9'
TECH.	MST
REVIEWER	MCM

TEST SERIES NO. 2
DATE Jan.03

FILE L17571

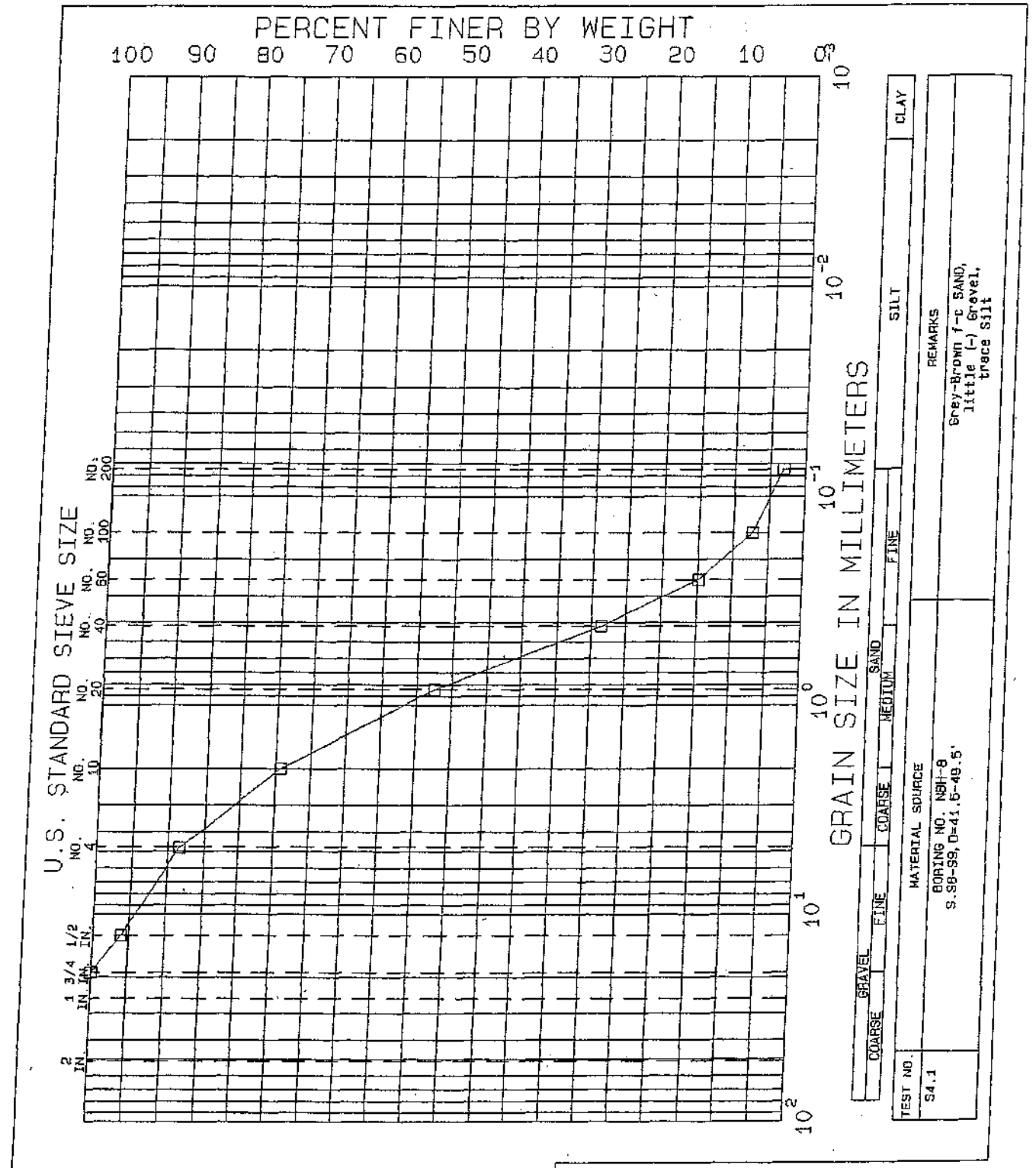


NEW BEDFORD HARBOR
NEW BEDFORD, MA.
GRADATION TESTS

BORING NO.	NBH-8
SAMPLE	S3-S6
DEPTH	10-27"
TECH.	MST
REVIEWER	MCM

TEST SERIES NO. 3
DATE Jan.03

FILE L17571

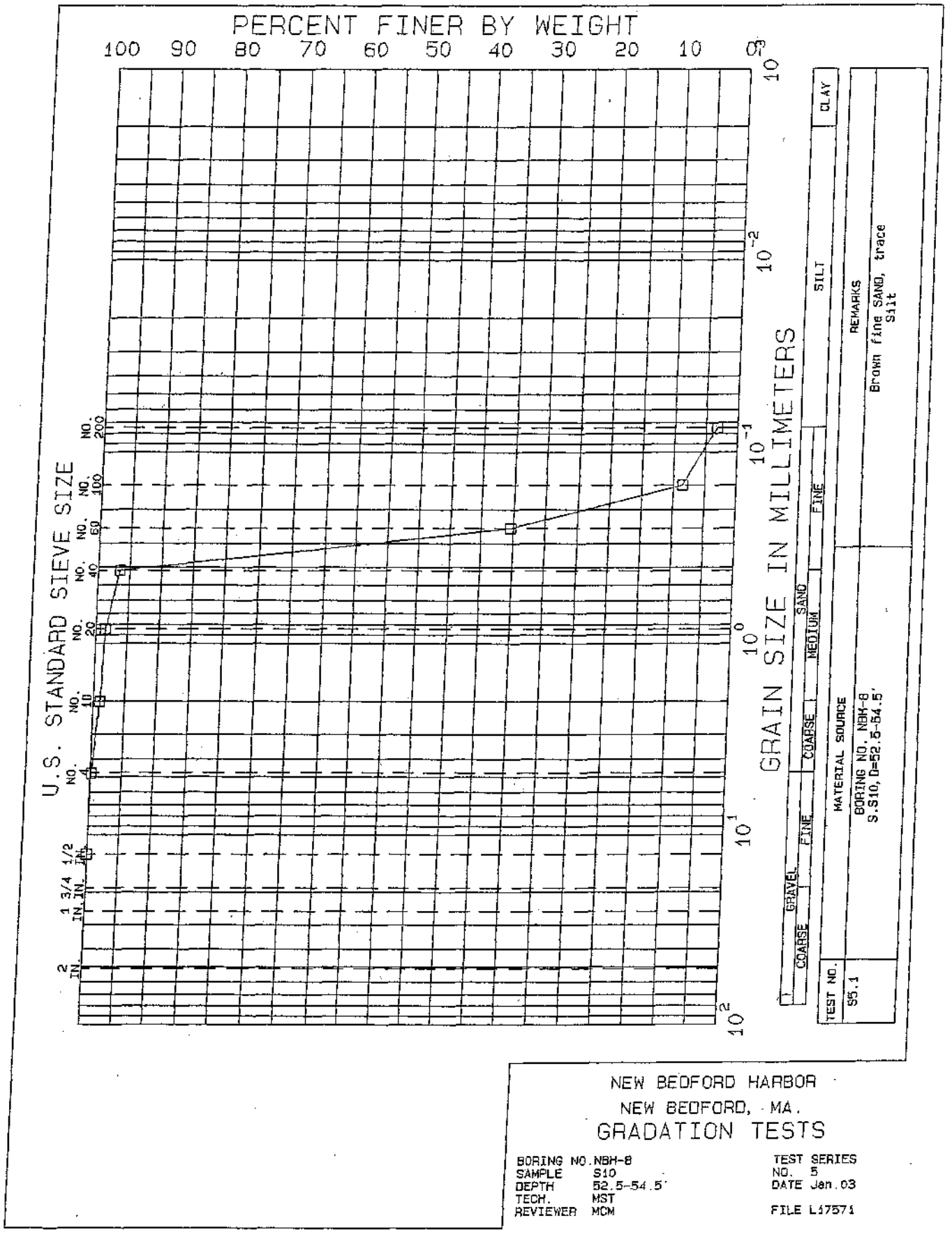


NEW BEDFORD HARBOR

NEW BEDFORD, MA.

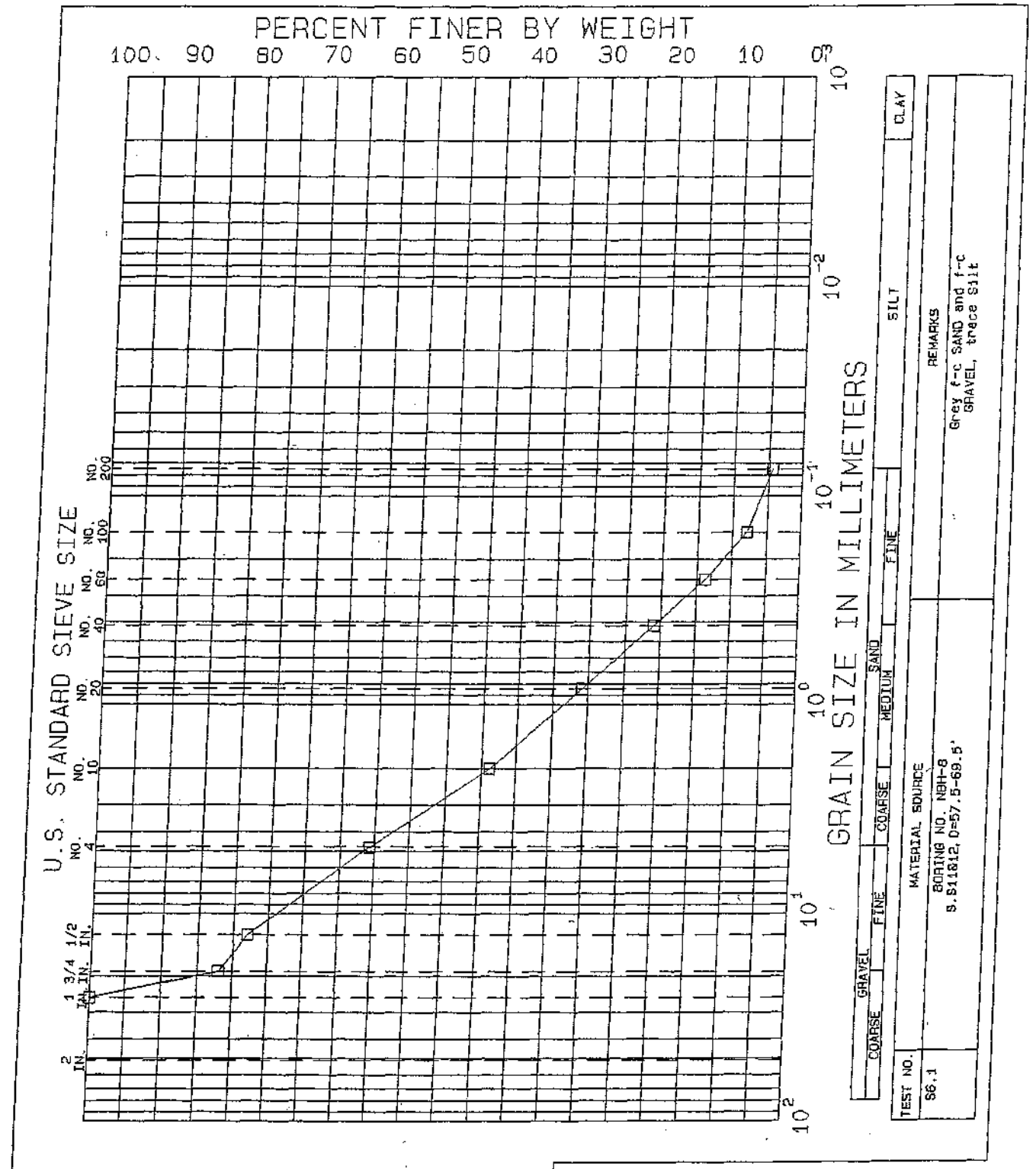
GRADATION TESTS

BORING NO.	NBH-8	TEST SERIES NO.	4
SAMPLE	S8-S9	DATE	Jan.03
DEPTH	41.5-49.5'		
TECH.	MST		
REVIEWER	MCM	FILE	L17571



NEW BEDFORD HARBOR
NEW BEDFORD, MA.
GRADATION TESTS

BORING NO.	NBH-8	TEST SERIES	
SAMPLE	S10	NO.	5
DEPTH	52.5-54.5'	DATE	Jan.03
TECH.	MST		
REVIEWER	MCM	FILE	L17571

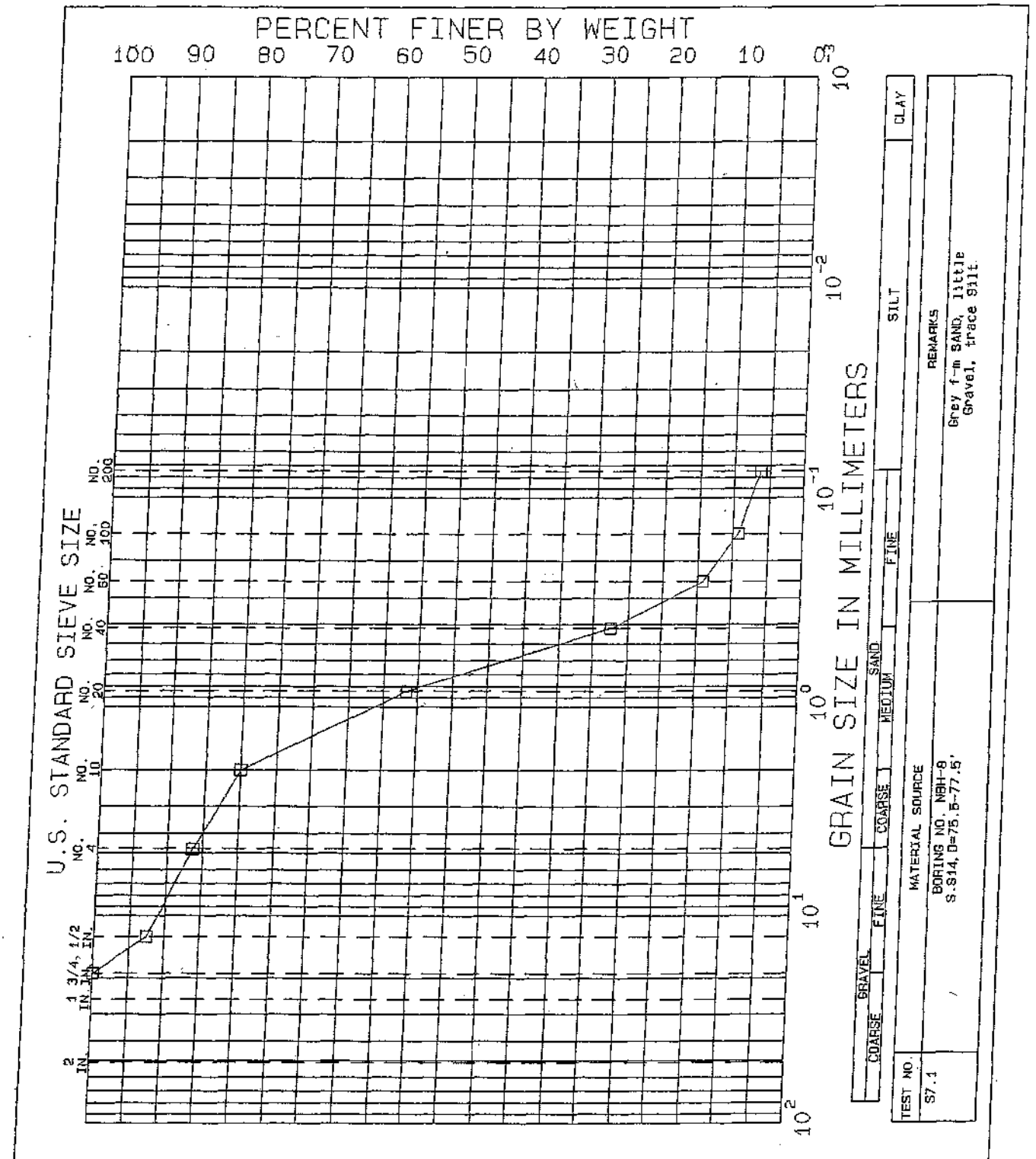


NEW BEDFORD HARBOR

NEW BEDFORD, MA.

GRADATION TESTS

BORING NO.	NBH-8	TEST SERIES	
SAMPLE	S11&12	NO.	6
DEPTH	57.5-69.5'	DATE	Jan.03
TECH.	MST		
REVIEWER	MCM	FILE	L17571



NEW BEDFORD HARBOR

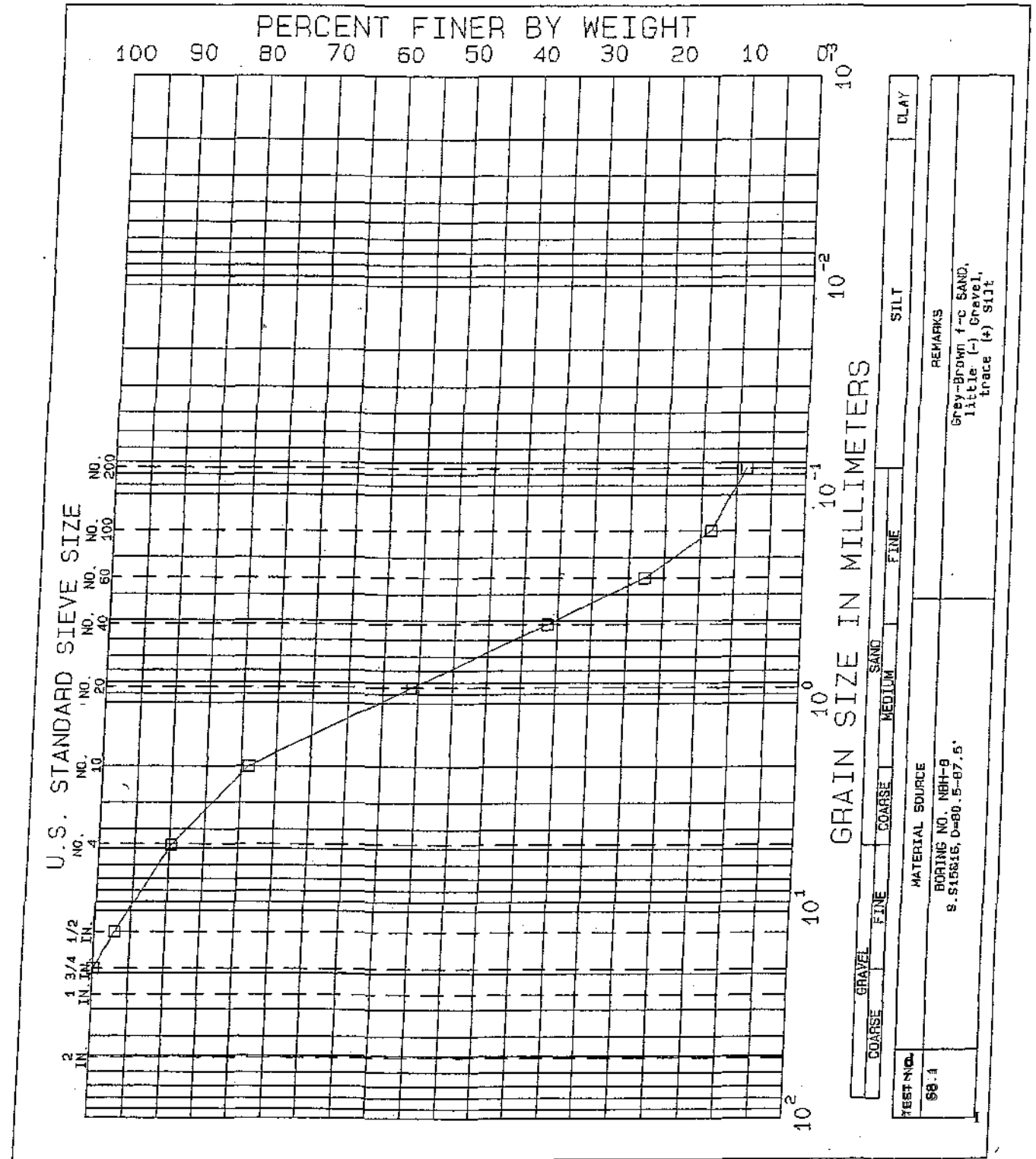
NEW BEDFORD, MA.

GRADATION TESTS

BORING NO. NBH-8
SAMPLE S14
DEPTH 75.5-77.5'
TECH. MST
REVIEWER MCM

TEST SERIES NO. 7
DATE Jan.03

FILE L17571



NEW BEDFORD HARBOR

NEW BEDFORD, MA.

GRADATION TESTS

BORING NO.	NBH-8	TEST SERIES NO.	8
SAMPLE	S15&16	DATE	Jan.03
DEPTH	80.5-87.5'		
TECH.	MST		
REVIEWER	MCM	FILE	L17571

Specific Gravity of Soils by ASTM D 854

Client: Nobis Engineering
Project Name: New Bedford Harbor Superfund Site
Project Location: New Bedford, MA

GTX #: 2409
Test Date: 10/18/99
Tested By: swj
Checked By: gtt

Boring #	Sample ID	Depth, ft	Visual Description	Specific Gravity @ 20° C
FD-2	UO-1	3-5	Wet, black sandy organic silt	2.49
FD-2	UO-2	6-8	Moist, very dark brown organic clay with sand	2.64
FD-5	UO-1	3-5	Moist, black organic clay	2.52
FD-5	UO-2	6-8	Moist, very dark brown sandy organic clay	2.64
FD-8	UO-2	6-8	Moist, very dark gray clayey sand with organics	2.59
FD-30	UO-2	4-6	Moist, dark gray clayey sand with organics	2.63
FD-31	UO-1	3-5	Moist, dark gray organic clay with sand	2.62
FD-31	UO-2	8-10	Moist, dark gray organic clay with sand	2.62
FD-31	UO-3	12-14	Moist, dark gray sandy organic clay	2.63
FD-32	UO-1	6-8	Moist, dark gray sandy organic clay	2.64

Notes: Specific gravity performed by using method B (moist specimens) of ASTM D 854

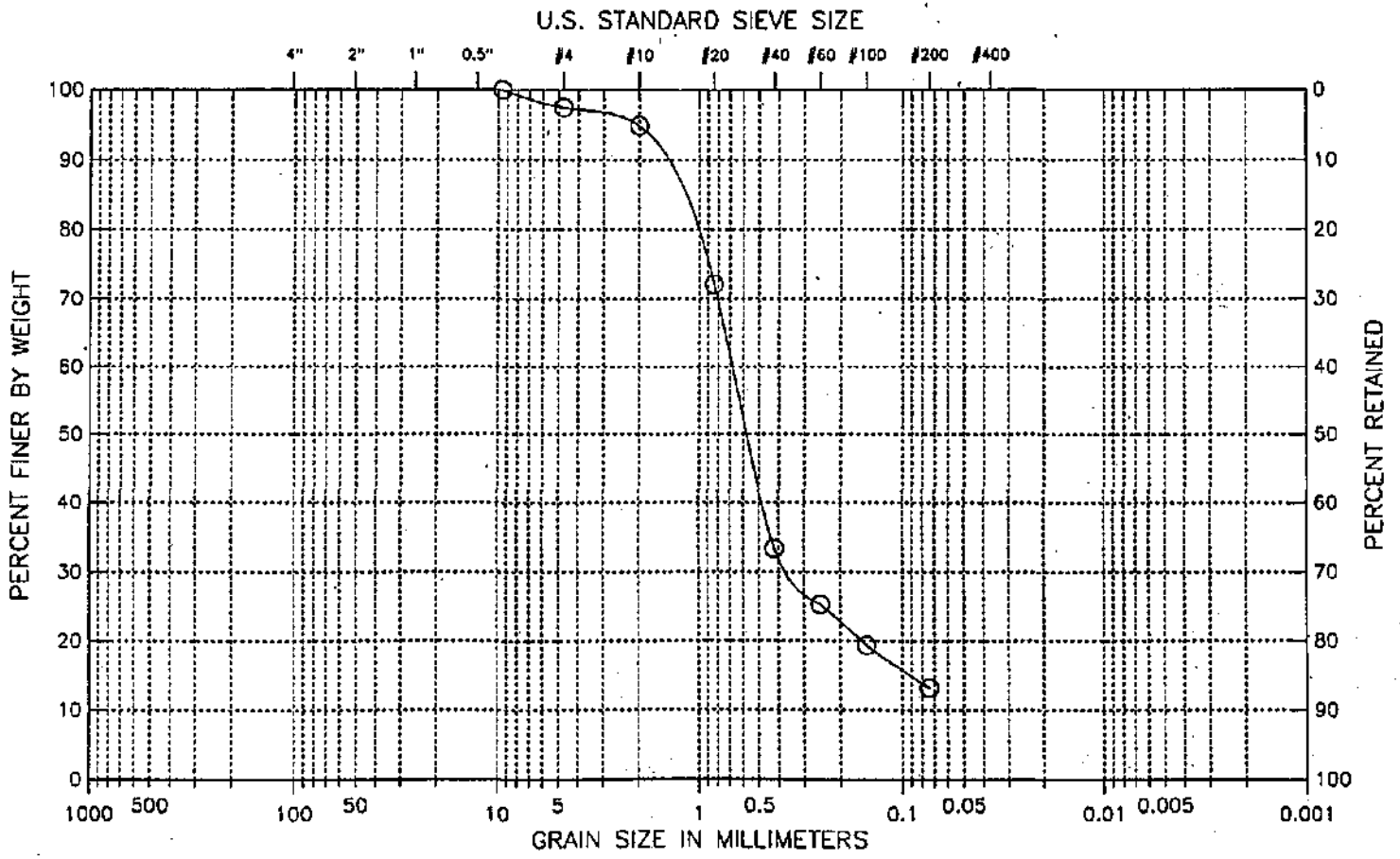
Moisture, Ash, and Organic Matter of Peat and Other Organic Soils by ASTM D 2974

Client:	Nobis Engineering	GTX #:	2409
Project Name:	New Bedford Harbor Superfund Site	Test Date:	11/30/99
Project Location:	New Bedford, MA	Tested By:	GSG
		Checked By:	GTT

Boring #	Sample ID	Depth, ft	Visual Description	Moisture Content, %	Ash Content, %	Organic Matter, %
FD-6	U-3	7-9	Moist, gray silty sand	22	99.5	0.5
FD-7	U-1	1-3	Moist, black organic clay with sand	142	90.1	9.9
FD-7	U-3	5-7	Moist, dark gray clayey sand with organics	50	96.3	3.7
FD-13	U-1	3-5	Moist, dark gray organic clay with sand	78	96.6	3.4
FD-13	U-2	6-8	Moist, dark gray sandy organic clay	77	93.4	6.6
FD-13	U-3	9-11	Moist, dark gray clayey sand with gravel, organics	62	93.0	7.0
FD-13	U-4	12-14	Moist, dark brown organic silt	123	84.6	15.4
FD-18	U-1	1-3	Moist, very dark gray sandy organic clay with shells	73	94.9	5.1
FD-18	U-3	7-9	Moist, dark brown sandy silt	24	99.4	0.6
FD-50	U-1	1-3	Moist, black sandy organic clay	93	91.7	8.3
FD-50	U-3	7-9	Moist, black silty sand	23	99.6	0.4

Notes: Moisture content determined by Method A & reported as a percentage of oven-dried mass; dried to constant mass at temperature of 110 °C
Ash content and organic matter determined by Method C; dried to constant mass at temperature of 440 °C

	Boring No. : FD-1 Sample No: S-2 (3.5-5.5) Test Method ASTM D 422 Filename : FD1S2	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Tue Nov 23 1999



Classification :

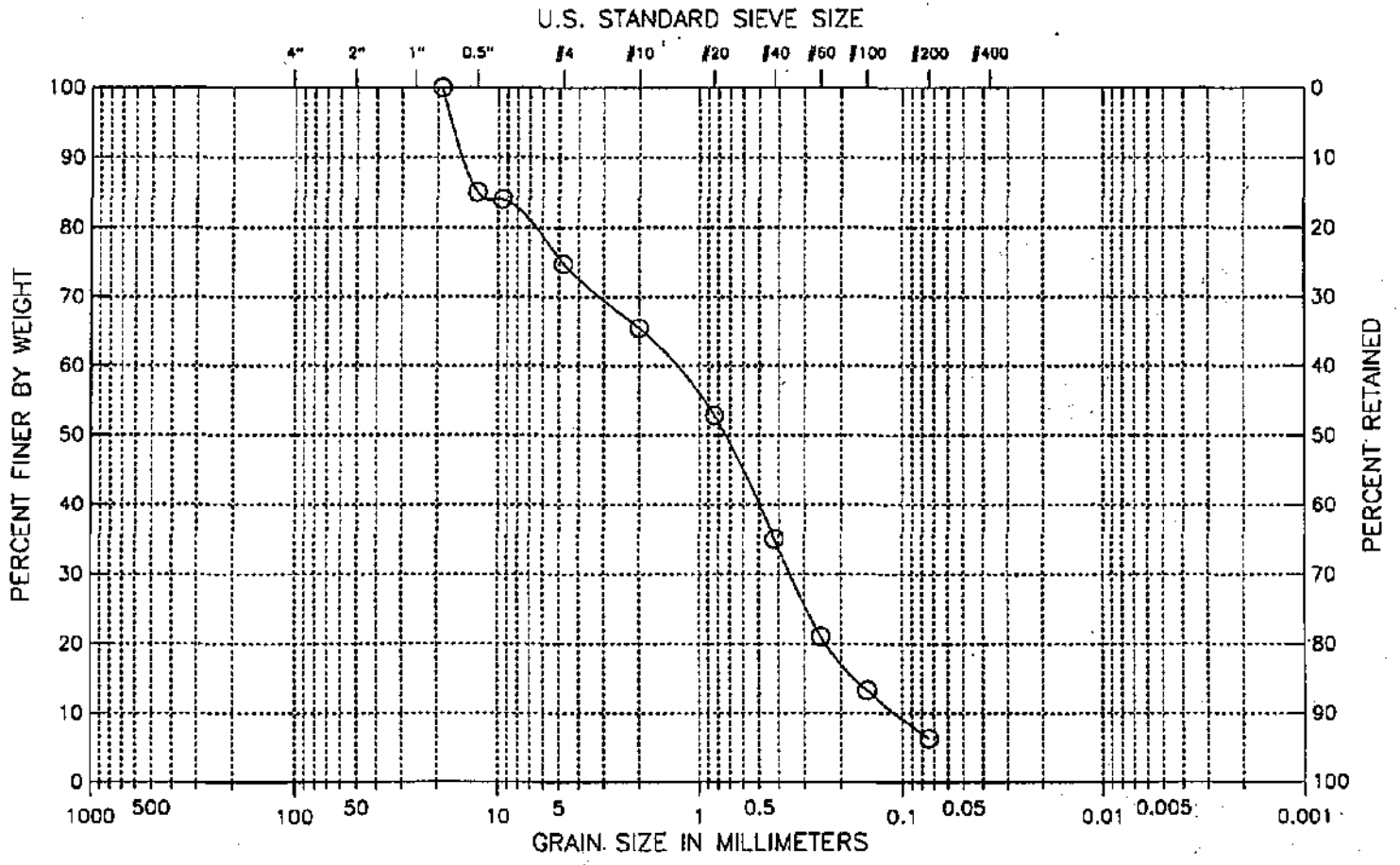
Visual Description :
Wet, black silty sand

Remarks :
Hydrometer not required, fines < 15%

Figure 1

GeoTesting Express • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-1 Sample No: S-9 (17.5-19.5 Test Method ASTM D 422 Filename : FD1S9	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Tue Nov 23 1999



Classification :

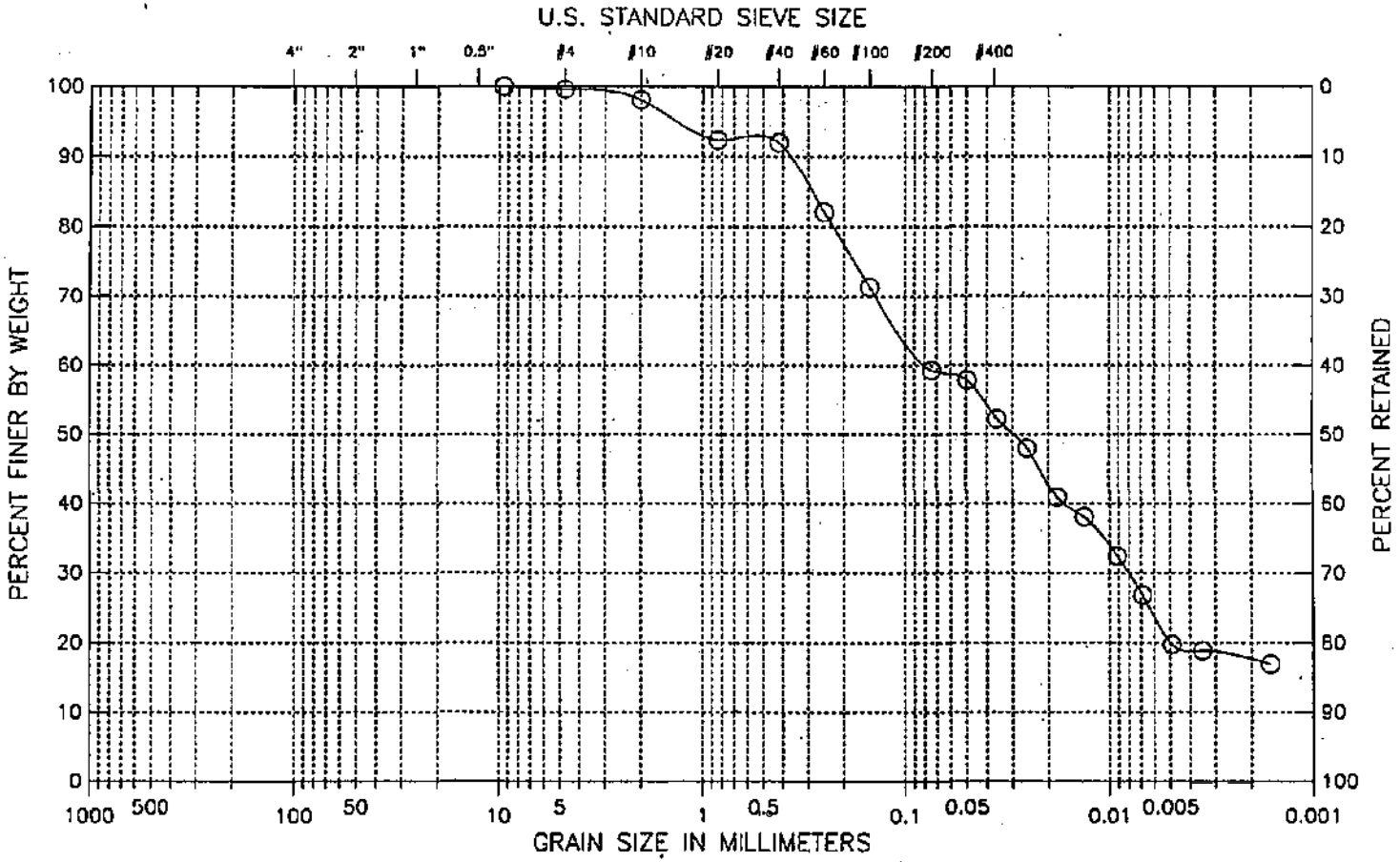
Remarks :
Hydrometer not required, fines < 15%

Visual Description :
Wet, yellowish brown sand with gravel, some silt

Figure 2

GeoTesting Express • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-2 Sample No: UO-1 (3-5) Test Method ASTM D 422 Filename : FD2U01	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Thu Oct 28 1999



Classification :
(OH) Sandy organic silt
Visual Description :
Wet, black sandy organic silt

Remarks :

Figure 1

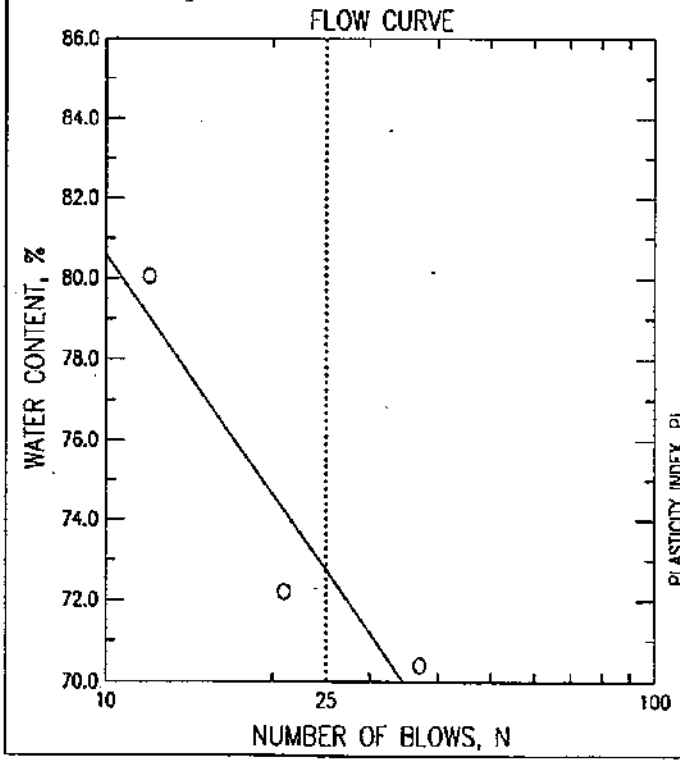
GeoTesting Express • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

ATTERBERG LIMITS

PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Harbor Superfund Site	GTX-2409	gsg/rjw	FD-2
LOCATION		CHECKED BY	SAMPLE NUMBER
New Bedford, MA		gtl	U0-1 (3-5)
SAMPLE DESCRIPTION		DATE	FILENAME
Wet, black sandy organic silt		Thu Oct 28 1999	FD2U01

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk85	bk104	bk110		
WT. WET SOIL + TARE	37.82	36.2	34.42		
WT. DRY SOIL + TARE	34.49	32.77	31.57		
WT. WATER	3.33	3.43	2.85		
TARE WT.	29.76	28.02	28.01		
WT. DRY SOIL	4.73	4.75	3.56		
WATER CONTENT, W_N (%)	70.40	72.21	80.06		
NUMBER OF BLOWS, N	37	21	12		
ONE-POINT LIQUID LIMIT, LL	73.82	70.70	73.25		

PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk4	bk137			
WT. WET SOIL + TARE	32.75	32.96			
WT. DRY SOIL + TARE	31.89	32.05			
WT. WATER	0.86	0.91			
TARE WT.	29.41	29.4			
WT. DRY SOIL	2.48	2.65			
WATER CONTENT (%)	34.68	34.34			



SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	62.7
LIQUID LIMIT, LL	72.7
PLASTIC LIMIT, PL	34.5
PLASTICITY INDEX, PI	38.2
LIQUIDITY INDEX, LI*	0.74

*LI = (W - PL)/PI

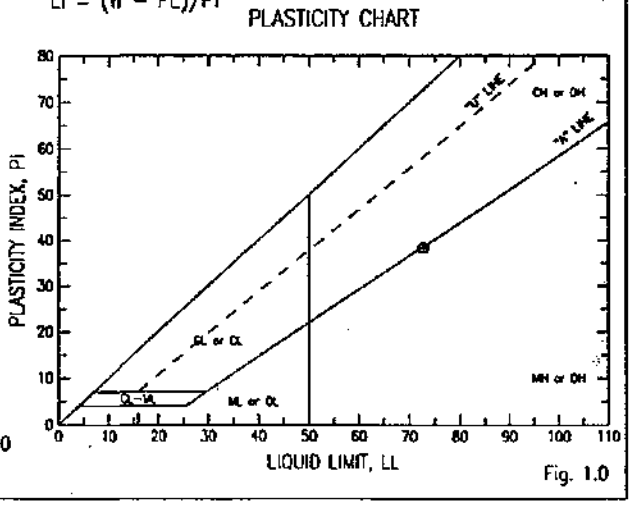
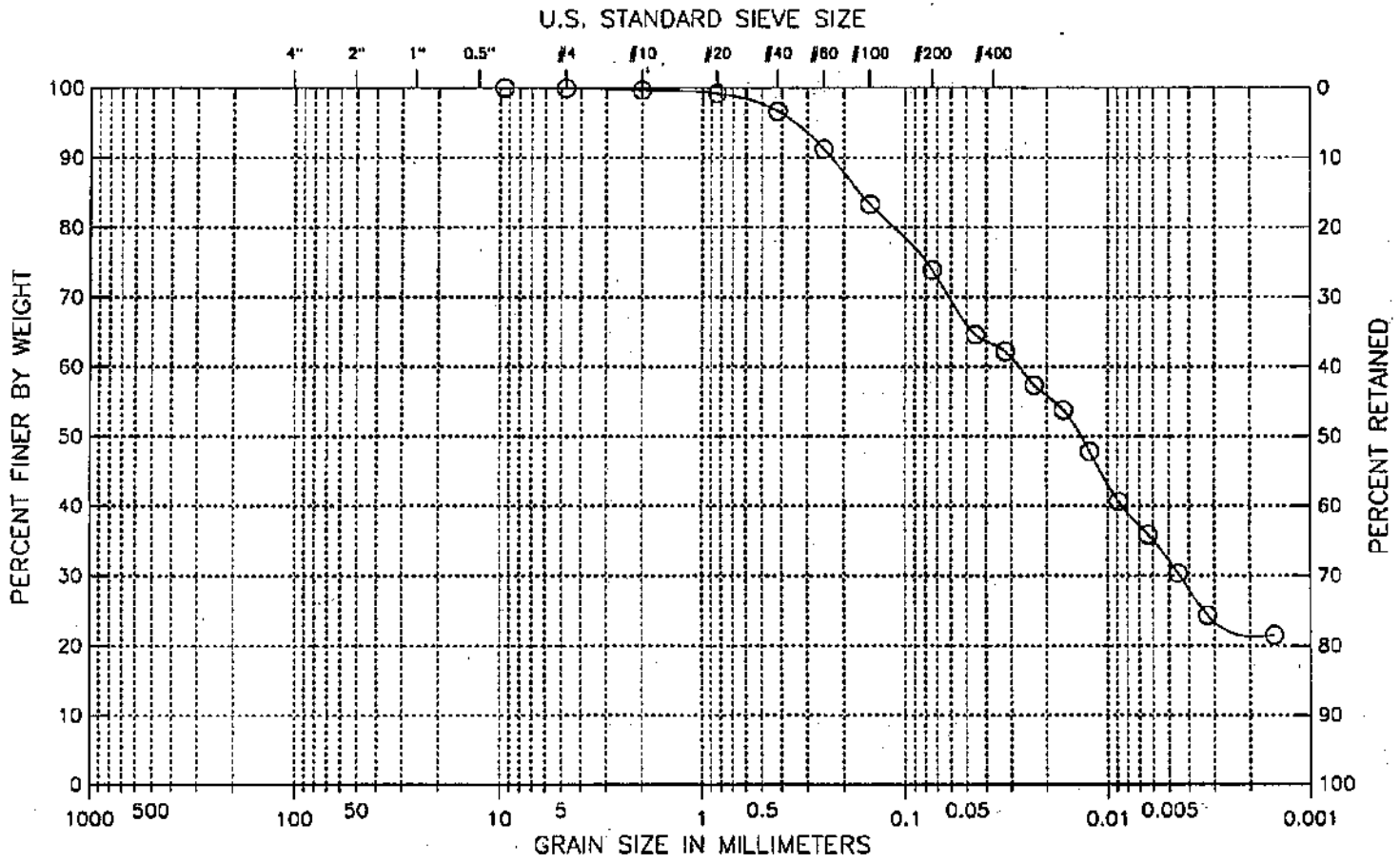


Fig. 1.0

	Boring No. : FD-2 Sample No: UO-2 (6-8) Test Method ASTM D 422 Filename : FD2UO2	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Thu Oct, 28 1999



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

Classification :
(OH) organic clay with sand
Visual Description :
Moist, very dark brown organic clay with sand

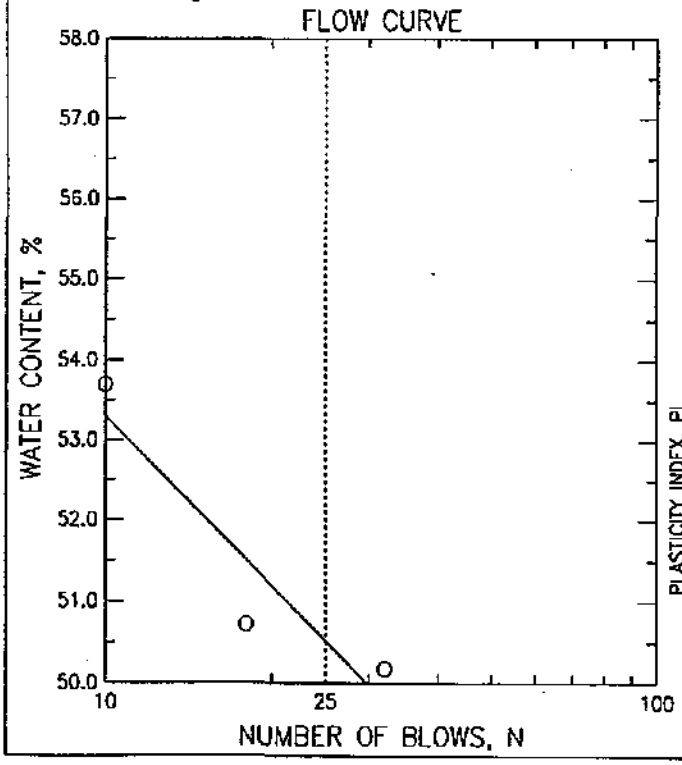
Remarks :

Figure 2

ATTERBERG LIMITS

PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Harbor Superfund Site	GTX-2409	gsg/rjw	FD-2
LOCATION		CHECKED BY	SAMPLE NUMBER
New Bedford, MA		glt	U0-2 (6-8)
SAMPLE DESCRIPTION		DATE	FILENAME
Moist, very dark brown organic clay with sand		Thu Oct 28 1999	FD2U02

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk71	bk16	bk37		
WT. WET SOIL + TARE	37.85	37.75	36.21		
WT. DRY SOIL + TARE	34.99	34.94	33.74		
WT. WATER	2.86	2.81	2.47		
TARE WT.	29.29	29.4	29.14		
WT. DRY SOIL	5.7	5.54	4.6		
WATER CONTENT, W_N (%)	50.18	50.72	53.70		
NUMBER OF BLOWS, N	32	18	10		
ONE-POINT LIQUID LIMIT, LL	51.70	48.75	48.06		
PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk76	bk10			
WT. WET SOIL + TARE	37.62	34.98			
WT. DRY SOIL + TARE	35.95	33.82			
WT. WATER	1.67	1.16			
TARE WT.	29.18	29.23			
WT. DRY SOIL	6.77	4.59			
WATER CONTENT (%)	24.67	25.27			



SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	58.8
LIQUID LIMIT, LL	50.5
PLASTIC LIMIT, PL	25.0
PLASTICITY INDEX, PI	25.6
LIQUIDITY INDEX, LI*	1.32

*LI = (W - PL)/PI

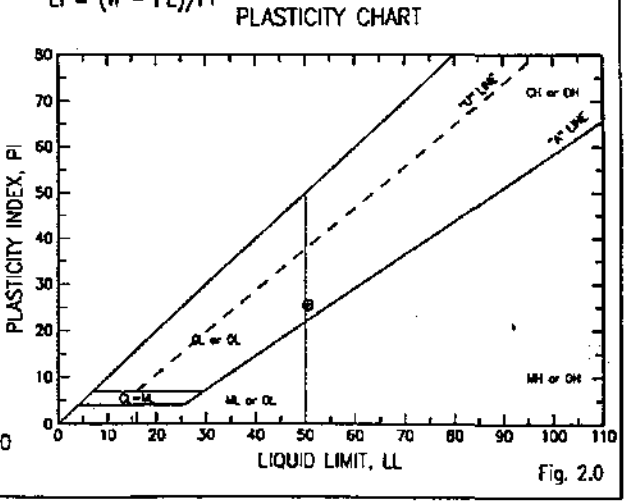
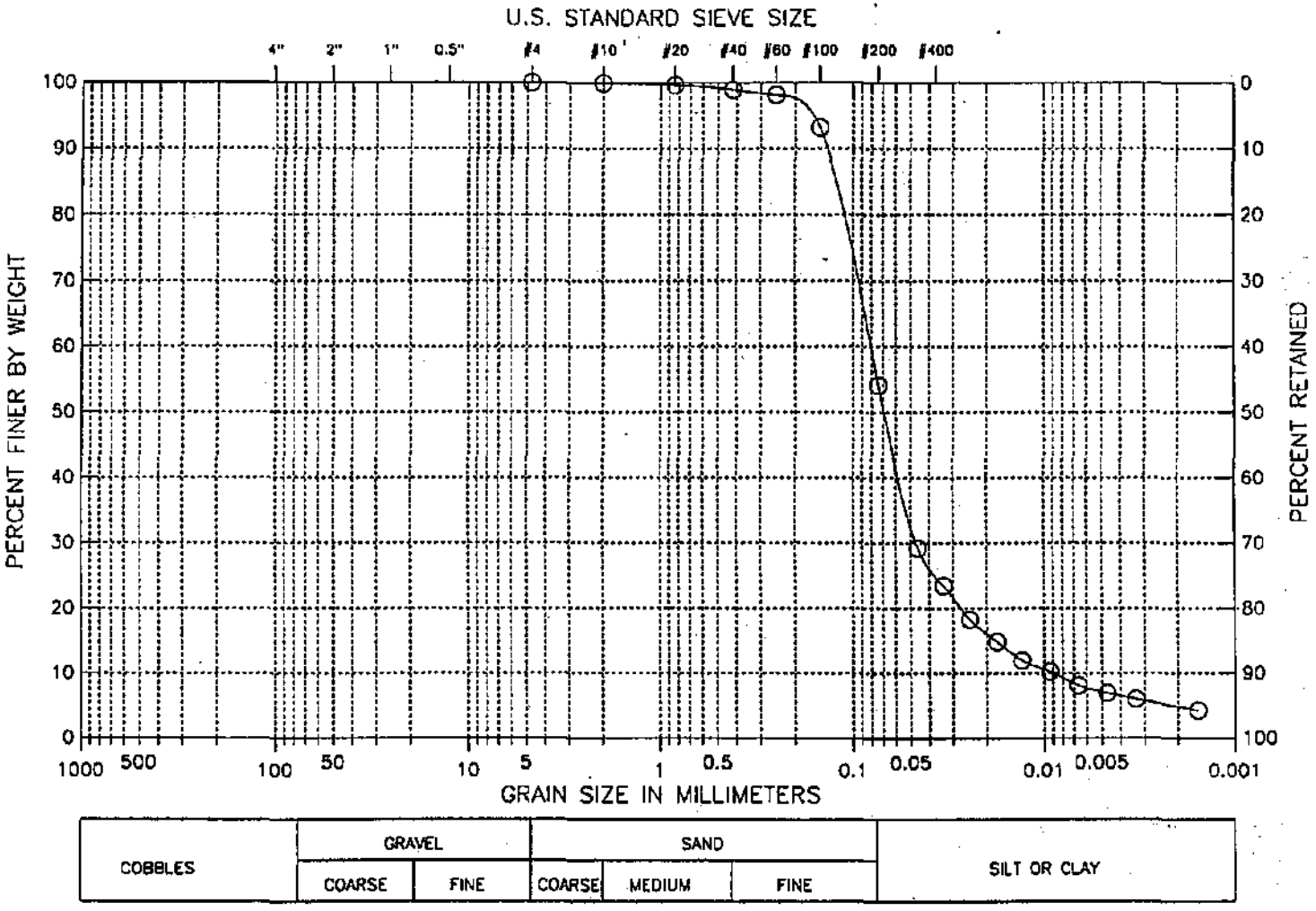


Fig. 2.0

	Boring No. : FD-3 Sample No.: S-3 (10-12) Test Method ASTM D 422 Filename : FD3S3	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Tue Nov 23 1999



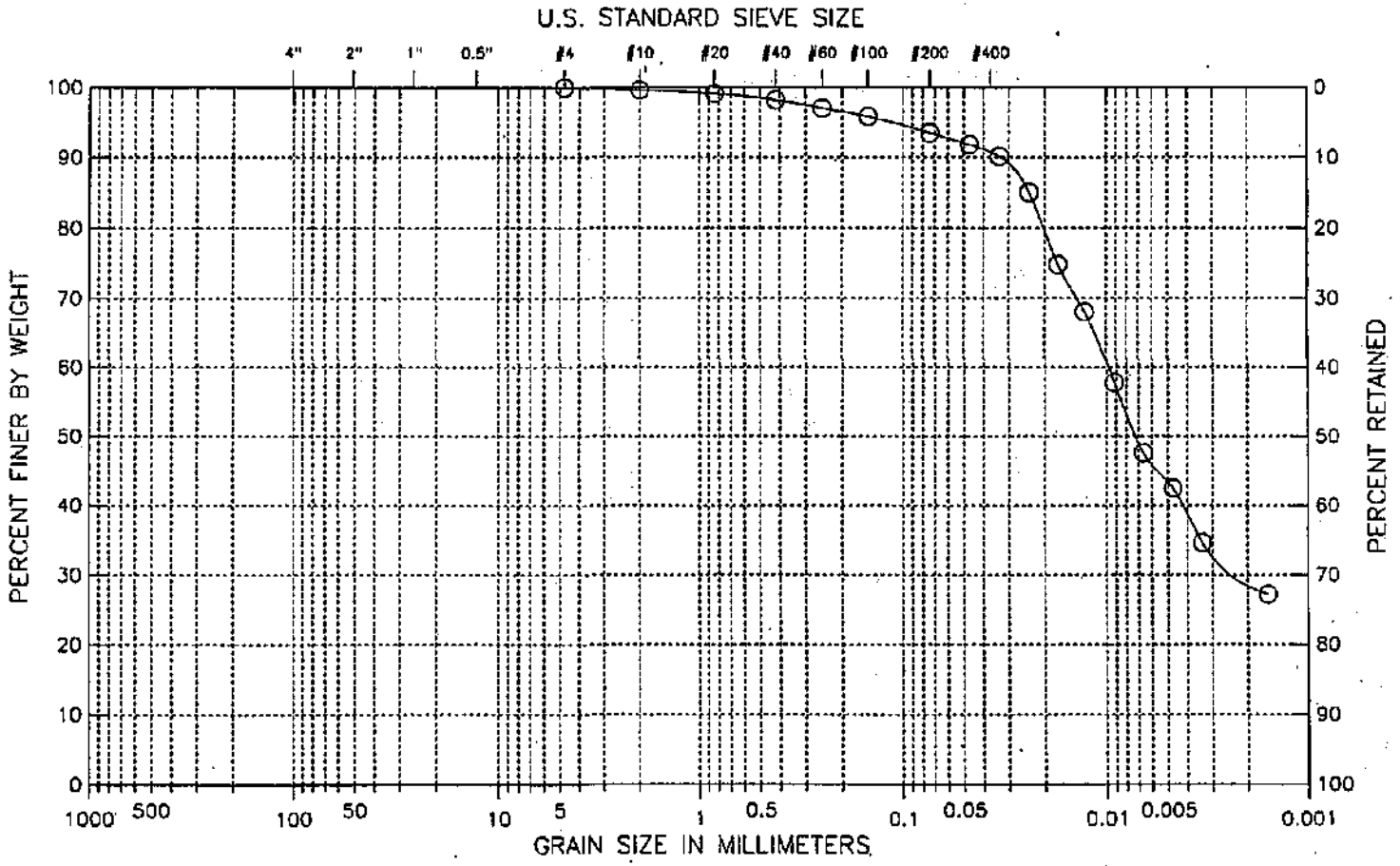
Classification :

Remarks :

Visual Description :
Wet, gray silty sand

Figure 3

	Boring No.: FD-5 Sample No.: UO-1 (3-5) Test Method ASTM D 422 Filename : FD5U01	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Thu Oct 28 1999



Classification :
(OH) organic clay
Visual Description :
Moist, black organic clay

Remarks :

Figure 3

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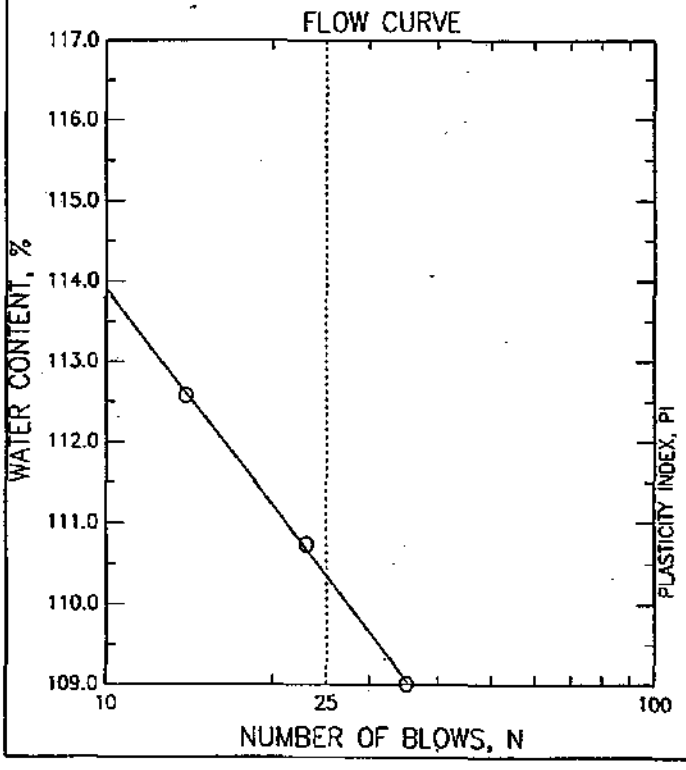
ATTERBERG LIMITS

PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Harbor Superfund Site	GTX-2409	gsg/rjw	FD-5
LOCATION		CHECKED BY	SAMPLE NUMBER
New Bedford, MA		gtl	UO-1 (3-5)
SAMPLE DESCRIPTION		DATE	FILENAME
Moist, black organic clay		Thu Oct 28 1999	FD5UO1

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk49	bk87	bk35		
WT. WET SOIL + TARE	37.45	35.45	37		
WT. DRY SOIL + TARE	33.82	32.15	33.42		
WT. WATER	3.63	3.3	3.58		
TARE WT.	30.49	29.17	30.24		
WT. DRY SOIL	3.33	2.98	3.18		
WATER CONTENT, W_N (%)	109.01	110.74	112.58		
NUMBER OF BLOWS, N	35	23	14		
ONE-POINT LIQUID LIMIT, LL	113.54	109.63	104.95		
PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk139	bk133			
WT. WET SOIL + TARE	34.26	34.62			
WT. DRY SOIL + TARE	32.48	32.57			
WT. WATER	1.78	2.05			
TARE WT.	28.16	27.55			
WT. DRY SOIL	4.32	5.02			
WATER CONTENT (%)	41.20	40.84			



SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	111.7
LIQUID LIMIT, LL	110.4
PLASTIC LIMIT, PL	41.0
PLASTICITY INDEX, PI	69.3
LIQUIDITY INDEX, LI*	1.02

*LI = (W - PL)/PI

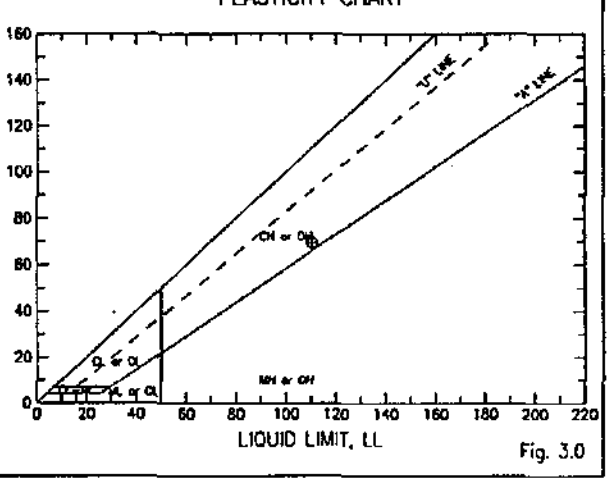


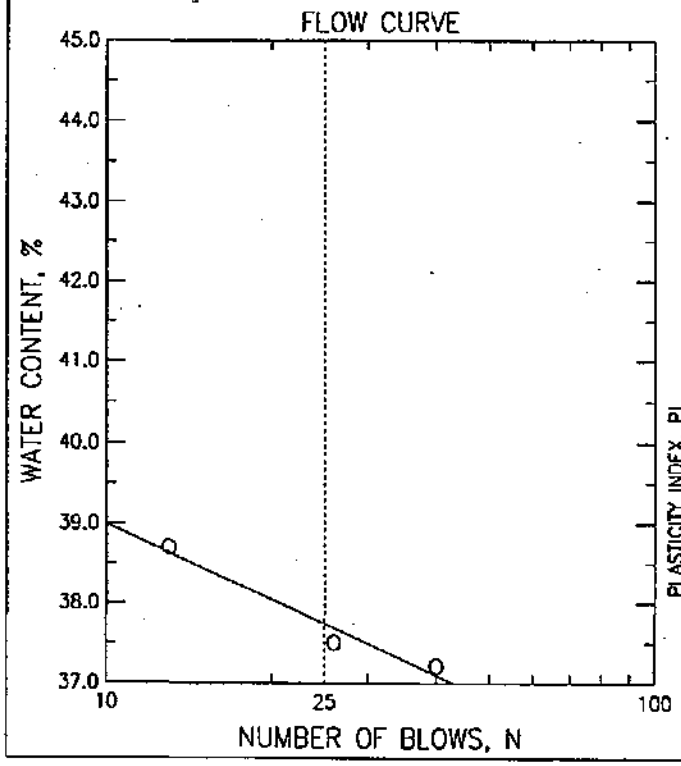
Fig. 3.0

ATTERBERG LIMITS

PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Harbor Superfund Site	GTX-2409	gsg/rjw	FD-5
LOCATION		CHECKED BY	SAMPLE NUMBER
New Bedford, MA		gtt	U0-2 (6-8)
SAMPLE DESCRIPTION		DATE	FILENAME
Moist, very dark brown sandy organic clay		Thu Oct 28 1999	FD5U02

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk114	bk143	bk33		
WT. WET SOIL + TARE	36.64	36.32	39.75		
WT. DRY SOIL + TARE	34.24	33.89	37.06		
WT. WATER	2.4	2.43	2.69		
TARE WT.	27.84	27.36	30.11		
WT. DRY SOIL	6.4	6.53	6.95		
WATER CONTENT, W_N (%)	37.50	37.21	38.71		
NUMBER OF BLOWS, N	26	40	13		
ONE-POINT LIQUID LIMIT, LL	37.68	39.39	35.76		

PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk144	bk43			
WT. WET SOIL + TARE	35.16	36.36			
WT. DRY SOIL + TARE	34.22	35.32			
WT. WATER	0.94	1.04			
TARE WT.	29.61	30.28			
WT. DRY SOIL	4.61	5.04			
WATER CONTENT (%)	20.39	20.63			



SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	31.0
LIQUID LIMIT, LL	37.7
PLASTIC LIMIT, PL	20.5
PLASTICITY INDEX, PI	17.2
LIQUIDITY INDEX, LI*	0.61

*LI = (W - PL)/PI

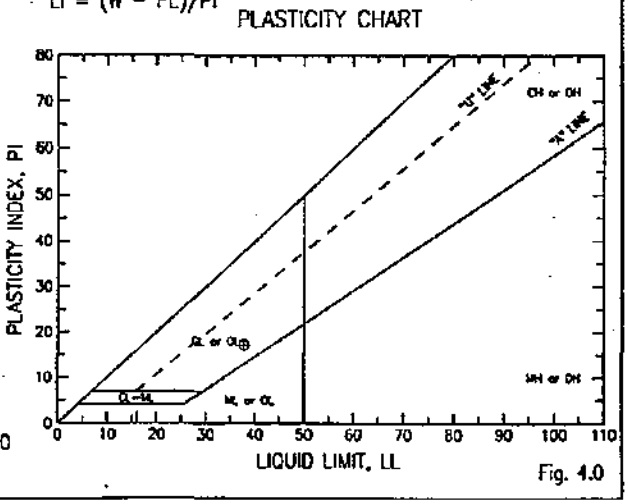
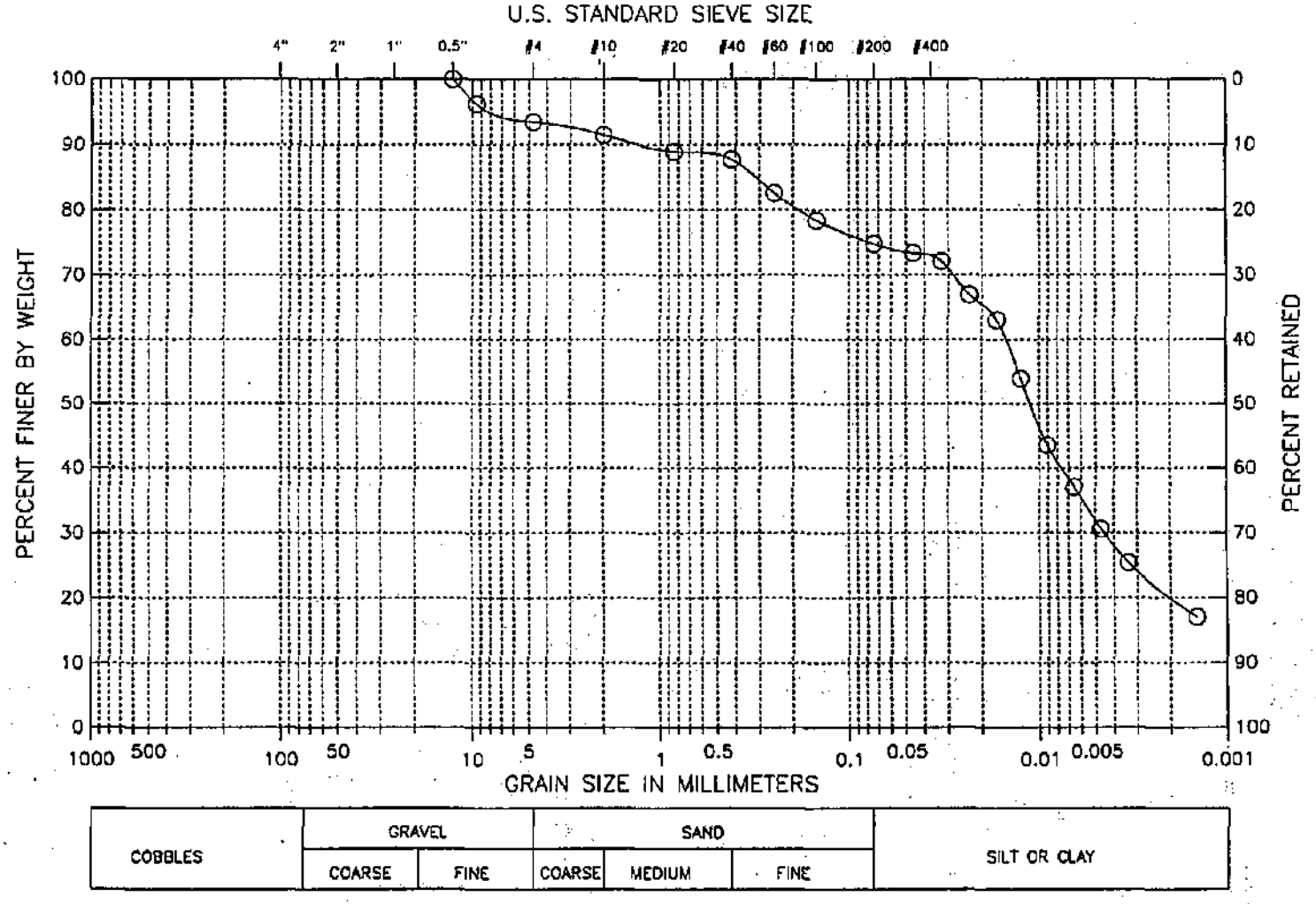


Fig. 4.0

	Boring No. : FD-6 Sample No: U-1 (1-3) Test Method ASTM D 422 Filename : FD6U1	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Fri Dec 17 1999



Classification :
(OH) organic clay with sand
Visual Description :
Moist, very dark gray organic clay with sand

Remarks :

Figure 1

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ATTERBERG LIMITS

PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Harbor Superfund Site	GTX-2409	GSG/MHM	FD-6
LOCATION		CHECKED BY	SAMPLE NUMBER
New Bedford, MA		GTT	U-3 (7-9)
SAMPLE DESCRIPTION		DATE	FILENAME
Moist, gray silty sand		Fri Dec 17 1999	FD6U3

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER					
WT. WET SOIL + TARE					
WT. DRY SOIL + TARE					
WT. WATER					
TARE WT.					
WT. DRY SOIL					
WATER CONTENT, W_N (%)					
NUMBER OF BLOWS, N					
ONE-POINT LIQUID LIMIT, LL					

PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER					
WT. WET SOIL + TARE					
WT. DRY SOIL + TARE					
WT. WATER					
TARE WT.					
WT. DRY SOIL					
WATER CONTENT (%)					

Determined to be Non-Plastic.

SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	21.6
LIQUID LIMIT, LL	
PLASTIC LIMIT, PL	
PLASTICITY INDEX, PI	
LIQUIDITY INDEX, LI*	

*LI = (W -- PL)/PI

PLASTICITY CHART

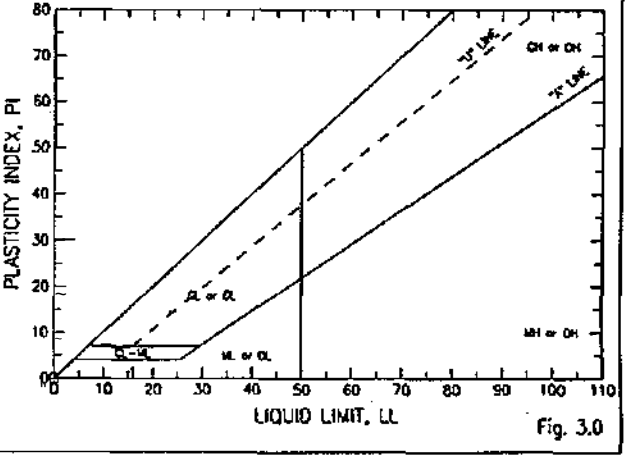
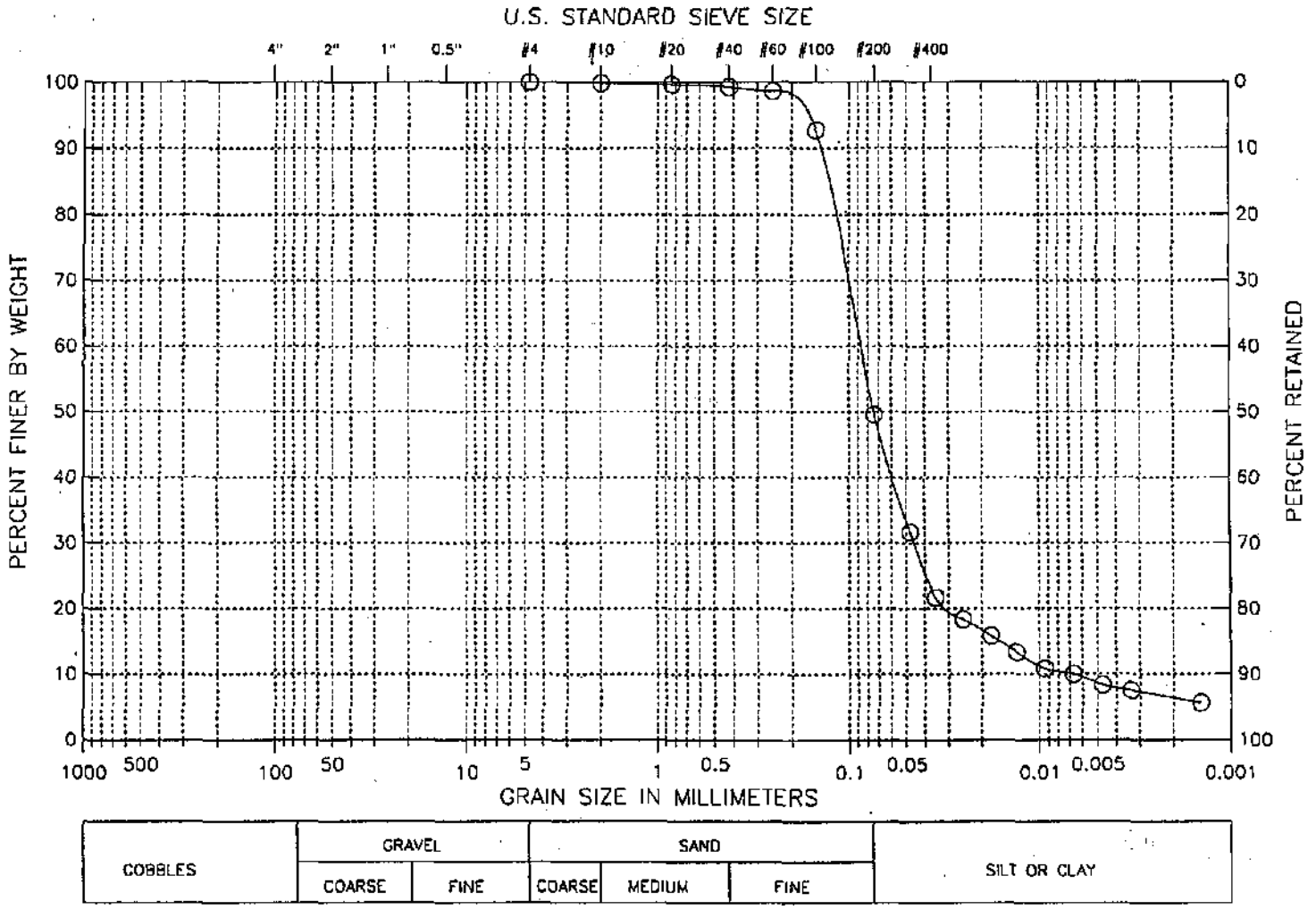


Fig. 3.0

	Boring No. : FD-6 Sample No.: S-1 (10-12) Test Method ASTM D 422 Filename : FD6S1	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Wed Feb 02 2000



Classification :

Visual Description :
Wet gray silty sand

Remarks :

Figure 3

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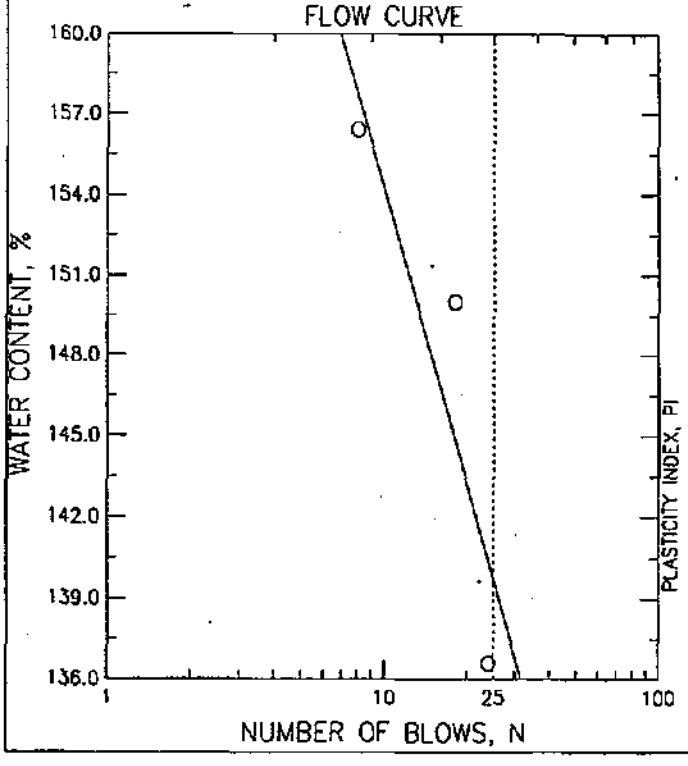
ATTERBERG LIMITS

PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Harbor Superfund Site	GTX-2409	GSG/MHM	FD-7
LOCATION		CHECKED BY	SAMPLE NUMBER
New Bedford, MA		GTT	U-1 (1-3)
SAMPLE DESCRIPTION		DATE	FILENAME
Moist, black organic clay with sand		Fri Dec 17 1999	FD7U1

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER	64	59	134		
WT. WET SOIL + TARE	34.12	33.45	33.47		
WT. DRY SOIL + TARE	31.47	31.05	31.03		
WT. WATER	2.65	2.4	2.44		
TARE WT.	29.53	29.45	29.47		
WT. DRY SOIL	1.94	1.6	1.56		
WATER CONTENT, W_N (%)	136.60	150.00	156.41		
NUMBER OF BLOWS, N	24	18	8		
ONE-POINT LIQUID LIMIT, LL	135.92	144.15	136.27		
PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER	68	92	43		
WT. WET SOIL + TARE	33.14	32.33	33.21		
WT. DRY SOIL + TARE	32.34	31.45	32.34		
WT. WATER	0.8	0.88	0.87		
TARE WT.	30.56	29.33	30.28		
WT. DRY SOIL	1.78	2.12	2.06		
WATER CONTENT (%)	44.94	41.51	42.23		



SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	141.7
LIQUID LIMIT, LL	139.7
PLASTIC LIMIT, PL	42.9
PLASTICITY INDEX, PI	96.8
LIQUIDITY INDEX, LI*	1.02

*LI = (W - PL)/PI

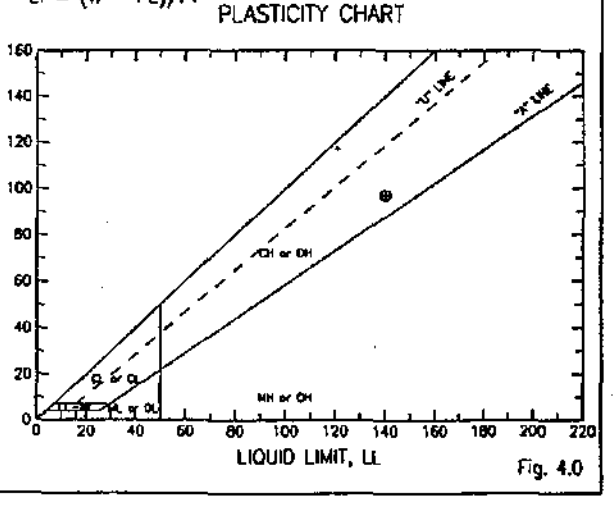


Fig. 4.0

GEOTECHNICAL LABORATORY TEST DATA

Project : *New Bedford Harbor Superfund Site* *Filename* : FD7U1
Project No. : GTX-2409 Depth : 1-3 ft Elevation : ---
Boring No. : FD-7 Test Date : 11/30/99 Tested by : GSG/MHM
Sample No. : U-1 (1-3) Test Method : ASTM D 2216 Checked by : GTT
Location : New Bedford, MA
Soil Description : Moist, black organic clay with sand
Remarks : ---

Natural Moisture Content

	Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Moisture Content (%)
1)	cr10	65.18	261.72	146.48	141.75

Average Moisture Content = 141.75

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-7
Sample No. : U-2 (3-5)
Location : New Bedford, MA
Soil Description : Moist, black organic clay
Remarks : ---

Depth : 3-5 ft
Test Date : 11/30/99
Test Method : ASTM D 4318

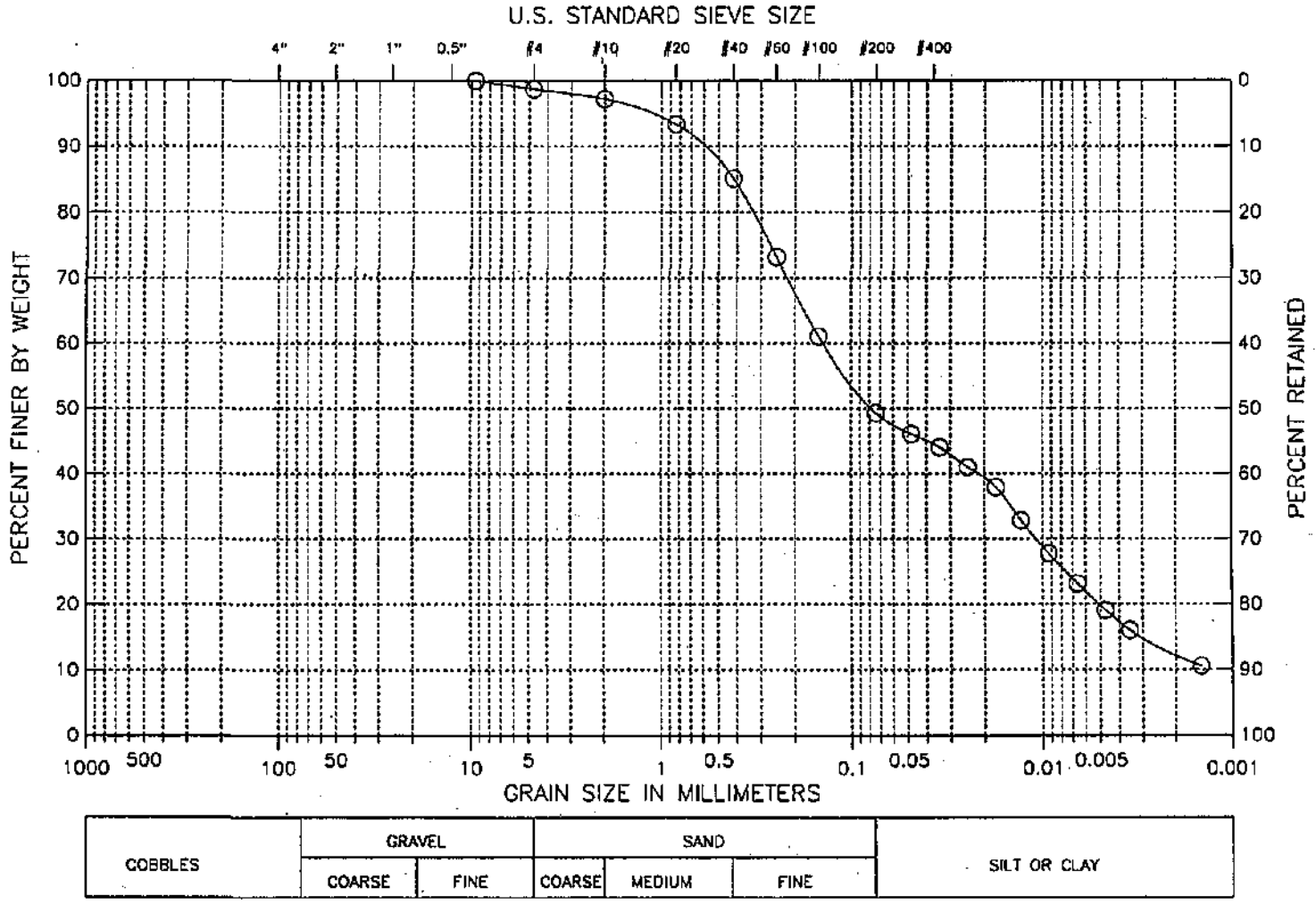
Filename : FD7U2
Elevation : ---
Tested by : GSG/MHM
Checked by : GTT

Liquid Limit for Organic

Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Number of Drops	Moisture Content (%)
1) 43	30.28	34.98	33.13	28	64.91
2) 144	29.76	34.17	32.40	16	67.05
3) 108	27.93	32.12	30.39	8	70.33

Liquid Limit = 65.30

	Boring No. : FD-7 Sample No: U-3 (5-7) Test Method ASTM D 422 Filename : FD7U3	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Fri Dec,17 1999



Classification :
(SC) Clayey sand
Visual Description :
Moist, dark gray clayey sand with organics

Remarks :

Figure 6

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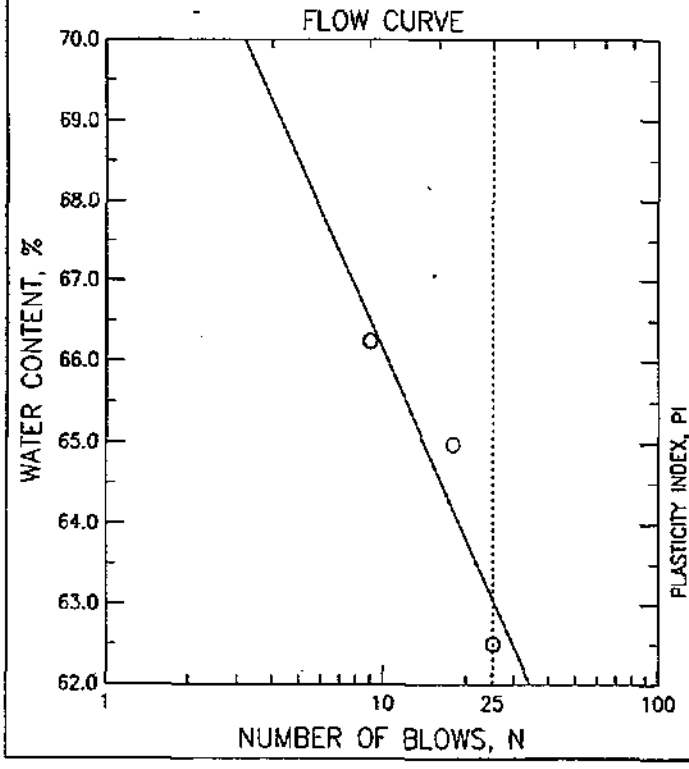
ATTERBERG LIMITS

PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Harbor Superfund Site	GTX-2409	GSG/MHM	FD-7
LOCATION		CHECKED BY	SAMPLE NUMBER
New Bedford, MA		GTT	U-3 (5-7)
SAMPLE DESCRIPTION		DATE	FILENAME
Moist, dark gray clayey sand with organics		Fri Dec 17 1999	FD7U3

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER	92	49	105		
WT. WET SOIL + TARE	36.35	35.41	36.61		
WT. DRY SOIL + TARE	33.65	33.48	34		
WT. WATER	2.7	1.93	2.61		
TARE WT.	29.33	30.51	30.06		
WT. DRY SOIL	4.32	2.97	3.94		
WATER CONTENT, W_N (%)	62.50	64.98	66.24		
NUMBER OF BLOWS, N	25	18	9		
ONE-POINT LIQUID LIMIT, LL	62.50	62.45	58.54		

PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER	69	32			
WT. WET SOIL + TARE	34.96	33.93			
WT. DRY SOIL + TARE	33.99	33.14			
WT. WATER	0.97	0.79			
TARE WT.	30.16	30.06			
WT. DRY SOIL	3.83	3.08			
WATER CONTENT (%)	25.33	25.65			



SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	50.1
LIQUID LIMIT, LL	63.1
PLASTIC LIMIT, PL	25.5
PLASTICITY INDEX, PI	37.6
LIQUIDITY INDEX, LI*	0.65

*LI = (W - PL)/PI

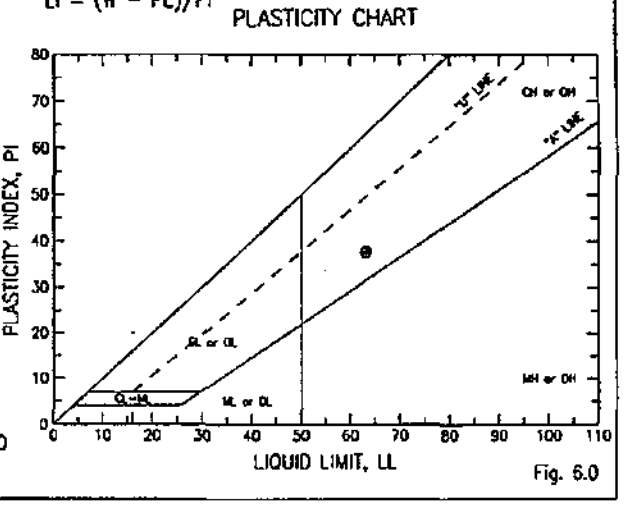


Fig. 6.0

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : PD-7
Sample No. : U-3 (5-7)
Location : New Bedford, MA
Soil Description : Moist, dark gray clayey sand with organics
Remarks : ---

Depth : 5-7 ft
Test Date : 11/30/99
Test Method : ASTM D 2216

Filename : FD7U3
Elevation : ---
Tested by : GSG/MHM
Checked by : GTT

Natural Moisture Content

	Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Moisture Content (%)
1)	cr7	71.05	252.26	191.80	50.07

Average Moisture Content = 50.07

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-7
Sample No. : U-4 (7-9)
Location : New Bedford, MA
Soil Description : Moist, dark gray clayey sand with organics
Remarks : ---

Depth : 7-9 ft
Test Date : 11/30/99
Test Method : ASTM D 422

Filename : FD7U4
Elevation : ---
Tested by : GSG/MHM
Checked by : GTT

HYDROMETER

Hydrometer ID : 257525
Weight of air-dried soil = 59.94 gm
Specific Gravity = 2.68

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	27.00	18.00	22.13	0.048	31	0.048
2.00	26.00	18.00	21.13	0.034	30	0.034
4.00	21.50	18.00	16.63	0.025	23	0.025
8.00	20.00	18.00	15.13	0.018	21	0.018
15.00	19.00	18.00	14.13	0.013	20	0.013
30.00	17.00	18.00	12.13	0.009	17	0.009
60.00	15.00	18.00	10.13	0.007	14	0.007
120.00	13.00	18.00	8.13	0.005	11	0.005
210.00	12.00	18.00	7.13	0.004	10	0.004
1279.00	9.50	20.00	5.18	0.001	7	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.5"	0.500	12.70	0.00	0.00	100
0.375"	0.374	9.51	1.64	1.64	97
#4	0.187	4.75	4.05	5.69	90
#10	0.079	2.00	3.72	9.41	84
#20	0.033	0.84	4.98	14.39	76
#40	0.017	0.42	7.51	21.90	63
#60	0.010	0.25	7.70	29.60	50
#100	0.006	0.15	5.69	35.29	41
#200	0.003	0.07	5.12	40.41	32
Pan			18.94	59.35	0

Total Dry Weight of Sample = 69.02

D85 : 2.2505 mm
D60 : 0.3710 mm
D50 : 0.2483 mm
D30 : 0.0383 mm
D15 : 0.0074 mm
D10 : 0.0036 mm

Soil Classification
ASTM Group Symbol : SC
ASTM Group Name : Clayey sand
AASHTO Group Symbol : A-2-7(5)
AASHTO Group Name : Clayey Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

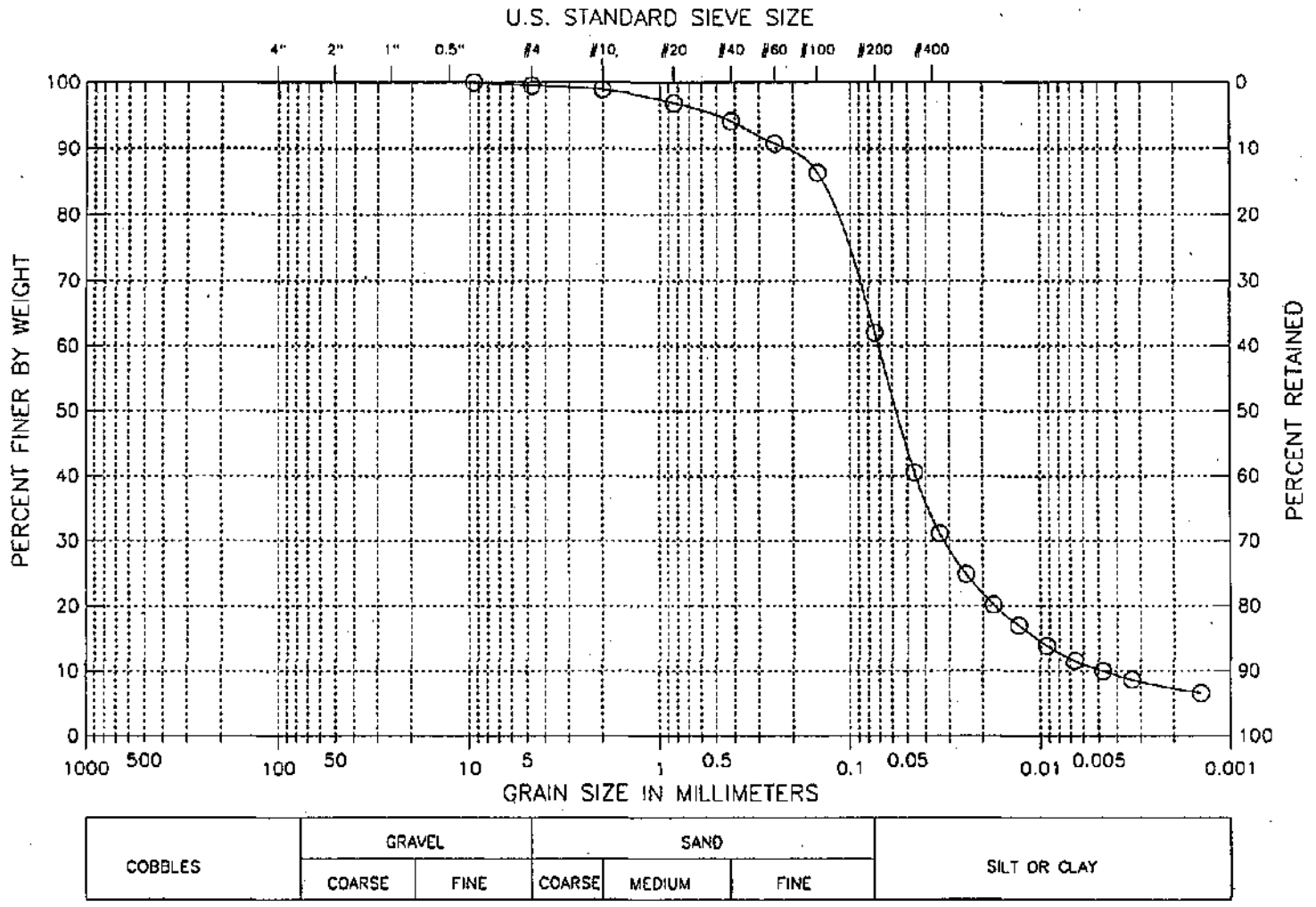
Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-7
Sample No. : U-4 (7-9)
Location : New Bedford, MA
Depth : 7-9 ft
Test Date : 11/30/99
Test Method : ASTM D 4318
Filename : FD7U4
Elevation : ---
Tested by : GSG/MHM
Checked by : GTT
Soil Description : Moist, dark gray clayey sand with organics
Remarks : ---

Liquid Limit for Organic

Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Number of Drops	Moisture Content (%)
1) 6	29.50	35.73	34.27	31	30.61
2) 137	29.62	35.97	34.40	23	32.85
3) 144	29.61	35.26	33.83	12	33.89

Liquid Limit = 31.81

	Boring No. : FD-7 Sample No.: S-2 (11-13) Test Method ASTM D 422 Filename : FD7S2	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Locotion: New Bedford, MA Date : Wed Feb 02 2000



Classificotion :

Remorks :

Visuol Description :
Moist greenish gray sandy, silty clay.

Figure 4

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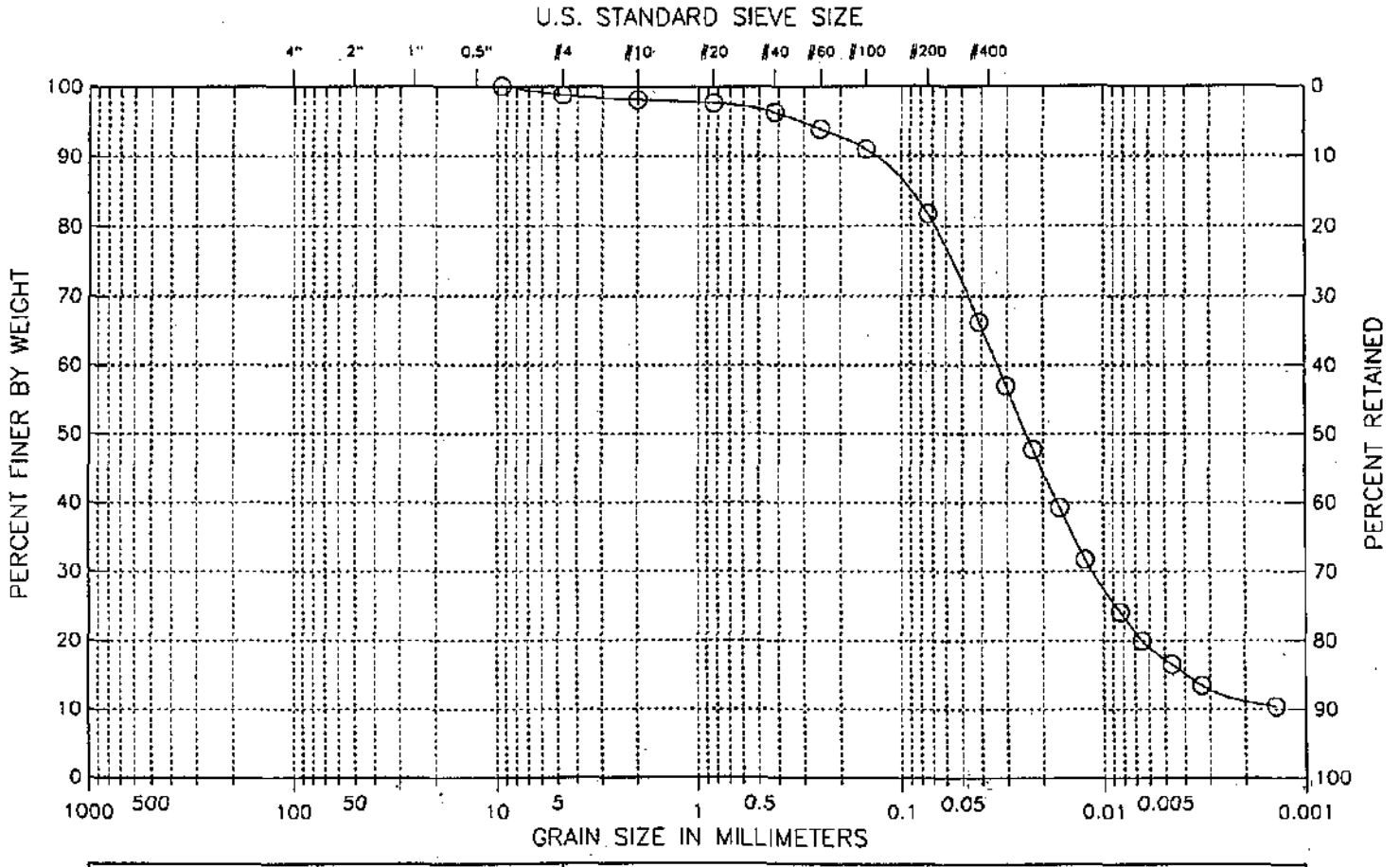
	Boring No. : FD-7 Sample No.: S-3 (13-15) Test Method ASTM D 422 Filename : FD7S3	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Wed Feb 02 2000



Classification :

Remarks :

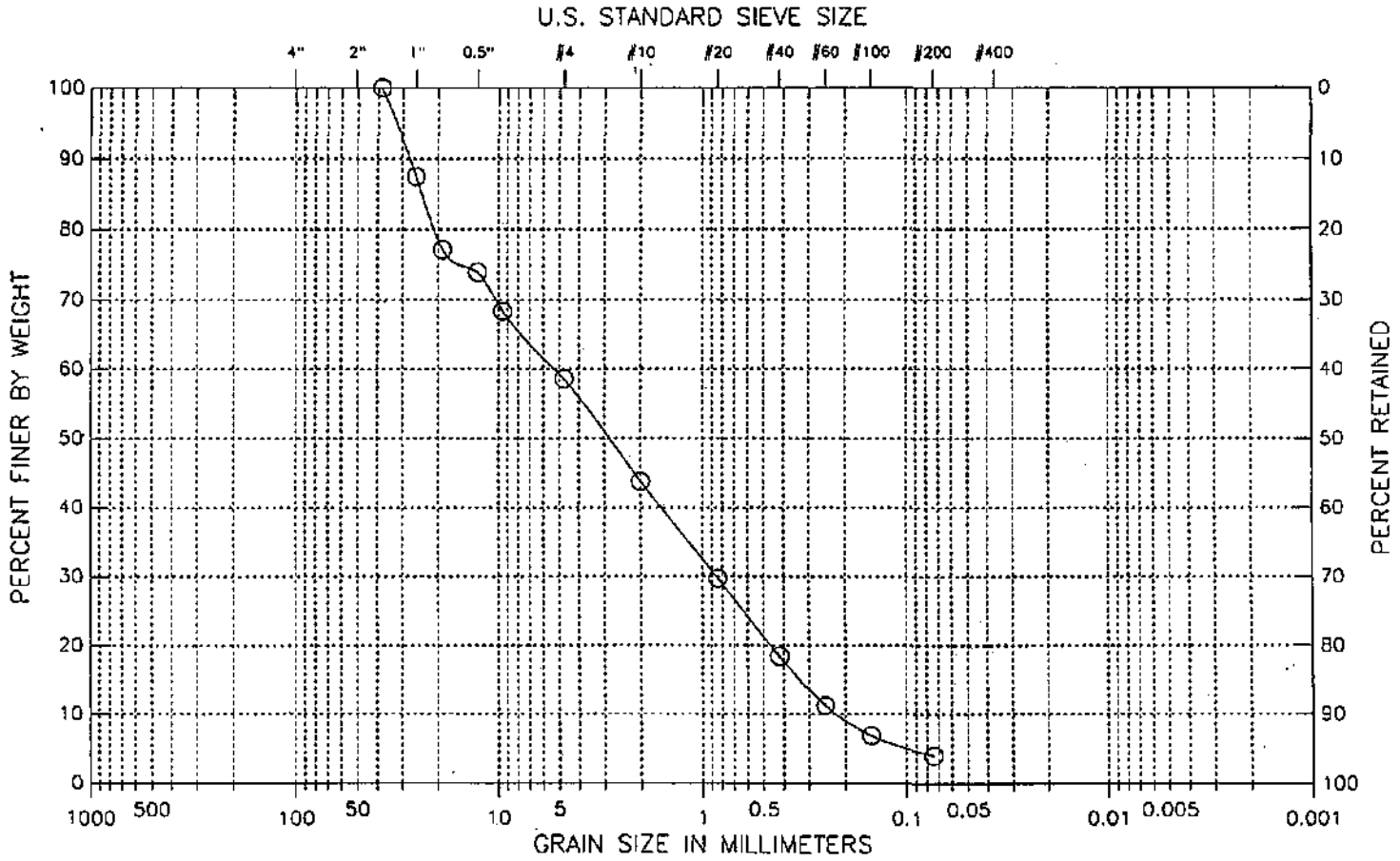
Visual Description :

Moist light olive brown silty clay with sand

Figure 5

GeoTesting Express • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-7 Sample No.: S-6 (20-22) Test Method ASTM D 422 Filename : FD7S6	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Wed Feb 02 2000

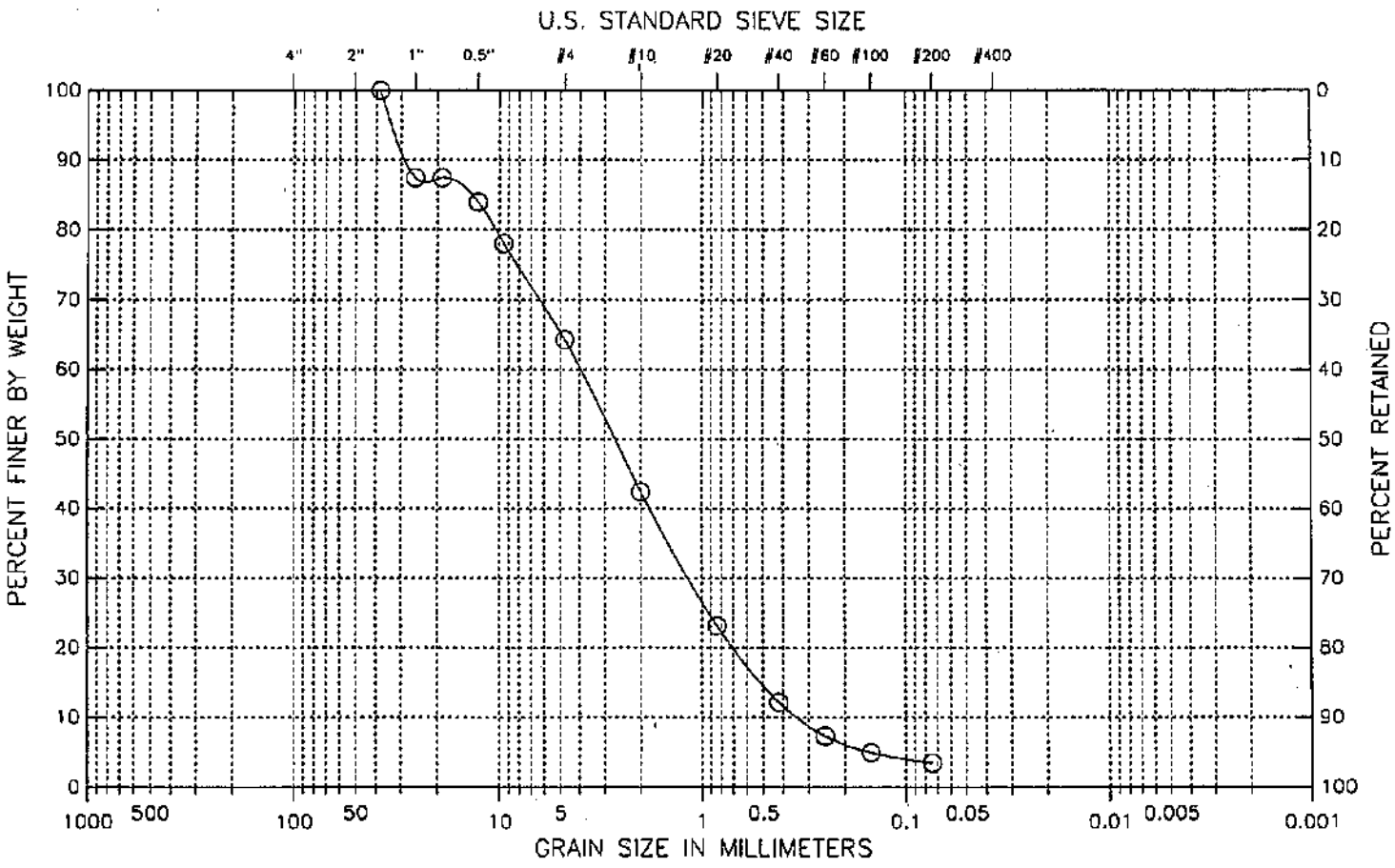


Classification :
(SP) Poorly graded sand with gravel
Visual Description :
Moist yellowish brown sand with gravel

Remarks :
Hydrometer not required, fines <15%

Figure 6

	Boring No. : FD-7 Sample No: S-7 (25-27) Test Method ASTM D 422 Filename : FD7S7	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Wed Feb 02 2000



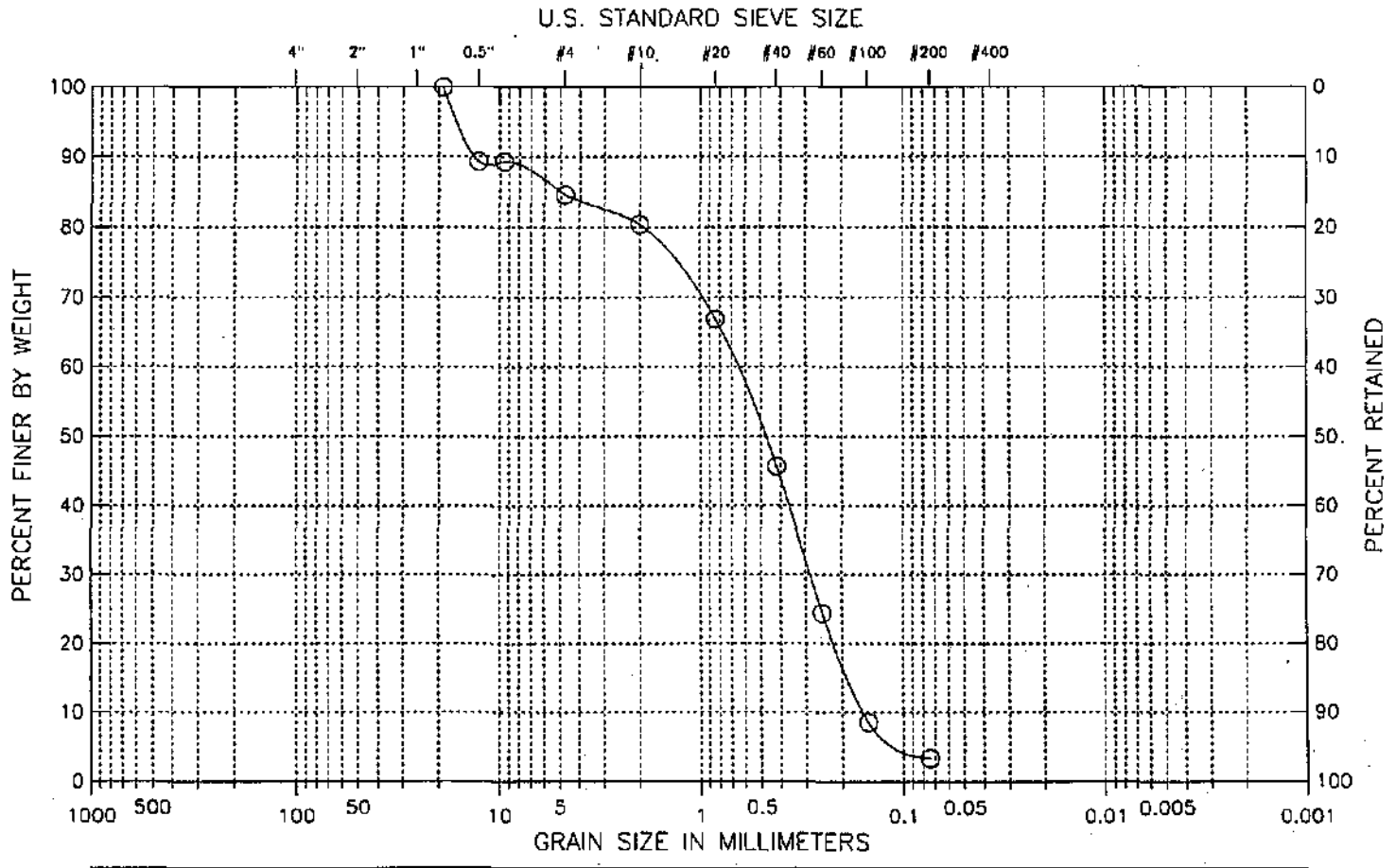
Classification :
(SP) Poorly graded sand with gravel
Visual Description-:
Moist olive sand with gravel

Remarks :
Hydrometer not required, fines <15%

Figure 7

GeoTesting Express • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-7 Sample No: S-9 (30-32) Test Method ASTM D 422 Filename : FD7S9	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Wed Feb 02 2000



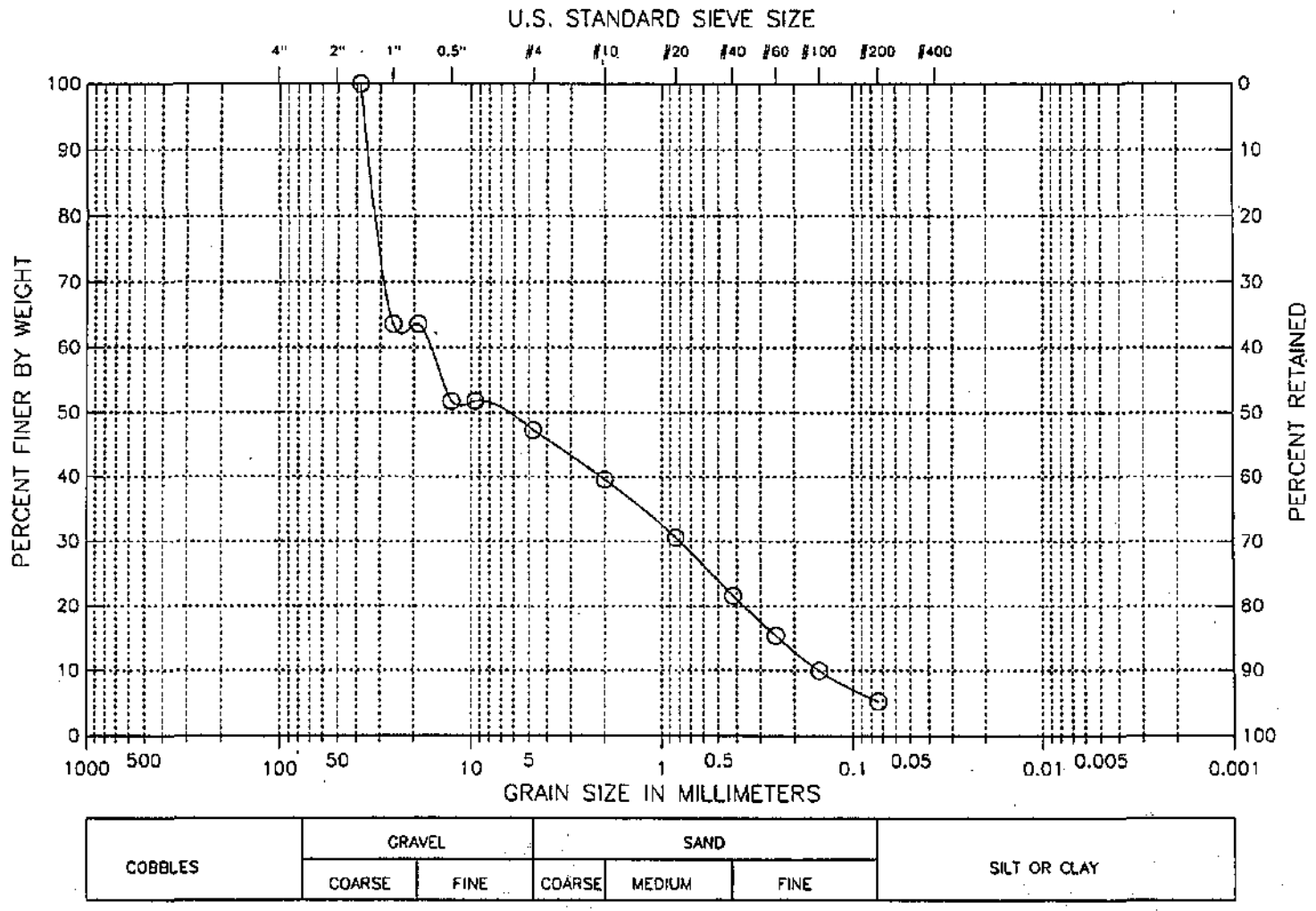
Classification :
(SP) Poorly graded sand with gravel
Visual Description :
Moist very dark gray sand

Remarks :
Hydrometer not required, fines <15%

Figure 8

GeoTesting Express • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-7 Sample No.: S-13B (38-39.9 Test Method ASTM D 422 Filename : FD7S13B	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Wed Feb 02 2000



Classification :

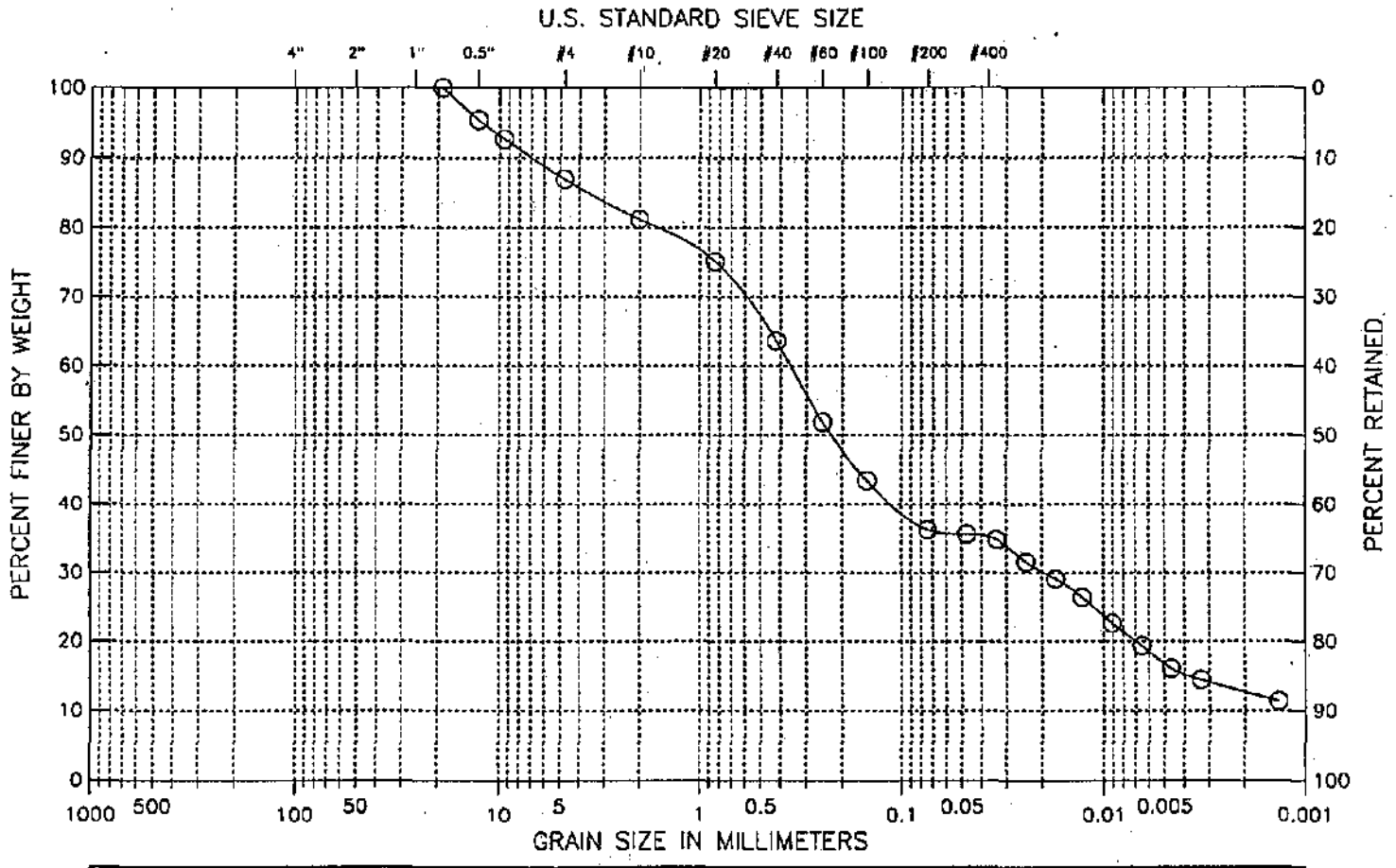
Visual Description :
Moist light olive gray sandy gravel

Remarks :
Hydrometer not required, fines <15%

Figure 9

GeoTesting Express • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-8 Sample No.: UO-2 (6-8) Test Method ASTM D 422 Filename : FD8UO2	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Thu Oct 28 1999



Classification :
(SC) Clayey sand
Visual Description :
Moist, very dark gray clayey sand with organics

Remarks :

Figure 5

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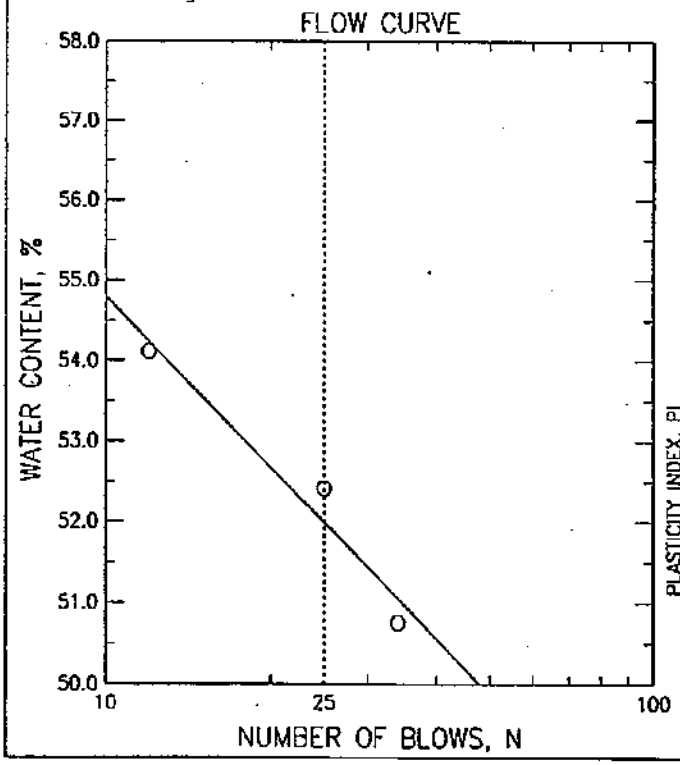
ATTERBERG LIMITS

PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Harbor Superfund Site	GTX-2409	gsg/rjw	FD-8
LOCATION		CHECKED BY	SAMPLE NUMBER
New Bedford, MA		gtt	UO-2 (6-8)
SAMPLE DESCRIPTION		DATE	FILENAME
Moist, very dark gray clayey sand with organics		Thu Oct 28 1999	FDBU02

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk91	bk120	bk41		
WT. WET SOIL + TARE	38.17	37.84	35.53		
WT. DRY SOIL + TARE	35.47	35.02	33.36		
WT. WATER	2.7	2.82	2.17		
TARE WT.	30.15	29.64	29.35		
WT. DRY SOIL	5.32	5.38	4.01		
WATER CONTENT, W_N (%)	50.75	52.42	54.11		
NUMBER OF BLOWS, N	34	25	12		
ONE-POINT LIQUID LIMIT, LL	52.68	52.42	49.52		
PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk119	bk28			
WT. WET SOIL + TARE	33.7	34.8			
WT. DRY SOIL + TARE	32.46	33.82			
WT. WATER	1.24	0.98			
TARE WT.	27.7	30.1			
WT. DRY SOIL	4.76	3.72			
WATER CONTENT (%)	26.05	26.34			



SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	41.7
LIQUID LIMIT, LL	52.0
PLASTIC LIMIT, PL	26.2
PLASTICITY INDEX, PI	25.8
LIQUIDITY INDEX, LI*	0.60

*LI = (W - PL)/PI

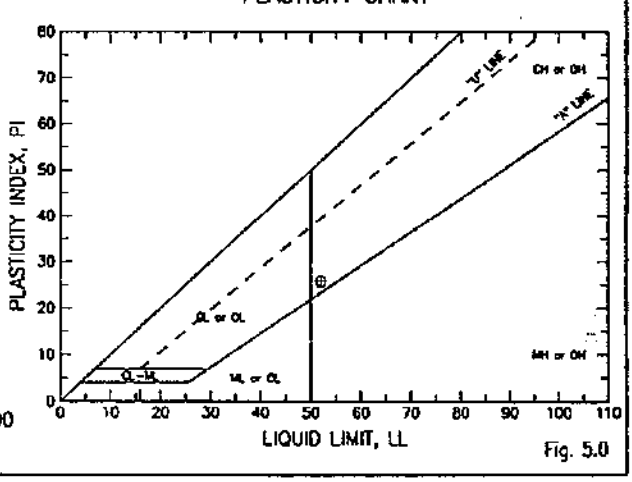


Fig. 5.0

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-8
Sample No. : UO-2 (6-8)
Location : New Bedford, MA
Soil Description : Moist, very dark gray clayey sand with organics
Remarks : ---

Depth : 6-8 ft
Test Date : 10/12/99
Test Method : ASTM D 2216

Filename : FD8UO2
Elevation : ---
Tested by : gsg/rjw
Checked by : gtt

Natural Moisture Content

	Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Moisture Content (%)
1)	fz4	9.53	174.35	125.83	41.72
2)		0.00	0.00	0.00	0.00

Average Moisture Content = 41.72

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-8
Sample No. : S-3 (15-17)
Location : New Bedford, MA
Soil Description : Moist, dark gray sandy silt
Remarks : ---

Depth : 15-17 ft
Test Date : 10/12/99
Test Method : ASTM D 422

Filename : FD8S3
Elevation : ---
Tested by : gsg
Checked by : gtt

HYDROMETER

Hydrometer ID : 257525
Weight of air-dried soil = 70.74 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	30.00	21.50	26.18	0.045	37	0.045
2.00	24.00	21.50	20.18	0.033	28	0.033
4.00	20.00	21.50	16.18	0.024	23	0.024
8.00	17.00	21.50	13.18	0.017	18	0.017
15.00	15.00	21.50	11.18	0.013	16	0.013
30.00	13.00	21.50	9.18	0.009	13	0.009
60.00	11.00	21.50	7.18	0.007	10	0.007
120.00	10.00	21.50	6.18	0.005	9	0.005
240.00	9.00	22.00	5.36	0.003	7	0.003
1467.00	8.50	21.00	4.50	0.001	6	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
#4	0.187	4.75	0.00	0.00	100
#10	0.079	2.00	1.02	1.02	99
#20	0.033	0.84	0.29	1.31	98
#40	0.017	0.42	0.26	1.57	98
#60	0.010	0.25	0.63	2.20	97
#100	0.006	0.15	2.51	4.71	93
#200	0.003	0.07	19.73	24.44	66
Pan			47.32	71.76	0

Total Dry Weight of Sample = 80.83

D85 : 0.1202 mm
D60 : 0.0670 mm
D50 : 0.0567 mm
D30 : 0.0356 mm
D15 : 0.0120 mm
D10 : 0.0065 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-4(0)
AASHTO Group Name : Silty Soils

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-9
Sample No. : S-7 (16-18)
Location : New Bedford, MA
Soil Description : Wet, gray silty sand
Remarks : ---

Depth : 16-18 ft
Test Date : 11/03/99
Test Method : ASTM D 422

Filename : FD9S7
Elevation : ---
Tested by : al
Checked by : gtt

HYDROMETER

Hydrometer ID : 257525
Weight of air-dried soil = 54.9 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	13.00	20.50	8.84	0.051	16	0.051
2.00	11.50	20.50	7.34	0.036	13	0.036
4.00	10.00	20.50	5.84	0.026	11	0.026
8.00	9.00	20.50	4.84	0.018	9	0.018
15.00	9.00	20.50	4.84	0.013	9	0.013
30.00	8.00	21.00	4.00	0.010	7	0.010
60.00	7.50	21.00	3.50	0.007	6	0.007
120.00	7.00	21.00	3.00	0.005	5	0.005
240.00	6.50	21.50	2.68	0.003	5	0.003
1131.00	6.00	20.00	1.68	0.002	3	0.002

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
#4	0.187	4.75	0.00	0.00	100
#10	0.079	2.00	0.48	0.48	100
#20	0.033	0.84	0.83	1.31	99
#40	0.017	0.42	2.98	4.29	97
#60	0.010	0.25	5.34	9.63	93
#100	0.006	0.15	24.17	33.80	75
#200	0.003	0.07	63.01	96.81	29
Pan			38.90	135.71	0

Total Dry Weight of Sample = 144.92

D85 : 0.1987 mm
D60 : 0.1187 mm
D50 : 0.1021 mm
D30 : 0.0755 mm
D15 : 0.0447 mm
D10 : 0.0231 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-2-4(0)
AASHTO Group Name : Silty Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-9
Sample No. : S-14 (45-47)
Location : New Bedford, MA
Soil Description : Moist, gray sand with gravel
Remarks : Hydrometer not required, fines < 15%

Depth : 45-47 ft
Test Date : 11/30/99
Test Method : ASTM D 422

Filename : FD9S14
Elevation : ---
Tested by : GSG
Checked by : GTT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
1.5"	1.500	38.10	0.00	0.00	100
1"	1.012	25.70	23.35	23.35	79
0.75"	0.748	19.00	0.00	23.35	79
0.5"	0.500	12.70	2.46	25.81	77
0.375"	0.374	9.51	9.00	34.81	69
#4	0.187	4.75	12.53	47.34	58
#10	0.079	2.00	13.21	60.55	47
#20	0.033	0.84	15.62	76.17	33
#40	0.017	0.42	12.97	89.14	22
#60	0.010	0.25	9.63	98.77	13
#100	0.006	0.15	6.42	105.19	7
#200	0.003	0.07	6.38	111.57	2
Pan			2.06	113.63	0

Total Dry Weight of Sample = 123.27

D85 : 28.5830 mm
D60 : 5.2738 mm
D50 : 2.5541 mm
D30 : 0.7021 mm
D15 : 0.2812 mm
D10 : 0.1886 mm

Soil Classification
ASTM Group Symbol : SP
ASTM Group Name : Poorly graded sand with gravel
AASHTO Group Symbol : A-1-a(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-12
Sample No. : S-4A (15-17)
Location : New Bedford, MA
Soil Description : Moist, light gray sandy silt
Remarks : ---

Depth : 15-17 ft
Test Date : 10/12/99
Test Method : ASTM D 422

Filename : FD12S4A
Elevation : ---
Tested by : gsg
Checked by : gtt

HYDROMETER

Hydrometer ID : 257525
Weight of air-dried soil = 74.14 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	28.50	22.00	24.86	0.045	33	0.045
2.00	23.00	22.00	19.36	0.033	26	0.033
4.00	19.50	22.00	15.86	0.024	21	0.024
8.00	17.00	22.00	13.36	0.017	18	0.017
15.00	15.50	22.00	11.86	0.013	16	0.013
30.00	13.50	22.00	9.86	0.009	13	0.009
60.00	12.00	22.00	8.36	0.007	11	0.007
120.00	10.50	22.00	6.86	0.005	9	0.005
240.00	10.00	22.00	6.36	0.003	9	0.003
1503.00	9.00	21.00	5.00	0.001	7	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
#4	0.187	4.75	0.00	0.00	100
#10	0.079	2.00	0.35	0.35	100
#20	0.033	0.84	0.25	0.60	99
#40	0.017	0.42	0.61	1.21	98
#60	0.010	0.25	1.49	2.70	96
#100	0.006	0.15	6.79	9.49	87
#200	0.003	0.07	16.22	25.71	65
Pan			48.78	74.49	0

Total Dry Weight of Sample = 83.56

D85 : 0.1386 mm
D60 : 0.0681 mm
D50 : 0.0585 mm
D30 : 0.0394 mm
D15 : 0.0113 mm
D10 : 0.0053 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-4(0)
AASHTO Group Name : Silty Soils

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-12
Sample No. : S-7 (22-24)
Location : New Bedford, MA
Soil Description : Moist, light yellowish brown sandy silt
Remarks : ---

Depth : 22-24 ft
Test Date : 10/12/99
Test Method : ASTM D 422

Filename : FD12S7
Elevation : ---
Tested by : gsg
Checked by : gtt

HYDROMETER

Hydrometer ID : 257525
Weight of air-dried soil = 71.84 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	34.00	22.00	30.36	0.044	42	0.044
2.00	31.00	22.00	27.36	0.032	38	0.032
4.00	27.50	22.00	23.86	0.023	33	0.023
8.00	24.50	22.00	20.86	0.017	29	0.017
15.00	21.50	22.00	17.86	0.012	25	0.012
30.00	19.00	22.00	15.36	0.009	21	0.009
61.00	17.00	22.00	13.36	0.006	19	0.006
120.00	14.50	22.00	10.86	0.005	15	0.005
240.00	13.00	22.00	9.36	0.003	13	0.003
1494.00	11.00	21.00	7.00	0.001	10	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
#10	0.079	2.00	0.00	0.00	100
#20	0.033	0.84	0.46	0.46	99
#40	0.017	0.42	2.73	3.19	96
#60	0.010	0.25	4.35	7.54	90
#100	0.006	0.15	7.11	14.65	80
#200	0.003	0.07	18.42	33.07	54
Pan			38.77	71.84	0

Total Dry Weight of Sample = 80.9

D85 : 0.1975 mm
D60 : 0.0872 mm
D50 : 0.0618 mm
D30 : 0.0177 mm
D15 : 0.0044 mm
D10 : 0.0014 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-4(0)
AASHTO Group Name : Silty Soils

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-13
Sample No. : U-2 (6-8)
Location : New Bedford, MA
Soil Description : Moist, dark gray sandy organic clay
Remarks : ---

Depth : 6-8 ft
Test Date : 11/30/99
Test Method : ASTM D 2216

Filename : FD13U2
Elevation : ---
Tested by : GSG/MHM
Checked by : GTT

Natural Moisture Content

	Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Moisture Content (%)
1)	025	70.80	263.44	180.09	76.26

Average Moisture Content = 76.26

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-13
Sample No. : U-3 (9-11)
Location : New Bedford, MA
Soil Description : Moist, dark gray clayey sand with gravel, organics
Remarks : ---

Depth : 9-11 ft
Test Date : 11/30/99
Test Method : ASTM D 422

Filename : FD13U3
Elevation : ---
Tested by : GSG/MHM
Checked by : GTT

HYDROMETER

Hydrometer ID : 87130
Weight of air-dried soil = 41.35 gm
Specific Gravity = 2.63

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	26.00	22.00	21.35	0.046	46	0.046
2.00	24.00	22.00	19.35	0.033	41	0.033
4.00	22.50	22.00	17.85	0.024	38	0.024
8.00	21.50	22.00	16.85	0.017	36	0.017
15.00	20.00	22.00	15.35	0.012	33	0.012
30.00	17.00	22.00	12.35	0.009	26	0.009
60.00	16.00	22.00	11.35	0.006	24	0.006
120.00	14.00	22.00	9.35	0.005	20	0.005
240.00	13.00	22.00	8.35	0.003	18	0.003
1261.00	12.00	22.00	7.35	0.001	16	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.75"	0.748	19.00	0.00	0.00	100
0.5"	0.500	12.70	5.40	5.40	89
0.375"	0.374	9.51	0.00	5.40	89
#4	0.187	4.75	0.15	5.55	88
#10	0.079	2.00	0.22	5.77	88
#20	0.033	0.84	0.58	6.35	87
#40	0.017	0.42	1.22	7.57	84
#60	0.010	0.25	2.35	9.92	79
#100	0.006	0.15	6.47	16.39	65
#200	0.003	0.07	8.10	24.49	48
Pan			22.63	47.12	0

Total Dry Weight of Sample = 56.77

D85 : 0.5589 mm
D60 : 0.1205 mm
D50 : 0.0802 mm
D30 : 0.0108 mm
D15 : N/A
D10 : N/A

Soil Classification
ASTM Group Symbol : SC
ASTM Group Name : Clayey sand
AASHTO Group Symbol : A-7-6(10)
AASHTO Group Name : Clayey Soils

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-13
Sample No. : U-3 (9-11)
Location : New Bedford, MA
Depth : 9-11 ft
Test Date : 11/30/99
Test Method : ASTM D 4318
Filename : FD13U3
Elevation : ---
Tested by : GSG/MHM
Checked by : GTT
Soil Description : Moist, dark gray clayey sand with gravel, organics
Remarks : ---

Liquid Limit for Organic

Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Number of Drops	Moisture Content (%)
1) 43	30.39	35.46	34.36	31	27.71
2) 110	28.02	34.49	32.99	22	30.18
3) 24	30.28	36.10	34.76	11	29.91

Liquid Limit = 28.84

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-13
Sample No. : U-4 (12-14)
Location : New Bedford, MA
Soil Description : Moist, dark brown organic silt
Remarks : ---

Depth : 12-14 ft
Test Date : 11/30/99
Test Method : ASTM D 2216

Filename : FD13U4
Elevation : ---
Tested by : GSG/MHM
Checked by : GTT

Natural Moisture Content

	Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Moisture Content (%)
1)	t	63.74	207.05	128.00	123.02

Average Moisture Content = 123.02

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-13
Sample No. : S-3 (17-19)
Location : New Bedford, MA
Soil Description : Moist, gray sand with silt
Remarks : ---

Depth : 17-19 ft
Test Date : 01/24/00
Test Method : ASTM D 422

Filename : FD1353
Elevation : ---
Tested by : MCH/NJH
Checked by : GTT

HYDROMETER

Hydrometer ID : 257525
Weight of air-dried soil = 78.26 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	18.00	21.00	14.00	0.049	16	0.049
2.00	13.50	21.00	9.50	0.036	11	0.036
4.00	12.00	21.00	8.00	0.026	9	0.026
8.00	11.00	21.00	7.00	0.018	8	0.018
15.00	10.00	21.00	6.00	0.013	7	0.013
30.00	9.00	21.00	5.00	0.009	6	0.009
60.00	8.50	21.00	4.50	0.007	5	0.007
122.00	8.00	21.00	4.00	0.005	5	0.005
240.00	7.00	22.50	3.55	0.003	4	0.003
1268.00	7.00	21.50	3.18	0.001	4	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.75"	0.748	19.00	0.00	0.00	100
0.5"	0.500	12.70	8.95	8.95	95
0.375"	0.374	9.51	2.52	11.47	94
#4	0.187	4.75	3.21	14.68	92
#10	0.079	2.00	3.98	18.66	90
#20	0.033	0.84	4.61	23.27	88
#40	0.017	0.42	9.24	32.51	83
#60	0.010	0.25	16.94	49.45	75
#100	0.006	0.15	45.31	94.76	51
#200	0.003	0.07	59.19	153.95	21
Pan			40.95	194.90	0

Total Dry Weight of Sample = 204.01

D85 : 0.5372 mm
D60 : 0.1805 mm
D50 : 0.1443 mm
D30 : 0.0910 mm
D15 : 0.0457 mm
D10 : 0.0295 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-2-4(0)
AASHTO Group Name : Silty Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-13
Sample No. : S-5A (25-27)
Location : New Bedford, MA
Soil Description : Wet, olive silty clay with sand
Remarks : ---

Filename : FD13S-5A
Depth : 25-27 ft
Test Date : 01/24/00
Test Method : ASTM D 422
Elevation : ---
Tested by : MCH/NJH
Checked by : GTT

HYDROMETER

Hydrometer ID : 257525
Weight of air-dried soil = 87.87 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	46.50	21.00	42.50	0.040	48	0.040
2.00	42.00	21.00	38.00	0.029	43	0.029
4.00	38.50	21.00	34.50	0.021	39	0.021
8.00	34.50	21.00	30.50	0.016	35	0.016
15.00	30.50	21.00	26.50	0.012	30	0.012
30.00	26.00	21.00	22.00	0.009	25	0.009
60.00	22.00	21.00	18.00	0.006	20	0.006
120.00	19.50	21.00	15.50	0.004	18	0.004
240.00	17.00	21.00	13.00	0.003	15	0.003
1345.00	12.50	22.50	9.05	0.001	10	0.001

FINE SIEVE SET

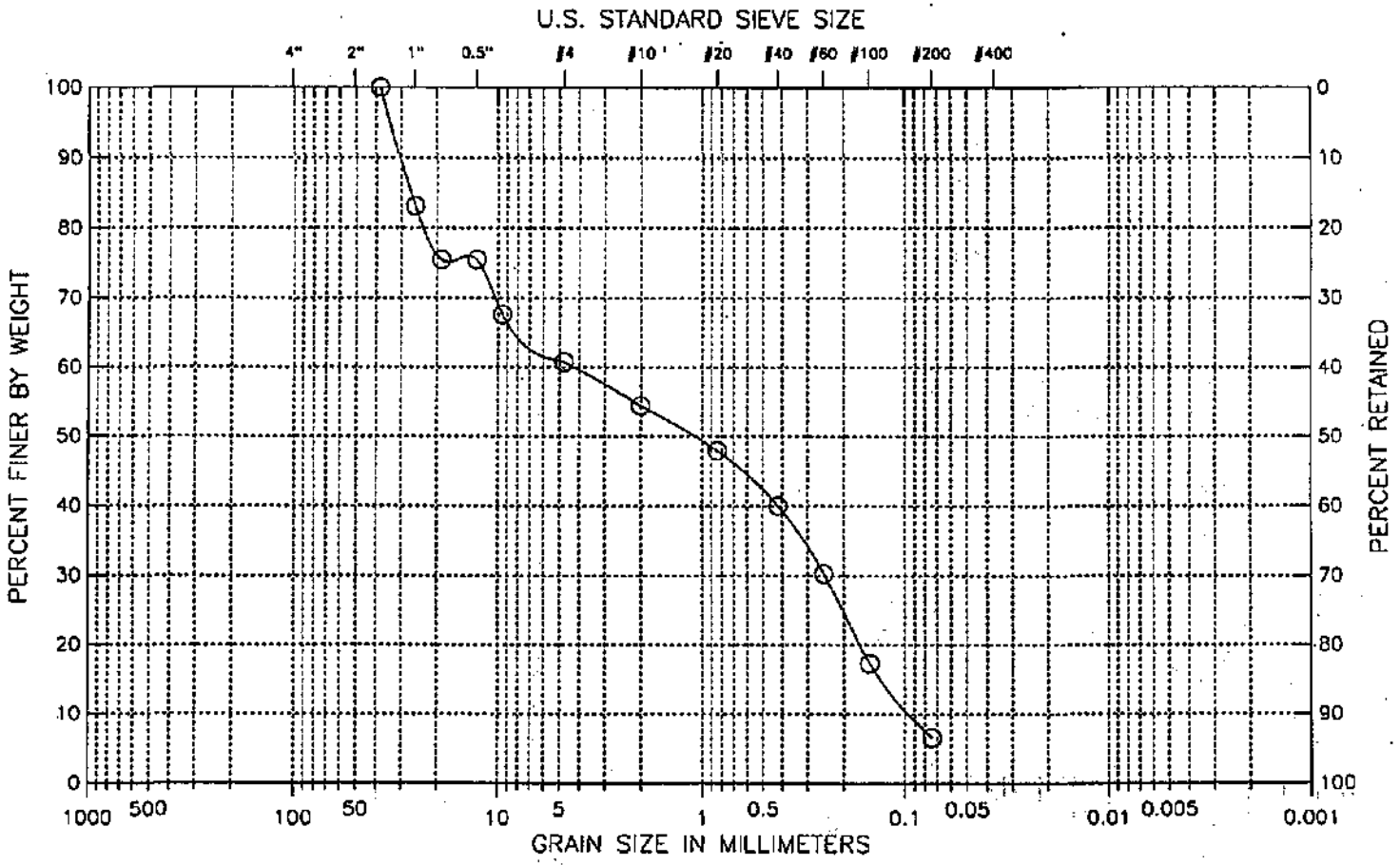
Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
#4	0.187	4.75	0.00	0.00	100
#10	0.079	2.00	0.21	0.21	100
#20	0.033	0.84	0.34	0.55	99
#40	0.017	0.42	1.46	2.01	98
#60	0.010	0.25	1.79	3.80	96
#100	0.006	0.15	2.44	6.24	93
#200	0.003	0.07	11.87	18.11	80
Pan			71.96	90.07	0

Total Dry Weight of Sample = 218.04

D85 : 0.0971 mm
D60 : 0.0500 mm
D50 : 0.0411 mm
D30 : 0.0116 mm
D15 : 0.0033 mm
D10 : 0.0013 mm

Soil Classification
ASTM Group Symbol : CL
ASTM Group Name : lean clay with sand
AASHTO Group Symbol : A-4(4)
AASHTO Group Name : Silty Soils

	Boring No. : FD-13 Sample No: S-12 (54-56) Test Method ASTM D 422 Filename : FD13S12	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Tue Nov, 23 1999



Classification :

Visual Description :
Wet, tan sand with gravel, some silt

Remarks :
Hydrometer not required fines < 15%

Figure 7

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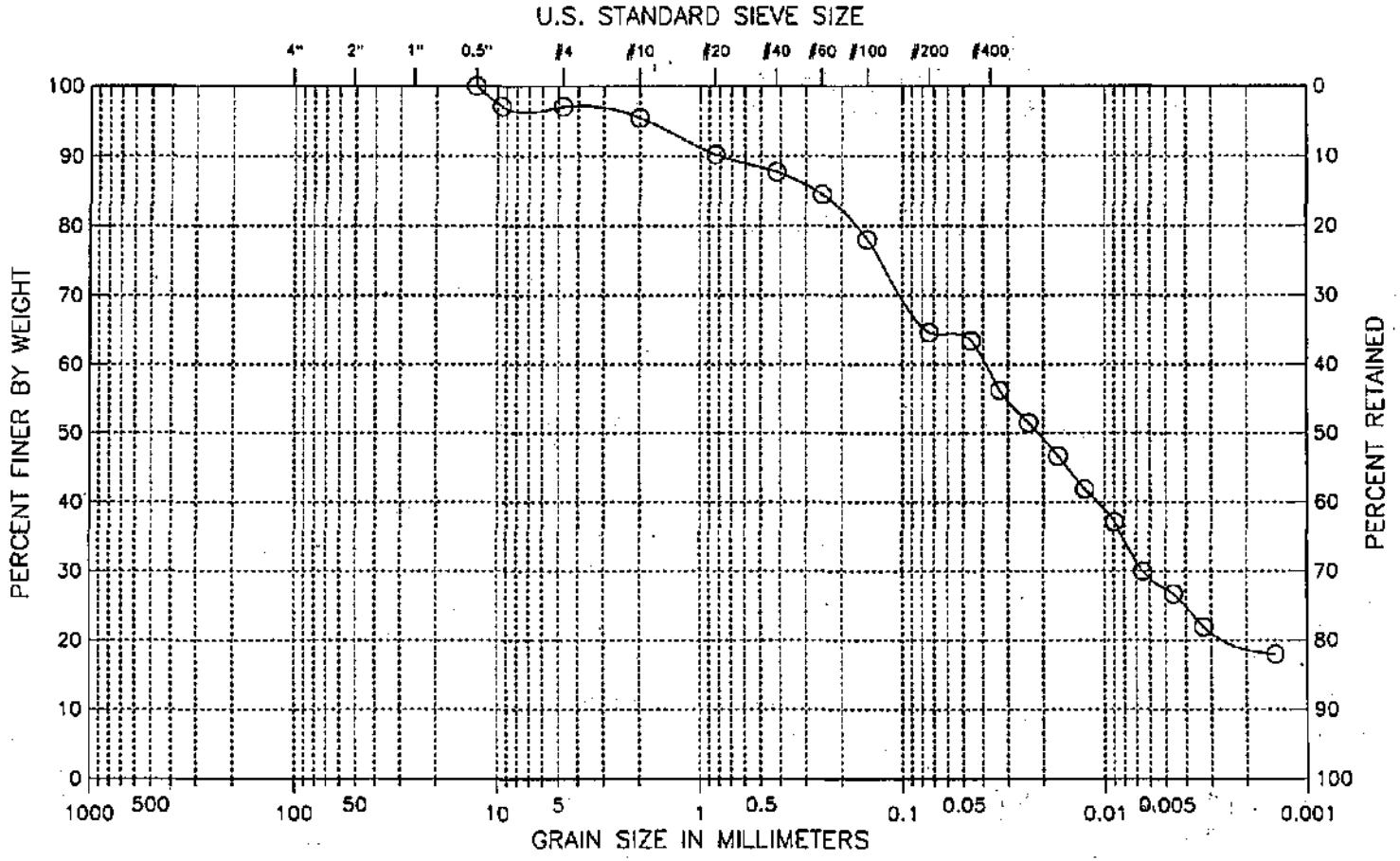
	Boring No. : FD-18 Sample No: U-1 (1-3) Test Method ASTM D 422 Filename : FD18U1	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Fri Dec,17 1999



Classification :
(OH) Sandy organic clay
Visual Description :
Moist, very dark gray sandy organic clay w/ shells

Remarks :

Figure 11

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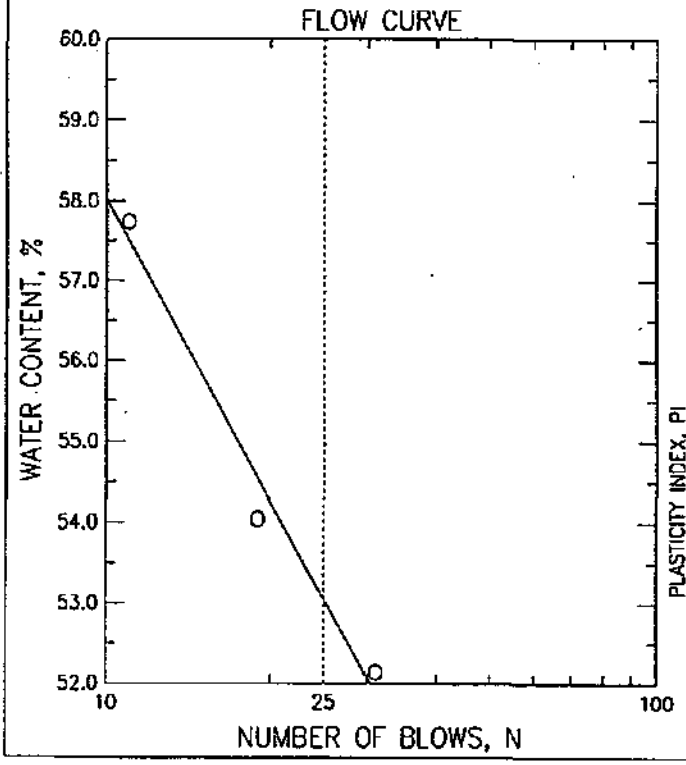
ATTERBERG LIMITS

PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Harbor Superfund Site	GTX-2409	GSG/MHM	FD-18
LOCATION		CHECKED BY	SAMPLE NUMBER
New Bedford, MA		GTT	U-1 (1-3)
SAMPLE DESCRIPTION		DATE	FILENAME
Moist, very dark gray sandy organic clay w/ shells		Fri Dec 17 1999	FD18U1

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER	44	133	97		
WT. WET SOIL + TARE	35.86	33.66	32.78		
WT. DRY SOIL + TARE	33.91	31.52	30.99		
WT. WATER	1.95	2.14	1.79		
TARE WT.	30.17	27.56	27.89		
WT. DRY SOIL	3.74	3.96	3.1		
WATER CONTENT, W_N (%)	52.14	54.04	57.74		
NUMBER OF BLOWS, N	31	19	11		
ONE-POINT LIQUID LIMIT, LL	53.51	52.28	52.28		
PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER	11	6			
WT. WET SOIL + TARE	35.48	35.5			
WT. DRY SOIL + TARE	34.36	34.25			
WT. WATER	1.12	1.25			
TARE WT.	30.1	29.47			
WT. DRY SOIL	4.26	4.78			
WATER CONTENT (%)	26.29	26.15			



SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	72.8
LIQUID LIMIT, LL	53.0
PLASTIC LIMIT, PL	26.2
PLASTICITY INDEX, PI	26.8
LIQUIDITY INDEX, LI*	1.74

*LI = (W - PL)/PI

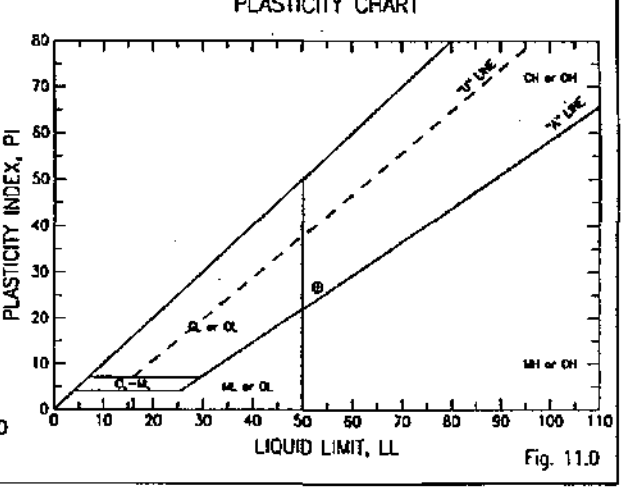


Fig. 11.0

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-18
Sample No. : U-1 (1-3)
Location : New Bedford, MA
Soil Description : Moist, very dark gray sandy organic clay w/ shells
Remarks : ---

Depth : 1-3 ft
Test Date : 11/30/99
Test Method : ASTM D 2216

Filename : FD18U1
Elevation : ---
Tested by : GSG/MHM
Checked by : GTT

Natural Moisture Content

	Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Moisture Content (%)
1)	03	75.23	270.93	188.45	72.85
2)		0.00	0.00	0.00	0.00

Average Moisture Content = 72.85

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-18
Sample No. : U-2 (4-6)
Location : New Bedford, MA
Soil Description : Moist, dark gray clayey sand with organics
Remarks : ---

Depth : 4-6 ft
Test Date : 11/30/99
Test Method : ASTM D 422

Filename : FD18U2
Elevation : ---
Tested by : GSG/MBM
Checked by : GTT

HYDROMETER

Hydrometer ID : 257525
Weight of air-dried soil = 46.45 gm
Specific Gravity = 2.68

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	26.00	19.50	21.52	0.047	43	0.047
2.00	25.00	19.50	20.52	0.034	41	0.034
4.00	22.00	19.50	17.52	0.024	35	0.024
8.00	20.00	19.50	15.52	0.017	31	0.017
15.00	18.00	19.50	13.52	0.013	27	0.013
30.00	15.00	19.50	10.52	0.009	21	0.009
60.00	13.00	19.50	8.52	0.007	17	0.007
120.00	11.50	20.00	7.18	0.005	14	0.005
246.00	10.00	20.00	5.68	0.003	11	0.003
1301.00	9.00	19.50	4.52	0.001	9	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.375"	0.374	9.51	0.00	0.00	100
#4	0.187	4.75	1.21	1.21	97
#10	0.079	2.00	2.18	3.39	93
#20	0.033	0.84	2.47	5.86	87
#40	0.017	0.42	3.85	9.71	79
#60	0.010	0.25	4.22	13.93	70
#100	0.006	0.15	5.55	19.48	58
#200	0.003	0.07	5.88	25.36	46
Pan			21.48	46.84	0

Total Dry Weight of Sample = 163.89

D85 : 0.6815 mm
D60 : 0.1597 mm
D50 : 0.0932 mm
D30 : 0.0163 mm
D15 : 0.0052 mm
D10 : 0.0021 mm

Soil Classification
ASTM Group Symbol : SC
ASTM Group Name : Clayey sand
AASHTO Group Symbol : A-6(3)
AASHTO Group Name : Clayey Soils

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-18
Sample No. : U-2 (4-6)
Location : New Bedford, MA
Soil Description : Moist, dark gray clayey sand with organics
Remarks : ---

Depth : 4-6 ft
Test Date : 11/30/99
Test Method : ASTM D 4318

Filename : FD18U2
Elevation : ---
Tested by : GSG/MHM
Checked by : GTT

Liquid Limit for Organic

Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Number of Drops	Moisture Content (%)
1) 6	29.47	38.52	36.72	35	24.83
2) 32	30.07	37.54	35.95	19	27.04
3) 52	30.43	37.51	35.97	12	27.80

Liquid Limit = 25.92

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-18
Sample No. : U-3 (7-9)
Location : New Bedford, MA
Soil Description : Moist, dark brown sandy silt
Remarks : ---

Depth : 7-9 ft
Test Date : 11/30/99
Test Method : ASTM D 2216

Filename : FD18U3
Elevation : ---
Tested by : GSG/MHM
Checked by : GTT

Natural Moisture Content

	Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Moisture Content (%)
1)	008	72.23	253.73	218.28	24.27

Average Moisture Content = 24.27

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-30
Sample No. : DO-1 (1-3)
Location : New Bedford, MA
Soil Description : Moist, very dark gray sandy organic silt
Remarks : ---

Depth : 1-3 ft
Test Date : 10/12/99
Test Method : ASTM D 422

Filename : FD30UO1
Elevation : ---
Tested by : gsg/rjw
Checked by : gtt

HYDROMETER

Hydrometer ID : 257525
Weight of air-dried soil = 36.57 gm
Specific Gravity = 2.6

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	23.50	21.50	19.68	0.048	54	0.048
2.00	22.00	21.50	18.18	0.034	50	0.034
4.00	21.00	21.50	17.18	0.024	47	0.024
8.00	19.00	21.50	15.18	0.017	42	0.017
15.00	18.00	21.50	14.18	0.013	39	0.013
30.00	15.50	22.00	11.86	0.009	33	0.009
60.00	14.50	22.00	10.86	0.007	30	0.007
120.00	13.00	22.50	9.55	0.005	26	0.005
240.00	12.00	22.00	8.36	0.003	23	0.003
1117.00	11.00	21.00	7.00	0.002	19	0.002

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
#4	0.187	4.75	0.00	0.00	100
#10	0.079	2.00	0.14	0.14	100
#20	0.033	0.84	0.58	0.72	98
#40	0.017	0.42	1.55	2.27	94
#60	0.010	0.25	2.62	4.89	87
#100	0.006	0.15	5.45	10.34	72
#200	0.003	0.07	5.65	15.99	56
Pan			20.72	36.71	0

Total Dry Weight of Sample = 45.96

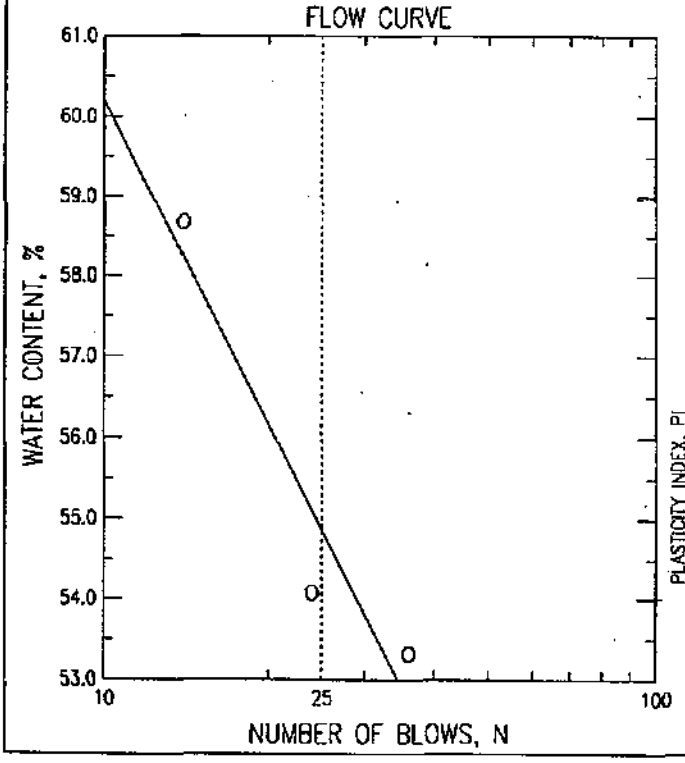
D85 : 0.2358 mm
D60 : 0.0870 mm
D50 : 0.0338 mm
D30 : 0.0066 mm
D15 : N/A
D10 : N/A

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-4(0)
AASHTO Group Name : Silty Soils

ATTERBERG LIMITS

PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Harbor Superfund Site	GTX-2409	GSG/MHM	FD-30
LOCATION		CHECKED BY	SAMPLE NUMBER
New Bedford, MA		GTT	U-1 (1-3)
SAMPLE DESCRIPTION		DATE	FILENAME
Moist, dark gray organic silt		Fri Dec 17 1999	FD30U1

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER	107	96	33		
WT. WET SOIL + TARE	34.71	36.35	35.87		
WT. DRY SOIL + TARE	32.3	34.03	33.74		
WT. WATER	2.41	2.32	2.13		
TARE WT.	27.78	29.74	30.11		
WT. DRY SOIL	4.52	4.29	3.63		
WATER CONTENT, W_N (%)	53.32	54.08	58.68		
NUMBER OF BLOWS, N	36	24	14		
ONE-POINT LIQUID LIMIT, LL	55.72	53.81	54.70		
PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER	55	78			
WT. WET SOIL + TARE	35.71	36.3			
WT. DRY SOIL + TARE	34.6	35.2			
WT. WATER	1.11	1.1			
TARE WT.	29.55	30.48			
WT. DRY SOIL	5.05	4.72			
WATER CONTENT (%)	21.98	23.31			



SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	59.8
LIQUID LIMIT, LL	54.9
PLASTIC LIMIT, PL	22.6
PLASTICITY INDEX, PI	32.2
LIQUIDITY INDEX, LI*	1.15

*LI = (W - PL)/PI

PLASTICITY CHART

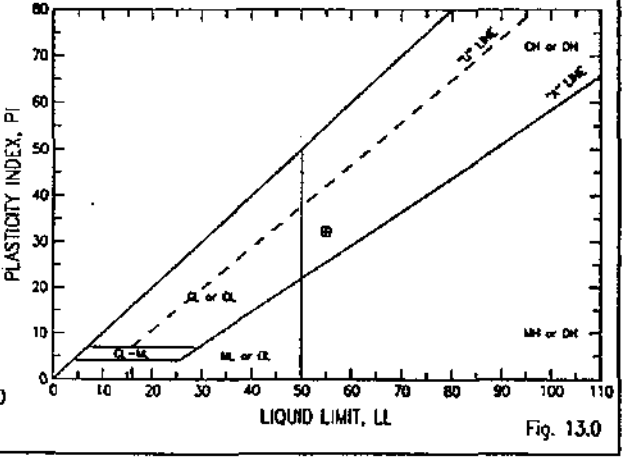


Fig. 13.0

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-30
Sample No. : U-1 (1-3)
Location : New Bedford, MA
Soil Description : Moist, dark gray organic silt
Remarks : ---

Depth : 1-3 ft
Test Date : 11/30/99
Test Method : ASTM D 2216

Filename : FD30U1
Elevation : ---
Tested by : GSG/MHM
Checked by : GTT

Natural Moisture Content

	Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Moisture Content (%)
1)	bk86	30.29	96.00	71.41	59.80

Average Moisture Content = 59.80

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-30
Sample No. : UO-2 (4-6)
Location : New Bedford, MA
Soil Description : Moist, dark gray clayey sand with organics
Remarks : ---

Filename : FD30UO2
Depth : 4-6 ft
Test Date : 10/12/99
Test Method : ASTM D 422
Elevation : ---
Tested by : gsg/rjw
Checked by : gtt

HYDROMETER

Hydrometer ID : 257525
Weight of air-dried soil = 51.34 gm
Specific Gravity = 2.63

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	24.00	21.00	20.00	0.048	38	0.048
2.00	23.00	21.00	19.00	0.034	36	0.034
4.00	21.00	21.00	17.00	0.024	32	0.024
8.00	19.00	21.00	15.00	0.017	29	0.017
15.00	17.00	21.00	13.00	0.013	25	0.013
30.00	15.50	21.00	11.50	0.009	22	0.009
60.00	13.50	21.00	9.50	0.007	18	0.007
120.00	12.50	21.00	8.50	0.005	16	0.005
240.00	11.00	22.50	7.55	0.003	14	0.003
1126.00	11.00	21.00	7.00	0.002	13	0.002

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.375"	0.374	9.51	0.00	0.00	100
#4	0.187	4.75	0.50	0.50	99
#10	0.079	2.00	0.95	1.45	97
#20	0.033	0.84	4.23	5.68	89
#40	0.017	0.42	4.48	10.16	80
#60	0.010	0.25	9.37	19.53	62
#100	0.006	0.15	7.48	27.01	48
#200	0.003	0.07	3.81	30.82	40
Pan			20.97	51.79	0

Total Dry Weight of Sample = 60.79

D85 : 0.6084 mm
D60 : 0.2303 mm
D50 : 0.1609 mm
D30 : 0.0198 mm
D15 : 0.0037 mm
D10 : 0.0001 mm

Soil Classification
ASTM Group Symbol : SC
ASTM Group Name : Clayey sand
AASHTO Group Symbol : A-6(3)
AASHTO Group Name : Clayey Soils

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-30
Sample No. : UO-2 (4-6)
Location : New Bedford, MA
Soil Description : Moist, dark gray clayey sand with organics
Remarks : ---

Depth : 4-6 ft
Test Date : 10/12/99
Test Method : ASTM D 2216

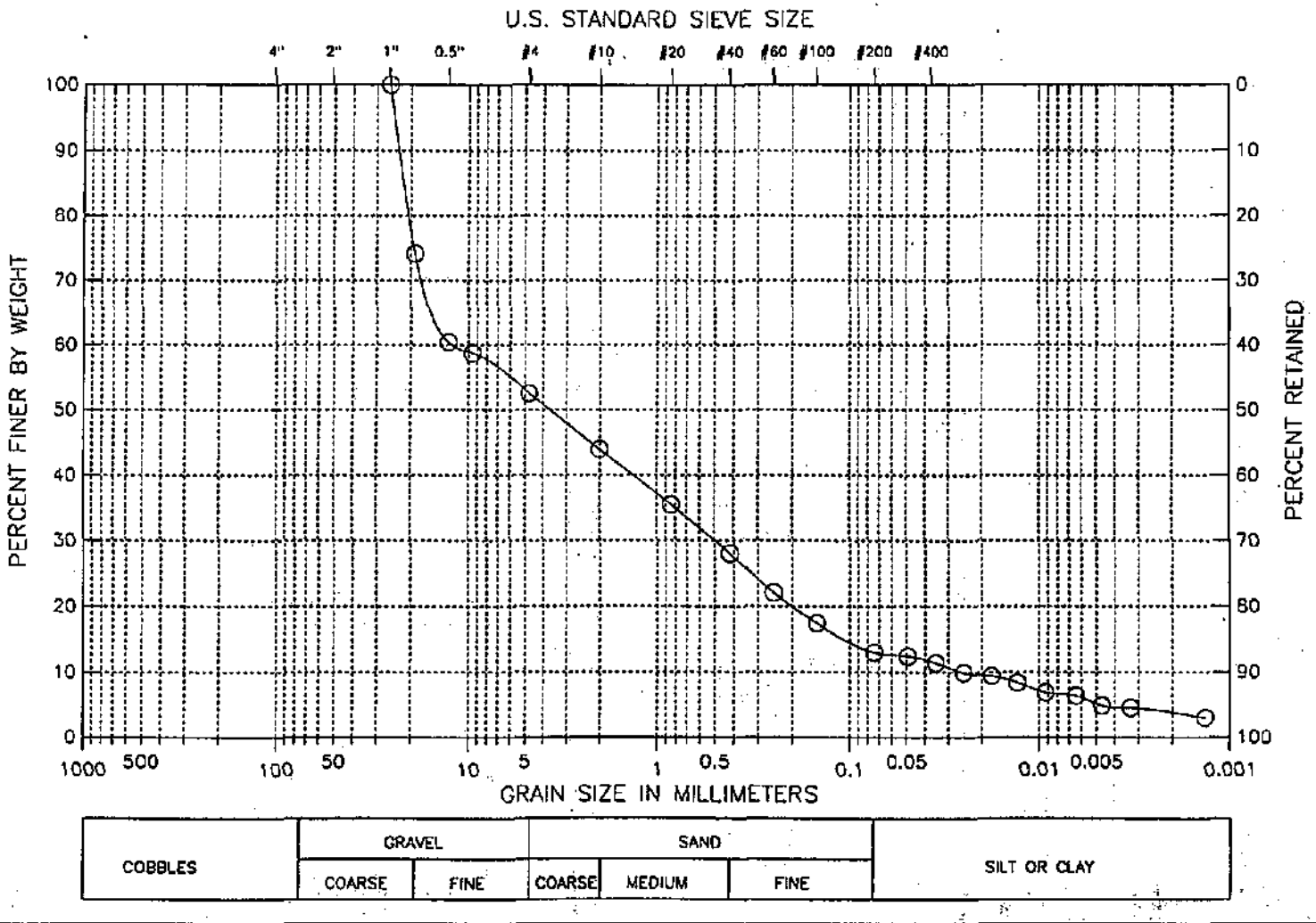
Filename : FD30UO2
Elevation : ---
Tested by : gsg/rjw
Checked by : gtt

Natural Moisture Content

	Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Moisture Content (%)
1)	nh119	8.96	121.81	92.24	35.51
2)		0.00	0.00	0.00	0.00

Average Moisture Content = 35.51

	Boring No. : FD-30 Sample No.: S-4 (25-27) Test Method ASTM D 422 Filename : FD30S4	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Thu Oct, 28 1999



Classification :

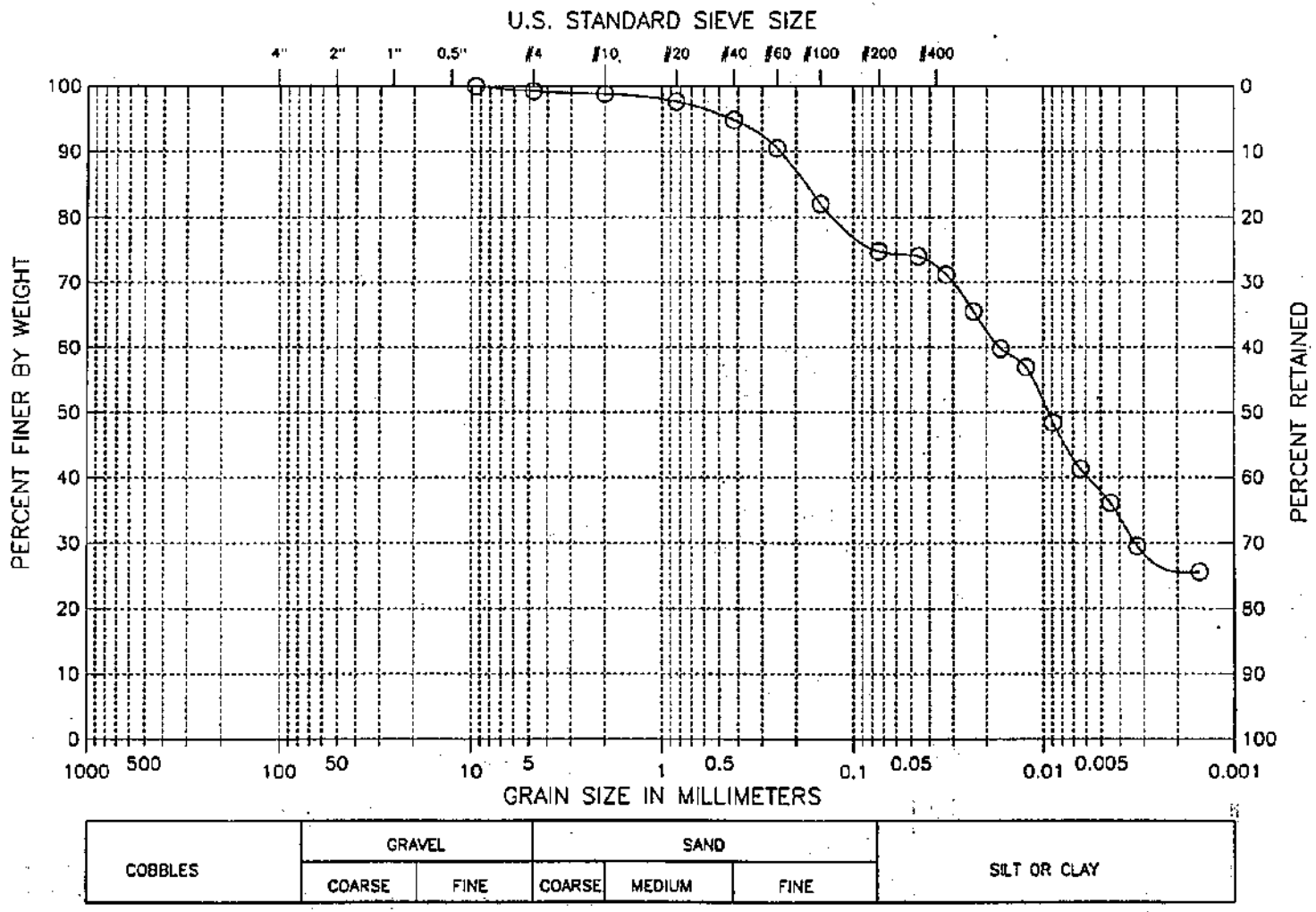
Remarks :

Visual Description :

Moist, light yellowish brown silty sand w/ gravel

Figure 8

	Boring No. : FD-31 Sample No: UO-1 (3-5) Test Method ASTM D 422 Filename : FD31UO1	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Thu Oct 28 1999



Classification :
(OH) organic clay with sand
Visual Description :
Moist, dark gray organic clay with sand

Remarks :

Figure B

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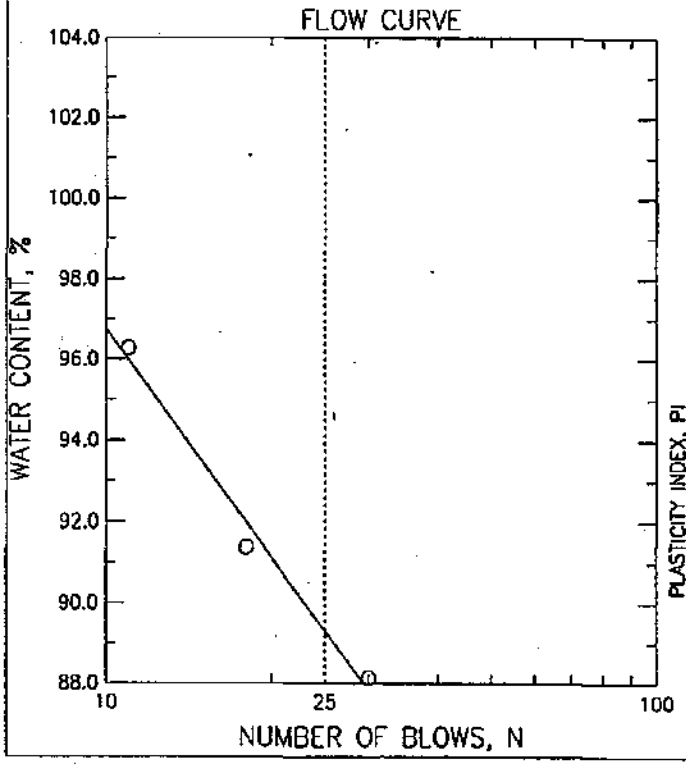
ATTERBERG LIMITS

PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Harbor Superfund Site	GTX-2409	gsg/rjw	FD-31
LOCATION		**CHECKED BY**	**SAMPLE NUMBER**
New Bedford, MA		gtt	UO-1 (3-5)
SAMPLE DESCRIPTION		**DATE**	**FILENAME**
Moist, dark gray organic clay with sand		Thu Oct 28 1999	FD31U01

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk10	bk82	bk71		
WT. WET SOIL + TARE	35.12	36.17	35.81		
WT. DRY SOIL + TARE	32.37	32.99	32.5		
WT. WATER	2.75	3.18	3.11		
TARE WT.	29.25	29.51	29.27		
WT. DRY SOIL	3.12	3.48	3.23		
WATER CONTENT, W_N (%)	88.14	91.38	96.28		
NUMBER OF BLOWS, N	30	18	11		
ONE-POINT LIQUID LIMIT, LL	90.11	87.82	87.18		
PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk76	bk37			
WT. WET SOIL + TARE	34.31	35.33			
WT. DRY SOIL + TARE	33.03	33.83			
WT. WATER	1.28	1.5			
TARE WT.	29.19	29.14			
WT. DRY SOIL	3.84	4.69			
WATER CONTENT (%)	33.33	31.98			



SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	90.3
LIQUID LIMIT, LL	89.3
PLASTIC LIMIT, PL	32.7
PLASTICITY INDEX, PI	56.7
LIQUIDITY INDEX, LI*	1.02

*LI = (W - PL)/PI

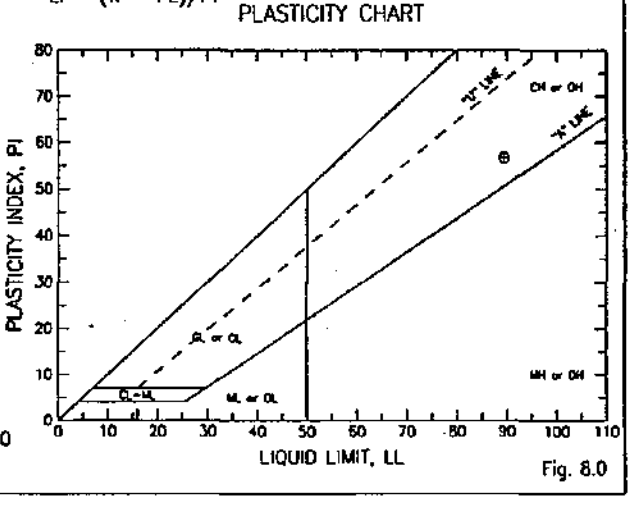
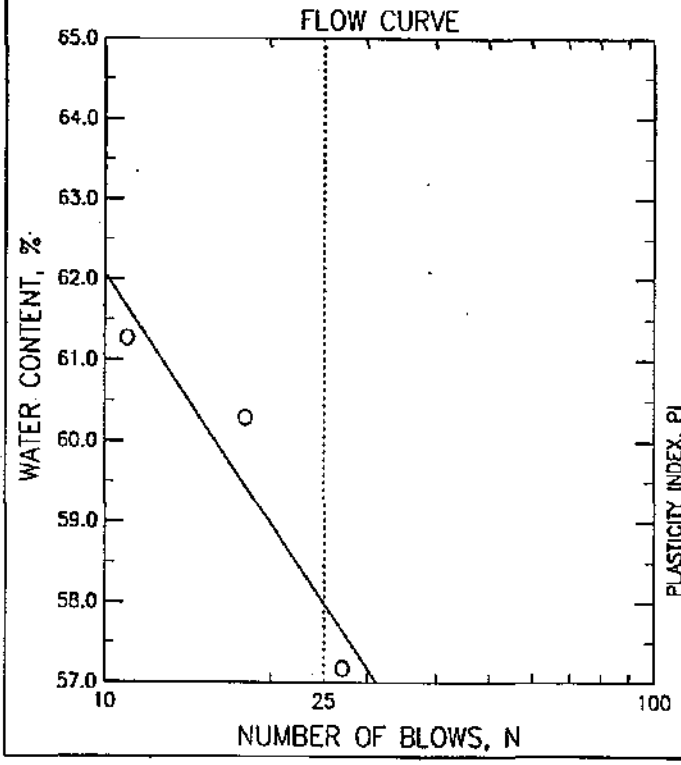


Fig. 8.0

ATTERBERG LIMITS

PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Harbor Superfund Site	GTX-2409	gsg/rjw	FD-31
LOCATION		CHECKED BY	SAMPLE NUMBER
New Bedford, MA		gtt	U0-2 (8-10)
SAMPLE DESCRIPTION		DATE	FILENAME
Moist, dark gray organic clay with sand		Thu Oct 28 1999	FD31U02

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk91	bk84	bk120		
WT. WET SOIL + TARE	37.82	38.08	36.99		
WT. DRY SOIL + TARE	35.03	35.18	34.19		
WT. WATER	2.79	2.9	2.8		
TARE WT.	30.15	30.37	29.62		
WT. DRY SOIL	4.88	4.81	4.57		
WATER CONTENT, W_N (%)	57.17	60.29	61.27		
NUMBER OF BLOWS, N	27	18	11		
ONE-POINT LIQUID LIMIT, LL	57.71	57.94	55.48		
PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk99	bk1			
WT. WET SOIL + TARE	34.03	35.66			
WT. DRY SOIL + TARE	32.76	34.55			
WT. WATER	1.27	1.11			
TARE WT.	27.63	30.14			
WT. DRY SOIL	5.13	4.41			
WATER CONTENT (%)	24.76	25.17			



SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	60.3
LIQUID LIMIT, LL	58.0
PLASTIC LIMIT, PL	25.0
PLASTICITY INDEX, PI	33.0
LIQUIDITY INDEX, LI*	1.07

*LI = (W - PL)/PI

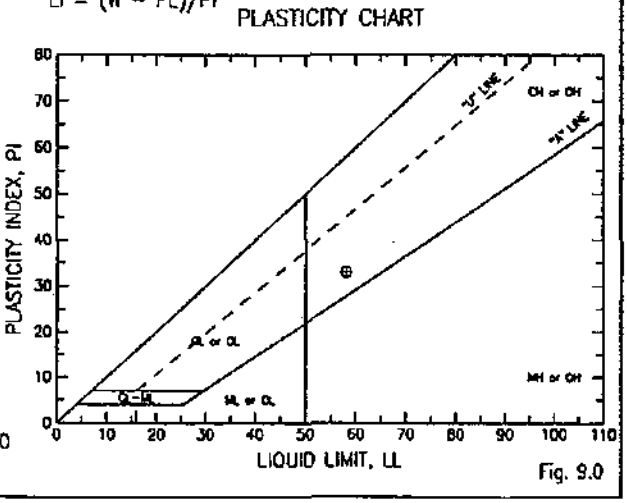
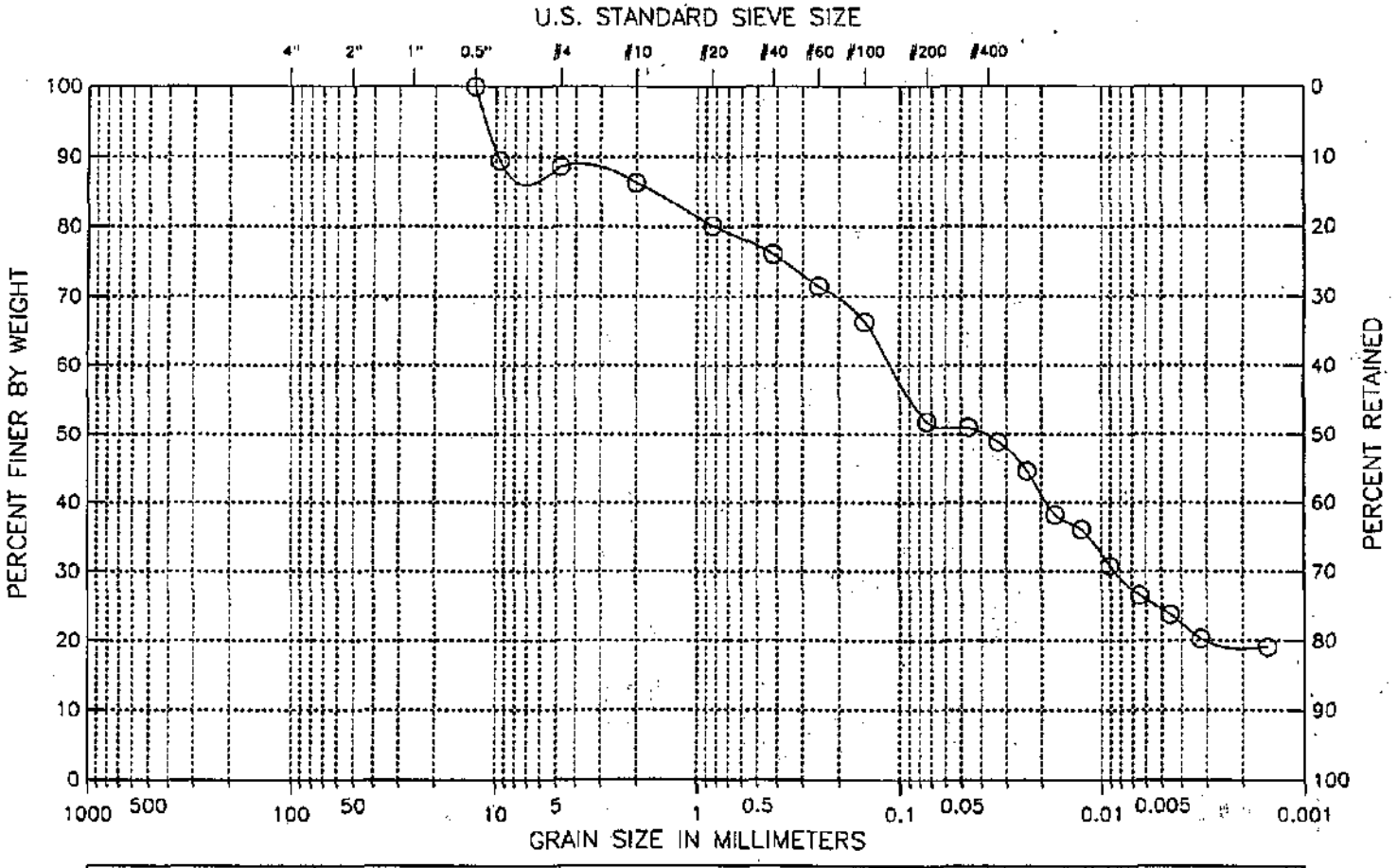


Fig. 9.0

	Boring No. : FD-31 Sample No: UO-3 (12-14) Test Method ASTM D 422 Filename : FD31U03	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Thu Oct 28 1999



Classificotion :
(OH) Sandy organic clay
Visual Description :
Moist, dark gray sandy organic clay

Remarks :

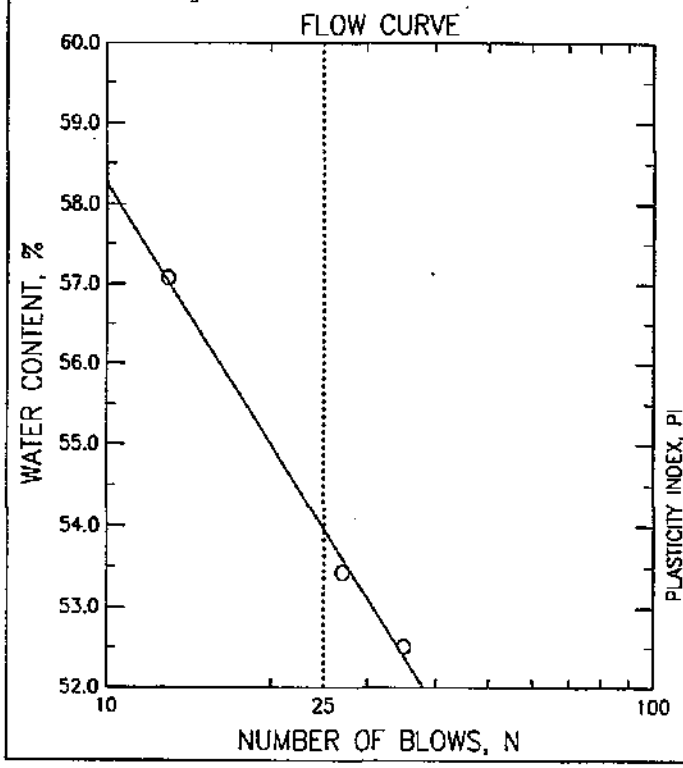
Figure 10

ATTERBERG LIMITS

PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Harbor Superfund Site	GTX-2409	gsg/rjw	FD-31
LOCATION		CHECKED BY	SAMPLE NUMBER
New Bedford, MA		glt	U0-3 (12-14)
SAMPLE DESCRIPTION		DATE	FILENAME
Moist, dark gray sandy organic clay		Thu Oct 28 1999	FD31U03

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk126	bk10	bk76		
WT. WET SOIL + TARE	36.05	36.84	35.74		
WT. DRY SOIL + TARE	33.33	34.19	33.36		
WT. WATER	2.72	2.65	2.38		
TARE WT.	28.15	29.23	29.19		
WT. DRY SOIL	5.18	4.96	4.17		
WATER CONTENT, W_N (%)	52.51	53.43	57.07		
NUMBER OF BLOWS, N	35	27	13		
ONE-POINT LIQUID LIMIT, LL	54.69	53.93	52.73		

PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk99	bk1			
WT. WET SOIL + TARE	32.56	34.85			
WT. DRY SOIL + TARE	31.49	33.81			
WT. WATER	1.07	1.04			
TARE WT.	27.66	30.14			
WT. DRY SOIL	3.83	3.67			
WATER CONTENT (%)	27.94	28.34			



SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	52.3
LIQUID LIMIT, LL	54.0
PLASTIC LIMIT, PL	28.1
PLASTICITY INDEX, PI	25.8
LIQUIDITY INDEX, LI*	0.94

*LI = (W - PL)/PI

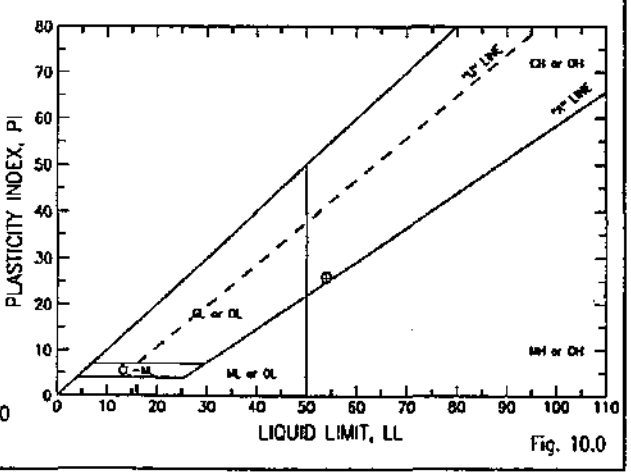


Fig. 10.0

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-31
Sample No. : UO-4 (15-17)
Location : New Bedford, MA
Soil Description : Moist, dark gray organic silt
Remarks : ---

Depth : 15-17 ft
Test Date : 10/12/99
Test Method : ASTM D 2216

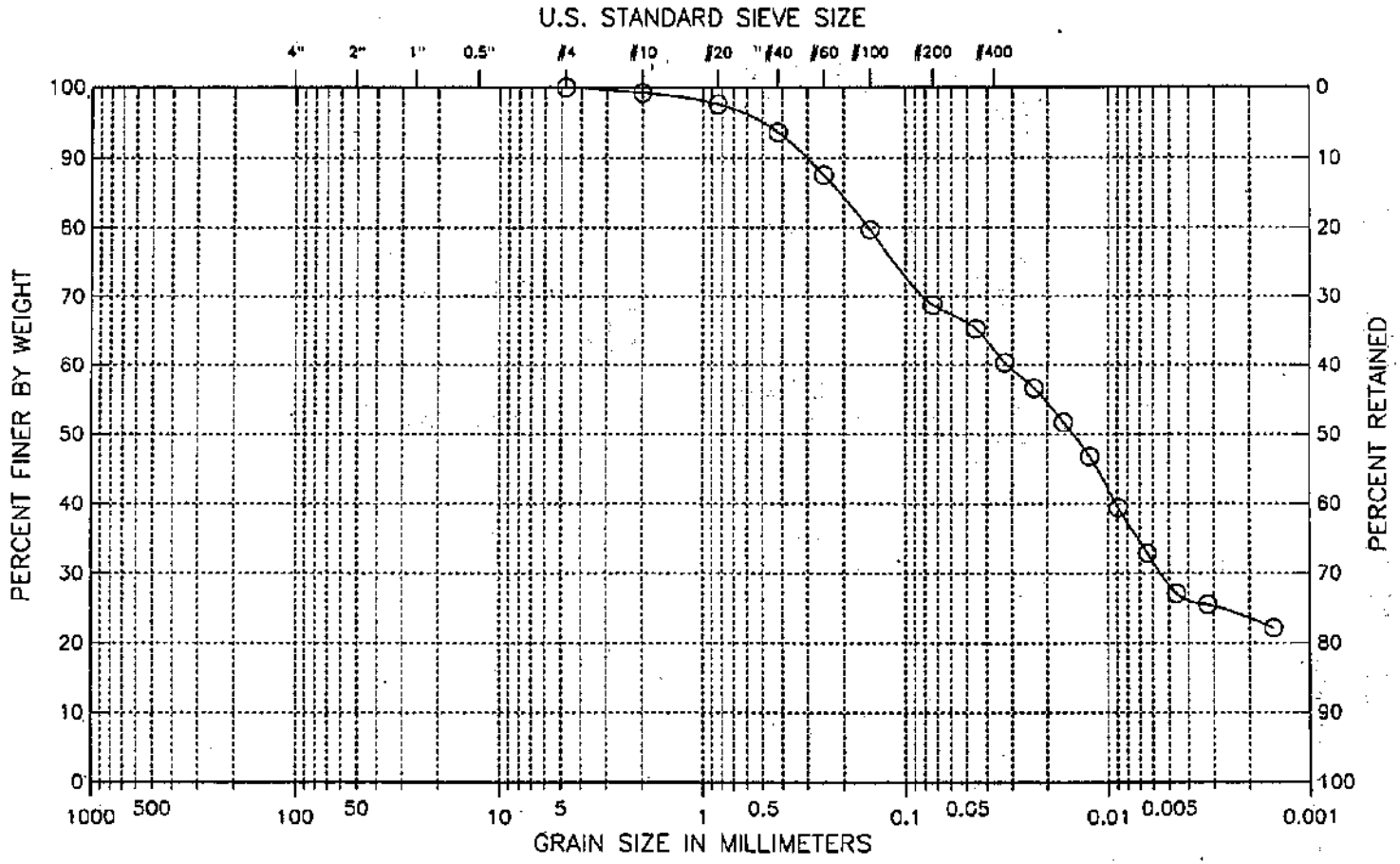
Filename : FD31UO4
Elevation : ---
Tested by : gsg
Checked by : gtt

Natural Moisture Content

	Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Moisture Content (%)
1)	sha3	9.22	163.61	108.05	56.22
2)		0.00	0.00	0.00	0.00

Average Moisture Content = 56.22

	Boring No. : FD-32 Sample No: UO-1 (6-8) Test Method ASTM D 422 Filename : FD32UO1	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Thu Oct 28 1999



Classification :
(OH) Sandy organic clay
Visual Description :
Moist, dark gray sandy organic clay

Remarks :

Figure 11

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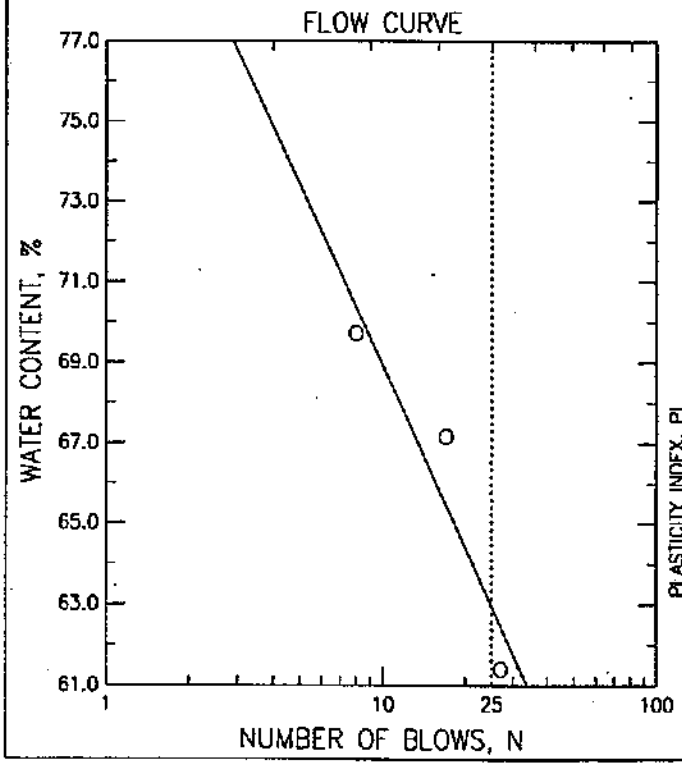
ATTERBERG LIMITS

PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Harbor Superfund Site	GTX-2409	gsg/rjw	FD-32
LOCATION		CHECKED BY	SAMPLE NUMBER
New Bedford, MA		gtt	U0-1 (6-8)
SAMPLE DESCRIPTION		DATE	FILENAME
Moist, dark gray sandy organic clay		Thu Oct 28 1999	FD32U01

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk84	bk1	bk99		
WT. WET SOIL + TARE	37.94	36.81	35.03		
WT. DRY SOIL + TARE	35.06	34.13	31.99		
WT. WATER	2.88	2.68	3.04		
TARE WT.	30.37	30.14	27.63		
WT. DRY SOIL	4.69	3.99	4.36		
WATER CONTENT, W_N (%)	61.41	67.17	69.72		
NUMBER OF BLOWS, N	27	17	8		
ONE-POINT LIQUID LIMIT, LL	61.98	64.11	60.74		
PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER	bk126	bk82			
WT. WET SOIL + TARE	32.01	34.8			
WT. DRY SOIL + TARE	31.28	33.81			
WT. WATER	0.73	0.99			
TARE WT.	28.15	29.52			
WT. DRY SOIL	3.13	4.29			
WATER CONTENT (%)	23.32	23.08			



SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	73.0
LIQUID LIMIT, LL	63.0
PLASTIC LIMIT, PL	23.2
PLASTICITY INDEX, PI	39.8
LIQUIDITY INDEX, LI*	1.25

*LI = (W – PL)/PI

PLASTICITY CHART

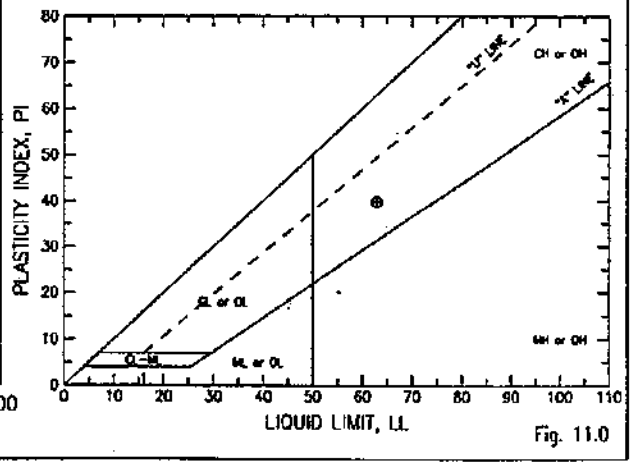


Fig. 11.0

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-32
Sample No. : UO-2 (10-12)
Location : New Bedford, MA
Soil Description : Moist, dark gray organic silt
Remarks : ---

Depth : 10-12 ft
Test Date : 10/12/99
Test Method : ASTM D 2216

Filename : FD32D02
Elevation : ---
Tested by : gsg
Checked by : gtt

Natural Moisture Content

	Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Moisture Content (%)
1)	hg26	8.90	190.11	128.82	51.11
2)		0.00	0.00	0.00	0.00

Average Moisture Content = 51.11

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-50
Sample No. : U-1 (1-3)
Location : New Bedford, MA
Soil Description : Moist, black sandy organic clay
Remarks : ---

Depth : 1-3 ft
Test Date : 11/30/99
Test Method : ASTM D 422

Filename : FD50U1
Elevation : ---
Tested by : GSG/MHM
Checked by : GTT

HYDROMETER

Hydrometer ID : 87130
Weight of air-dried soil = 25.71 gm
Specific Gravity = 2.58

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	23.50	21.00	18.30	0.049	57	0.049
2.00	23.00	21.00	17.80	0.034	55	0.034
4.00	22.00	21.00	16.80	0.025	52	0.025
8.00	18.00	21.00	12.80	0.018	40	0.018
15.00	16.00	21.00	10.80	0.013	34	0.013
30.00	14.00	21.00	8.80	0.009	27	0.009
60.00	12.00	21.00	6.80	0.007	21	0.007
120.00	11.00	21.00	5.80	0.005	18	0.005
240.00	10.50	20.00	4.58	0.003	14	0.003
1387.00	9.00	20.00	3.08	0.001	10	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
#4	0.187	4.75	0.00	0.00	100
#10	0.079	2.00	6.48	6.48	79
#20	0.033	0.84	1.29	7.77	74
#40	0.017	0.42	1.75	9.52	68
#60	0.010	0.25	1.19	10.71	65
#100	0.006	0.15	1.57	12.28	59
#200	0.003	0.07	0.11	12.39	59
Pan			17.80	30.19	0

Total Dry Weight of Sample = 39.82

D85 : 2.5952 mm
D60 : 0.1594 mm
D50 : 0.0232 mm
D30 : 0.0109 mm
D15 : 0.0037 mm
D10 : 0.0016 mm

Soil Classification
ASTM Group Symbol : OH
ASTM Group Name : Sandy organic clay
AASHTO Group Symbol : A-7-5(35)
AASHTO Group Name : Clayey Soils

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-50
Sample No. : U-1 (1-3)
Location : New Bedford, MA
Soil Description : Moist, black sandy organic clay
Remarks : ---

Depth : 1-3 ft
Test Date : 11/30/99
Test Method : ASTM D 4318

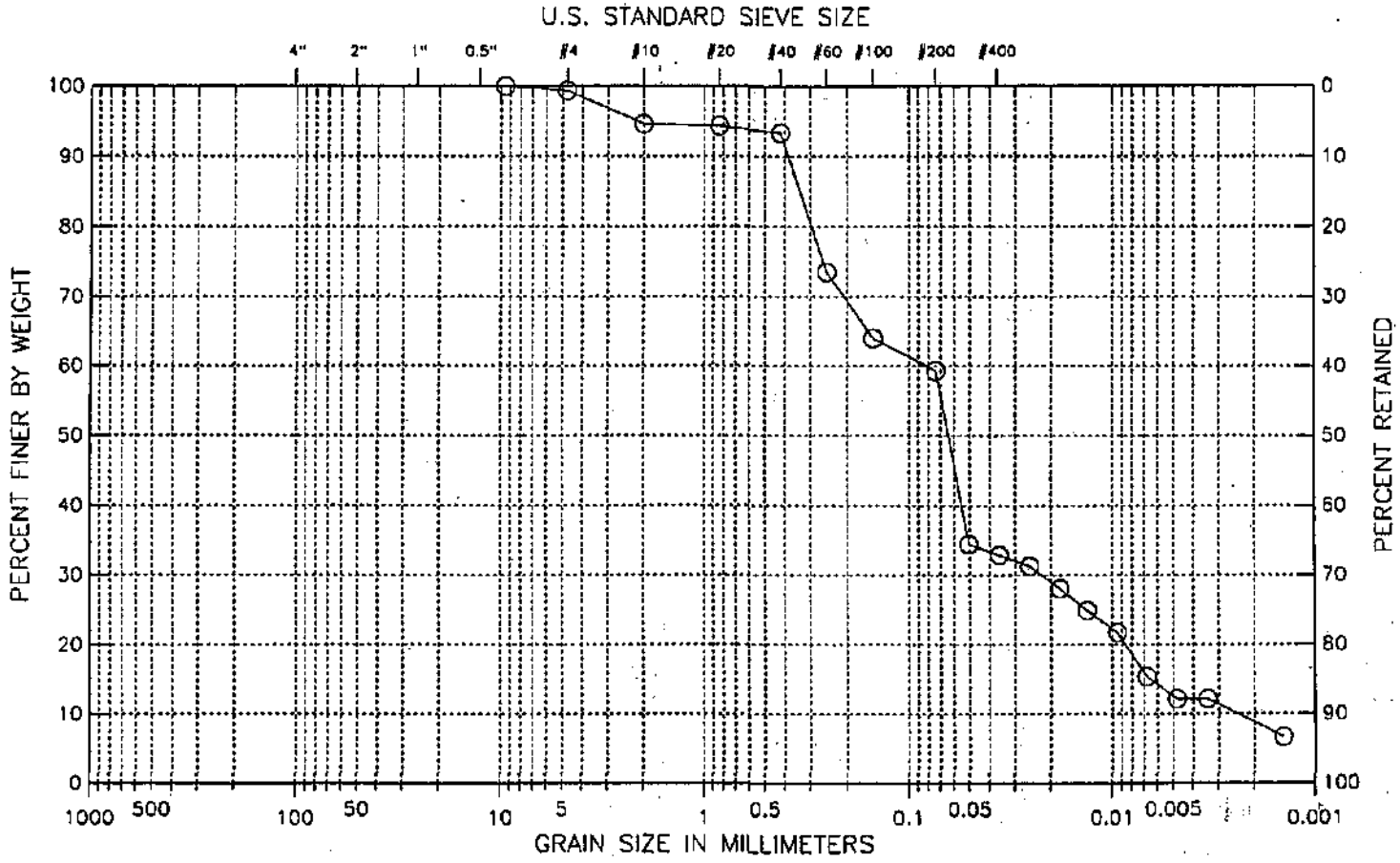
Filename : FD50U1
Elevation : ---
Tested by : GSG/MHM
Checked by : GTT

Liquid Limit for Organic

	Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Number of Drops	Moisture Content (%)
1)	69	30.29	38.66	36.57	27	33.28
2)	3	30.19	36.58	34.90	15	35.67
3)	32	30.10	35.30	33.91	9	36.48

Liquid Limit = 33.72

	Boring No. : FD-50 Sample No: U-2 (4-6) Test Method ASTM D 422 Filename : FD50U2	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Mon Dec 20 1999



Classification :

Remarks :

Visual Description :
Moist, black sandy organic clay

Figure 15

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GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-50
Sample No. : U-2 (4-6)
Location : New Bedford, MA
Soil Description : Moist, black sandy organic clay
Remarks : ---

Depth : 4-6 ft
Test Date : 11/30/99
Test Method : ASTM D 2216

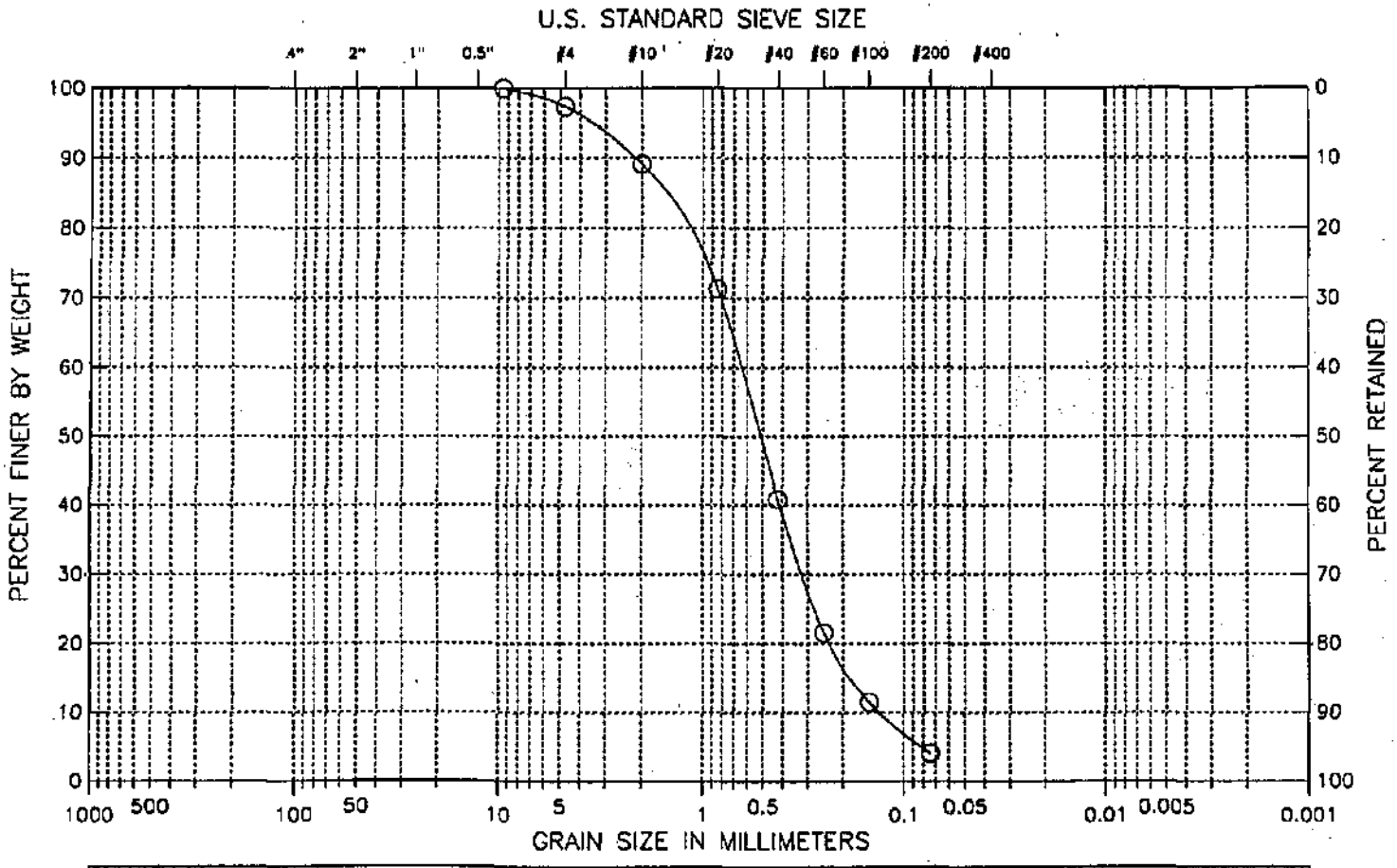
Filename : FD50U2
Elevation : ---
Tested by : GSG/MHM
Checked by : GTT

Natural Moisture Content

	Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Moisture Content (%)
1)	ee14	9.37	196.61	136.74	47.00
2)		0.00	0.00	0.00	0.00

Average Moisture Content = 47.00

	Boring No. : FD-50 Sample No: S-7 (27-29) Test Method ASTM D 422 Filename : FD50S7	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Tue Nov 23 1999



Classification :
(SP) Poorly graded sand
Visual Description :
Wet, light olive brown sand with some silt

Remarks :
Hydrometer not required fines < 15%

Figure 8

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GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-51
Sample No. : U-1 (1-3)
Location : New Bedford, MA
Soil Description : Moist, black organic clay with sand
Remarks : ---

Depth : 1-3 ft
Test Date : 11/30/99
Test Method : ASTM D 2216

Filename : FD51U1
Elevation : ---
Tested by : GSG/MBM
Checked by : GTT

Natural Moisture Content

	Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Moisture Content (%)
1)	ny9	7.99	165.34	75.74	132.25
2)		0.00	0.00	0.00	0.00

Average Moisture Content = 132.25

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-51
Sample No. : U-2 (4-6)
Location : New Bedford, MA
Soil Description : Moist, dark gray silty sand with some organics
Remarks : ---

Depth : 4-6 ft
Test Date : 11/30/99
Test Method : ASTM D 422

Filename : FD51U2
Elevation : ---
Tested by : GSG/MHM
Checked by : GTT

HYDROMETER

Hydrometer ID : 87130
Weight of air-dried soil = 66.93 gm
Specific Gravity = 2.67

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	19.00	21.00	13.80	0.049	20	0.049
2.00	17.00	21.00	11.80	0.035	17	0.035
4.00	16.50	21.00	11.30	0.025	16	0.025
8.00	16.00	21.00	10.80	0.018	15	0.018
15.00	15.50	21.00	10.30	0.013	15	0.013
30.00	14.00	21.00	8.80	0.009	13	0.009
60.00	13.00	21.00	7.80	0.007	11	0.007
120.00	12.00	21.00	6.80	0.005	10	0.005
240.00	11.00	20.00	5.08	0.003	7	0.003
1405.00	9.00	20.00	3.08	0.001	4	0.001

FINE SIEVE SET

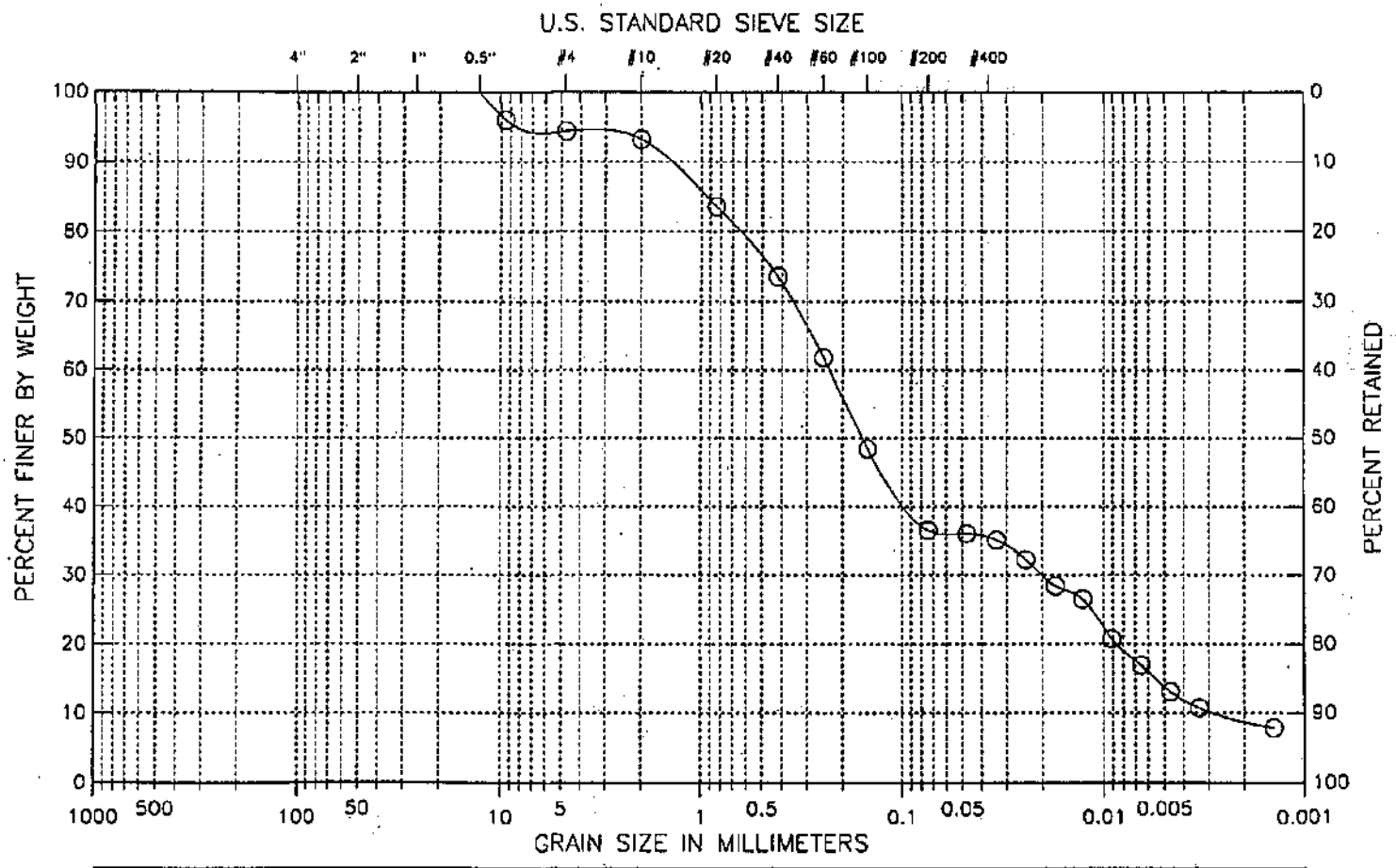
Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.375"	0.374	9.51	0.00	0.00	100
#4	0.187	4.75	1.06	1.06	98
#10	0.079	2.00	2.15	3.21	95
#20	0.033	0.84	5.35	8.56	88
#40	0.017	0.42	17.42	25.98	63
#60	0.010	0.25	15.02	41.00	42
#100	0.006	0.15	7.05	48.05	31
#200	0.003	0.07	3.95	52.00	26
Pan			18.14	70.14	0

Total Dry Weight of Sample = 79.78

D85 : 0.7778 mm
D60 : 0.3909 mm
D50 : 0.3068 mm
D30 : 0.1237 mm
D15 : 0.0150 mm
D10 : 0.0050 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-2-4(0)
AASHTO Group Name : Silty Gravel and Sand

	Boring No. : FD-51 Sample No: U-3 (7-9) Test Method ASTM D 422 Filename : FD51U3	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Mon Dec 20 1999



Classification :
(SC) Clayey sand
Visual Description :
Moist, dark gray clayey sand with organics

Remarks :

Figure 18

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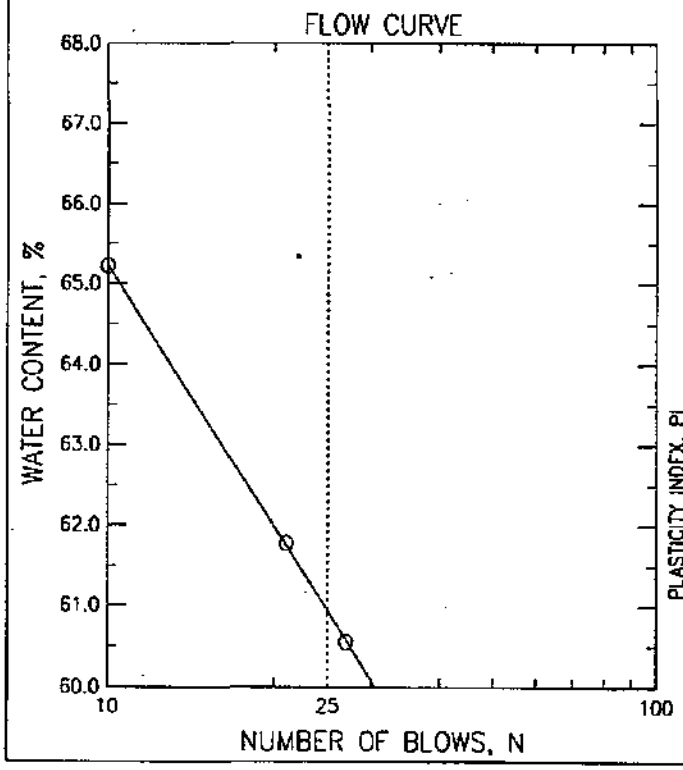
ATTERBERG LIMITS

PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Harbor Superfund Site	GTX-2409	GSG/MHM	FD-51
LOCATION		CHECKED BY	SAMPLE NUMBER
New Bedford, MA		GTT	U-3 (7-9)
SAMPLE DESCRIPTION		DATE	FILENAME
Moist, dark gray clayey sand with organics		Mon Dec 20 1999	FD5103

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER	126	144	87		
WT. WET SOIL + TARE	33.96	34.3	35.25		
WT. DRY SOIL + TARE	31.75	32.49	32.85		
WT. WATER	2.21	1.81	2.4		
TARE WT.	28.1	29.56	29.17		
WT. DRY SOIL	3.65	2.93	3.68		
WATER CONTENT, W_N (%)	60.55	61.77	65.22		
NUMBER OF BLOWS, N	27	21	10		
ONE-POINT LIQUID LIMIT, LL	61.11	60.49	58.37		
PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER	95	64			
WT. WET SOIL + TARE	35.92	34.4			
WT. DRY SOIL + TARE	34.57	33.36			
WT. WATER	1.35	1.04			
TARE WT.	29.5	29.37			
WT. DRY SOIL	5.07	3.99			
WATER CONTENT (%)	26.63	26.07			



SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	46.7
LIQUID LIMIT, LL	60.9
PLASTIC LIMIT, PL	26.3
PLASTICITY INDEX, PI	34.6
LIQUIDITY INDEX, LI*	0.59

*LI = (W - PL)/PI

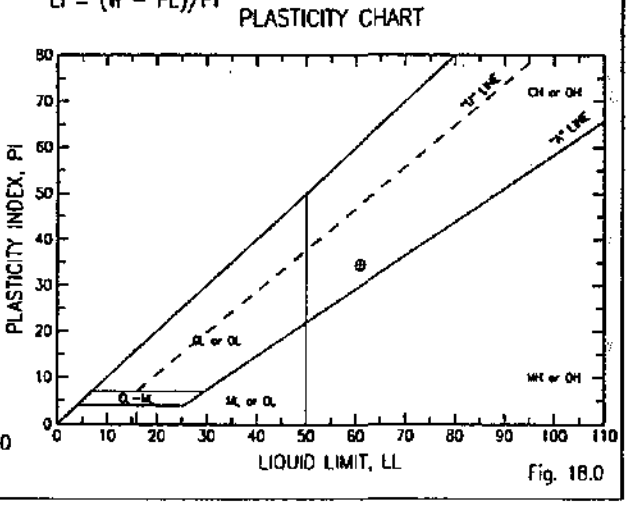


Fig. 18.0

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-51
Sample No. : U-3 (7-9)
Location : New Bedford, MA
Soil Description : Moist, dark gray clayey sand with organics
Remarks : ---

Depth : 7-9 ft
Test Date : 11/30/99
Test Method : ASTM D 2216

Filename : FD51U3
Elevation : ---
Tested by : GSG/MHM
Checked by : GTT

Natural Moisture Content

	Moisture Content ID	Mass of Container (gm)	Mass of Container and Moist Soil (gm)	Mass of Container and Dried Soil (gm)	Moisture Content (%)
1)	geo13	9.13	156.54	109.63	46.68
2)		0.00	0.00	0.00	0.00

Average Moisture Content = 46.68

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Harbor Superfund Site
Project No. : GTX-2409
Boring No. : FD-51
Sample No. : S-2 (12-14)
Location : New Bedford, MA
Soil Description : Wet, gray silt with sand
Remarks : ---

Depth : 12-14 ft
Test Date : 01/24/00
Test Method : ASTM D 422

Filename : FD51S2
Elevation : ---
Tested by : MCH/NJH
Checked by : GTT

HYDROMETER

Hydrometer ID : 257525
Weight of air-dried soil = 61.05 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	30.00	20.50	25.84	0.046	42	0.046
2.00	22.00	20.50	17.84	0.034	29	0.034
4.00	19.00	20.50	14.84	0.025	24	0.025
8.00	16.00	20.50	11.84	0.018	19	0.018
15.00	14.00	20.50	9.84	0.013	16	0.013
30.00	12.00	20.50	7.84	0.009	13	0.009
60.00	10.50	20.50	6.34	0.007	10	0.007
120.00	9.50	20.50	5.34	0.005	9	0.005
240.00	9.00	21.00	5.00	0.003	8	0.003
1309.00	9.00	20.00	4.68	0.001	8	0.001

FINE SIEVE SET

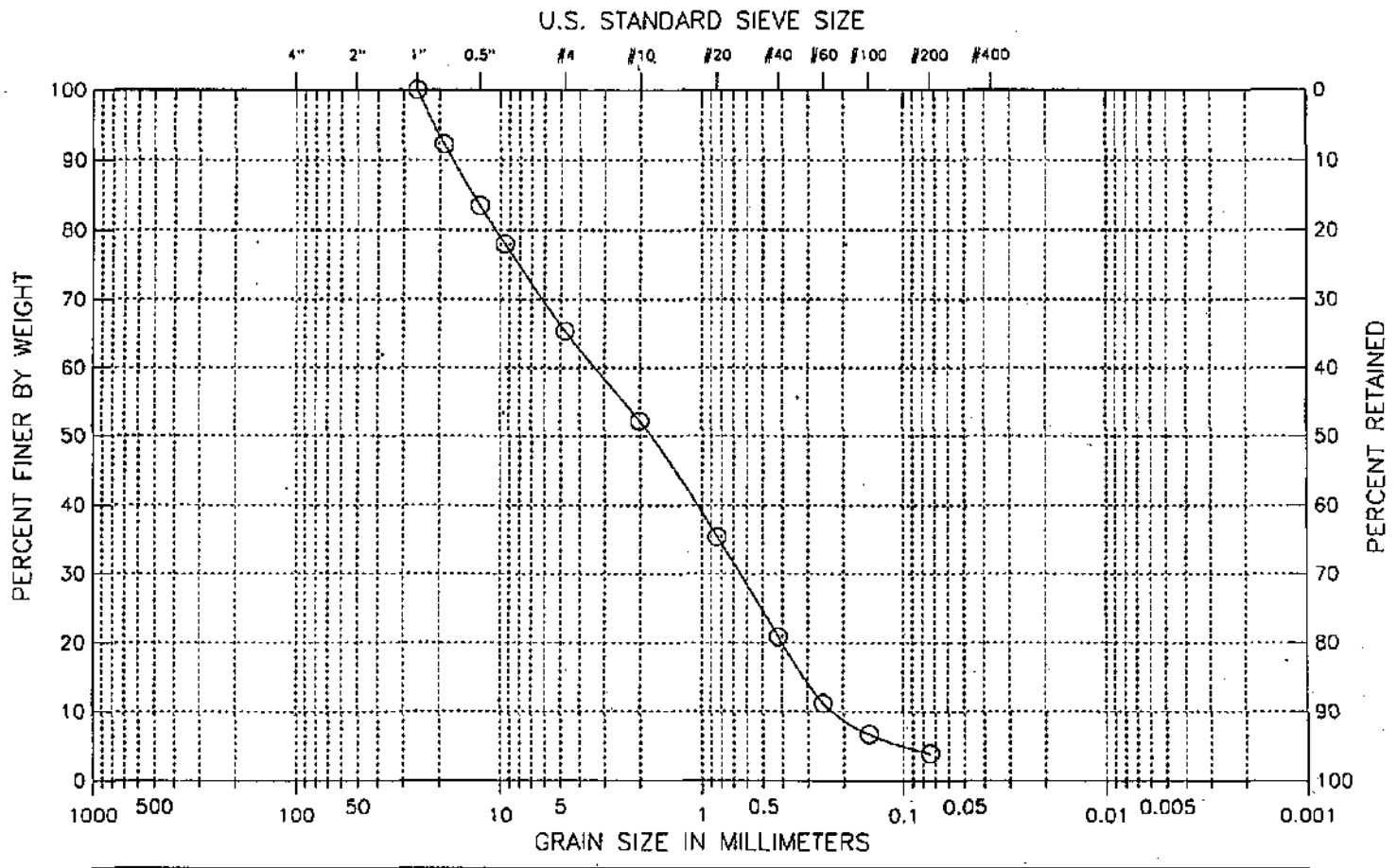
Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
#4	0.187	4.75	0.00	0.00	100
#10	0.079	2.00	0.16	0.16	100
#20	0.033	0.84	0.28	0.44	99
#40	0.017	0.42	0.40	0.84	99
#60	0.010	0.25	0.39	1.23	98
#100	0.006	0.15	1.54	2.77	95
#200	0.003	0.07	14.26	17.03	72
Pan			44.18	61.21	0

Total Dry Weight of Sample = 179.7

D85 : 0.1088 mm
D60 : 0.0608 mm
D50 : 0.0518 mm
D30 : 0.0348 mm
D15 : 0.0117 mm
D10 : 0.0062 mm

Soil Classification
ASTM Group Symbol : ML
ASTM Group Name : silt with sand
AASHTO Group Symbol : A-4(0)
AASHTO Group Name : Silty Soils

	Boring No. : FD-51 Sample No.: S-12 (33-35) Test Method ASTM D 422 Filename : FD51S12	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Wed Feb 02 2000



Classification :
(SP) Poorly graded sand with gravel
Visual Description :
Moist, pale olive sand with gravel

Remarks :
Hydrometer not required, fines < 15%

Figure 13

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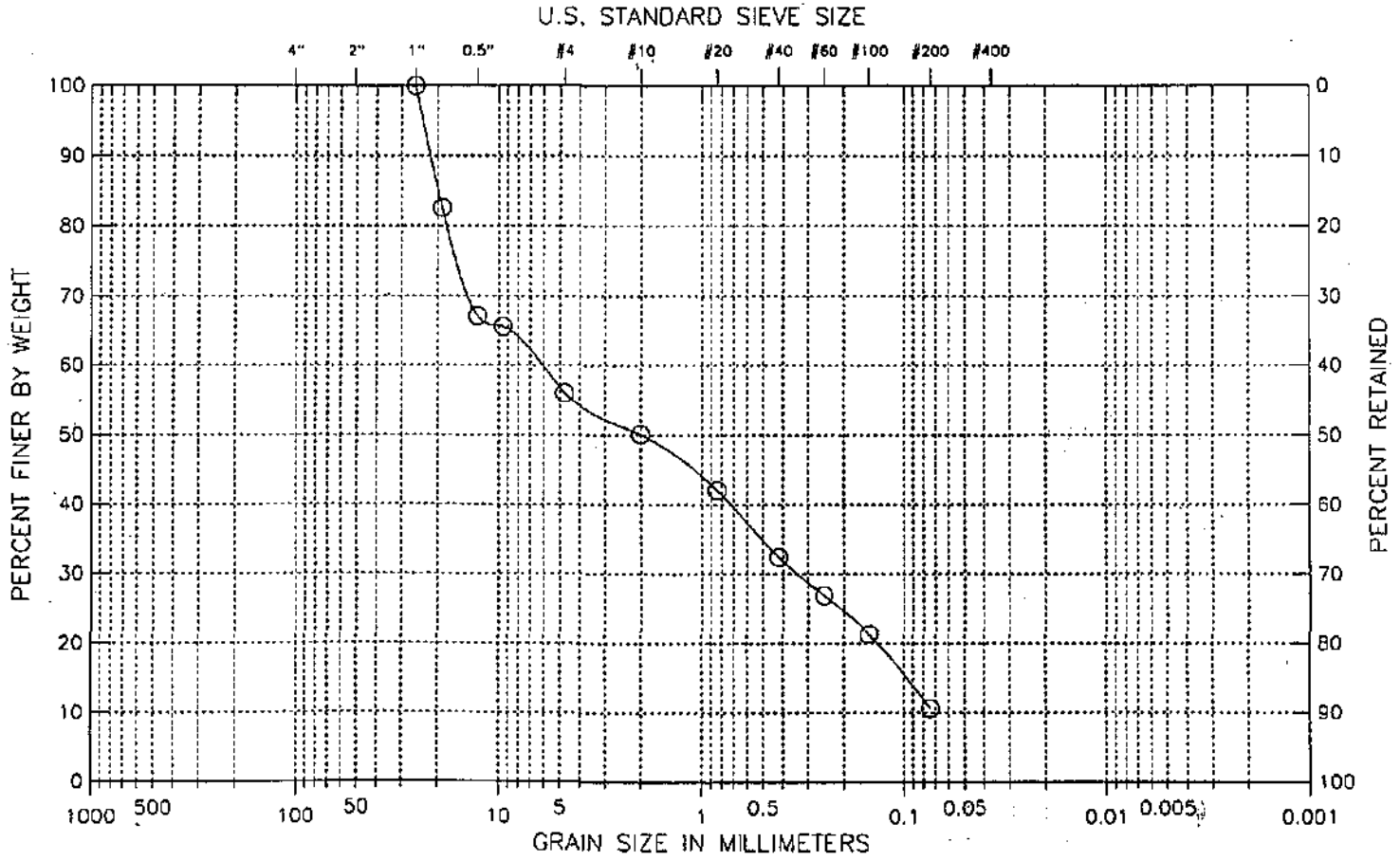
	Boring No. : FD-51 Sample No: S-15B (40-42) Test Method ASTM D 422 Filename : FD51S15B	Project : New Bedford Harbor Superfund Site Project No.: GTX-2409 Location: New Bedford, MA Date : Wed Feb 02 2000



Classification :

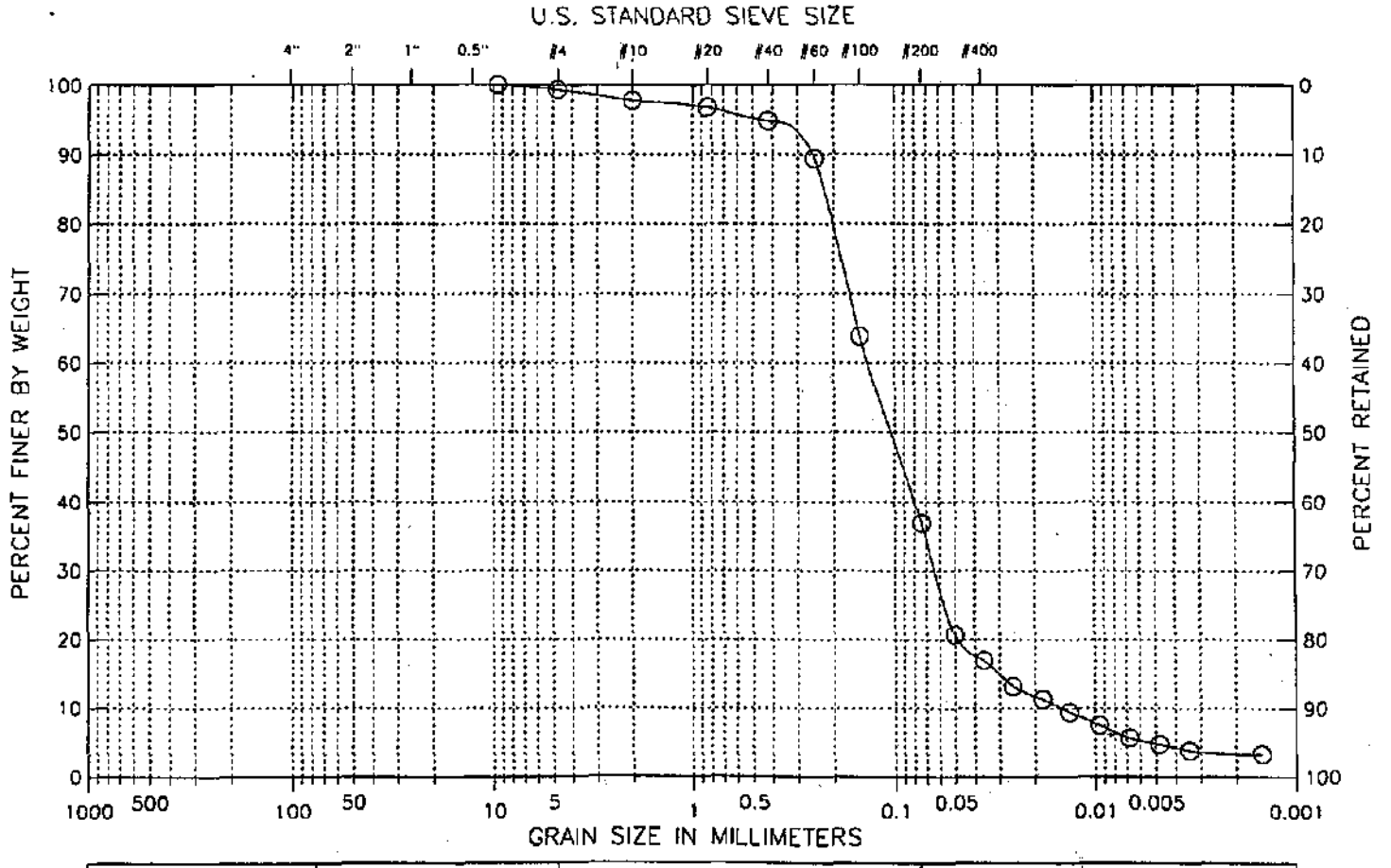
Visual Description :
Moist, olive gravel with sand

Remarks :
Hydrometer not required, fines < 15%

Figure 14

GeoTesting Express • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-101 Sample No: S-5 Test Method ASTM D 422 Filename : FD101S5	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :

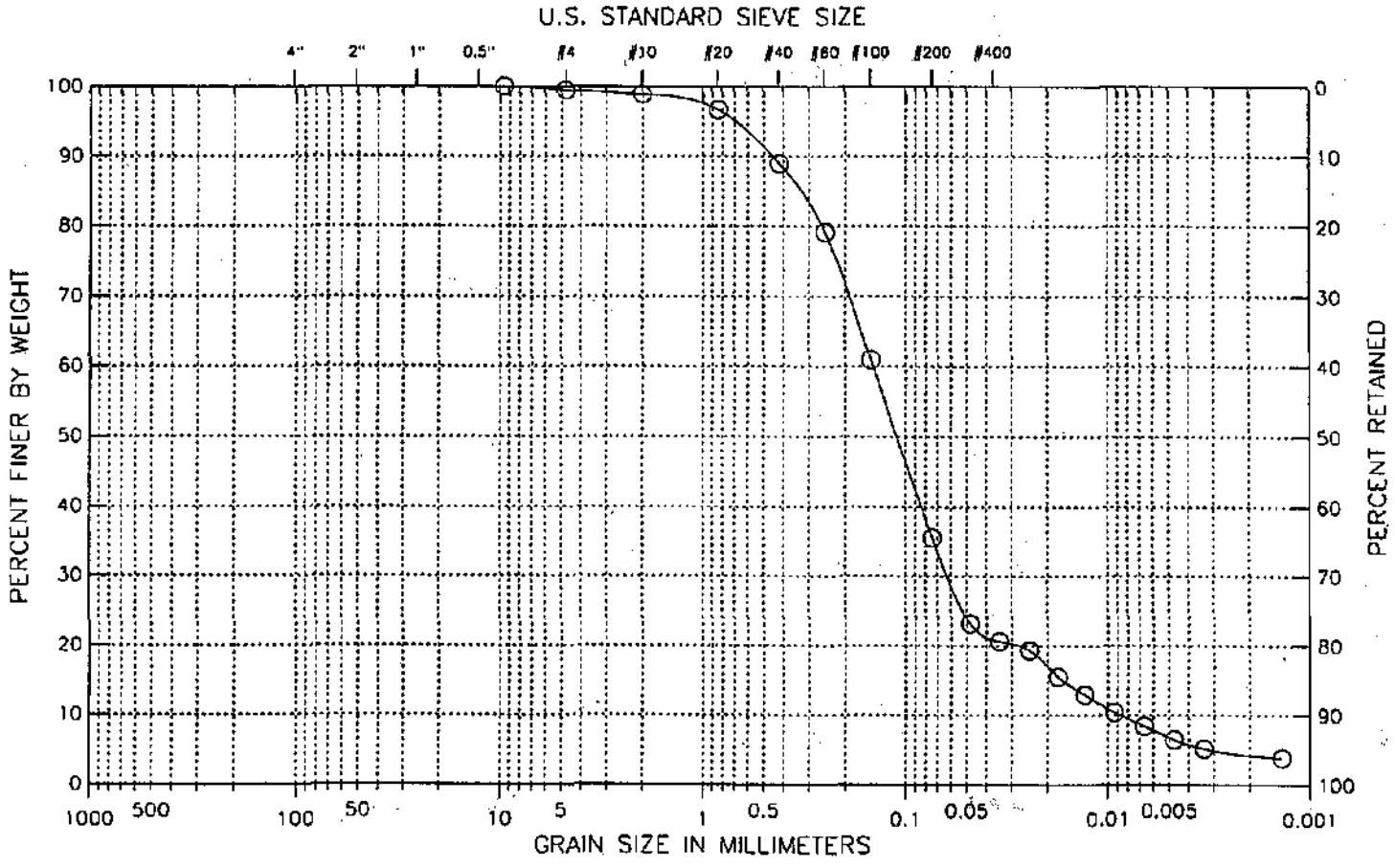
Remarks :

Visual Description :
Wet, grayish brown silty sand

Figure 1

GeoTesting Express, Inc. • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-101 Sample No: S-8 Test Method ASTM D 422 Filename : FD101S8	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :

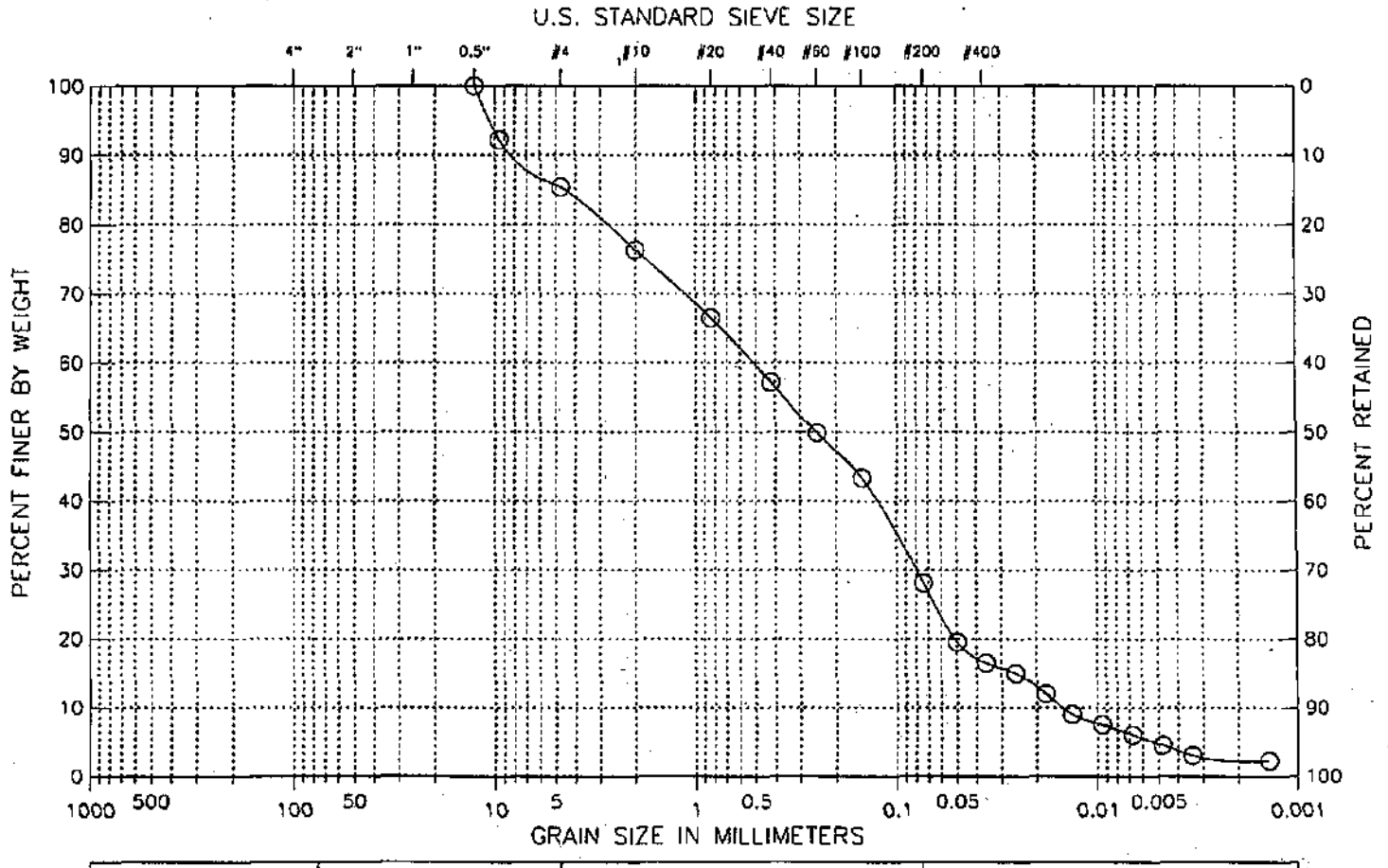
Remarks :

Visual Description :
Wet, brown, red & gray silty sand.

Figure 2

GeoTesting Express, Inc. • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-101 Sample No.: S-9 Test Method ASTM D 422 Filename : FD101S9	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :

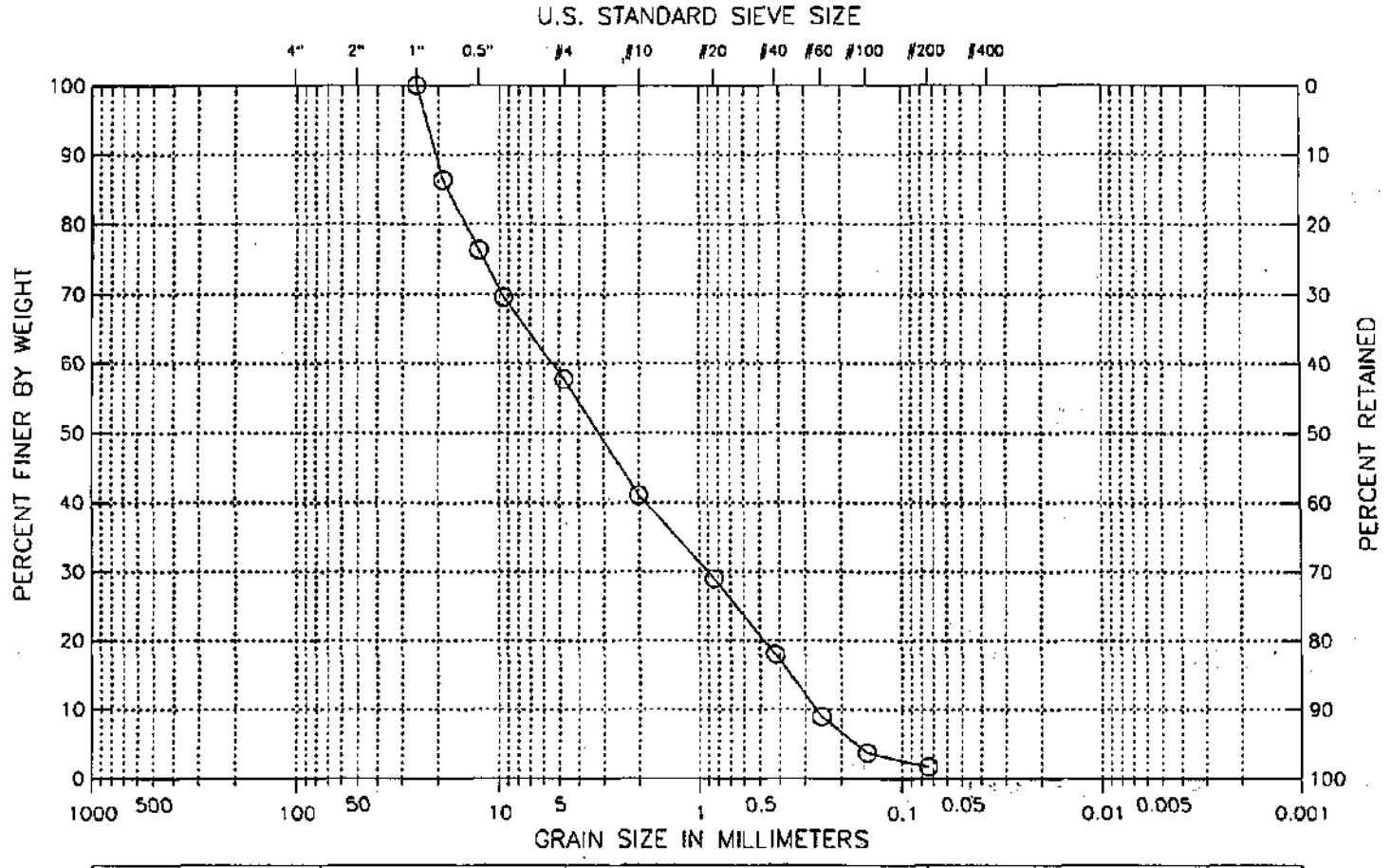
Remarks :

Visual Description :
Wet, brown silty sand with grovel

Figure 3

GeoTesting Express, Inc. • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-101 Sample No.: S-10 Test Method ASTM D 422 Filename : FD101S10	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



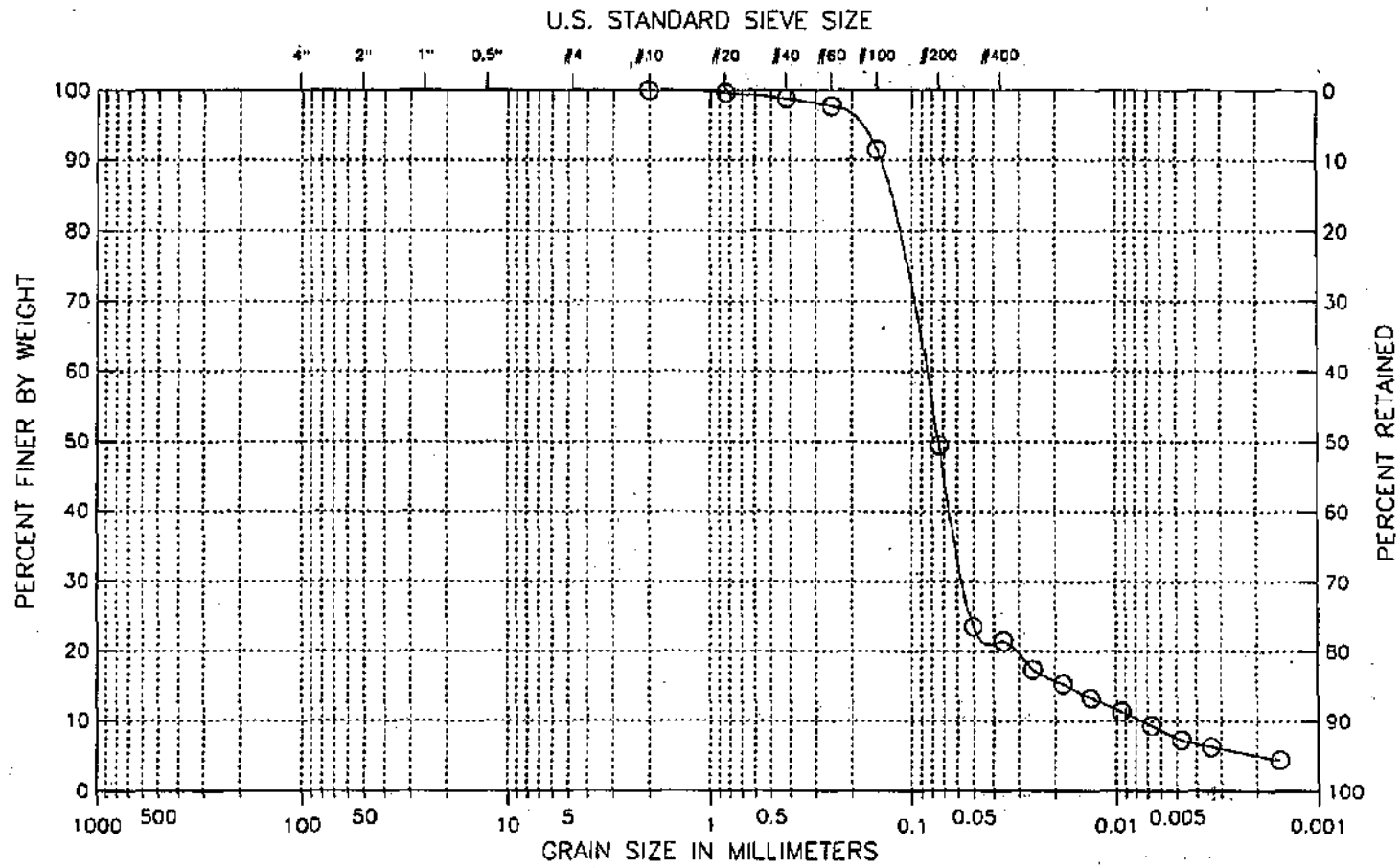
Classification :
(SP) Poorly graded sand with gravel
Visual Description :
Wet, brown sand with gravel

Remarks :

Figure 4

GeoTesting Express, Inc. • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-102 Sample No.: S3B Test Method ASTM D 422 Filename : FD102S3B	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :

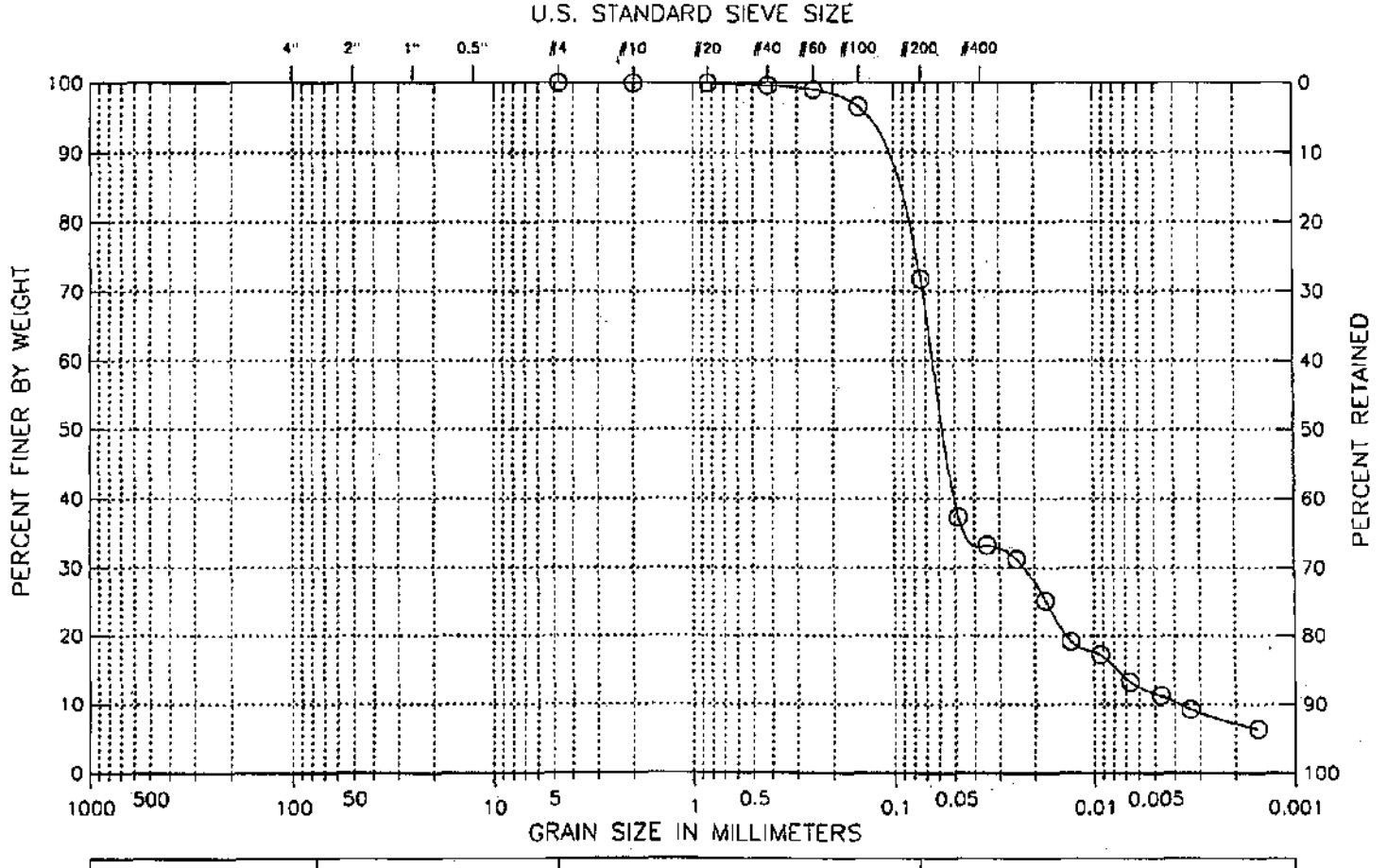
Remarks :

Visual Description :
Wet, gray silt and fine sand

Figure 5

GeoTesting Express, Inc. • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-102 Sample No: S-5 Test Method ASTM D 422 Filename : FD102S5	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :

Remarks :

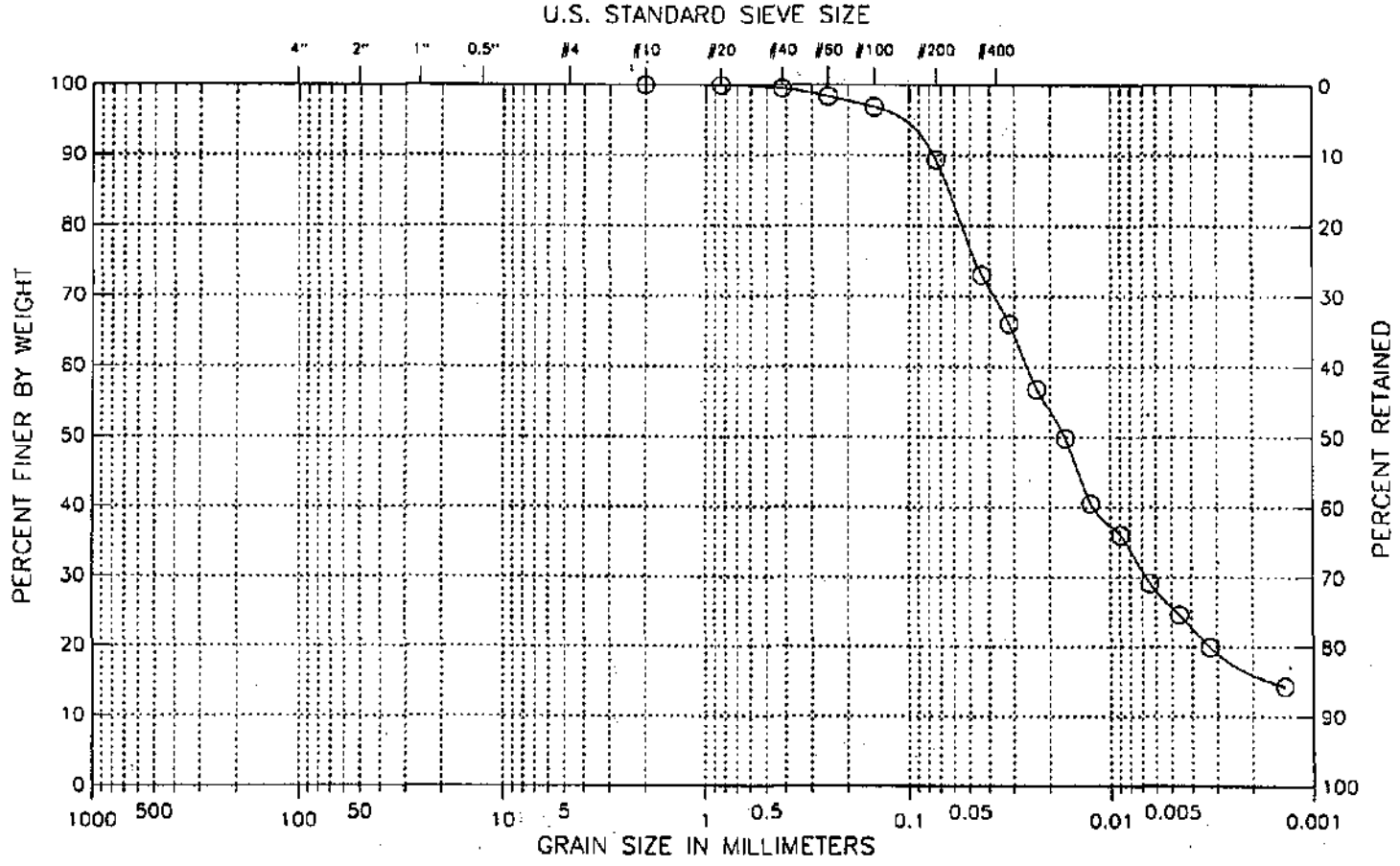
Visual Description :

Wet, gray silty clay with sand

Figure 6

GeoTesting Express, Inc. • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-102 Sample No.: S6A Test Method ASTM D 422 Filename : FD102S6A	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :
(CL-ML) silty clay
Visual Description :
Wet, grayish brown silty clay

Remarks :

Figure 7

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ATTERBERG LIMITS

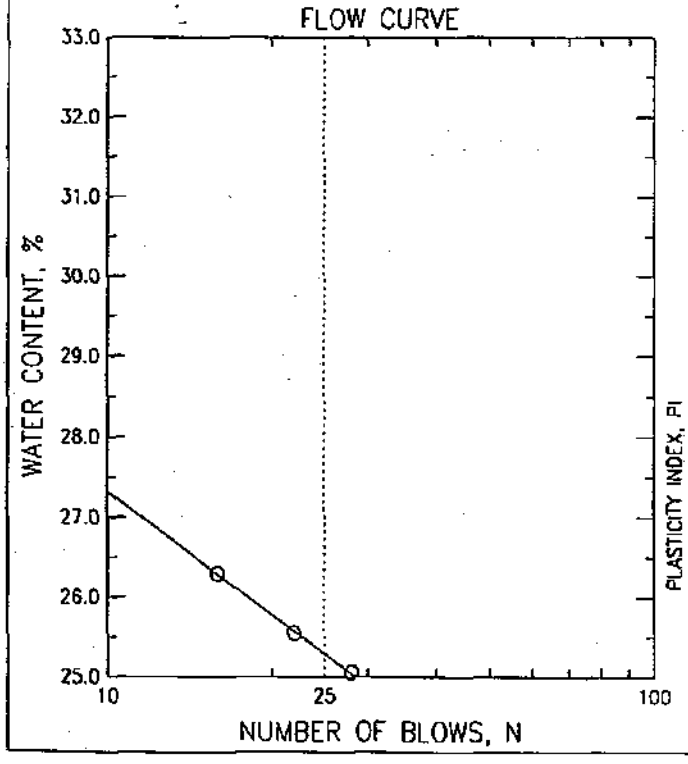
PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Superfund Site	GTX-3289	HB	FD-102
LOCATION		CHECKED BY	SAMPLE NUMBER
New Bedford, MA		JDT	S6A
SAMPLE DESCRIPTION		DATE	FILENAME
Wet, grayish brown silty clay		Mon Mar 05 2001	FD102S6A

LIQUID LIMIT DETERMINATIONS

CONTAINER NUMBER	BK133	BK55	BK27		
WT. WET SOIL + TARE	33.19	35.24	35.15		
WT. DRY SOIL + TARE	32.06	34.08	33.93		
WT. WATER	1.13	1.16	1.22		
TARE WT.	27.55	29.54	29.29		
WT. DRY SOIL	4.51	4.54	4.64		
WATER CONTENT, W_N (%)	25.06	25.55	26.29		
NUMBER OF BLOWS, N	28	22	16		
ONE-POINT LIQUID LIMIT, LL	25.40	25.16	24.91		

PLASTIC LIMIT DETERMINATIONS

CONTAINER NUMBER	BK114	BK95			
WT. WET SOIL + TARE	34.62	35.15			
WT. DRY SOIL + TARE	33.51	34.18			
WT. WATER	1.11	0.97			
TARE WT.	27.78	29.35			
WT. DRY SOIL	5.73	4.83			
WATER CONTENT (%)	19.37	20.08			



SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	26.5
LIQUID LIMIT, LL	25.3
PLASTIC LIMIT, PL	19.7
PLASTICITY INDEX, PI	5.6
LIQUIDITY INDEX, LI*	1.21

*LI = (W – PL)/PI

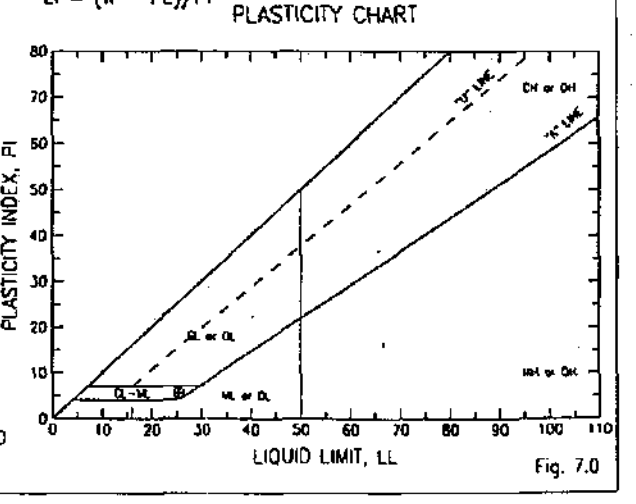


Fig. 7.0

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289 Depth : --
Boring No. : FD-102 Test Date : 03/01/01
Sample No. : S7A Test Method : ASTM D 422
Location : New Bedford, MA
Soil Description : Moist, grayish brown silt with sand
Remarks : ---

Filename : FD102S7A
Elevation : ---
Tested by : KAH
Checked by : JDT

HYDROMETER

Hydrometer ID : 649262
Weight of air-dried soil = 43.96 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	25.00	20.00	20.44	0.048	47	0.048
2.00	22.00	20.00	17.44	0.034	40	0.034
4.00	19.00	20.00	14.44	0.025	33	0.025
8.00	16.00	20.00	11.44	0.018	26	0.018
15.00	15.00	20.25	10.47	0.013	24	0.013
30.00	13.00	20.50	8.50	0.009	19	0.009
60.00	11.00	20.75	6.54	0.007	15	0.007
120.00	10.00	21.25	5.60	0.005	13	0.005
240.00	9.00	21.25	4.60	0.003	10	0.003
1440.00	8.00	19.00	3.15	0.001	7	0.001

FINE SIEVE SET

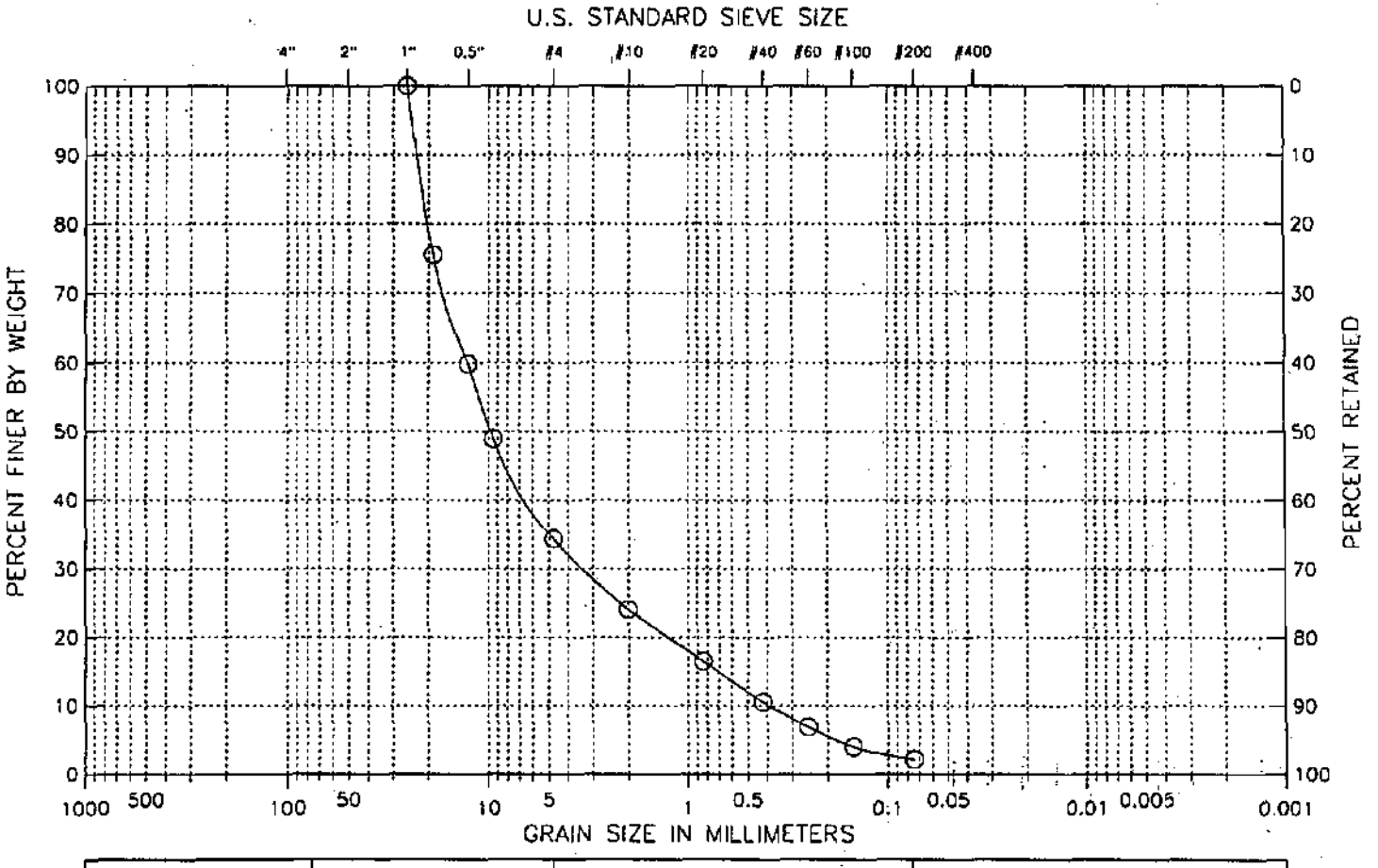
Sieve Mesh	Sieve Openings Inches	Sieve Openings Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
#10	0.079	2.00	0.00	0.00	100
#20	0.033	0.84	0.13	0.13	100
#40	0.017	0.42	0.59	0.72	98
#60	0.010	0.25	1.53	2.25	95
#100	0.006	0.15	2.87	5.12	88
#200	0.003	0.07	7.79	12.91	71
Pan			31.05	43.96	0

Total Dry Weight of Sample = 148.62

D85 : 0.1305 mm
D60 : 0.0609 mm
D50 : 0.0508 mm
D30 : 0.0216 mm
D15 : 0.0067 mm
D10 : 0.0029 mm

Soil Classification
ASTM Group Symbol : ML
ASTM Group Name : silt with sand
AASHTO Group Symbol : A-4(0)
AASHTO Group Name : Silty Soils

	Boring No. : FD-102 Sample No.: S8B Test Method ASTM D 422 Filename : FD102S8B	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :
(GW) Well-graded gravel with sand
Visual Description :
Wet, yellowish brown gravel with sand

Remarks :

Figure 9

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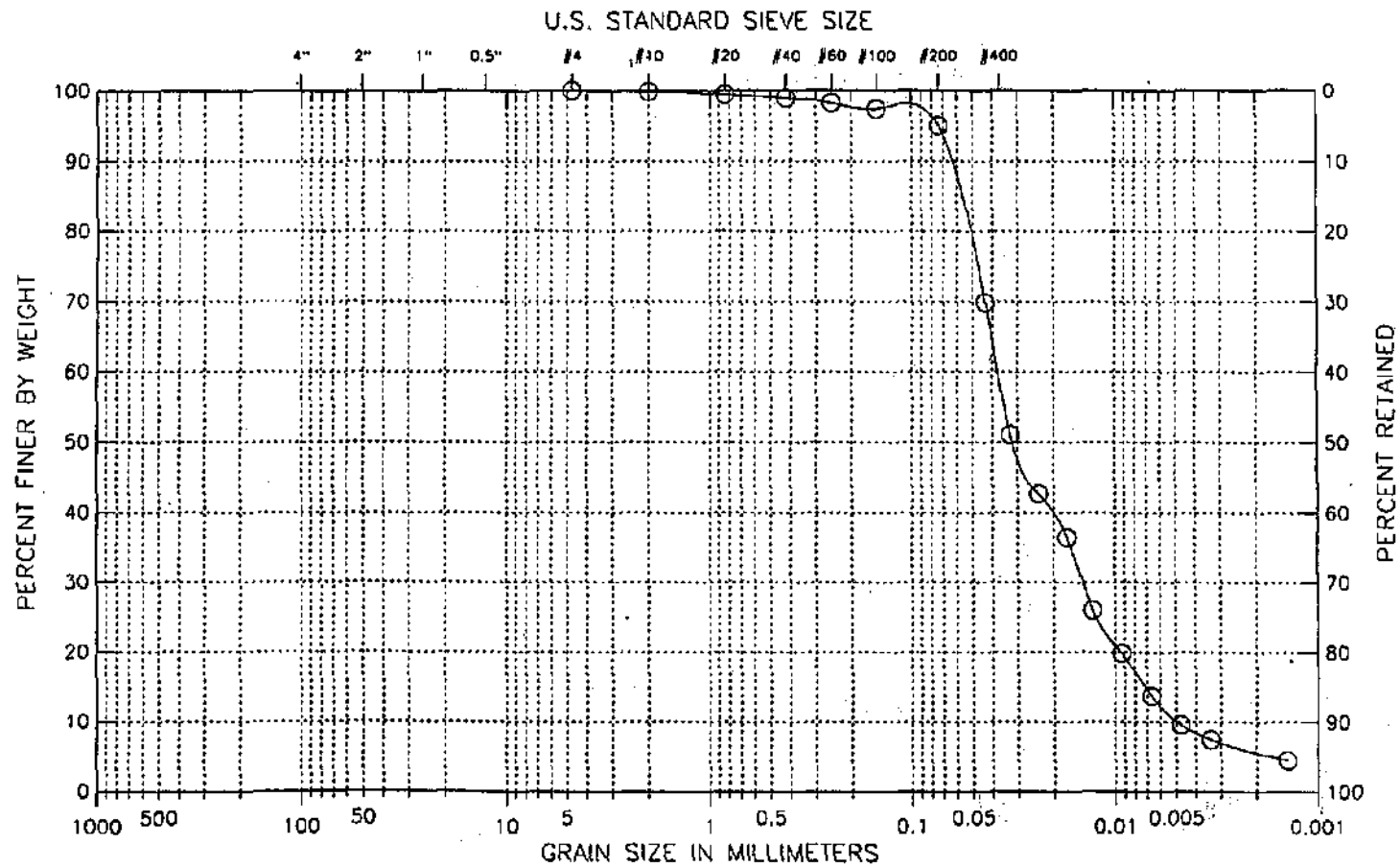
	Boring No. : FD-102 Sample No.: S10A Test Method ASTM D 422 Filename : FD102S10	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :

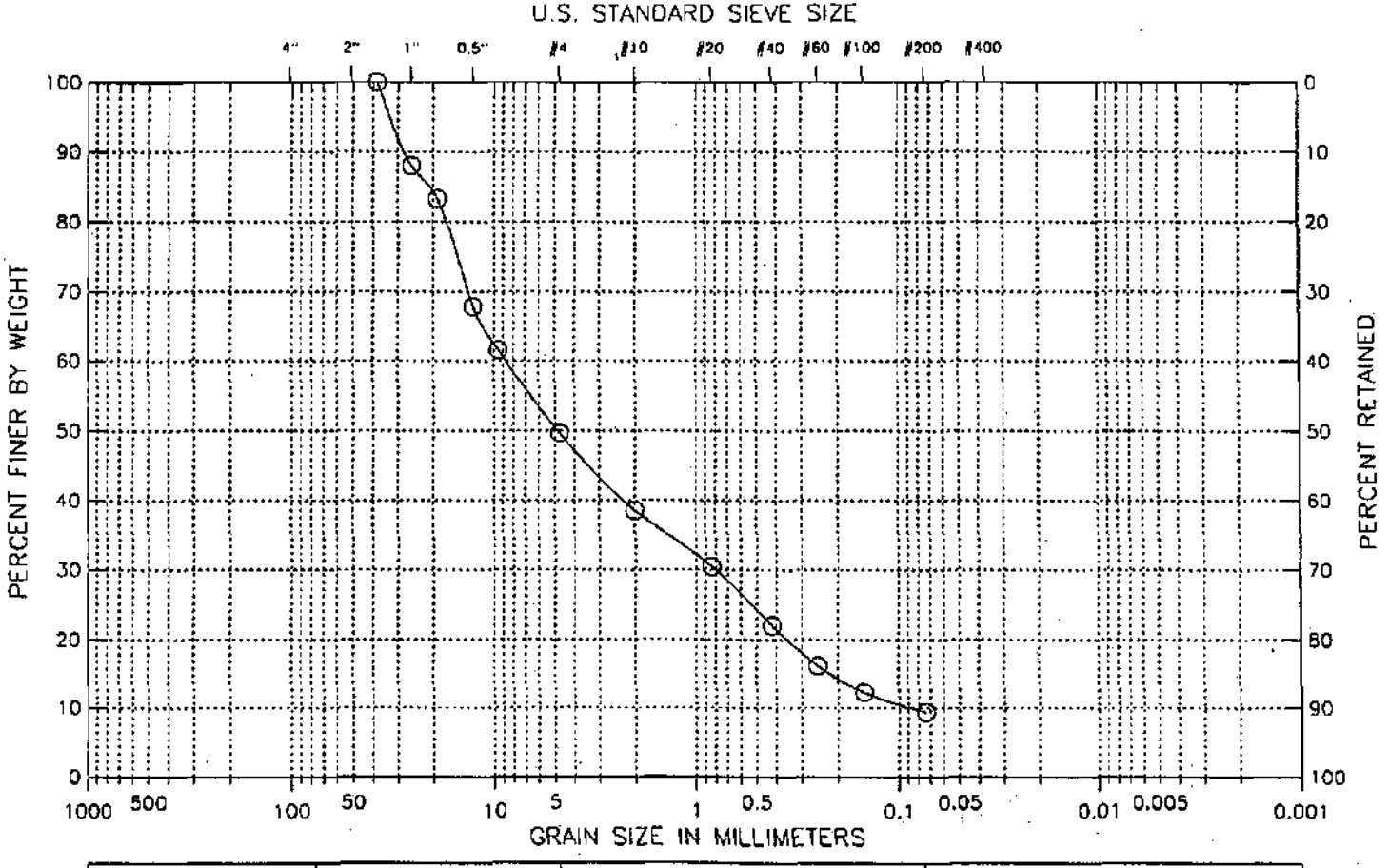
Remarks :

Visual Description :
Moist, light brown silt

Figure 10

GeoTesting Express, Inc. • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-102 Sample No.: S11 Test Method ASTM D 422 Filename : FD102S11	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :

Remarks :

Visual Description :

Wet, brown gravel with sand and some silt

Figure 11

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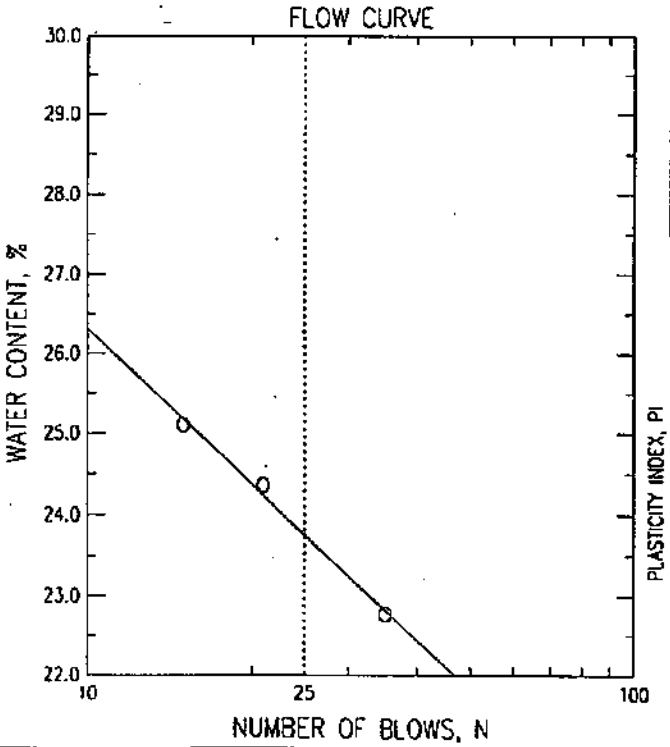
ATTERBERG LIMITS

PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Superfund Site	GTX-3289	KAH	FD-103
LOCATION		CHECKED BY	SAMPLE NUMBER
New Bedford, MA		JDT	S2
SAMPLE DESCRIPTION		DATE	FILENAME
Wet, brown silty clay with sand		Mon Mar 05 2001	FD103S2

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER	BK57	BK45	BK121		
WT. WET SOIL + TARE	35.38	35.68	35.51		
WT. DRY SOIL + TARE	34.23	34.43	34.37		
WT. WATER	1.15	1.25	1.14		
TARE WT.	29.18	29.3	29.83		
WT. DRY SOIL	5.05	5.13	4.54		
WATER CONTENT, W_N (%)	22.77	24.37	25.11		
NUMBER OF BLOWS, N	35	21	15		
ONE-POINT LIQUID LIMIT, LL	23.72	23.86	23.61		

PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER	BK67	BK32			
WT. WET SOIL + TARE	35.55	36.41			
WT. DRY SOIL + TARE	34.55	35.38			
WT. WATER	1	1.03			
TARE WT.	29.29	30.07			
WT. DRY SOIL	5.26	5.31			
WATER CONTENT (%)	19.01	19.40			



SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	23.3
LIQUID LIMIT, LL	23.8
PLASTIC LIMIT, PL	19.2
PLASTICITY INDEX, PI	4.6
LIQUIDITY INDEX, LI*	0.89

*LI = (W - PL)/PI

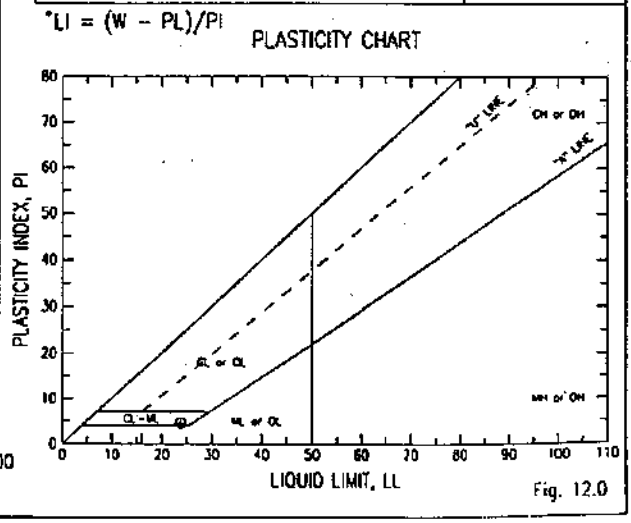


Fig. 12.0

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-103
Sample No. : S3B
Location : New Bedford, MA
Soil Description : Wet, brown silty sand
Remarks : ---

Depth : ---
Test Date : 03/01/01
Test Method : ASTM D 422

Filename : FD103S3B
Elevation : ---
Tested by : KAH
Checked by : JDT

HYDROMETER

Hydrometer ID : 649262
Weight of air-dried soil = 44.3 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	12.00	20.30	7.48	0.051	15	0.051
2.00	11.00	20.30	6.48	0.037	13	0.037
4.00	10.00	20.30	5.48	0.026	11	0.026
8.00	9.00	20.30	4.48	0.018	9	0.018
15.00	8.00	20.30	3.48	0.014	7	0.014
30.00	7.50	20.50	3.00	0.010	6	0.010
60.00	7.00	20.50	2.50	0.007	5	0.007
120.00	6.00	20.50	1.50	0.005	3	0.005
240.00	5.50	20.50	1.00	0.003	2	0.003
1212.00	5.00	20.00	0.44	0.002	1	0.002

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.375"	0.374	9.51	0.00	0.00	100
#4	0.187	4.75	1.20	1.20	98
#10	0.079	2.00	4.50	5.70	89
#20	0.033	0.84	6.21	11.91	76
#40	0.017	0.42	8.19	20.10	60
#60	0.010	0.25	8.31	28.41	43
#100	0.006	0.15	5.60	34.01	32
#200	0.003	0.07	4.19	38.20	24
Pan			11.80	50.00	0

Total Dry Weight of Sample = 58.04

D85 : 1.5559 mm
D60 : 0.4236 mm
D50 : 0.3093 mm
D30 : 0.1263 mm
D15 : 0.0515 mm
D10 : 0.0221 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-2-4(0)
AASHTO Group Name : Silty Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-103
Sample No. : S6
Location : New Bedford, MA
Soil Description : Wet, brown gravel with sand and silt
Remarks : ---

Depth : ---
Test Date : 02/28/01
Test Method : ASTM D 422

Filename : FD103S6
Elevation : ---
Tested by : KAH
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
1"	1.012	25.70	0.00	0.00	100
0.75"	0.748	19.00	26.57	26.57	83
0.5"	0.500	12.70	20.45	47.02	69
0.375"	0.374	9.51	9.43	56.45	63
#4	0.187	4.75	9.91	66.36	57
#10	0.079	2.00	15.83	82.19	46
#20	0.033	0.84	15.83	98.02	36
#40	0.017	0.42	15.83	113.85	26
#60	0.010	0.25	11.23	125.08	19
#100	0.006	0.15	8.89	133.97	13
#200	0.003	0.07	5.82	139.79	9
Pan			13.80	153.59	0

Total Dry Weight of Sample = 161.62

D85 : 19.7783 mm
D60 : 6.7065 mm
D50 : 2.6857 mm
D30 : 0.5546 mm
D15 : 0.1818 mm
D10 : 0.0893 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-a(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-104
Sample No. : S3A
Location : New Bedford, MA
Soil Description : Wet, olive brown silty sand
Remarks : ---

Depth : ---
Test Date : 02/28/01
Test Method : ASTM D 422

Filename : FD104S3A
Elevation : ---
Tested by : KAH
Checked by : JDT

HYDROMETER

Hydrometer ID : 583901
Weight of air-dried soil = 53.06 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	17.00	20.00	12.01	0.050	20	0.050
2.00	15.00	20.00	10.01	0.036	16	0.036
4.00	14.00	20.00	9.01	0.026	15	0.026
8.00	13.00	20.00	8.01	0.018	13	0.018
15.00	12.00	20.30	7.03	0.013	12	0.013
30.00	10.00	20.50	5.03	0.009	8	0.009
60.00	9.00	20.50	4.03	0.007	7	0.007
120.00	8.00	20.50	3.03	0.005	5	0.005
240.00	7.50	20.50	2.53	0.003	4	0.003
1230.00	7.00	20.00	2.01	0.002	3	0.002

FINE SIEVE SET

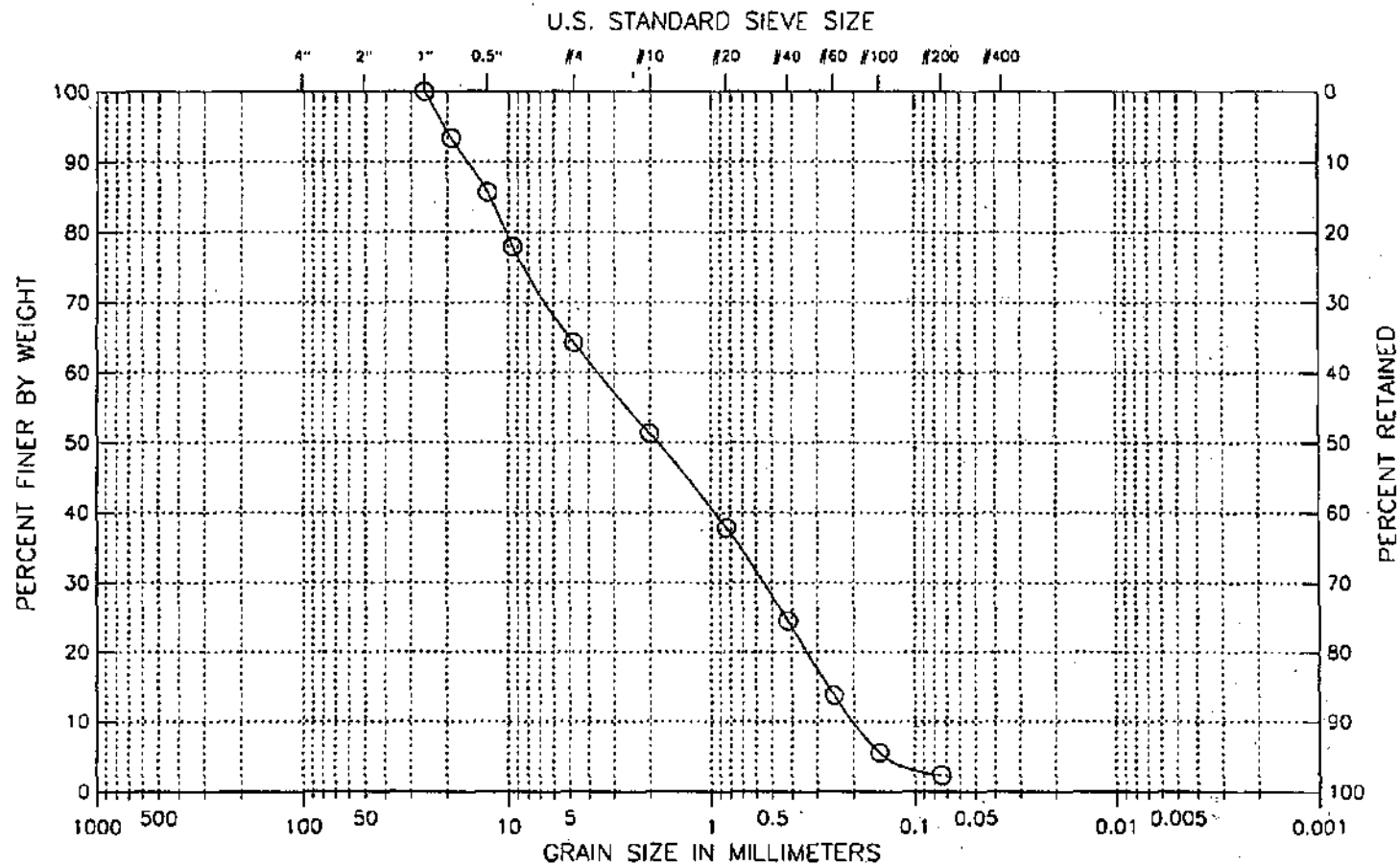
Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.75"	0.748	19.00	0.00	0.00	100
0.5"	0.500	12.70	5.85	5.85	90
0.375"	0.374	9.51	0.00	5.85	90
#4	0.187	4.75	1.27	7.12	88
#10	0.079	2.00	1.00	8.12	87
#20	0.033	0.84	3.81	11.93	81
#40	0.017	0.42	15.52	27.45	55
#60	0.010	0.25	9.63	37.08	39
#100	0.006	0.15	3.48	40.56	34
#200	0.003	0.07	4.19	44.75	27
Pan			16.43	61.18	0

Total Dry Weight of Sample = 69.34

D85 : 1.5727 mm
D60 : 0.4799 mm
D50 : 0.3546 mm
D30 : 0.1020 mm
D15 : 0.0269 mm
D10 : 0.0114 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-2-4(0)
AASHTO Group Name : Silty Gravel and Sand

	Boring No. : FD-104 Sample No: S7 Test Method ASTM D 422 Filename : FD104S7	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :
(SP) Poorly graded sand with gravel
Visual Description :
Wet, brown sand with gravel

Remarks :

Figure 20

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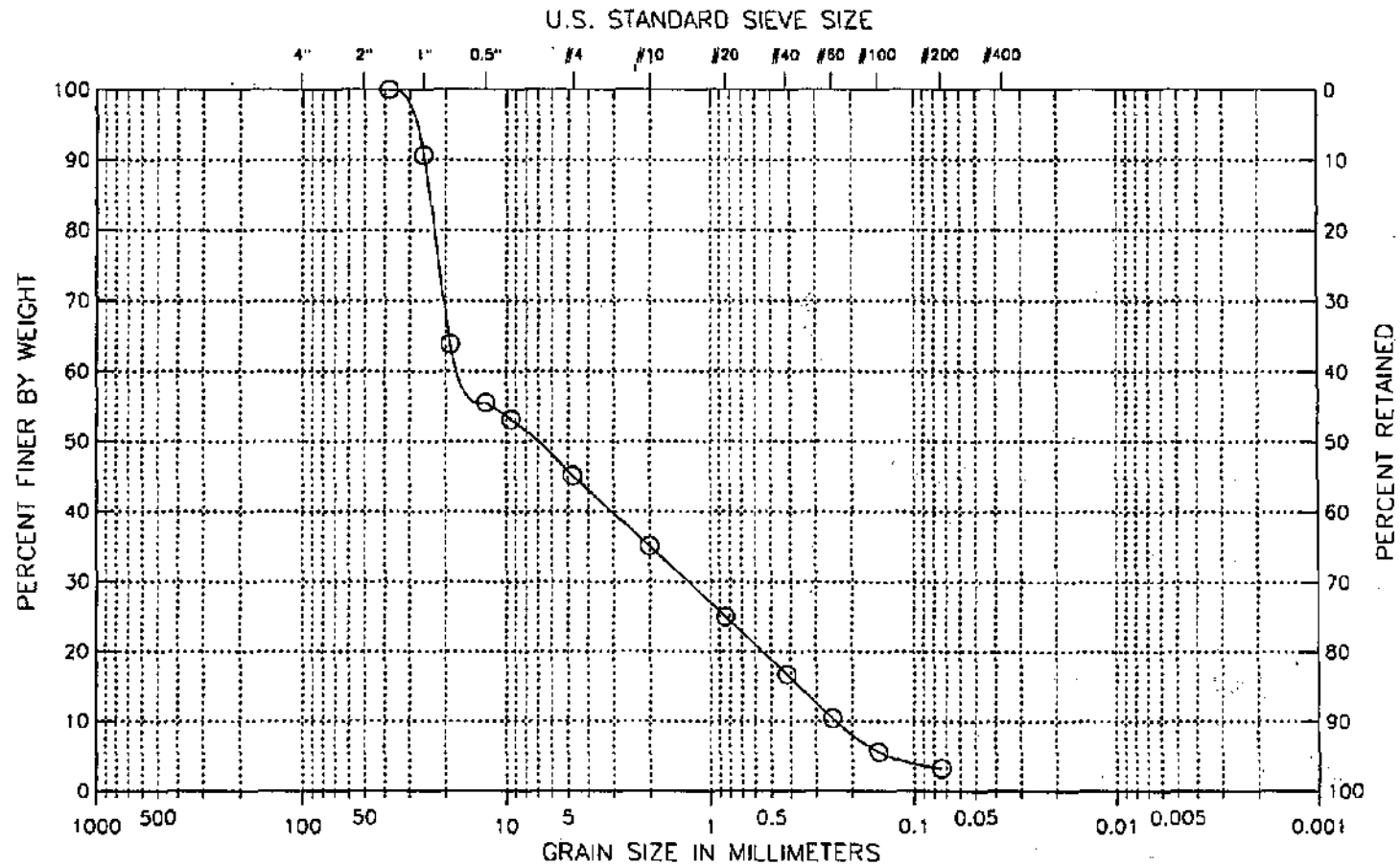
	Boring No. : FD-104 Sample No.: S10 Test Method ASTM D 422 Filename : FD104S10	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :
(GP) Poorly graded gravel with sand
Visual Description :
Wet, gray gravel with sand

Remarks :

Figure 21

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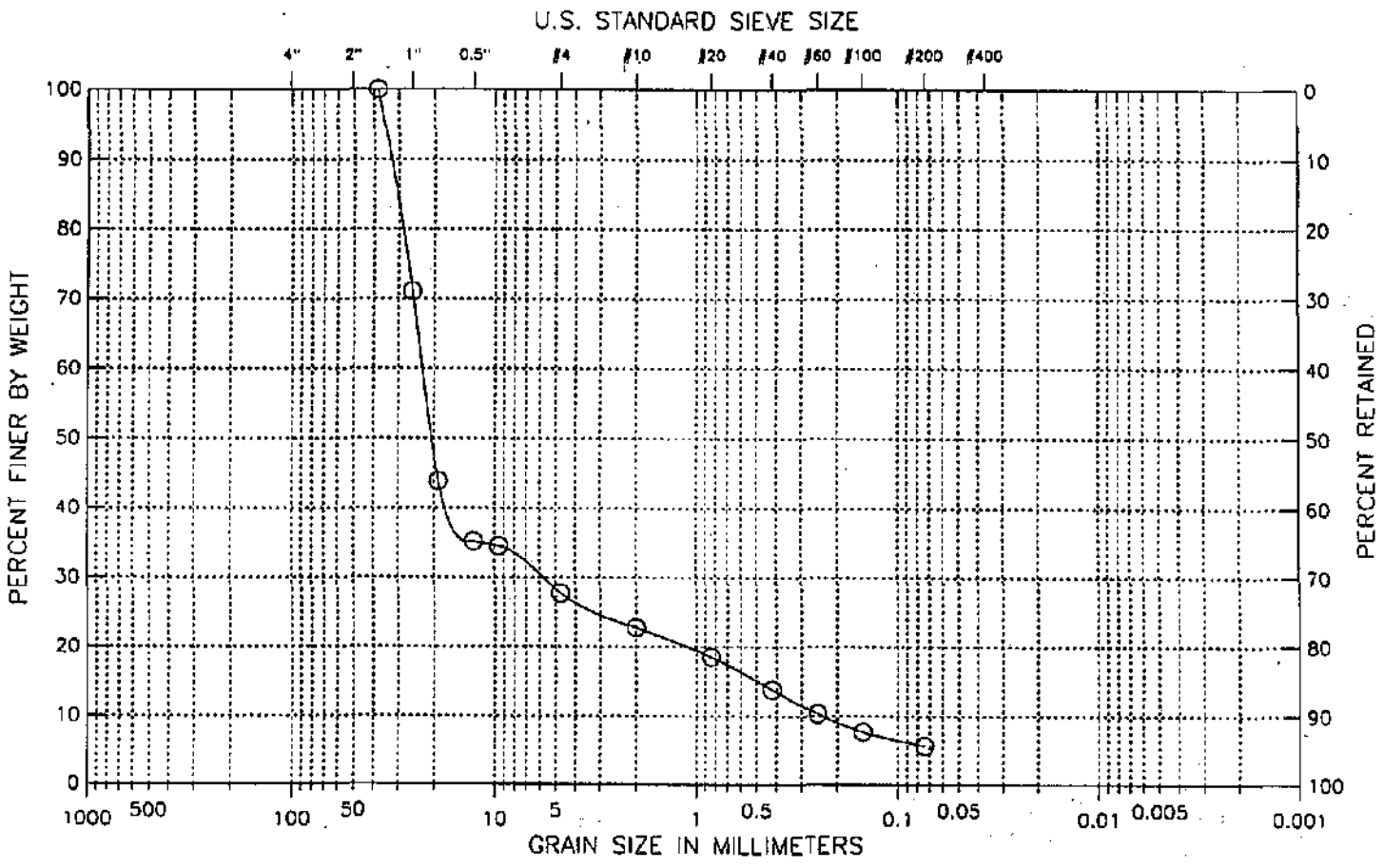
	Boring No. : FD-104 Sample No: S12 Test Method ASTM D 422 Filename : FD104S12	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :

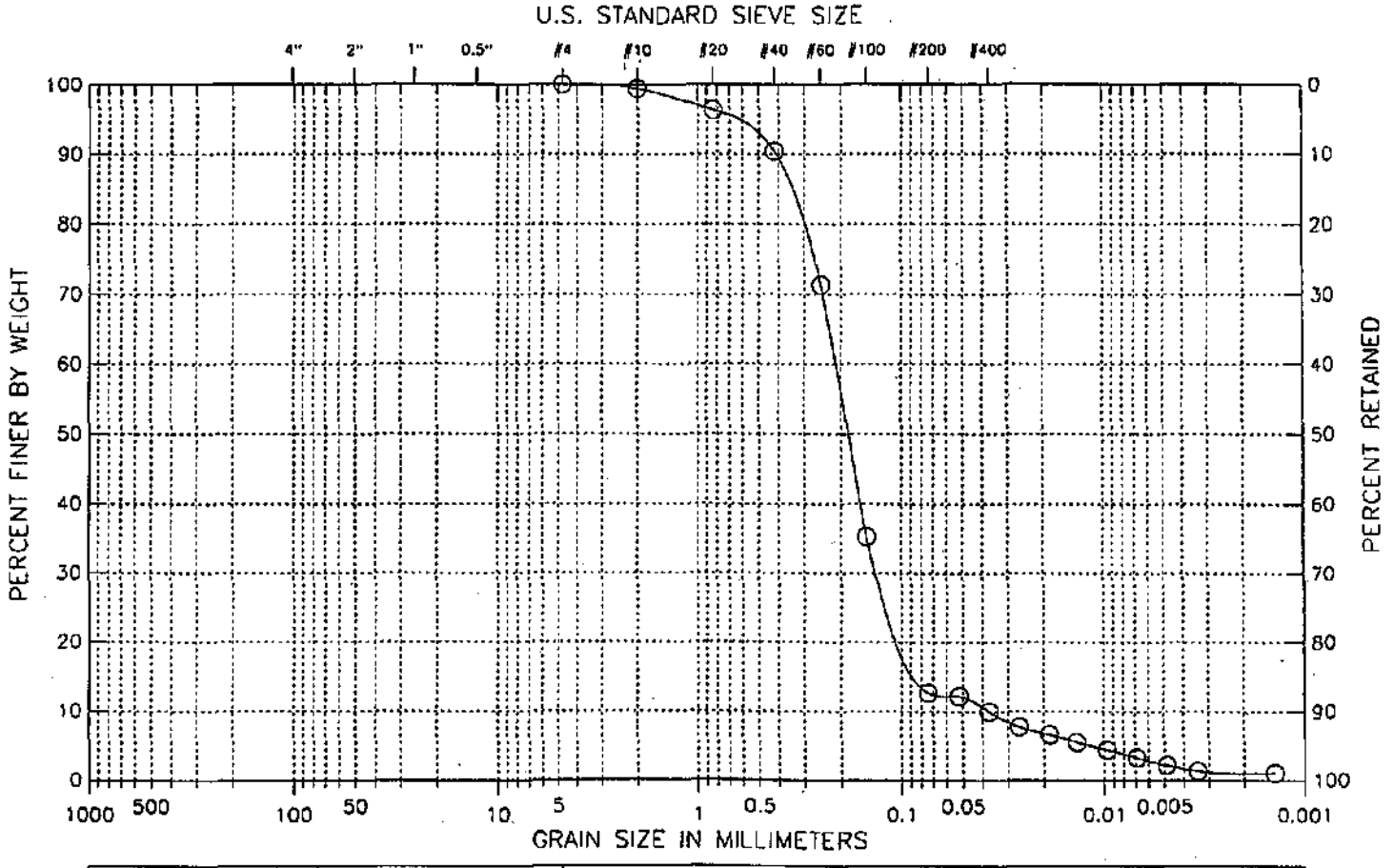
Remarks :

Visual Description :
Wet, gray gravel with sand and silt

Figure 23

GeoTesting Express, Inc. • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-105 Sample No: S2 Test Method ASTM D 422 Filename : FD105S2	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :

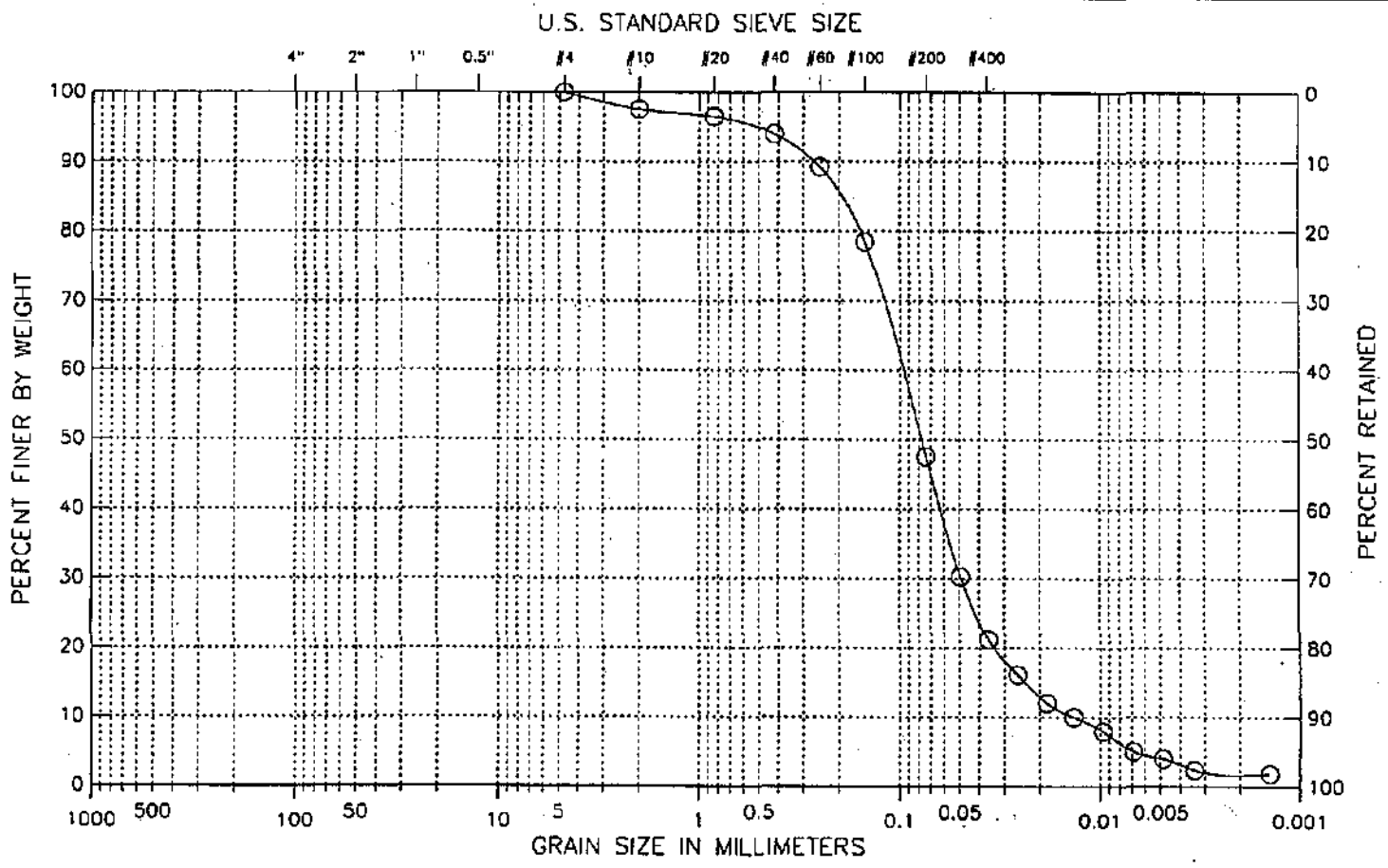
Remarks :

Visual Description :
Moist, brownish gray silty fine sand

Figure 24

GeoTesting Express, Inc. • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-105 Sample No.: S3 Test Method ASTM D 422 Filename : FD105S3	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :

Remarks :

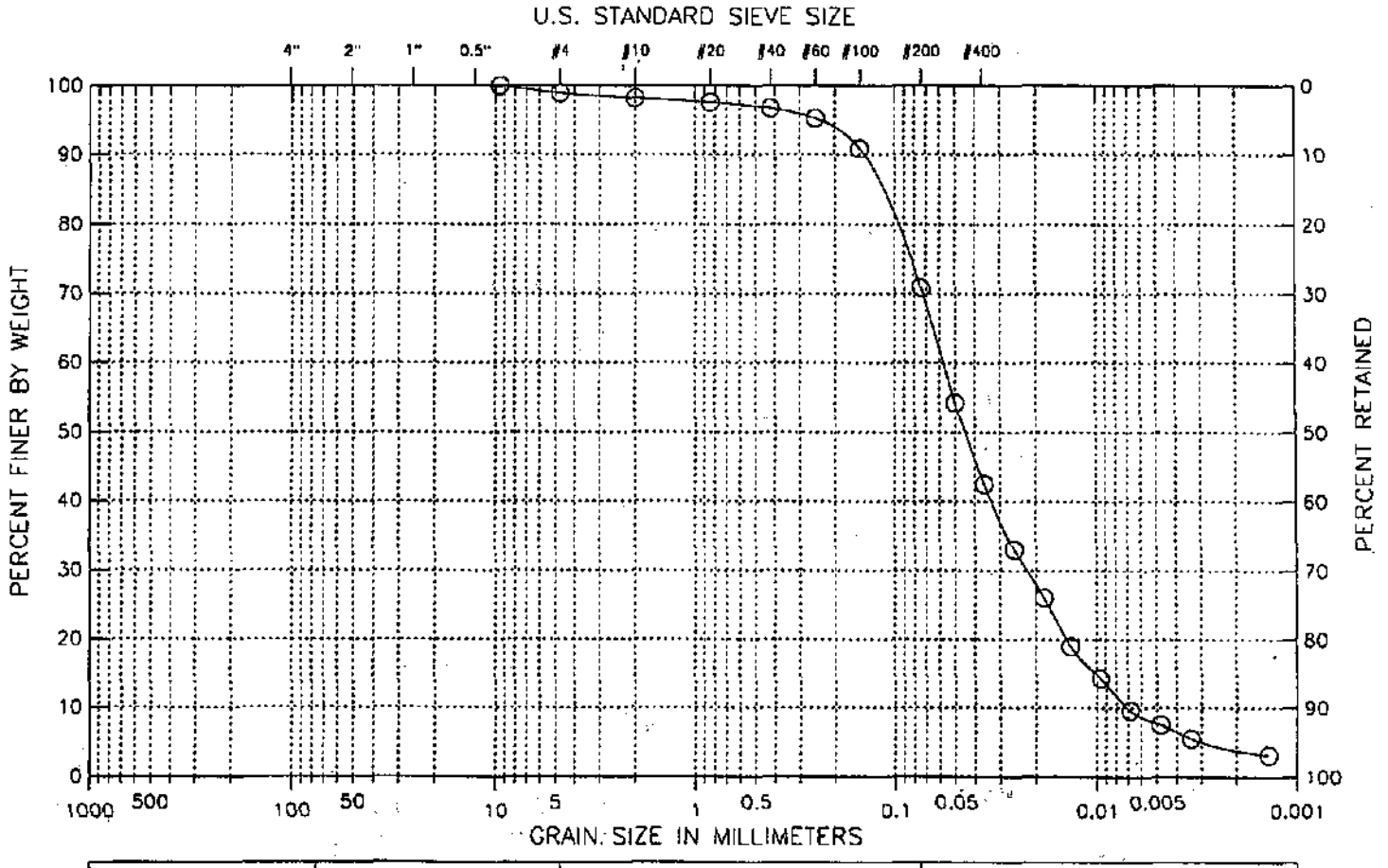
Visual Description :

Moist, light gray silty sand

Figure 25

GeoTesting Express, Inc. • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-105 Sample No.: S4B Test Method ASTM D 422 Filename : FD105S4B	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :
(ML) silt with sand
Visual Description :
Saturated, grayish brown silt with sand

Remarks :

Figure 26

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ATTERBERG LIMITS

PROJECT	PROJECT NUMBER	TESTED BY	BORING NUMBER
New Bedford Superfund Site	CTX-3289	KAH	FD-105
LOCATION		CHECKED BY	SAMPLE NUMBER
New Bedford, MA		JDT	S4B
SAMPLE DESCRIPTION		DATE	FILENAME
Saturated, grayish brown silt with sand		Mon Mar 05 2001	FD105S4B

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER					
WT. WET SOIL + TARE					
WT. DRY SOIL + TARE					
WT. WATER					
TARE WT.					
WT. DRY SOIL					
WATER CONTENT, W_N (%)					
NUMBER OF BLOWS, N					
ONE-POINT LIQUID LIMIT, LL					

PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER					
WT. WET SOIL + TARE					
WT. DRY SOIL + TARE					
WT. WATER					
TARE WT.					
WT. DRY SOIL					
WATER CONTENT (%)					

Determined to be Non-plastic.

SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	28.0
LIQUID LIMIT, LL	
PLASTIC LIMIT, PL	
PLASTICITY INDEX, PI	
LIQUIDITY INDEX, LI*	

*LI = (W – PL)/PI

PLASTICITY CHART

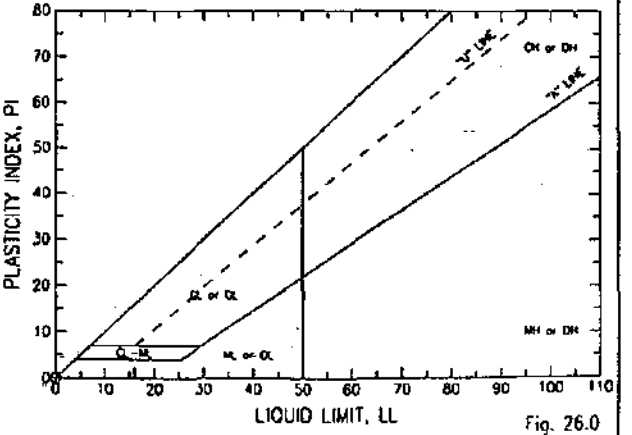

Fig. 26.0

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289 Depth : --
Boring No. : FD-105 Test Date : 02/26/01
Sample No. : SSB Test Method : ASTM D 422
Location : New Bedford, MA
Soil Description : Wet, grayish brown sandy silt
Remarks : ---

Filename : FD105SSB
Elevation : ---
Tested by : HB
Checked by : JDT

HYDROMETER

Hydrometer ID : 649262
Weight of air-dried soil = 45.34 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	22.00	20.50	17.50	0.048	39	0.048
2.00	20.00	20.50	15.50	0.035	34	0.035
4.00	18.00	20.50	13.50	0.025	30	0.025
8.00	15.50	20.50	11.00	0.018	24	0.018
15.00	13.50	20.50	9.00	0.013	20	0.013
30.00	12.00	20.50	7.50	0.009	17	0.009
60.00	10.00	20.75	5.54	0.007	12	0.007
120.00	9.00	20.75	4.54	0.005	10	0.005
240.00	8.00	20.75	3.54	0.003	8	0.003
1440.00	7.00	20.25	2.47	0.001	5	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
#4	0.187	4.75	0.00	0.00	100
#10	0.079	2.00	0.08	0.08	100
#20	0.033	0.84	0.23	0.31	99
#40	0.017	0.42	0.40	0.71	98
#60	0.010	0.25	0.69	1.40	97
#100	0.006	0.15	4.03	5.43	88
#200	0.003	0.07	14.38	19.81	56
Pan			25.61	45.42	0

Total Dry Weight of Sample = 53.45

D85 : 0.1393 mm
D60 : 0.0802 mm
D50 : 0.0635 mm
D30 : 0.0252 mm
D15 : 0.0083 mm
D10 : 0.0047 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-4(0)
AASHTO Group Name : Silty Soils

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-105
Sample No. : S9
Location : New Bedford, MA
Soil Description : Saturated, gravel with sand
Remarks : ---

Depth : ---
Test Date : 02/27/01
Test Method : ASTM D 422

Filename : FD105S9
Elevation : ---
Tested by : KAH
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
1.5"	1.500	38.10	0.00	0.00	100
1"	1.012	25.70	33.34	33.34	83
0.75"	0.748	19.00	0.00	33.34	83
0.5"	0.500	12.70	4.60	37.94	81
0.375"	0.374	9.51	8.67	46.61	77
#4	0.187	4.75	38.86	85.47	57
#10	0.079	2.00	83.27	168.74	15
#20	0.033	0.84	15.86	184.60	7
#40	0.017	0.42	4.64	189.24	5
#60	0.010	0.25	2.03	191.27	4
#100	0.006	0.15	1.46	192.73	3
#200	0.003	0.07	1.13	193.86	2
Pan			4.89	198.75	0

Total Dry Weight of Sample = 206.79

D85 : 26.7932 mm
D60 : 5.2846 mm
D50 : 4.1111 mm
D30 : 2.7204 mm
D15 : 1.9785 mm
D10 : 1.1498 mm

Soil Classification
ASTM Group Symbol : SP
ASTM Group Name : Poorly graded sand with gravel
AASHTO Group Symbol : A-1-a(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-106
Sample No. : S3
Location : New Bedford, MA
Soil Description : Wet, gray sand with silt
Remarks : ---

Depth : ---
Test Date : 02/20/01
Test Method : ASTM D 422

Filename : FD106S3
Elevation : ---
Tested by : HB
Checked by : JDT

HYDROMETER

Hydrometer ID : 583901
Weight of air-dried soil = 67.39 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	11.00	20.00	6.01	0.052	8	0.052
2.00	10.00	20.00	5.01	0.037	6	0.037
4.00	9.00	20.00	4.01	0.026	5	0.026
8.00	8.00	20.00	3.01	0.019	4	0.019
15.00	7.50	20.25	2.52	0.014	3	0.014
30.00	7.00	20.50	2.03	0.010	3	0.010
60.00	6.00	21.00	1.06	0.007	1	0.007
120.00	6.00	21.00	1.06	0.005	1	0.005
240.00	5.00	21.25	0.07	0.003	0	0.003

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.75"	0.748	19.00	0.00	0.00	100
0.5"	0.500	12.70	3.47	3.47	96
0.375"	0.374	9.51	2.93	6.40	92
#4	0.187	4.75	2.02	8.42	89
#10	0.079	2.00	4.06	12.48	84
#20	0.033	0.84	3.39	15.87	80
#40	0.017	0.42	11.27	27.14	66
#60	0.010	0.25	17.05	44.19	45
#100	0.006	0.15	15.57	59.76	25
#200	0.003	0.07	11.87	71.63	10
Pan			8.24	79.87	0

Total Dry Weight of Sample = 187.26

D85 : 2.2246 mm
D60 : 0.3628 mm
D50 : 0.2846 mm
D30 : 0.1693 mm
D15 : 0.0923 mm
D10 : 0.0711 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-2-4(0)
AASHTO Group Name : Silty Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-106
Sample No. : S4
Location : New Bedford, MA
Soil Description : Wet, light gray silty sand with gravel
Remarks : ---

Depth : ---
Test Date : 02/20/01
Test Method : ASTM D 422

Filename : FD106S4
Elevation : ---
Tested by : HB
Checked by : JDT

HYDROMETER

Hydrometer ID : SG3901
Weight of air-dried soil = 63.48 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	21.00	20.00	16.01	0.049	17	0.049
2.00	20.00	20.00	15.01	0.035	16	0.035
4.00	17.00	20.00	12.01	0.025	12	0.025
8.00	16.00	20.00	11.01	0.018	11	0.018
15.00	15.00	20.25	10.02	0.013	10	0.013
30.00	13.00	20.50	8.03	0.009	8	0.009
60.00	12.00	21.00	7.06	0.007	7	0.007
120.00	10.00	21.25	5.07	0.005	5	0.005
240.00	9.00	21.50	4.08	0.003	4	0.003
1440.00	8.00	19.00	3.00	0.001	3	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
1"	1.012	25.70	0.00	0.00	100
0.75"	0.748	19.00	11.76	11.76	88
0.5"	0.500	12.70	0.00	11.76	88
0.375"	0.374	9.51	4.08	15.84	84
#4	0.187	4.75	6.39	22.23	77
#10	0.079	2.00	10.62	32.85	66
#20	0.033	0.84	11.16	44.01	54
#40	0.017	0.42	11.04	55.05	43
#60	0.010	0.25	8.97	64.02	34
#100	0.006	0.15	8.36	72.37	25
#200	0.003	0.07	6.04	78.41	19
Pan			17.92	96.33	0

Total Dry Weight of Sample = 218.1

D85 : 10.4953 mm
D60 : 1.2867 mm
D50 : 0.6476 mm
D30 : 0.2024 mm
D15 : 0.0327 mm
D10 : 0.0122 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-b(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-106
Sample No. : S7A
Location : New Bedford, MA
Soil Description : Saturated, brown sand with gravel
Remarks : ---

Depth : --
Test Date : 02/27/01
Test Method : ASTM D 422

Filename : FD106S7A
Elevation : ---
Tested by : KAH
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
1"	1.012	25.70	0.00	0.00	100
0.75"	0.748	19.00	50.65	50.65	78
0.5"	0.500	12.70	13.44	64.09	72
0.375"	0.374	9.51	13.58	77.67	66
#4	0.187	4.75	25.98	103.65	55
#10	0.079	2.00	44.05	147.70	35
#20	0.033	0.84	27.87	175.57	23
#40	0.017	0.42	19.22	194.79	15
#60	0.010	0.25	14.52	209.31	8
#100	0.006	0.15	9.48	218.79	4
#200	0.003	0.07	4.83	223.62	2
Pan			4.30	227.92	0

Total Dry Weight of Sample = 235.93

D85 : 20.9599 mm
D60 : 6.6304 mm
D50 : 3.8794 mm
D30 : 1.3840 mm
D15 : 0.4364 mm
D10 : 0.2903 mm

Soil Classification
ASTM Group Symbol : SP
ASTM Group Name : Poorly graded sand with gravel
AASHTO Group Symbol : A-1-a(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-106
Sample No. : S7B
Location : New Bedford, MA
Soil Description : Wet, brownish gray silty sand with gravel
Remarks : ---

Depth : --
Test Date : 02/21/01
Test Method : ASTM D 422

Filename : FD106S7B
Elevation : ---
Tested by : KAH
Checked by : JDT

HYDROMETER

Hydrometer ID : 88-18231
Weight of air-dried soil = 52.7 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	22.00	19.00	15.92	0.049	16	0.049
2.00	18.00	19.00	11.92	0.036	12	0.036
4.00	14.50	19.00	8.42	0.026	8	0.026
8.00	13.00	19.00	6.92	0.018	7	0.018
15.00	11.00	19.00	4.92	0.014	5	0.014
30.00	9.50	19.00	3.42	0.010	3	0.010
60.00	8.00	19.00	1.92	0.007	2	0.007
120.00	8.00	19.50	1.98	0.005	2	0.005
240.00	6.50	21.00	0.67	0.003	1	0.003
1440.00	6.50	19.00	0.42	0.001	0	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Sieve Openings Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.75"	0.748	19.00	0.00	0.00	100
0.5"	0.500	12.70	15.14	15.14	85
0.375"	0.374	9.51	7.00	22.14	78
#4	0.187	4.75	17.92	40.06	60
#10	0.079	2.00	8.63	48.69	52
#20	0.033	0.84	7.25	55.94	45
#40	0.017	0.42	6.81	62.75	38
#60	0.010	0.25	4.83	67.58	33
#100	0.006	0.15	6.03	73.61	27
#200	0.003	0.07	8.58	82.19	19
Pan			19.20	101.39	0

Total Dry Weight of Sample = 206.04

D85 : 12.6641 mm
D60 : 4.5196 mm
D50 : 1.5739 mm
D30 : 0.1868 mm
D15 : 0.0464 mm
D10 : 0.0302 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-b(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-107
Sample No. : S2
Location : New Bedford, MA
Soil Description : Wet, brown silty sand
Remarks : ---

Depth : --
Test Date : 02/23/01
Test Method : ASTM D 422

Filename : FD107S2
Elevation : ---
Tested by : KAH
Checked by : JDT

HYDROMETER

Hydrometer ID : 08-18231
Weight of air-dried soil = 61.78 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	15.00	20.00	9.04	0.051	14	0.051
2.00	12.00	20.00	6.04	0.037	9	0.037
4.00	11.00	20.00	5.04	0.026	8	0.026
8.00	10.00	20.00	4.04	0.018	6	0.018
15.00	9.50	20.00	3.54	0.014	5	0.014
30.00	8.50	20.00	2.54	0.010	4	0.010
60.00	7.50	20.00	1.54	0.007	2	0.007
120.00	7.00	20.00	1.04	0.005	2	0.005
240.00	6.50	21.00	0.67	0.003	1	0.003
1440.00	6.50	20.50	0.60	0.001	1	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.5"	0.500	12.70	0.00	0.00	100
0.375"	0.374	9.51	3.29	3.29	95
#4	0.187	4.75	0.00	3.29	95
#10	0.079	2.00	1.03	4.32	93
#20	0.033	0.84	1.96	6.28	90
#40	0.017	0.42	8.25	14.53	78
#60	0.010	0.25	11.76	26.29	60
#100	0.006	0.15	14.13	40.42	39
#200	0.003	0.07	14.79	55.21	16
Pan			10.89	66.10	0

Total Dry Weight of Sample = 188.96

D85 : 0.6193 mm
D60 : 0.2486 mm
D50 : 0.1952 mm
D30 : 0.1130 mm
D15 : 0.0606 mm
D10 : 0.0388 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-2-4(0)
AASHTO Group Name : Silty Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-107
Sample No. : S4
Location : New Bedford, MA
Soil Description : Wet, brown silty sand with gravel
Remarks : ---

Depth : --
Test Date : 02/23/01
Test Method : ASTM D 422

Filename : FD107S4
Elevation : ---
Tested by : KAH
Checked by : JDT

HYDROMETER

Hydrometer ID : 88-18231
Weight of air-dried soil = 41.97 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	13.00	20.00	7.04	0.051	10	0.051
2.00	10.50	20.00	4.54	0.037	7	0.037
4.00	9.50	20.00	3.54	0.026	5	0.026
8.00	9.00	20.00	3.04	0.019	4	0.019
15.00	8.50	20.00	2.54	0.014	4	0.014
30.00	7.50	20.00	1.54	0.010	2	0.010
60.00	7.00	20.00	1.04	0.007	2	0.007
120.00	6.50	20.50	0.60	0.005	1	0.005
240.00	6.50	21.00	0.67	0.003	1	0.003
1440.00	6.00	21.00	0.17	0.001	0	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
1"	1.012	25.70	0.00	0.00	100
0.75"	0.748	19.00	10.73	10.73	84
0.5"	0.500	12.70	7.84	18.57	73
0.375"	0.374	9.51	0.00	18.57	73
#4	0.187	4.75	4.35	22.92	66
#10	0.079	2.00	3.12	26.04	62
#20	0.033	0.84	2.65	28.69	58
#40	0.017	0.42	3.30	31.99	53
#60	0.010	0.25	3.84	35.83	47
#100	0.006	0.15	7.46	43.29	36
#200	0.003	0.07	14.26	57.55	15
Pan			10.46	68.01	0

Total Dry Weight of Sample = 170.46

D85 : 19.2848 mm
D60 : 1.3670 mm
D50 : 0.3199 mm
D30 : 0.1206 mm
D15 : 0.0720 mm
D10 : 0.0497 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-2-4(0)
AASHTO Group Name : Silty Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : PD-107
Sample No. : SS
Location : New Bedford, MA
Depth : --
Test Date : 02/23/01
Test Method : ASTM D 422
Filename : PD107SS
Elevation : ---
Tested by : KAH
Checked by : JDT
Soil Description : Wet, light brown silty sand with gravel
Remarks : ---

HYDROMETER

Hydrometer ID : 88-18231
Weight of air-dried soil = 49.75 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	26.00	20.00	20.04	0.047	24	0.047
2.00	22.00	20.00	16.04	0.034	20	0.034
4.00	19.00	20.00	13.04	0.025	16	0.025
8.00	17.00	20.00	11.04	0.018	13	0.018
15.00	14.50	20.00	8.54	0.013	10	0.013
30.00	12.00	20.00	6.04	0.009	7	0.009
60.00	11.00	20.00	5.04	0.007	6	0.007
120.00	10.00	20.00	4.04	0.005	5	0.005
240.00	9.00	21.00	3.17	0.003	4	0.003
1440.00	8.00	21.00	2.17	0.001	3	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.75"	0.748	19.00	0.00	0.00	100
0.5"	0.500	12.70	22.41	22.41	73
0.375"	0.374	9.51	4.19	26.60	68
#4	0.187	4.75	2.27	28.87	65
#10	0.079	2.00	3.60	32.47	61
#20	0.033	0.84	4.61	37.08	55
#40	0.017	0.42	5.12	42.20	49
#60	0.010	0.25	4.90	47.10	43
#100	0.006	0.15	5.82	52.92	36
#200	0.003	0.07	6.37	59.29	28
Pan			22.93	82.22	0

Total Dry Weight of Sample = 200.66

D85 : 15.2220 mm
D60 : 1.8489 mm
D50 : 0.4869 mm
D30 : 0.0896 mm
D15 : 0.0219 mm
D10 : 0.0126 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-2-4(0)
AASHTO Group Name : Silty Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-107
Sample No. : S6
Location : New Bedford, MA
Soil Description : Wet, brown gravel with sand
Remarks : ---

Depth : --
Test Date : 02/26/01
Test Method : ASTM D 422

Filename : FD107S6
Elevation : ---
Tested by : KAH
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
1"	1.012	25.70	0.00	0.00	100
0.75"	0.748	19.00	34.60	34.60	88
0.5"	0.500	12.70	55.63	90.23	69
0.375"	0.374	9.51	19.88	110.11	63
#4	0.187	4.75	42.08	152.19	48
#10	0.079	2.00	46.31	198.50	33
#20	0.033	0.84	59.48	257.98	12
#40	0.017	0.42	14.03	272.01	8
#60	0.010	0.25	6.81	278.82	5
#100	0.006	0.15	3.21	282.03	4
#200	0.003	0.07	3.14	285.17	3
Pan			9.21	294.38	0

Total Dry Weight of Sample = 304.02

D85 : 17.7296 mm
D60 : 8.3836 mm
D50 : 5.1584 mm
D30 : 1.7913 mm
D15 : 0.9416 mm
D10 : 0.5959 mm

Soil Classification
ASTM Group Symbol : GP
ASTM Group Name : Poorly graded gravel with sand
AASHTO Group Symbol : A-1-a(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-107
Sample No. : S8
Location : New Bedford, MA
Soil Description : Wet, yellowish brown gravel with sand
Remarks : ---

Depth : --
Test Date : 02/26/01
Test Method : ASTM D 422

Filename : FD107S8
Elevation : ---
Tested by : KAH
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
1"	1.012	25.70	0.00	0.00	100
0.75"	0.748	19.00	33.03	33.03	87
0.5"	0.500	12.70	55.15	88.18	66
0.375"	0.374	9.51	26.35	114.53	56
#4	0.187	4.75	44.38	158.91	39
#10	0.079	2.00	35.95	194.86	25
#20	0.033	0.84	24.92	219.78	15
#40	0.017	0.42	18.39	238.17	8
#60	0.010	0.25	12.16	250.33	3
#100	0.006	0.15	4.94	255.27	1
#200	0.003	0.07	1.94	257.21	1
Pan			1.62	258.83	0

Total Dry Weight of Sample = 268.44

D85 : 18.2126 mm
D60 : 10.7303 mm
D50 : 7.5346 mm
D30 : 2.7795 mm
D15 : 0.8339 mm
D10 : 0.5116 mm

Soil Classification
ASTM Group Symbol : GW
ASTM Group Name : Well-graded gravel with sand
AASHTO Group Symbol : A-1-a(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-108
Sample No. : S2
Location : New Bedford, MA
Soil Description : Moist, brown sandy silt
Remarks : ---

Depth : --
Test Date : 02/23/01
Test Method : ASTM D 422

Filename : FD108S2
Elevation : ---
Tested by : KAH
Checked by : JDT

HYDROMETER

Hydrometer ID : 88-18231
Weight of air-dried soil = 49.92 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	25.00	20.00	19.04	0.048	38	0.048
2.00	19.50	20.00	13.54	0.035	27	0.035
4.00	16.50	20.00	10.54	0.025	21	0.025
8.00	14.00	20.00	8.04	0.018	16	0.018
15.00	13.00	20.00	7.04	0.013	14	0.013
30.00	11.00	20.00	5.04	0.009	10	0.009
60.00	10.00	20.00	4.04	0.007	8	0.007
120.00	9.00	20.50	3.10	0.005	6	0.005
240.00	8.50	21.00	2.67	0.003	5	0.003
1440.00	7.50	21.00	1.67	0.001	3	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
#4	0.187	4.75	0.00	0.00	100
#10	0.079	2.00	0.13	0.13	100
#20	0.033	0.84	0.09	0.22	100
#40	0.017	0.42	0.71	0.93	98
#60	0.010	0.25	1.80	2.73	95
#100	0.006	0.15	3.52	6.25	88
#200	0.003	0.07	14.99	21.24	58
Pan			28.81	50.05	0

Total Dry Weight of Sample = 167.11

D85 : 0.1405 mm
D60 : 0.0783 mm
D50 : 0.0624 mm
D30 : 0.0379 mm
D15 : 0.0153 mm
D10 : 0.0094 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-4(0)
AASHTO Group Name : Silty Soils

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-108
Sample No. : S-3
Location : New Bedford, MA
Soil Description : Wet, reddish brown gravel with sand and silt
Remarks : ---

Depth : --
Test Date : 02/27/01
Test Method : ASTM D 422

Filename : FD108S3
Elevation : ---
Tested by : KAH
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
1.5"	1.500	38.10	0.00	0.00	100
1"	1.012	25.70	53.14	53.14	64
0.75"	0.748	19.00	0.00	53.14	64
0.5"	0.500	12.70	8.18	61.32	58
0.375"	0.374	9.51	1.46	62.78	57
#4	0.187	4.75	12.71	75.49	48
#10	0.079	2.00	16.35	91.84	37
#20	0.033	0.84	14.90	106.74	27
#40	0.017	0.42	11.14	117.88	19
#60	0.010	0.25	7.48	125.36	14
#100	0.006	0.15	6.23	131.59	10
#200	0.003	0.07	4.81	136.40	7
Pan			9.87	146.27	0

Total Dry Weight of Sample = 154.32

D85 : 32.3836 mm
D60 : 14.5863 mm
D50 : 5.4020 mm
D30 : 1.0831 mm
D15 : 0.2685 mm
D10 : 0.1479 mm

Soil Classification -
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-a(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-108
Sample No. : S5
Location : New Bedford, MA
Soil Description : Wet, light brown silty sand with gravel
Remarks : ---

Depth : --
Test Date : 02/26/01
Test Method : ASTM D 422

Filename : FD108S5
Elevation : ---
Tested by : HB
Checked by : JDT

HYDROMETER

Hydrometer ID : 583901
Weight of air-dried soil = 67.39 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	20.00	20.25	15.02	0.049	13	0.049
2.00	19.00	20.25	14.02	0.035	13	0.035
4.00	17.00	20.25	12.02	0.025	11	0.025
8.00	16.00	20.25	11.02	0.018	10	0.018
15.00	14.00	20.25	9.02	0.013	8	0.013
30.00	12.00	20.25	7.02	0.009	6	0.009
60.00	10.00	20.50	5.03	0.007	5	0.007
120.00	8.00	20.50	3.03	0.005	3	0.005
240.00	7.50	20.50	2.53	0.003	2	0.003
1440.00	6.75	20.25	1.77	0.001	2	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
1"	1.012	25.70	0.00	0.00	100
0.75"	0.748	19.00	16.12	16.12	86
0.5"	0.500	12.70	10.54	26.66	76
0.375"	0.374	9.51	1.50	28.16	75
#4	0.187	4.75	5.92	34.08	70
#10	0.079	2.00	10.40	44.48	60
#20	0.033	0.84	11.83	56.31	50
#40	0.017	0.42	11.83	68.14	39
#60	0.010	0.25	9.69	77.83	30
#100	0.006	0.15	7.86	85.69	23
#200	0.003	0.07	6.26	91.95	18
Pan			19.92	111.87	0

Total Dry Weight of Sample = 121.46

D85 : 18.5264 mm
D60 : 1.9611 mm
D50 : 0.8644 mm
D30 : 0.2422 mm
D15 : 0.0568 mm
D10 : 0.0187 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-b(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-109
Sample No. : S3
Location : New Bedford, MA
Soil Description : Wet, light brown silty sand with gravel
Remarks : ---

Depth : --
Test Date : 02/22/01
Test Method : ASTM D 422

Filename : FD109S3
Elevation : ---
Tested by : KAH
Checked by : JDT

HYDROMETER

Hydrometer ID : 88-18231
Weight of air-dried soil = 47 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	21.00	19.50	14.98	0.049	18	0.049
2.00	18.50	19.50	12.48	0.035	15	0.035
4.00	17.00	19.50	10.98	0.025	13	0.025
8.00	15.50	19.50	9.48	0.018	12	0.018
15.00	14.50	19.50	8.48	0.013	10	0.013
30.00	13.00	19.50	6.98	0.009	8	0.009
60.00	12.00	19.50	5.98	0.007	7	0.007
120.00	11.00	19.50	4.98	0.005	6	0.005
240.00	10.00	21.00	4.17	0.003	5	0.003
1358.00	9.00	20.00	3.04	0.001	4	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
1"	1.012	25.70	0.00	0.00	100
0.75"	0.748	19.00	11.49	11.49	86
0.5"	0.500	12.70	9.27	20.76	75
0.375"	0.374	9.51	0.87	21.63	74
#4	0.187	4.75	5.39	27.02	67
#10	0.079	2.00	8.50	35.52	57
#20	0.033	0.84	8.91	44.43	46
#40	0.017	0.42	7.70	52.13	37
#60	0.010	0.25	6.08	58.21	29
#100	0.006	0.15	4.68	62.89	24
#200	0.003	0.07	4.52	67.41	18
Pan			15.11	82.52	0

Total Dry Weight of Sample = 209.52

D85 : 18.2808 mm
D60 : 2.5826 mm
D50 : 1.1446 mm
D30 : 0.2597 mm
D15 : 0.0344 mm
D10 : 0.0125 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-b(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-109
Sample No. : S4
Location : New Bedford, MA
Soil Description : Wet, brown sand with gravel and silt
Remarks : ---

Depth : --
Test Date : 02/26/01
Test Method : ASTM D 422

Filename : FD109S4
Elevation : ---
Tested by : KAH
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.75"	0.748	19.00	0.00	0.00	100
0.5"	0.500	12.70	36.47	36.47	79
0.375"	0.374	9.51	20.36	56.83	68
#4	0.187	4.75	32.15	88.98	50
#10	0.079	2.00	22.97	111.95	37
#20	0.033	0.84	18.86	130.81	26
#40	0.017	0.42	12.62	143.43	19
#60	0.010	0.25	9.23	152.66	14
#100	0.006	0.15	6.70	159.36	10
#200	0.003	0.07	6.05	165.41	7
Pan			11.56	176.97	0

Total Dry Weight of Sample = 184.95

D85 : 14.1714 mm
D60 : 7.0354 mm
D50 : 4.8010 mm
D30 : 1.1563 mm
D15 : 0.2835 mm
D10 : 0.1500 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-a(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-109
Sample No. : S6
Location : New Bedford, MA
Soil Description : Wet, brown gravel with sand and silt
Remarks : ---

Depth : --
Test Date : 02/26/01
Test Method : ASTM D 422

Filename : FD109S6
Elevation : ---
Tested by : KAH
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
1"	1.012	25.70	0.00	0.00	100
0.75"	0.748	19.00	58.94	58.94	69
0.5"	0.500	12.70	22.77	81.71	58
0.375"	0.374	9.51	11.70	93.41	51
#4	0.187	4.75	26.07	119.48	38
#10	0.079	2.00	11.76	131.24	32
#20	0.033	0.84	11.82	143.06	26
#40	0.017	0.42	12.44	155.50	19
#60	0.010	0.25	8.98	164.48	14
#100	0.006	0.15	7.18	171.66	11
#200	0.003	0.07	6.99	178.65	7
Pan			13.63	192.28	0

Total Dry Weight of Sample = 200.24

D85 : 22.1687 mm
D60 : 13.8251 mm
D50 : 8.8432 mm
D30 : 1.5639 mm
D15 : 0.2655 mm
D10 : 0.1296 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-a(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-109
Sample No. : S7
Location : New Bedford, MA
Soil Description : Wet, brown gravel with sand and silt
Remarks : ---

Depth : --
Test Date : 02/26/01
Test Method : ASTM D 422

Filename : FD109S7
Elevation : ---
Tested by : KAH
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
1"	1.012	25.70	0.00	0.00	100
0.75"	0.748	19.00	36.49	36.49	79
0.5"	0.500	12.70	9.23	45.72	73
0.375"	0.374	9.51	9.44	55.16	68
#4	0.187	4.75	27.62	82.78	52
#10	0.079	2.00	19.27	102.05	40
#20	0.033	0.84	13.67	115.72	32
#40	0.017	0.42	13.80	129.52	24
#60	0.010	0.25	9.73	139.25	19
#100	0.006	0.15	7.90	147.15	14
#200	0.003	0.07	7.96	155.11	9
Pan			16.21	171.32	0

Total Dry Weight of Sample = 179.47

D85 : 20.7754 mm
D60 : 6.7961 mm
D50 : 4.1740 mm
D30 : 0.6807 mm
D15 : 0.1647 mm
D10 : 0.0802 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-a(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-110
Sample No. : S4
Location : New Bedford, MA
Soil Description : Wet, light brown silty sand
Remarks : ---

Depth : ---
Test Date : 02/26/01
Test Method : ASTM D 422

Filename : FD110S4
Elevation : ---
Tested by : NB
Checked by : JDT

HYDROMETER

Hydrometer ID : 649262
Weight of air-dried soil = 56.23 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	10.00	20.50	5.50	0.052	10	0.052
2.00	9.00	20.50	4.50	0.037	8	0.037
4.00	8.00	20.50	3.50	0.026	6	0.026
8.00	7.50	20.50	3.00	0.019	5	0.019
15.00	7.00	20.50	2.50	0.014	4	0.014
30.00	6.00	20.75	1.54	0.010	3	0.010
60.00	6.00	20.75	1.54	0.007	3	0.007
120.00	5.50	20.75	1.04	0.005	2	0.005
240.00	5.00	20.75	0.54	0.003	1	0.003

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
#10	0.079	2.00	0.00	0.00	100
#20	0.033	0.84	0.01	0.01	100
#40	0.017	0.42	0.14	0.15	100
#60	0.010	0.25	4.20	4.35	92
#100	0.006	0.15	20.30	24.65	56
#200	0.003	0.07	15.47	40.12	29
Pan			16.11	56.23	0

Total Dry Weight of Sample = 64.34

D85 : 0.2253 mm
D60 : 0.1574 mm
D50 : 0.1274 mm
D30 : 0.0766 mm
D15 : 0.0572 mm
D10 : 0.0521 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-2-4(0)
AASHTO Group Name : Silty Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-110
Sample No. : S6
Location : New Bedford, MA
Soil Description : Wet, yellowish brown sand
Remarks : ---

Depth : ---
Test Date : 03/01/01
Test Method : ASTM D 422

Filename : FD110S6
Elevation : ---
Tested by : NB
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.375"	0.374	9.51	0.00	0.00	100
#4	0.187	4.75	0.19	0.19	100
#10	0.079	2.00	0.54	0.73	99
#20	0.033	0.84	0.30	1.03	99
#40	0.017	0.42	5.43	6.46	92
#60	0.010	0.25	25.04	31.50	60
#100	0.006	0.15	32.12	63.62	19
#200	0.003	0.07	11.82	75.44	4
Pan			3.36	78.80	0

Total Dry Weight of Sample = 86.77

D85 : 0.3759 mm
D60 : 0.2499 mm
D50 : 0.2201 mm
D30 : 0.1708 mm
D15 : 0.1221 mm
D10 : 0.0967 mm

Soil Classification
ASTM Group Symbol : SP
ASTM Group Name : Poorly graded sand
AASHTO Group Symbol : A-3(0)
AASHTO Group Name : Fine Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-110
Sample No. : S9
Location : New Bedford, MA
Depth : ---
Test Date : 02/27/01
Test Method : ASTM D 422
Filename : FD110S9
Elevation : ---
Tested by : KAH
Checked by : JDT
Soil Description : Wet, grayish brown sand with gravel
Remarks : ---

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
1"	1.012	25.70	0.00	0.00	100
0.75"	0.748	19.00	10.99	10.99	95
0.5"	0.500	12.70	31.20	42.19	81
0.375"	0.374	9.51	6.12	48.31	79
#4	0.187	4.75	23.94	72.25	68
#10	0.079	2.00	31.99	104.24	54
#20	0.033	0.84	21.73	125.97	44
#40	0.017	0.42	28.41	154.38	32
#60	0.010	0.25	31.19	185.57	18
#100	0.006	0.15	21.86	207.43	8
#200	0.003	0.07	8.38	215.81	4
Pan			10.09	225.90	0

Total Dry Weight of Sample = 235.54

D85 : 14.1375 mm
D60 : 2.9109 mm
D50 : 1.4133 mm
D30 : 0.3946 mm
D15 : 0.2146 mm
D10 : 0.1643 mm

Soil Classification
ASTM Group Symbol : SP
ASTM Group Name : Poorly graded sand with gravel
AASHTO Group Symbol : A-1-b(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-111
Sample No. : S4
Location : New Bedford, MA
Soil Description : Wet, yellowish brown sand
Remarks : Composite of samples S4A & S4B

Depth : --
Test Date : 03/01/01
Test Method : ASTM D 422

Filename : FD111S4
Elevation : ---
Tested by : HB
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.375"	0.374	9.51	0.00	0.00	100
#4	0.187	4.75	0.17	0.17	100
#10	0.079	2.00	0.36	0.53	99
#20	0.033	0.84	0.14	0.67	99
#40	0.017	0.42	3.71	4.38	94
#60	0.010	0.25	24.13	28.51	62
#100	0.006	0.15	33.04	61.55	18
#200	0.003	0.07	11.05	72.60	3
Pan			2.27	74.87	0

Total Dry Weight of Sample = 179.68

D85 : 0.3625 mm
D60 : 0.2444 mm
D50 : 0.2174 mm
D30 : 0.1719 mm
D15 : 0.1305 mm
D10 : 0.1030 mm

Soil Classification
ASTM Group Symbol : SP
ASTM Group Name : Poorly graded sand
AASHTO Group Symbol : A-3(0)
AASHTO Group Name : Fine Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289 Depth : --
Boring No. : PD-111 Test Date : 03/01/01
Sample No. : S6 Test Method : ASTM D 422
Location : New Bedford, MA
Soil Description : Wet, yellowish brown sand with silt
Remarks : ---

Filename : FD111S6
Elevation : ---
Tested by : HB
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.375"	0.374	9.51	0.00	0.00	100
#4	0.187	4.75	0.77	0.77	99
#10	0.079	2.00	3.03	3.80	95
#20	0.033	0.84	6.32	10.12	88
#40	0.017	0.42	15.44	25.56	69
#60	0.010	0.25	19.98	45.54	44
#100	0.006	0.15	18.37	63.91	22
#200	0.003	0.07	11.61	75.52	8
Pan			6.35	81.87	0

Total Dry Weight of Sample = 185.73

D85 : 0.7631 mm
D60 : 0.3485 mm
D50 : 0.2818 mm
D30 : 0.1795 mm
D15 : 0.1058 mm
D10 : 0.0827 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-3(0)
AASHTO Group Name : Fine Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-111
Sample No. : S7
Location : New Bedford, MA
Soil Description : Wet, yellowish brown sand with silt and gravel
Remarks : ---

Depth : --
Test Date : 03/01/01
Test Method : ASTM D 422

Filename : FD111S7
Elevation : ---
Tested by : HB
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.75"	0.748	19.00	0.00	0.00	100
0.5"	0.500	12.70	9.42	9.42	89
0.375"	0.374	9.51	3.48	12.90	85
#4	0.187	4.75	8.50	21.40	75
#10	0.079	2.00	9.36	30.76	65
#20	0.033	0.84	9.31	40.07	54
#40	0.017	0.42	11.53	51.60	41
#60	0.010	0.25	11.47	63.07	28
#100	0.006	0.15	9.67	72.74	17
#200	0.003	0.07	7.00	79.74	9
Pan			7.94	87.68	0

Total Dry Weight of Sample = 192.05

D85 : 9.3163 mm
D60 : 1.3390 mm
D50 : 0.6702 mm
D30 : 0.2699 mm
D15 : 0.1246 mm
D10 : 0.0804 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-b(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-111
Sample No. : S12
Location : New Bedford, MA
Soil Description : Moist, light gray silty sand
Remarks : ---

Depth : ---
Test Date : 02/23/01
Test Method : ASTM D 422

Filename : FD111S12
Elevation : ---
Tested by : KAH
Checked by : JDT

HYDROMETER

Hydrometer ID : 88-18231
Weight of air-dried soil = 49.4 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	18.00	20.00	12.04	0.050	19	0.050
2.00	15.00	20.00	9.04	0.036	15	0.036
4.00	12.50	20.00	6.54	0.026	11	0.026
8.00	11.00	20.00	5.04	0.018	8	0.018
15.00	10.00	20.00	4.04	0.013	7	0.013
30.00	8.50	20.00	2.54	0.010	4	0.010
60.00	8.00	20.50	2.10	0.007	3	0.007
120.00	7.00	20.50	1.10	0.005	2	0.005
240.00	6.50	21.00	0.67	0.003	1	0.003
1440.00	6.00	21.00	0.17	0.001	0	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.5"	0.500	12.70	0.00	0.00	100
0.375"	0.374	9.51	1.93	1.93	97
#4	0.187	4.75	7.78	9.71	84
#10	0.079	2.00	2.92	12.63	80
#20	0.033	0.84	3.25	15.88	74
#40	0.017	0.42	2.82	18.70	70
#60	0.010	0.25	3.62	22.32	64
#100	0.006	0.15	9.64	31.96	48
#200	0.003	0.07	13.05	45.01	27
Pan			17.02	62.03	0

Total Dry Weight of Sample = 184.85

D85 : 4.9250 mm
D60 : 0.2187 mm
D50 : 0.1568 mm
D30 : 0.0806 mm
D15 : 0.0369 mm
D10 : 0.0238 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-2-4(0)
AASHTO Group Name : Silty Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-112
Sample No. : S3
Location : New Bedford, MA
Soil Description : Saturated, yellowish brown sand with gravel & silt
Remarks : ---

Depth : --
Test Date : 03/01/01
Test Method : ASTM D 422

Filename : FD112S3
Elevation : ---
Tested by : KAH/NB/HB
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.75"	0.748	19.00	0.00	0.00	100
0.5"	0.500	12.70	7.97	7.97	90
0.375"	0.374	9.51	1.96	9.93	88
#4	0.187	4.75	5.55	15.48	81
#10	0.079	2.00	7.44	22.92	71
#20	0.033	0.84	8.51	31.43	61
#40	0.017	0.42	10.95	42.38	47
#60	0.010	0.25	13.64	56.02	30
#100	0.006	0.15	14.03	70.05	13
#200	0.003	0.07	5.67	75.72	6
Pan			4.48	80.20	0

Total Dry Weight of Sample = 197.71

D85 : 7.3131 mm
D60 : 0.8070 mm
D50 : 0.4853 mm
D30 : 0.2489 mm
D15 : 0.1597 mm
D10 : 0.1146 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-b(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-112
Sample No. : S6
Location : New Bedford, MA
Soil Description : Wet, light brown sand with gravel and silt
Remarks : ---

Depth : --
Test Date : 02/21/01
Test Method : ASTM D 422

Filename : FD112S6
Elevation : ---
Tested by : KAH/NB/RB
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.75"	0.748	19.00	0.00	0.00	100
0.5"	0.500	12.70	15.97	15.97	84
0.375"	0.374	9.51	7.30	23.27	76
#4	0.187	4.75	8.94	32.21	67
#10	0.079	2.00	11.66	43.87	55
#20	0.033	0.84	11.51	55.38	44
#40	0.017	0.42	12.38	67.76	31
#60	0.010	0.25	9.67	77.43	21
#100	0.006	0.15	7.90	85.33	13
#200	0.003	0.07	4.61	89.94	8
Pan			8.26	98.20	0

Total Dry Weight of Sample = 198.87

D85 : 13.1035 mm
D60 : 2.8113 mm
D50 : 1.3492 mm
D30 : 0.3985 mm
D15 : 0.1683 mm
D10 : 0.0938 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-b(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289 Depth : --
Boring No. : PD-112 Test Date : 02/22/01
Sample No. : S7 Test Method : ASTM D 422
Location : New Bedford, MA
Soil Description : Wet, light brown silty sand with gravel
Remarks : ---

Filename : FD112S7
Elevation : ---
Tested by : KAH
Checked by : JDT

HYDROMETER

Hydrometer ID : 88-18231
Weight of air-dried soil = 41.63 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	18.00	19.00	11.92	0.050	13	0.050
2.00	16.00	19.00	9.92	0.036	11	0.036
4.00	14.50	19.00	8.42	0.026	9	0.026
8.00	13.00	19.00	6.92	0.018	7	0.018
15.00	11.50	19.00	5.42	0.014	6	0.014
30.00	10.00	19.00	3.92	0.010	4	0.010
60.00	9.50	19.50	3.48	0.007	4	0.007
120.00	8.00	19.50	1.98	0.005	2	0.005
240.00	7.00	21.00	1.17	0.003	1	0.003
1338.00	7.00	20.00	1.04	0.001	1	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
1"	1.012	25.70	0.00	0.00	100
0.75"	0.748	19.00	33.95	33.95	64
0.5"	0.500	12.70	0.00	33.95	64
0.375"	0.374	9.51	3.18	37.13	60
#4	0.187	4.75	5.64	42.77	54
#10	0.079	2.00	8.63	51.40	45
#20	0.033	0.84	9.32	60.72	35
#40	0.017	0.42	6.84	67.56	27
#60	0.010	0.25	5.01	72.57	22
#100	0.006	0.15	4.14	76.71	18
#200	0.003	0.07	3.91	80.62	13
Pan			12.41	93.03	0

Total Dry Weight of Sample = 224.12

D85 : 22.6994 mm
D60 : 9.4145 mm
D50 : 3.2634 mm
D30 : 0.5380 mm
D15 : 0.0976 mm
D10 : 0.0314 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-a(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-112
Sample No. : S10
Location : New Bedford, MA
Soil Description : Wet, yellow brown sand with silt and gravel
Remarks : ---

Depth : ---
Test Date : 02/21/01
Test Method : ASTM D 422

Filename : FD112S10
Elevation : ---
Tested by : KAH
Checked by : JDT

HYDROMETER

Hydrometer ID : 583901
Weight of air-dried soil = 44.81 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	13.00	19.25	8.00	0.052	8	0.052
2.00	12.00	19.25	7.00	0.037	7	0.037
4.00	11.00	19.25	6.00	0.026	6	0.026
8.00	10.00	19.25	5.00	0.019	5	0.019
15.00	9.50	19.25	4.50	0.014	5	0.014
30.00	9.00	19.75	4.00	0.010	4	0.010
60.00	8.00	20.00	3.01	0.007	3	0.007
120.00	7.00	20.25	2.02	0.005	2	0.005
240.00	7.00	20.50	2.03	0.003	2	0.003
1440.00	6.00	19.50	1.00	0.001	1	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
1"	1.012	25.70	0.00	0.00	100
0.75"	0.748	19.00	9.34	9.34	90
0.5"	0.500	12.70	3.30	12.64	87
0.375"	0.374	9.51	9.18	21.82	77
#4	0.187	4.75	17.56	39.38	59
#10	0.079	2.00	10.99	50.37	47
#20	0.033	0.84	8.76	59.13	38
#40	0.017	0.42	8.74	67.87	29
#60	0.010	0.25	6.18	74.05	22
#100	0.006	0.15	5.52	79.57	16
#200	0.003	0.07	4.56	84.13	12
Pan			11.05	95.18	0

Total Dry Weight of Sample = 195.29

D85 : 12.0615 mm
D60 : 5.0021 mm
D50 : 2.4892 mm
D30 : 0.4636 mm
D15 : 0.1214 mm
D10 : 0.0618 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-a(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-112
Sample No. : S11A
Location : New Bedford, MA
Soil Description : Wet, light brown sand with silt and gravel
Remarks : ---

Depth : ---
Test Date : 02/22/01
Test Method : ASTM D 422

Filename FD112S11
Elevation : ---
Tested by : KAH
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.75"	0.748	19.00	0.00	0.00	100
0.5"	0.500	12.70	10.51	10.51	89
0.375"	0.374	9.51	8.75	19.26	80
#4	0.187	4.75	20.10	39.36	59
#10	0.079	2.00	13.22	52.58	45
#20	0.033	0.84	10.45	63.03	34
#40	0.017	0.42	9.37	72.40	24
#60	0.010	0.25	6.29	78.69	18
#100	0.006	0.15	4.71	83.40	13
#200	0.003	0.07	4.32	87.72	8
Pan			7.74	95.46	0

Total Dry Weight of Sample = 200.08

D85 : 11.1974 mm
D60 : 4.9469 mm
D50 : 2.7469 mm
D30 : 0.6350 mm
D15 : 0.1910 mm
D10 : 0.0992 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-a(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-113
Sample No. : S5
Location : New Bedford, MA
Soil Description : Wet, yellowish brown sand with silt and gravel
Remarks : ---

Filename : FD113S5
Elevation : ---
Tested by : HB
Checked by : JDT

Depth : --
Test Date : 03/02/01
Test Method : ASTM D 422

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.5"	0.500	12.70	0.00	0.00	100
0.375"	0.374	9.51	2.50	2.50	97
#4	0.187	4.75	9.32	11.82	87
#10	0.079	2.00	9.71	21.53	76
#20	0.033	0.84	9.96	31.49	65
#40	0.017	0.42	13.01	44.50	50
#60	0.010	0.25	13.86	58.36	34
#100	0.006	0.15	13.43	71.79	19
#200	0.003	0.07	9.67	81.46	8
Pan			7.36	88.82	0

Total Dry Weight of Sample = 96.91

D85 : 4.1548 mm
D60 : 0.6780 mm
D50 : 0.4220 mm
D30 : 0.2158 mm
D15 : 0.1139 mm
D10 : 0.0826 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-b(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-113
Sample No. : S7
Location : New Bedford, MA
Soil Description : Saturated, brown silty sand and gravel
Remarks : ---

Filename : FD113S7
Depth : --
Test Date : 02/26/01
Test Method : ASTM D 422
Elevation : ---
Tested by : NB
Checked by : JDT

HYDROMETER

Hydrometer ID : 583901
Weight of air-dried soil = 47.41 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	13.00	20.25	8.02	0.051	8	0.051
2.00	12.00	20.25	7.02	0.036	7	0.036
4.00	10.00	20.25	5.02	0.026	5	0.026
8.00	9.00	20.25	4.02	0.019	4	0.019
15.00	8.50	20.25	3.52	0.014	3	0.014
30.00	7.50	20.50	2.53	0.010	2	0.010
60.00	6.50	20.50	1.53	0.007	1	0.007
120.00	6.00	20.75	1.05	0.005	1	0.005
240.00	5.50	20.75	0.55	0.003	1	0.003

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.75"	0.748	19.00	0.00	0.00	100
0.5"	0.500	12.70	19.18	19.18	82
0.375"	0.374	9.51	9.22	28.40	73
#4	0.187	4.75	14.56	42.96	59
#10	0.079	2.00	13.73	56.69	46
#20	0.033	0.84	8.64	65.33	37
#40	0.017	0.42	6.46	71.79	31
#60	0.010	0.25	5.69	77.48	26
#100	0.006	0.15	4.11	81.59	22
#200	0.003	0.07	5.55	87.14	16
Pan			16.96	104.10	0

Total Dry Weight of Sample = 112.23

D85 : 13.6874 mm
D60 : 5.0586 mm
D50 : 2.6791 mm
D30 : 0.3806 mm
D15 : 0.0700 mm
D10 : 0.0565 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-b(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-113
Sample No. : S9
Location : New Bedford, MA
Soil Description : Wet, brown silty sand with gravel
Remarks : ---

Depth : ---
Test Date : 02/23/01
Test Method : ASTM D 422

Filename : FD113S9
Elevation : ---
Tested by : KAH
Checked by : JDT

HYDROMETER

Hydrometer ID : 88-10231
Weight of air-dried soil = 51.2 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	23.00	20.00	17.04	0.048	21	0.048
2.00	19.50	20.00	13.54	0.035	16	0.035
4.00	17.00	20.00	11.04	0.025	13	0.025
8.00	15.00	20.00	9.04	0.018	11	0.018
15.00	13.00	20.00	7.04	0.013	9	0.013
30.00	11.00	20.00	5.04	0.009	6	0.009
60.00	9.50	20.00	3.54	0.007	4	0.007
120.00	8.50	20.50	2.60	0.005	3	0.005
240.00	7.50	21.00	1.67	0.003	2	0.003
1440.00	7.00	21.00	1.17	0.001	1	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.75"	0.748	19.00	0.00	0.00	100
0.5"	0.500	12.70	13.26	13.26	84
0.375"	0.374	9.51	3.04	16.30	80
#4	0.187	4.75	6.21	22.51	73
#10	0.079	2.00	8.90	31.41	62
#20	0.033	0.84	8.16	39.57	52
#40	0.017	0.42	8.31	47.88	42
#60	0.010	0.25	6.29	54.17	34
#100	0.006	0.15	5.41	59.58	28
#200	0.003	0.07	5.35	64.93	21
Pan			17.68	82.61	0

Total Dry Weight of Sample = 201.39

D85 : 13.0395 mm
D60 : 1.6815 mm
D50 : 0.7275 mm
D30 : 0.1762 mm
D15 : 0.0299 mm
D10 : 0.0159 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-1-b(0)
AASHTO Group Name : Stone Fragments, Gravel and Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-114
Sample No. : SS
Location : New Bedford, MA
Soil Description : Moist, light brown silt with sand
Remarks : ---

Filename : FD114SS
Elevation : ---
Tested by : HB
Checked by : JDT

Depth : --
Test Date : 02/26/01
Test Method : ASTM D 422

HYDROMETER

Hydrometer ID : 88-18231
Weight of air-dried soil = 37.3 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	23.00	21.50	17.23	0.047	46	0.047
2.00	21.00	21.50	15.23	0.034	41	0.034
4.00	20.00	21.50	14.23	0.024	38	0.024
8.00	18.00	21.50	12.23	0.017	33	0.017
15.00	15.50	21.50	9.73	0.013	26	0.013
30.00	13.50	21.50	7.73	0.009	21	0.009
60.00	11.50	21.50	5.73	0.007	15	0.007
120.00	10.00	21.50	4.23	0.005	11	0.005
240.00	8.50	21.50	2.73	0.003	7	0.003
1440.00	7.00	20.50	1.10	0.001	3	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
#4	0.187	4.75	0.00	0.00	100
#10	0.079	2.00	0.03	0.03	100
#20	0.033	0.84	0.21	0.24	99
#40	0.017	0.42	0.98	1.22	97
#60	0.010	0.25	1.23	2.45	93
#100	0.006	0.15	2.00	4.45	88
#200	0.003	0.07	5.42	9.87	74
Pan			27.46	37.33	0

Total Dry Weight of Sample = 138.8

D85 : 0.1284 mm
D60 : 0.0593 mm
D50 : 0.0504 mm
D30 : 0.0153 mm
D15 : 0.0064 mm
D10 : 0.0042 mm

Soil Classification
ASTM Group Symbol : ML
ASTM Group Name : silt with sand
AASHTO Group Symbol : A-4(0)
AASHTO Group Name : Silty Soils

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Boring No. : FD-114
Sample No: S6
Test Method ASTM D 422
Filename : FD114S6

Project : New Bedford Superfund Site
Project No.: GTX-3289
Location: New Bedford, MA
Date : Mon Mar 05 2001

U.S. STANDARD SIEVE SIZE

4" 2" 1" 0.5" #4 #10 #20 #40 #60 #100 #200 #400

PERCENT FINER BY WEIGHT

PERCENT RETAINED

GRAIN SIZE IN MILLIMETERS

COBBLES	GRAVEL		SAND				SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE		

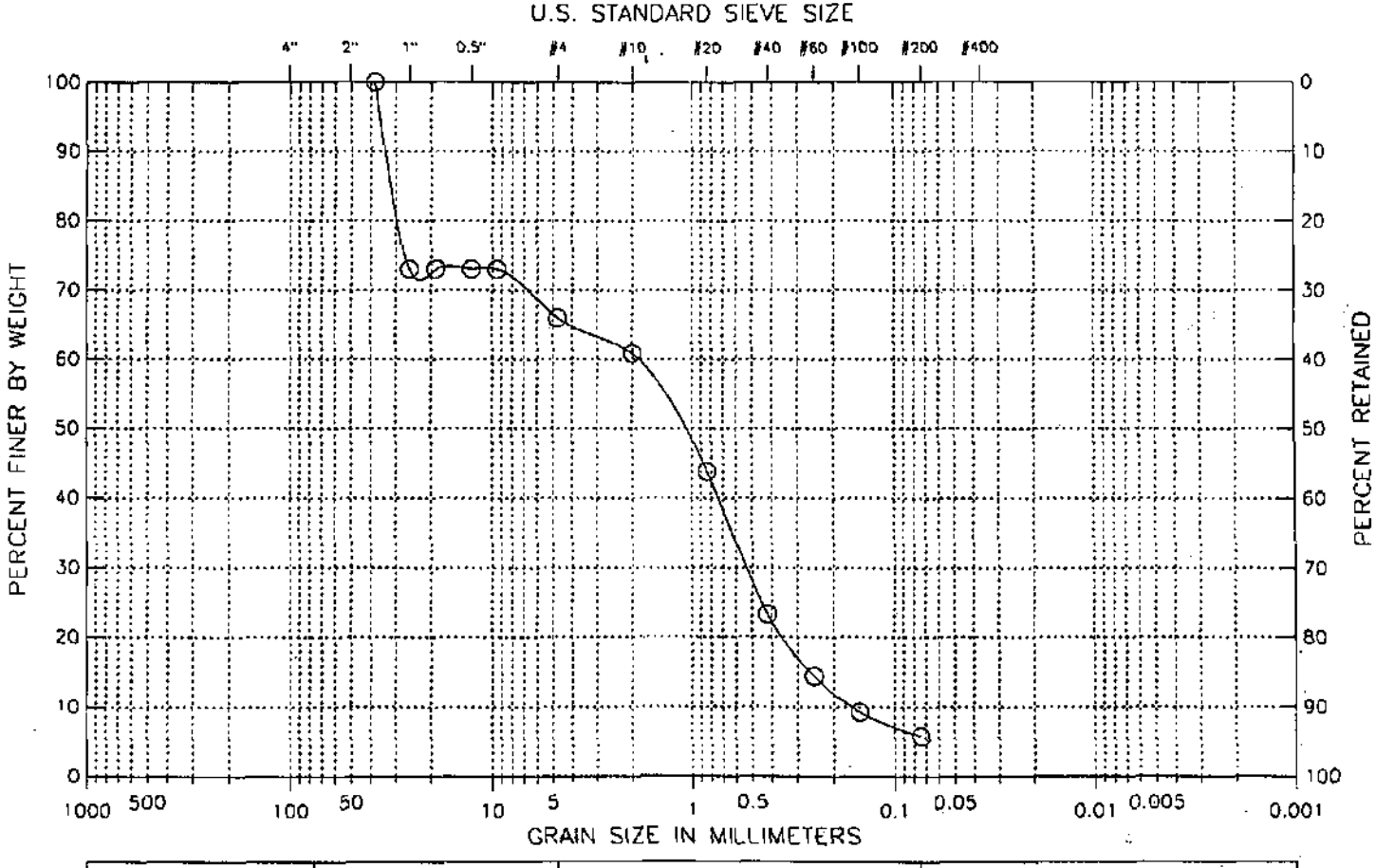
Classification :

Visual Description :
Wet brown silty sand

Remarks :

Figure 63

	Boring No. : FD-114 Sample No.: S9 Test Method ASTM D 422 Filename : FD114S9	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :

Remarks :

Visual Description :
Wet brown sand with gravel and silt

Figure 64

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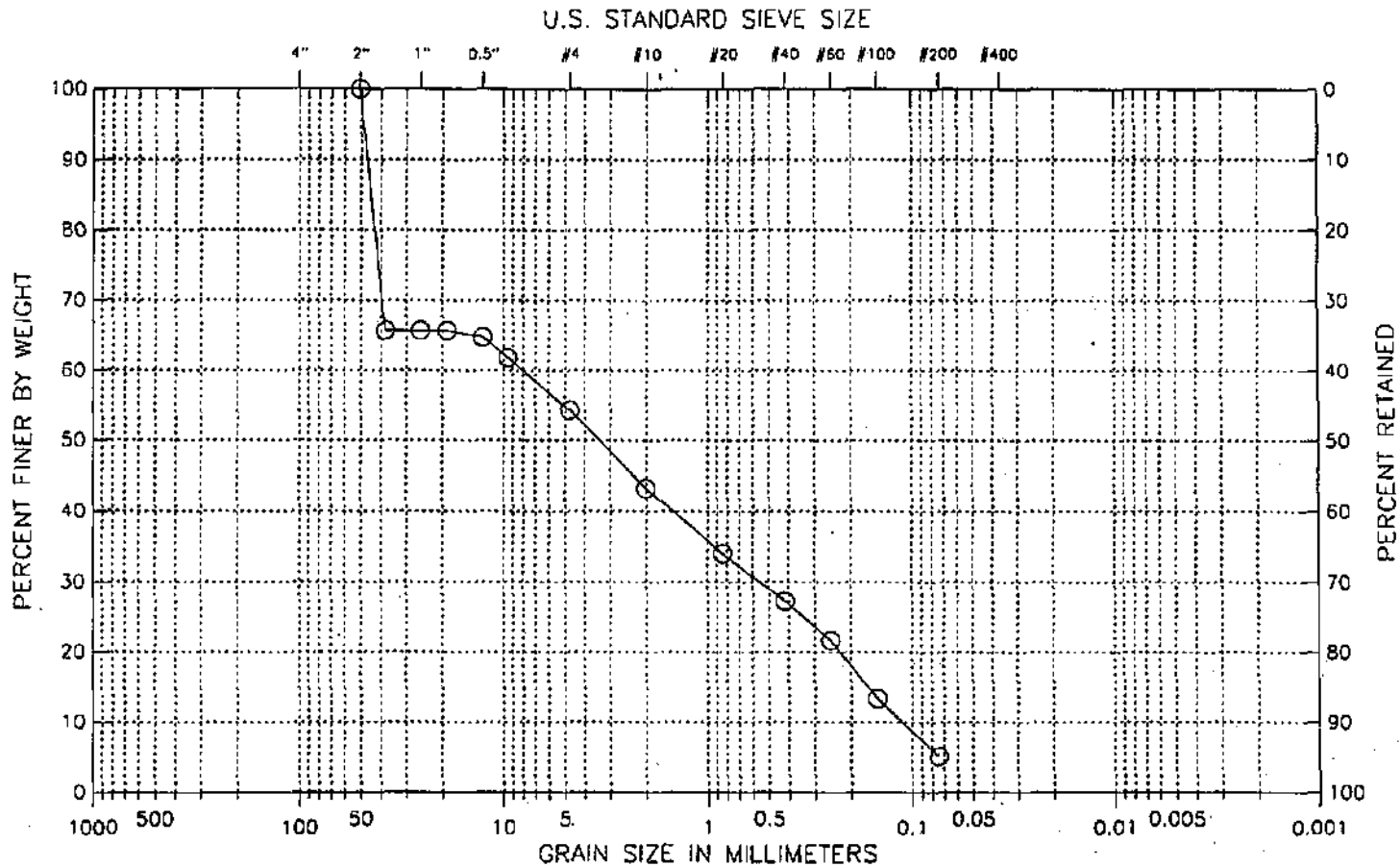
	Boring No. : FD-114 Sample No.: S10 Test Method ASTM D 422 Filename : FD114S10	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :

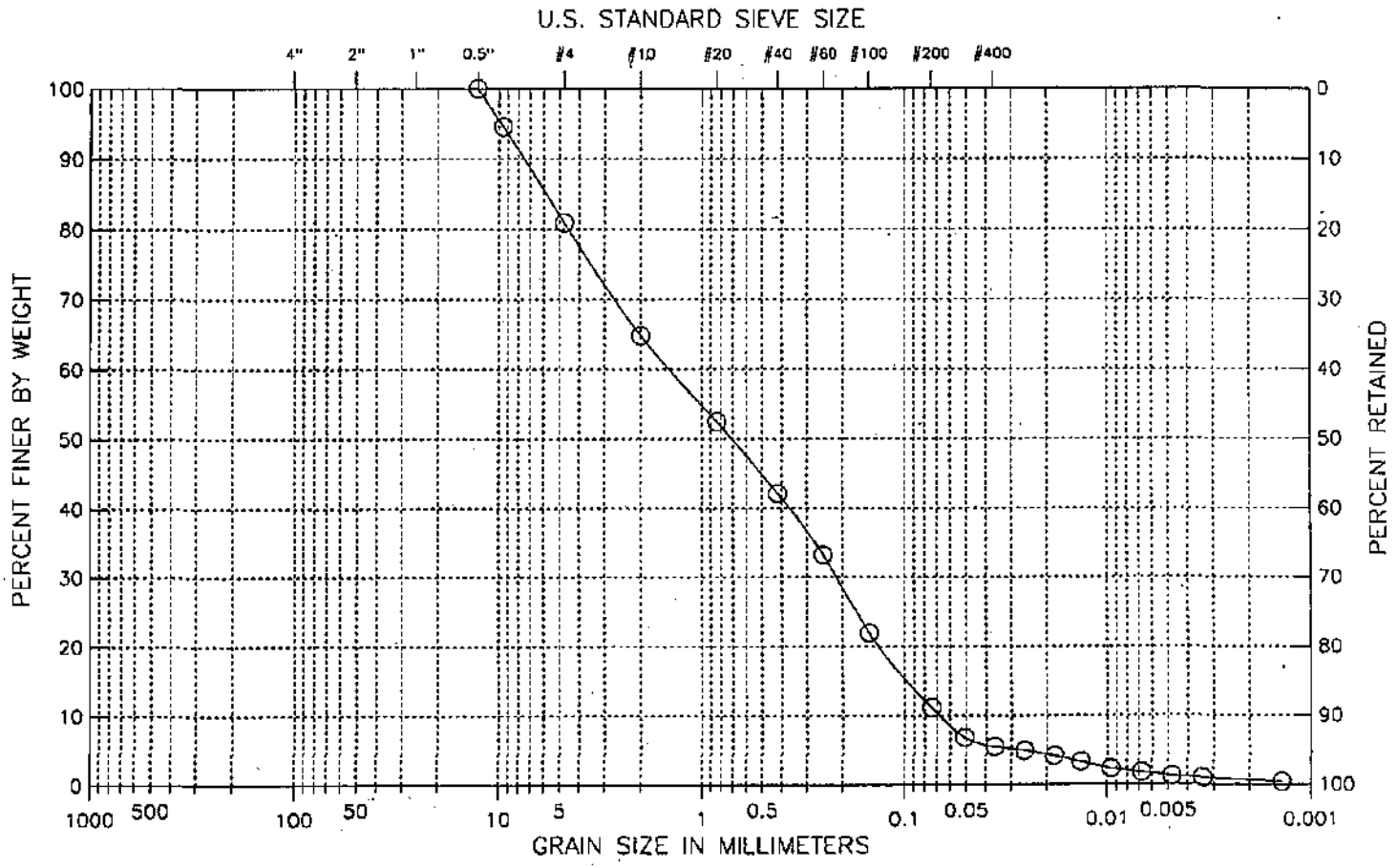
Remarks :

Visual Description :

Wet, brown sand and gravel with silt

Figure 65

	Boring No. : FD-114 Sample No.: S12 Test Method ASTM D 422 Filename : FD114S12	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Tue Mar 27 2001



Classification :

Remarks :

Visual Description :
Moist, brown sand with silt and gravel

Figure 1

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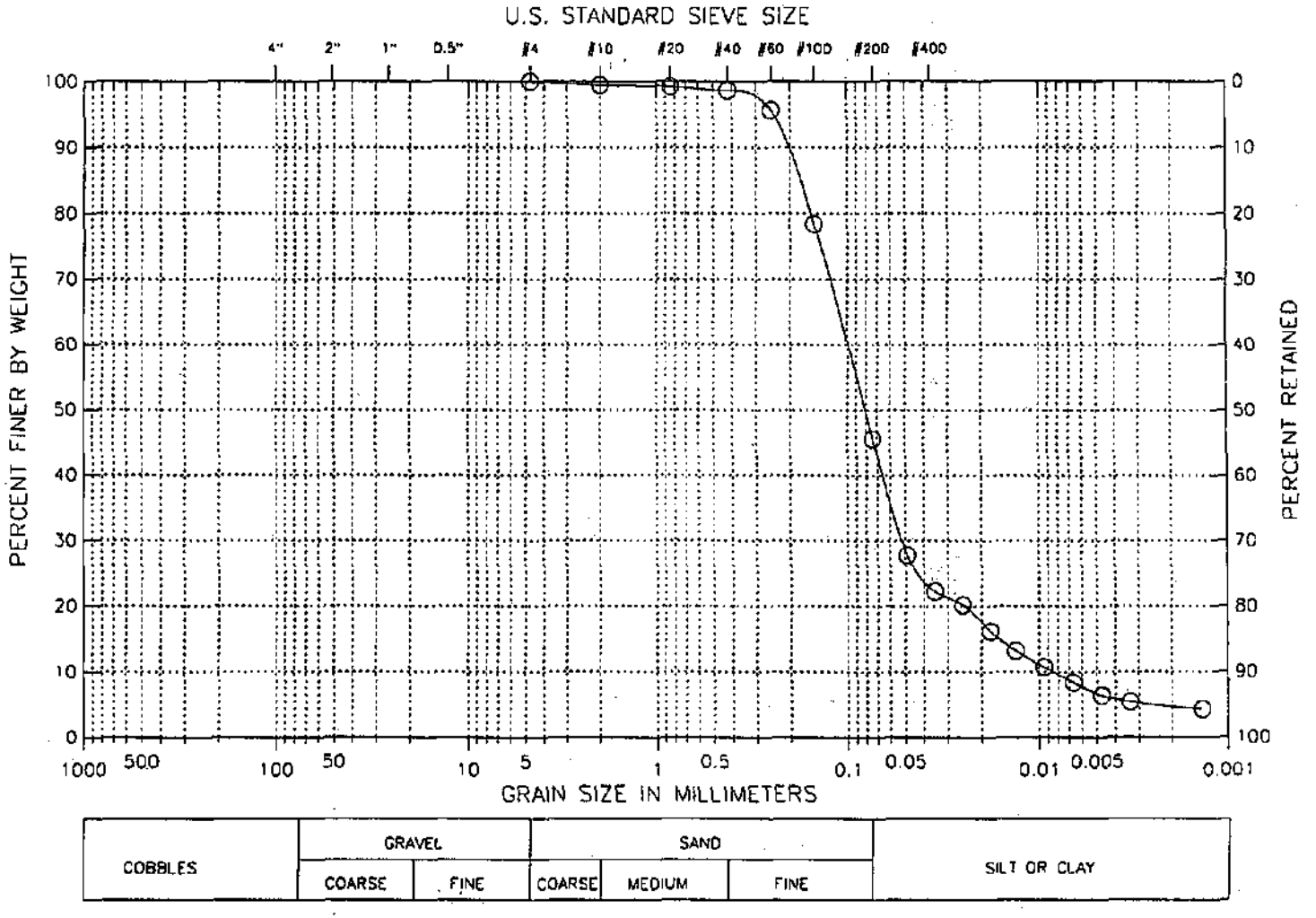
Boring No. : FD-115	Project : New Bedford Superfund Site
Sample No.: S3	Project No.: GTX-3289
Test Method ASTM D 422	Locotion: New Bedford, MA
Filename : FD115S3	Date : Mon Mar 05 2001



Classificotion :
(SM) Silty sand
Visual Description :
Moist, light brown silty sand

Remarks :

Figure 66

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ATTERBERG LIMITS

PROJECT New Bedford Superfund Site	PROJECT NUMBER GTX-3289	TESTED BY XAH	BORING NUMBER FD-115
LOCATION New Bedford, MA		CHECKED BY JDT	SAMPLE NUMBER S3
SAMPLE DESCRIPTION Moist, light brown silty sand		DATE Mon Mar 05 2001	FILENAME FD115S3

LIQUID LIMIT DETERMINATIONS					
CONTAINER NUMBER					
WT. WET SOIL + TARE					
WT. DRY SOIL + TARE					
WT. WATER					
TARE WT.					
WT. DRY SOIL					
WATER CONTENT, W_N (%)					
NUMBER OF BLOWS, N					
ONE-POINT LIQUID LIMIT, LL					
PLASTIC LIMIT DETERMINATIONS					
CONTAINER NUMBER					
WT. WET SOIL + TARE					
WT. DRY SOIL + TARE					
WT. WATER					
TARE WT.					
WT. DRY SOIL					
WATER CONTENT (%)					

Determined to be Non-plastic.

SUMMARY OF RESULTS	
NATURAL WATER CONTENT, W (%)	19.8
LIQUID LIMIT, LL	
PLASTIC LIMIT, PL	
PLASTICITY INDEX, PI	
LIQUIDITY INDEX, LI*	

*LI = (W - PL)/PI

PLASTICITY CHART

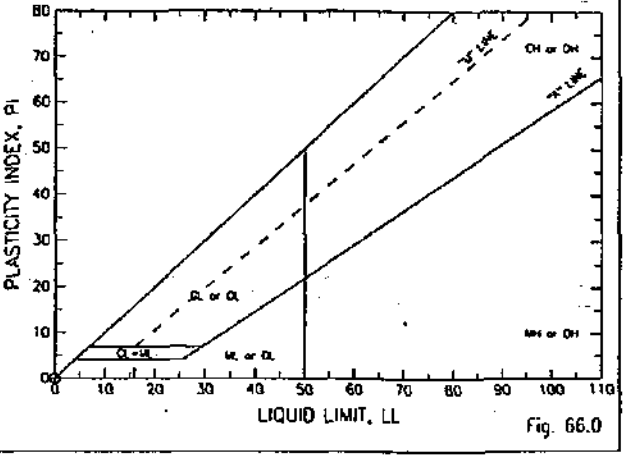

Fig. 66.0

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-1289
Boring No. : FD-115
Sample No. : S5
Location : New Bedford, MA
Soil Description : Wet, brown sand
Remarks : ---

Depth : --
Test Date : 03/02/01
Test Method : ASTM D 422

Filename : FD115S5
Elevation : ---
Tested by : HB
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
#4	0.187	4.75	0.00	0.00	100
#10	0.079	2.00	0.04	0.04	100
#20	0.033	0.84	0.09	0.13	100
#40	0.017	0.42	3.61	3.74	95
#60	0.010	0.25	24.23	27.97	60
#100	0.006	0.15	27.52	55.49	20
#200	0.003	0.07	11.69	67.18	3
Pan			2.35	69.53	0

Total Dry Weight of Sample = 196.53

D85 : 0.3640 mm
D60 : 0.2508 mm
D50 : 0.2200 mm
D30 : 0.1694 mm
D15 : 0.1200 mm
D10 : 0.0975 mm

Soil Classification
ASTM Group Symbol : SP
ASTM Group Name : Poorly graded sand
AASHTO Group Symbol : A-3(0)
AASHTO Group Name : Fine Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-115
Sample No. : S7
Location : New Bedford, MA
Soil Description : Wet, brown sand with silt
Remarks : ---

Depth : --
Test Date : 03/01/01
Test Method : ASTM D 422

Filename : FD115S7
Elevation : ---
Tested by : HB
Checked by : JDT

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.375"	0.374	9.51	0.00	0.00	100
#4	0.187	4.75	2.44	2.44	97
#10	0.079	2.00	2.00	4.44	95
#20	0.033	0.84	4.54	8.98	90
#40	0.017	0.42	14.42	23.40	73
#60	0.010	0.25	23.56	46.96	46
#100	0.006	0.15	23.48	70.44	19
#200	0.003	0.07	10.63	81.07	7
Pan			6.19	87.26	0

Total Dry Weight of Sample = 95.41

D85 : 0.6900 mm
D60 : 0.3260 mm
D50 : 0.2690 mm
D30 : 0.1831 mm
D15 : 0.1165 mm
D10 : 0.0874 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-3(0)
AASHTO Group Name : Fine Sand

GEOTECHNICAL LABORATORY TEST DATA

Project : New Bedford Superfund Site
Project No. : GTX-3289
Boring No. : FD-115
Sample No. : S9
Location : New Bedford, MA
Soil Description : Wet, brown silty sand with gravel
Remarks : ---

Filename : FD115S9
Depth : --
Test Date : 02/27/01
Test Method : ASTM D 422
Elevation : ---
Tested by : HB
Checked by : JDT

HYDROMETER

Hydrometer ID : 88-18231
Weight of air-dried soil = 57.52 gm
Specific Gravity = 2.65

Hydroscopic Moisture Content :
Weight of Wet Soil = 0 gm
Weight of Dry Soil = 0 gm
Moisture Content = 0

Elapsed Time (min)	Reading	Temperature (deg. C)	Corrected Reading	Particle Size (mm)	Percent Finer (%)	Adjusted Particle Size
1.00	18.50	20.25	12.57	0.050	16	0.050
2.00	16.00	20.25	10.07	0.036	13	0.036
4.00	13.50	20.50	7.60	0.025	10	0.025
8.00	12.00	20.25	6.07	0.018	8	0.018
15.00	10.50	20.25	4.57	0.013	6	0.013
30.00	9.75	20.50	3.85	0.009	5	0.009
60.00	8.50	20.75	2.64	0.007	3	0.007
120.00	8.00	21.00	2.17	0.005	3	0.005
240.00	7.00	21.25	1.20	0.003	2	0.003
1440.00	7.00	20.75	1.14	0.001	1	0.001

FINE SIEVE SET

Sieve Mesh	Sieve Openings Inches	Millimeters	Weight Retained (gm)	Cumulative Weight Retained (gm)	Percent Finer (%)
0.5"	0.500	12.70	0.00	0.00	100
0.375"	0.374	9.51	8.23	8.23	89
#4	0.187	4.75	4.88	13.11	83
#10	0.079	2.00	6.34	19.45	75
#20	0.033	0.84	7.36	26.81	65
#40	0.017	0.42	9.17	35.98	53
#60	0.010	0.25	8.17	44.15	43
#100	0.006	0.15	7.39	51.54	33
#200	0.003	0.07	8.09	59.63	23
Pan			17.34	76.97	0

Total Dry Weight of Sample = 85.04

D85 : 5.9340 mm
D60 : 0.6223 mm
D50 : 0.3582 mm
D30 : 0.1217 mm
D15 : 0.0431 mm
D10 : 0.0257 mm

Soil Classification
ASTM Group Symbol : N/A
ASTM Group Name : N/A
AASHTO Group Symbol : A-2-4(0)
AASHTO Group Name : Silty Gravel and Sand

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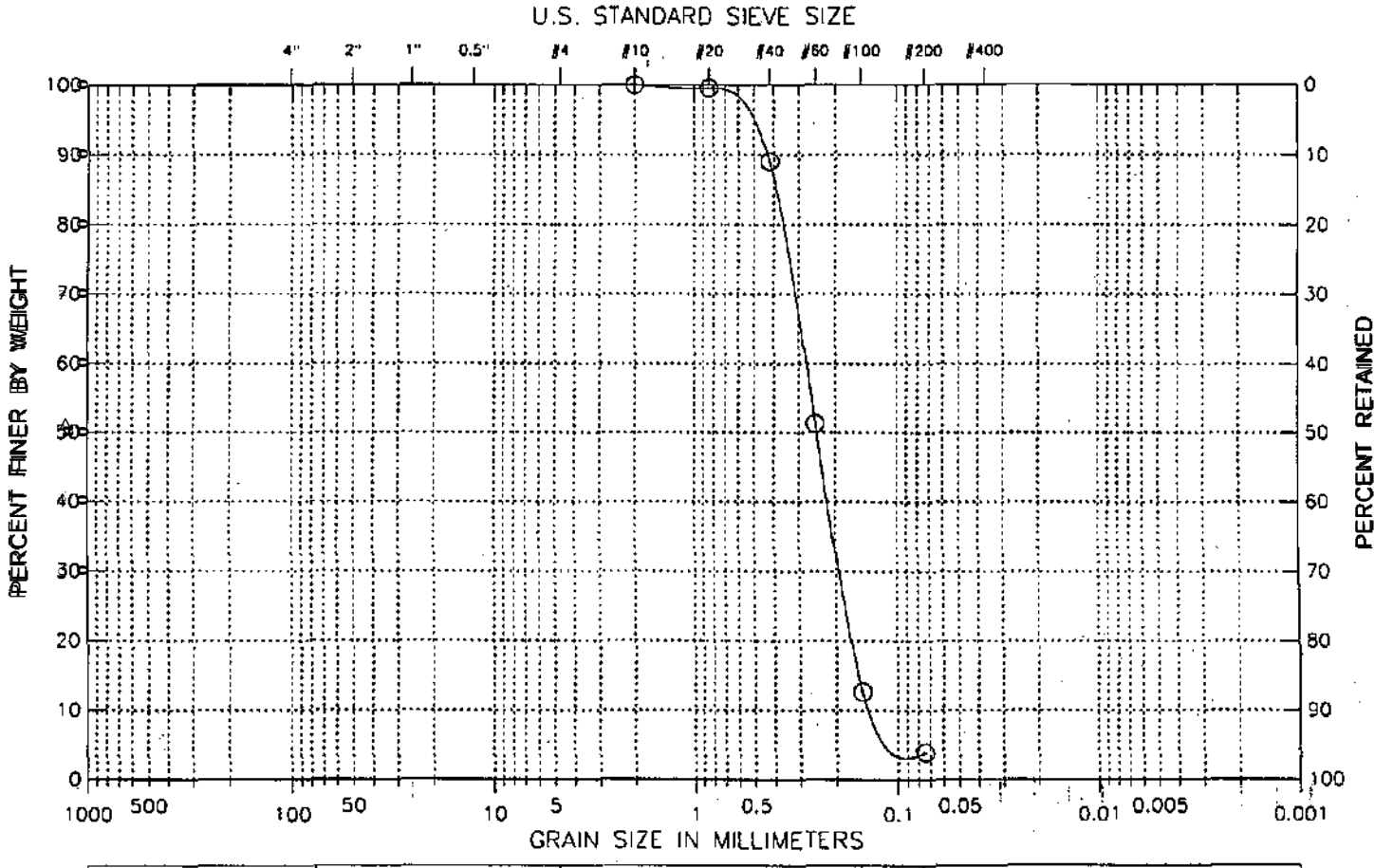
	Boring No. : FD-116 Sample No.: S6 Test Method: ASTM D 422 Filename : FD11696	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 06 2006

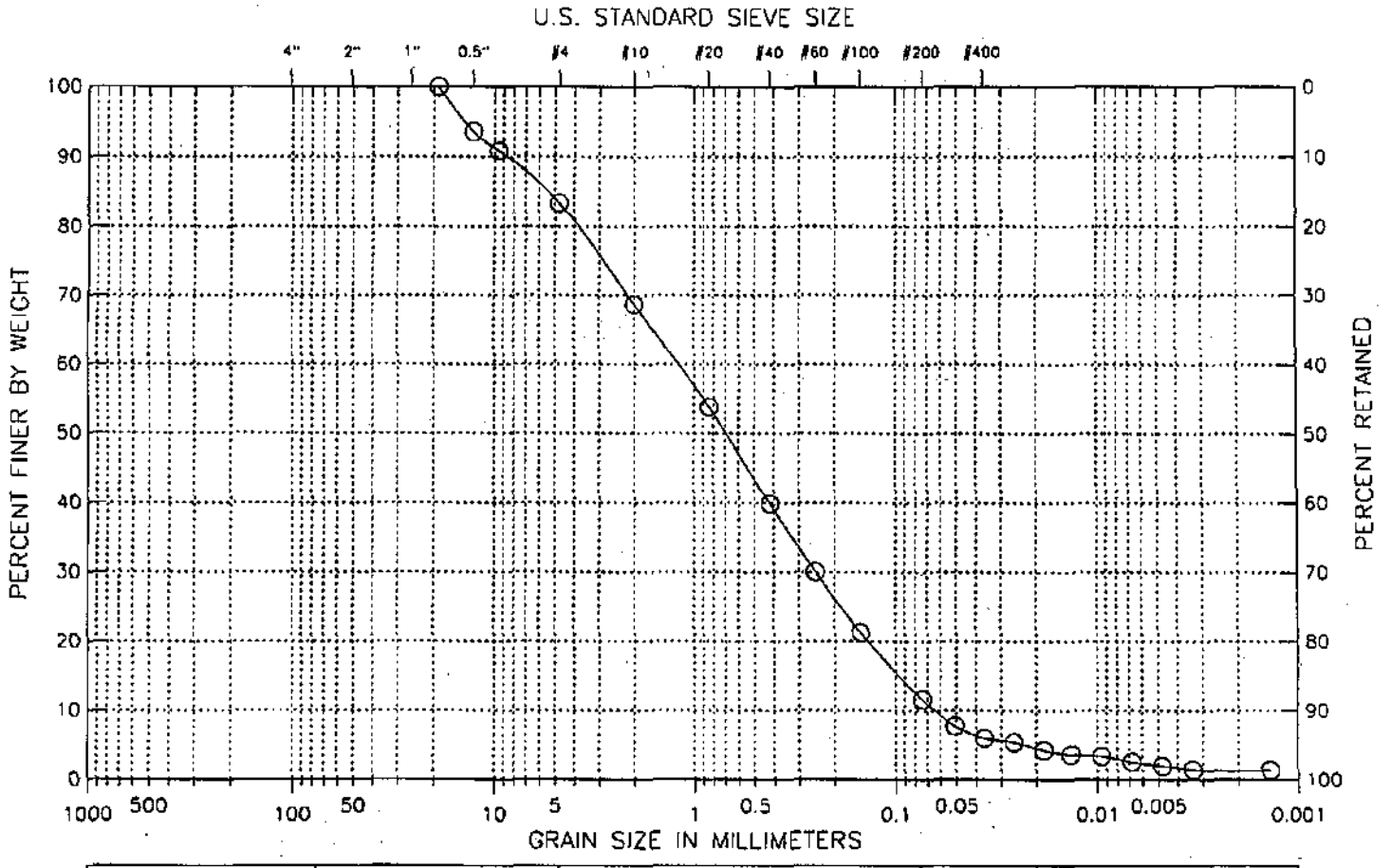


Classification :
(SP) Poorly graded sand
Visual Description :
Wet, brown sand

Remarks :

Figure 71

	Boring No. : FD-116 Sample No.: S8 Test Method ASTM D 422 Filename : FD116S8	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :

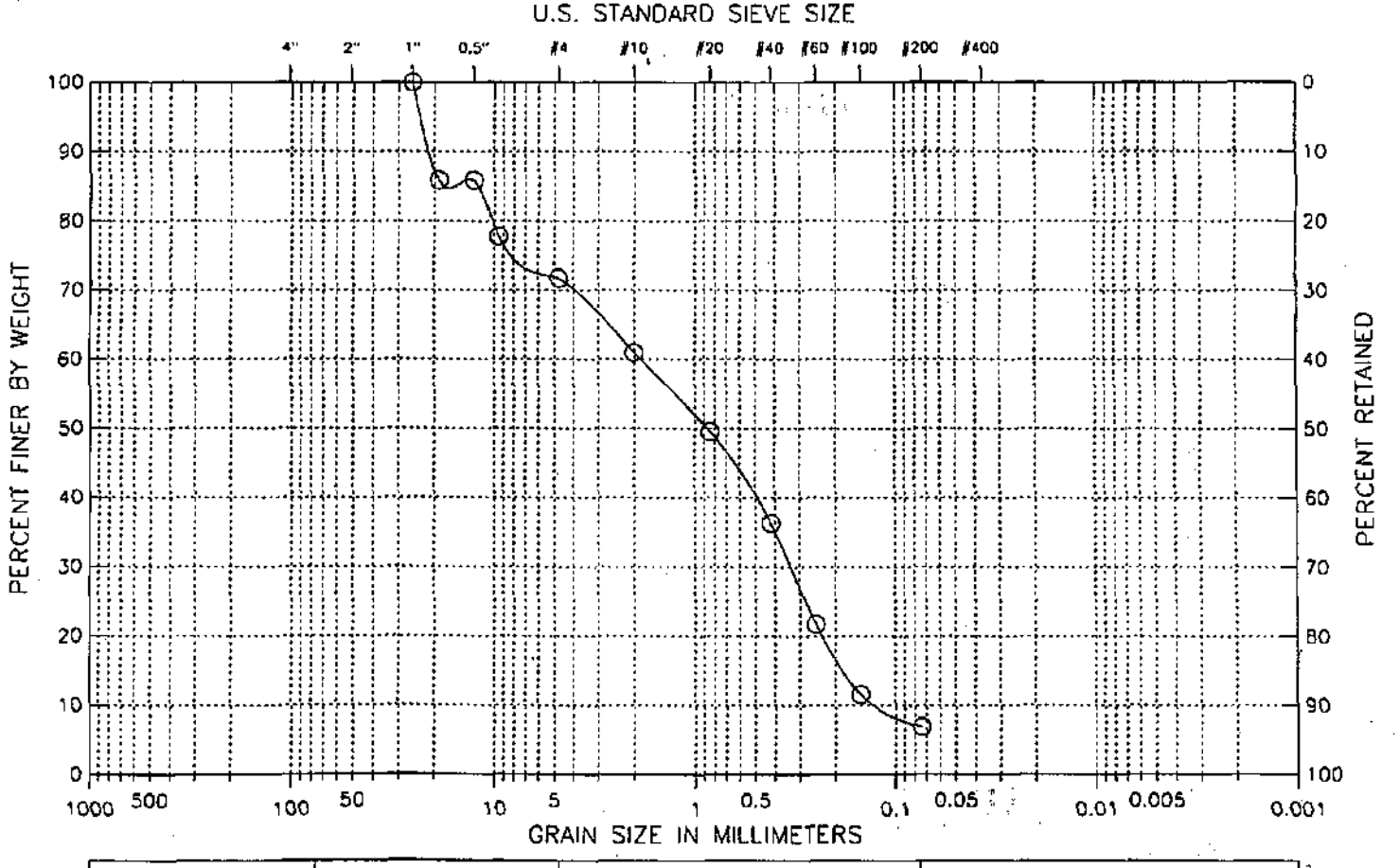
Remarks :

Visual Description :
Wet, grayish brown silty sand with gravel

Figure 72

GeoTesting Express, Inc. • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266

	Boring No. : FD-116 Sample No.: S10 Test Method ASTM D 422 Filename : FD116S10	Project : New Bedford Superfund Site Project No.: GTX-3289 Location: New Bedford, MA Date : Mon Mar 05 2001



Classification :

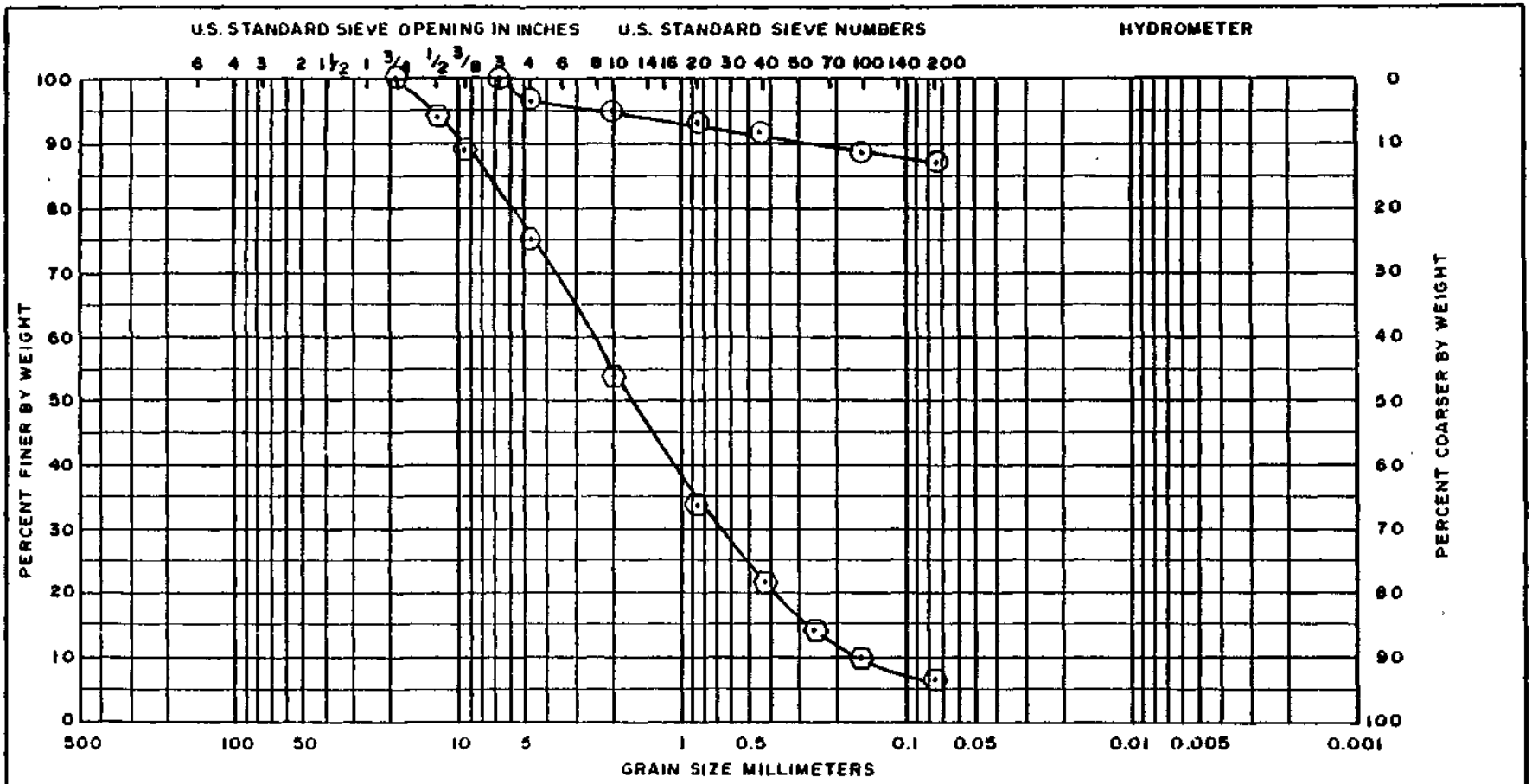
Remarks :

Visual Description :

Wet, brownish gray sand with gravel and silt

Figure 73

GeoTesting Express, Inc. • Boxborough, MA • (978) 635-0424 • Fax (978) 635-0266



COBBLES	GRAVEL		SAND			SILT	CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE		

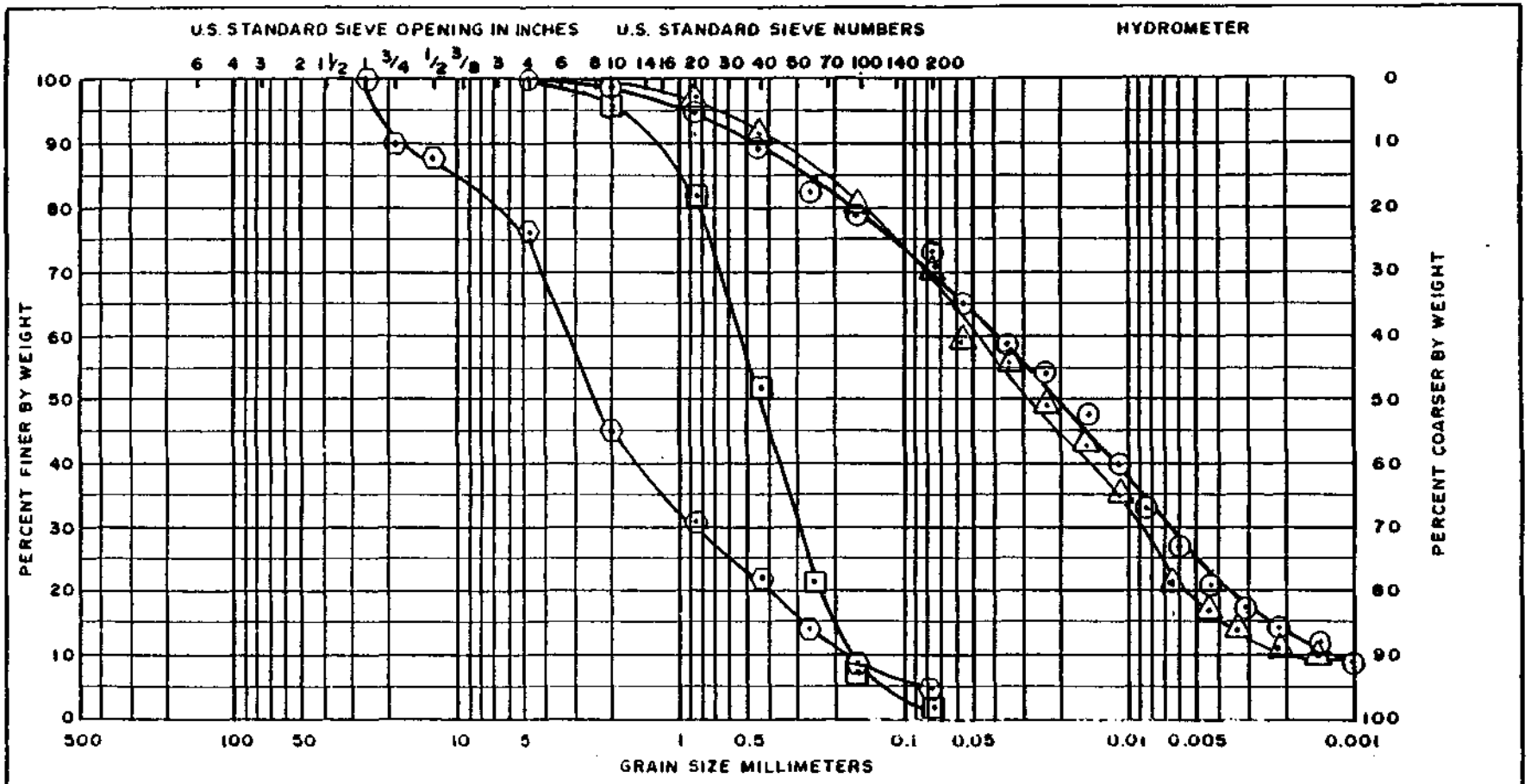
SAMPLE NO.	ELEV OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
BW109 S2	⊙ 4-6'	Gray silt, trace sand & gravel	114.9			
BW109 S7	⊙ 14-16'	SW-SM Gray sand, some gravel, trace silt	12.5			

GRAIN SIZE DISTRIBUTION CURVES

PRELIMINARY GEOTECHNICAL INVESTIGATION
NEW BEDFORD HARBOR SUPERFUND SITE

TESTED BY	CHECKED BY	PROJ NO
TS	PD	4959-19
	DATE 4-1-88	B-9

JGA 003
1 APR 82



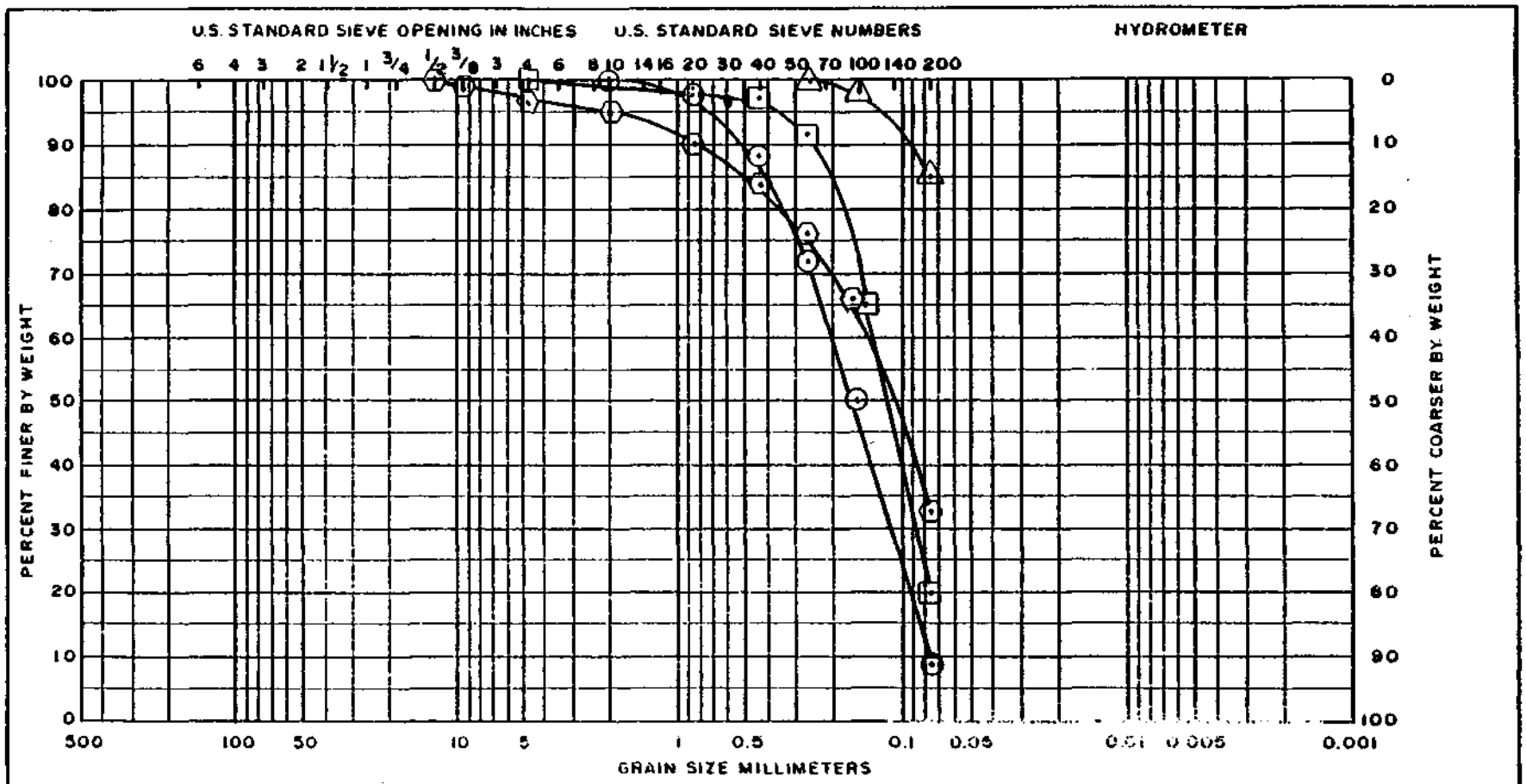
SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
BW110 S9	⊙ 34-36'	SW-SM Gray sand, some gravel, trace silt	10.9			
BW 110 C1	⊙ 2-4'	OH Gray silt, some sand	88.5	85.2	34.4	50.8
BW 110 C2	△ 6-8'	OH Gray silt, some sand	59.7	57.0	26.4	30.6
BW 110 C4	⊡ 14-16'	SP Gray sand, trace silt	14.0			

GRAIN SIZE DISTRIBUTION CURVES

PRELIMINARY GEOTECHNICAL INVESTIGATION
NEW BEDFORD HARBOR SUPERFUND SITE

TESTED BY	CHECKED BY	PROJ NO.
TS	PD	4959-19
	DATE 4-1-88	B-10

JGA 003
1 APR 82



COBBLES	GRAVEL		SAND			SILT	CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE		

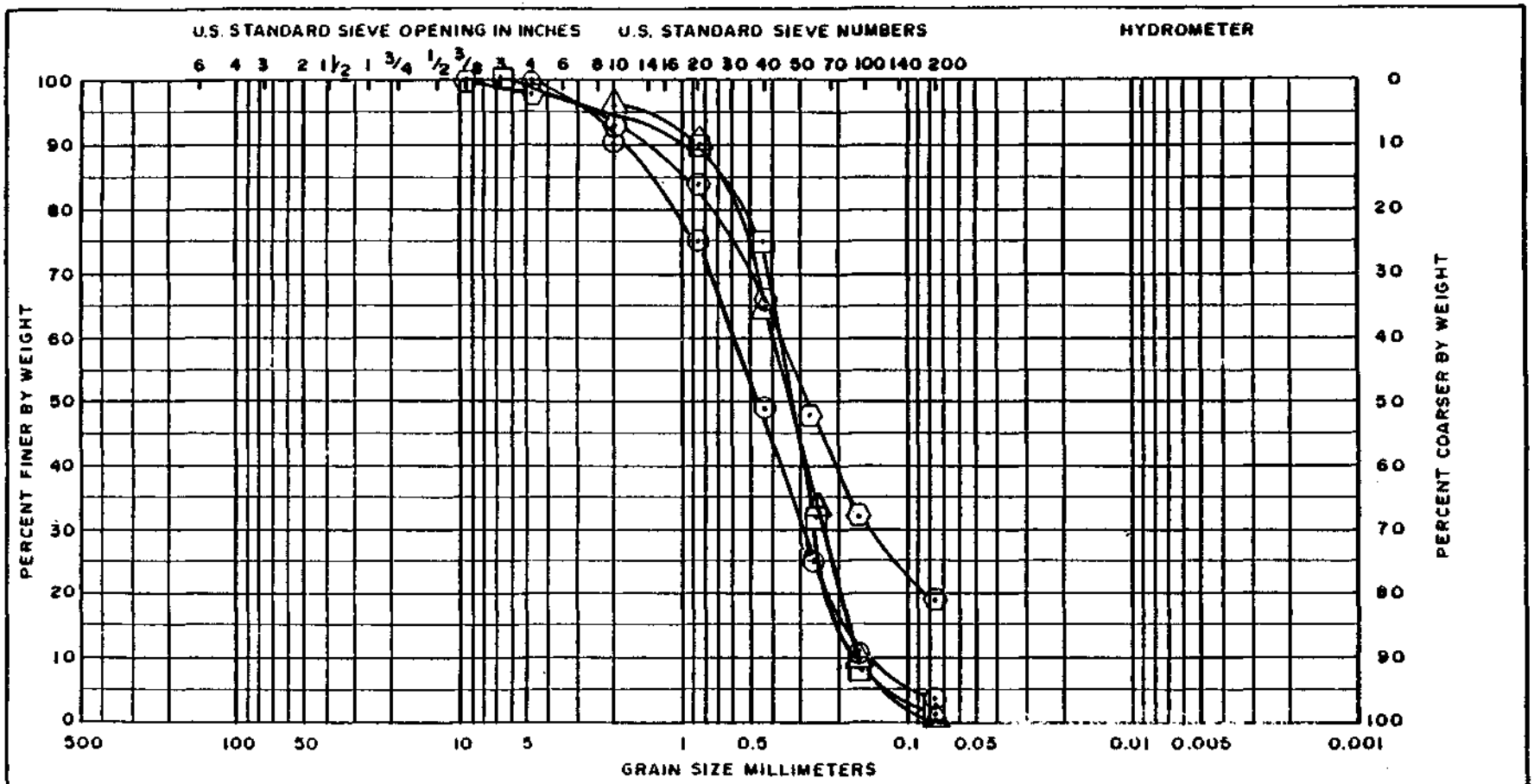
SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
BWIII S1	⊙ 2-4'	SM Brown sand, some silt, trace gravel	18.0			
BWIII S3	⊙ 6-8'	SP-SM Brown sand, trace silt	33.7			
BWIII S11	⊡ 33-35'	SM Brownish-grey sand, little silt	18.6			
BWIII S14	△ 48-50'	Grey silt, little sand	29.6			

GRAIN SIZE DISTRIBUTION CURVES

PRELIMINARY GEOTECHNICAL INVESTIGATION
NEW BEDFORD HARBOR SUPERFUND SITE

TESTED BY	CHECKED BY	PROJ. NO
TS	PD	4959-19
	DATE 4-1-88	B-11

JGA 003
1 APR 82



COBBLES	GRAVEL		SAND			SILT	CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE		

SAMPLE NO.	ELEV. OR DEPTH	CLASSIFICATION	NAT W%	LL	PL	PI
BW 112 S1	⊙ 2-4'	SM Gray sand, little silt, trace gravel	38.0			
BW 112 S3	⊙ 6-8'	SP Brown sand, trace silt	22.6			
BW 112 S8	□ 19-21'	SP Brown sand, trace gravel + silt	17.9			
BW 112 S10	△ 28-30'	SP Grayish brown sand, trace gravel & silt	17.6			

GRAIN SIZE DISTRIBUTION CURVES

PRELIMINARY GEOTECHNICAL INVESTIGATION
NEW BEDFORD HARBOR SUPERFUND SITE

TESTED BY	CHECKED BY	PROJ NO
TS	PD	4959-19
	DATE 4-1-88	B-12

JGA 003
1 APR 82

PROJECT	COMP. BY	JOB NO.
NEW BEDFORD GEOTECHNICAL	TS	4959-19
BW 110 C1 2-4'	CHK. BY: PD	DATE: 3-22-88

ATTERBERG LIMITS

WATER CONTENT (W_n)

DETERMINATION NO.			1
TARE NO.			170
WT. IN GRAMS	TARE PLUS WET SOIL		39.1
	TARE PLUS DRY SOIL		28.93
	WATER	W_w	10.2
	TARE		17.5
	DRY SOIL	W_s	11.4
WATER CONTENT, %		W	89.0

PLASTIC LIMIT (W_p)

1	
158	118
205	22.2
19.77	21.27
0.7	0.9
17.7	18.5
2.1	2.8
35.3	33.6

AVG = 34.4

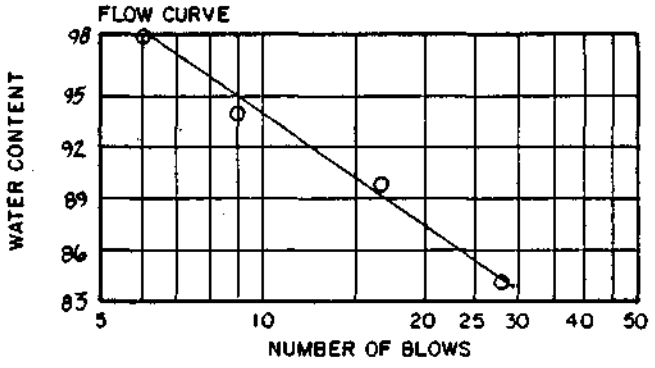
LIQUID LIMIT (W_l)

DETERMINATION NO.			1	2	3	4	5
NO. OF BLOWS			28	17	9	6	
TARE NO.			131	103	134	167	
WT. IN GRAMS	TARE PLUS WET SOIL		25.32	24.3	27.3	27.3	
	TARE PLUS DRY SOIL		21.4	20.07	22.7	22.35	
	WATER	W_w	3.9	4.2	4.6	5.0	
	TARE		16.73	15.35	17.8	17.3	
	DRY SOIL	W_s	4.7	4.7	4.9	5.1	
WATER CONTENT, %		W	83.9	89.6	93.9	98.0	

RESULT SUMMARY

NATURAL WATER CONTENT	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
89.0	85.2	34.4	50.8

REMARKS _____



E.C. JORDAN CO. ENGINEERS & SCIENTISTS

PROJECT	COMP. BY	JOB NO.
NEW BEDFORD GEOTECHNICAL	RS	4959-19
BW110 C2 6-8'	CHK. BY: PD	DATE: 3-22-88

ATTERBERG LIMITS

WATER CONTENT (W_n)

DETERMINATION NO.		1
TARE NO.		151
WT. IN GRAMS: TARE PLUS WET SOIL		47.3*
WT. IN GRAMS: TARE PLUS DRY SOIL		35.03
WT. IN GRAMS: WATER	W_w	12.3
WT. IN GRAMS: TARE		17.2*
WT. IN GRAMS: DRY SOIL	W_s	17.8
WATER CONTENT, %	W	68.8

PLASTIC LIMIT (W_p)

1	
113	156
23.55	22.05
22.63	21.0
0.9	1.1
19.15	17.0*
3.5	4.0
26.4	26.3

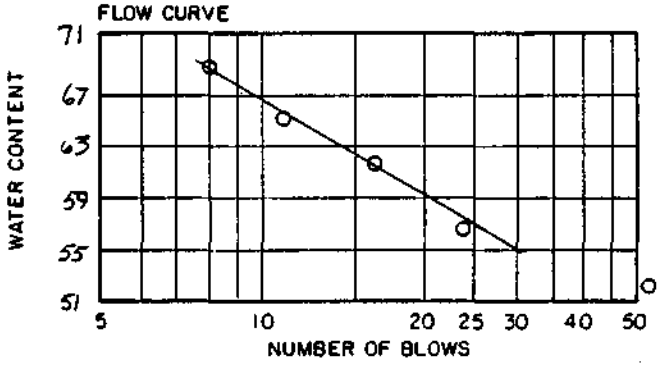
LIQUID LIMIT (W_l)

DETERMINATION NO.		1	2	3	4	5
NO. OF BLOWS		16	11	8	55	24
TARE NO.		155	171	109	135	152
WT. IN GRAMS: TARE PLUS WET SOIL		30.13	29.0	27.9	25.83	29.0
WT. IN GRAMS: TARE PLUS DRY SOIL		25.27	24.1	22.93	23.1	25.0*
WT. IN GRAMS: WATER	W_w	4.9	4.9	5.0	2.7	4.0
WT. IN GRAMS: TARE		17.37	16.55	15.75	17.83	18.0
WT. IN GRAMS: DRY SOIL	W_s	7.9	7.6	7.2	5.3	7.0
WATER CONTENT, %	W	61.5	64.9	69.2	51.8	57.1

RESULT SUMMARY

NATURAL WATER CONTENT	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
68.8	57.0	26.4	30.6

REMARKS _____



E.C. JORDAN CO. ENGINEERS & SCIENTISTS