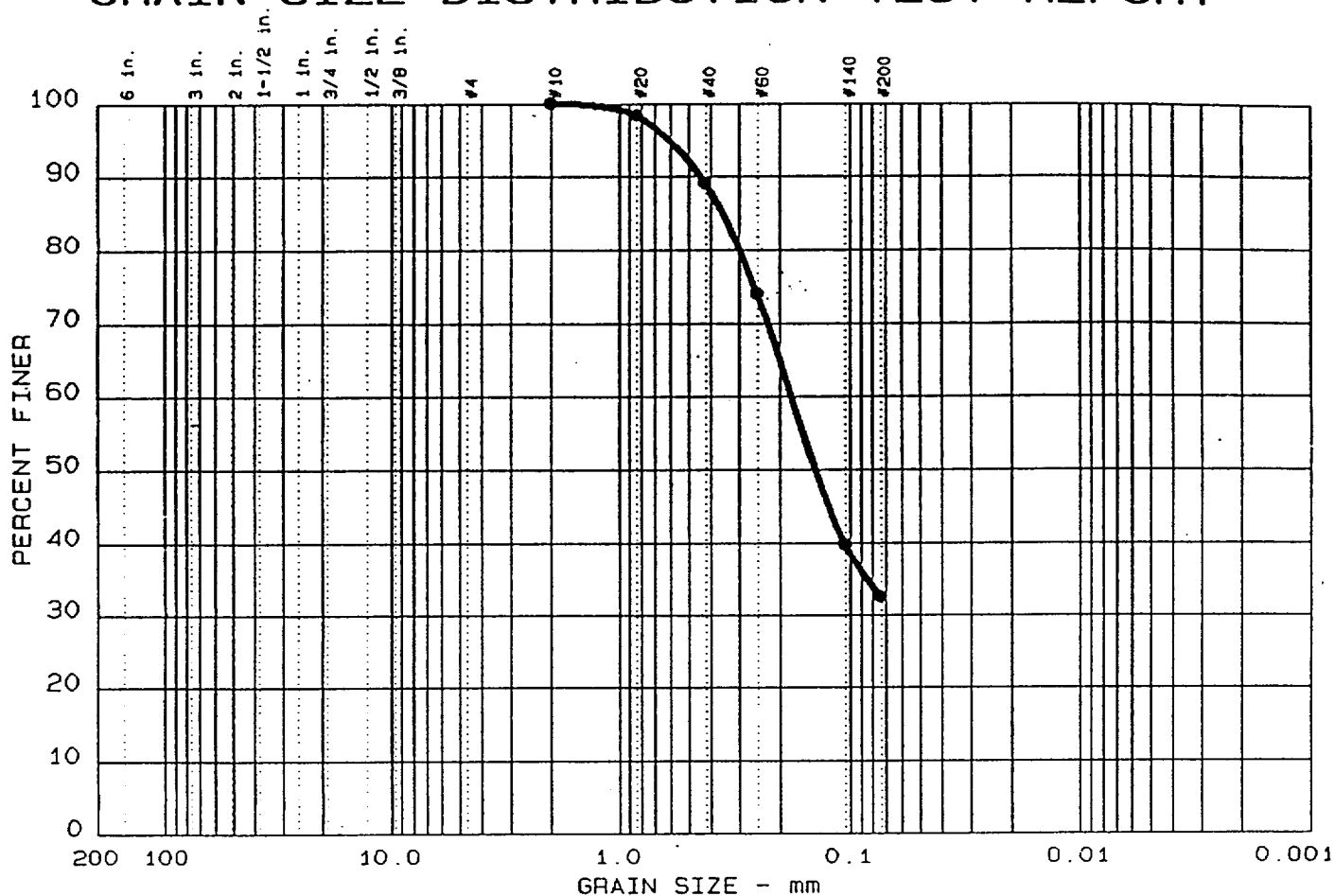


GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 1	0.0	0.0	67.5	32.5	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.35	0.18	0.14					

MATERIAL DESCRIPTION	USCS	AASHTO
• Reddish Brown Silty Sand		

Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: FB-1 SS-7 @ 16 Ft.

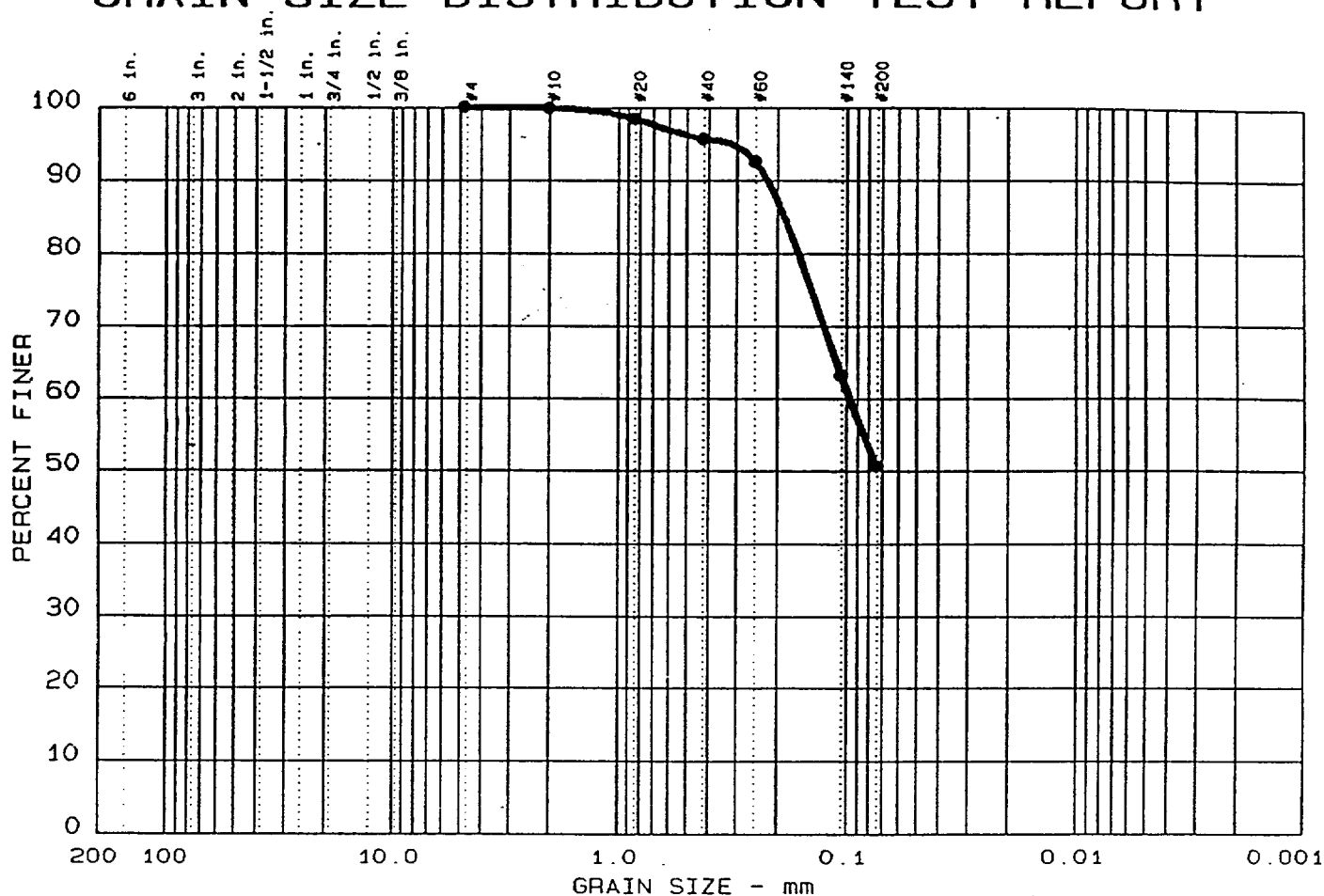
Remarks:
 Tested by: HES
 Reviewed by: RLB

Date: November 3, 1995

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 2	0.0	0.0	49.4	50.6	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.19	0.10						

MATERIAL DESCRIPTION	USCS	AASHTO
• Reddish Brown & Tan Sandy Silt		

Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: FB-1 SS-10 @ 20 Ft.

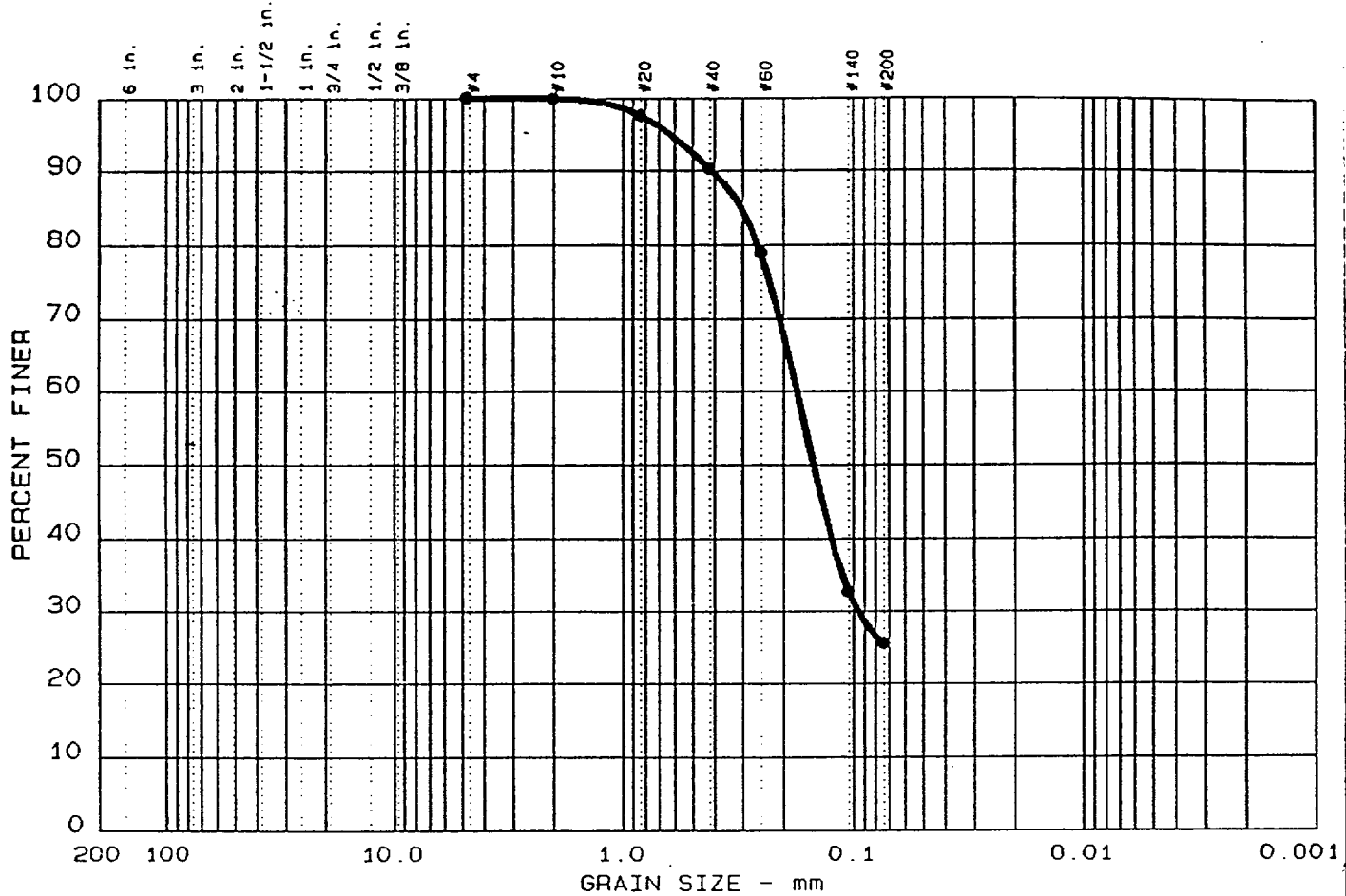
Date: November 3, 1995

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:
 Tested by: *HES*
 Reviewed by: *RUS*

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 7	0.0	0.0	74.4	25.6	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.30	0.17	0.15	0.096				

MATERIAL DESCRIPTION	USCS	AASHTO
• Purplish-Brown Silty Sand		

Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: FB-1 SS-13 @ 25 Ft.

Date: November 3, 1995

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:
 Tested by: *HES*
 Reviewed by: *RLB*

Figure No.

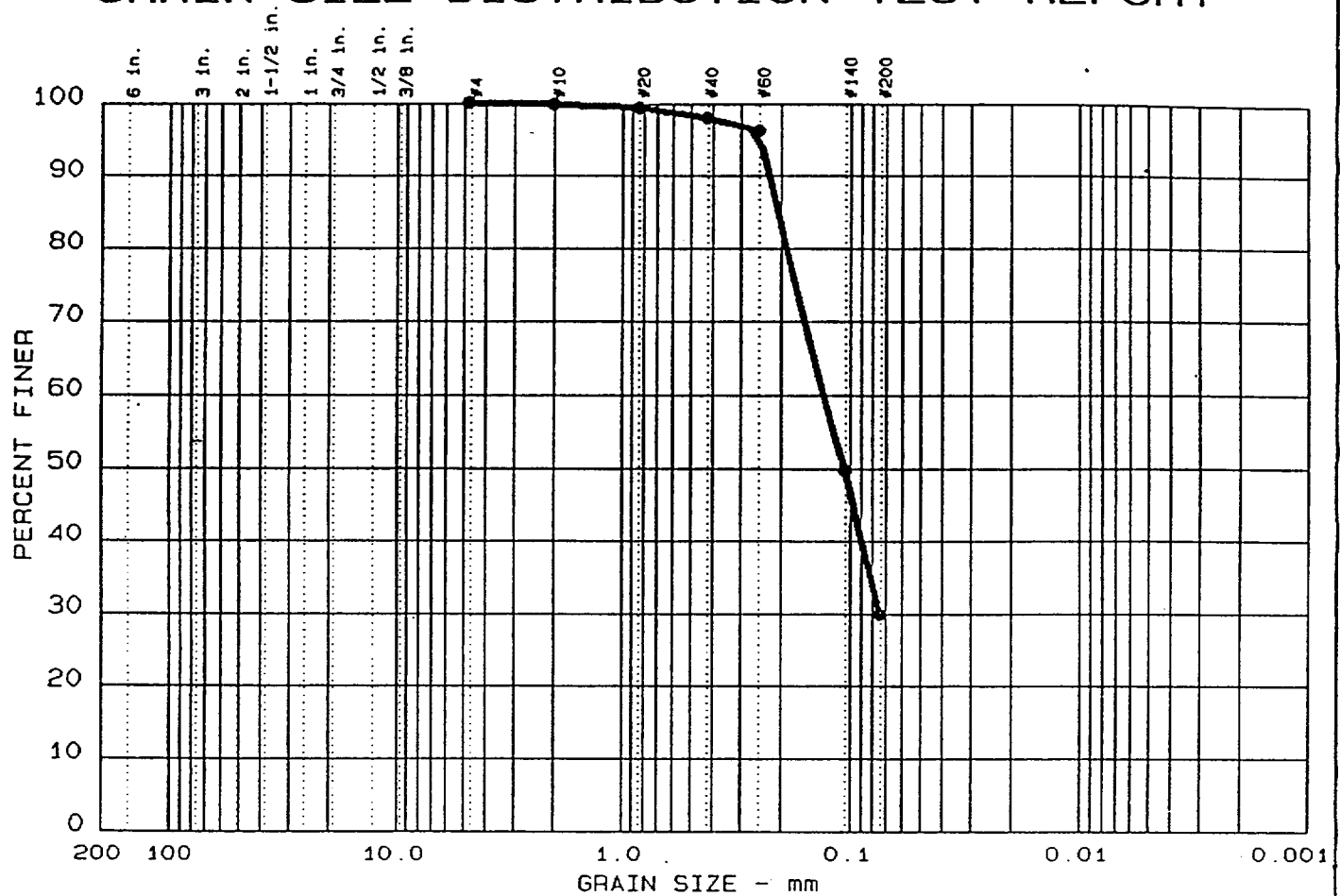
Grain size distribution curve for a sample of sand. The graph plots Percent Finer (0 to 100) against Grain Size in mm (200 to 0.001). The curve shows that approximately 91% of the sand is finer than 0.6 mm, and about 25% is finer than 0.075 mm.

Grain Size (mm)	Percent Finer (%)
200	100
100	100
60	100
40	100
20	98
10	97
6	91
4	88
2	37
1	28
0.6	25
0.425	25
0.3	25
0.25	25
0.2	25
0.15	25
0.125	25
0.1	25
0.075	25
0.06	25
0.05	25
0.04	25
0.03	25
0.025	25
0.02	25
0.015	25
0.0125	25
0.01	25
0.0075	25
0.006	25
0.005	25
0.004	25
0.003	25
0.0025	25
0.002	25
0.0015	25
0.00125	25
0.001	25

[illegible]

Project No.: 50161-5-5756 Project: Savannah River Site Task 12 ◆ Location: FB-1 SS-15 @ 28 Ft.	Remarks: Tested by: <i>HEJ</i> Reviewed by: <i>RLB</i>
Date: November 3, 1995	
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	
	Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 11	0.0	0.0	70.2	29.8	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.21	0.13	0.11					

MATERIAL DESCRIPTION	USCS	AASHTO
• Light Brown Silty Sand		

Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: FB-1 SS-17 @ 31 Ft.

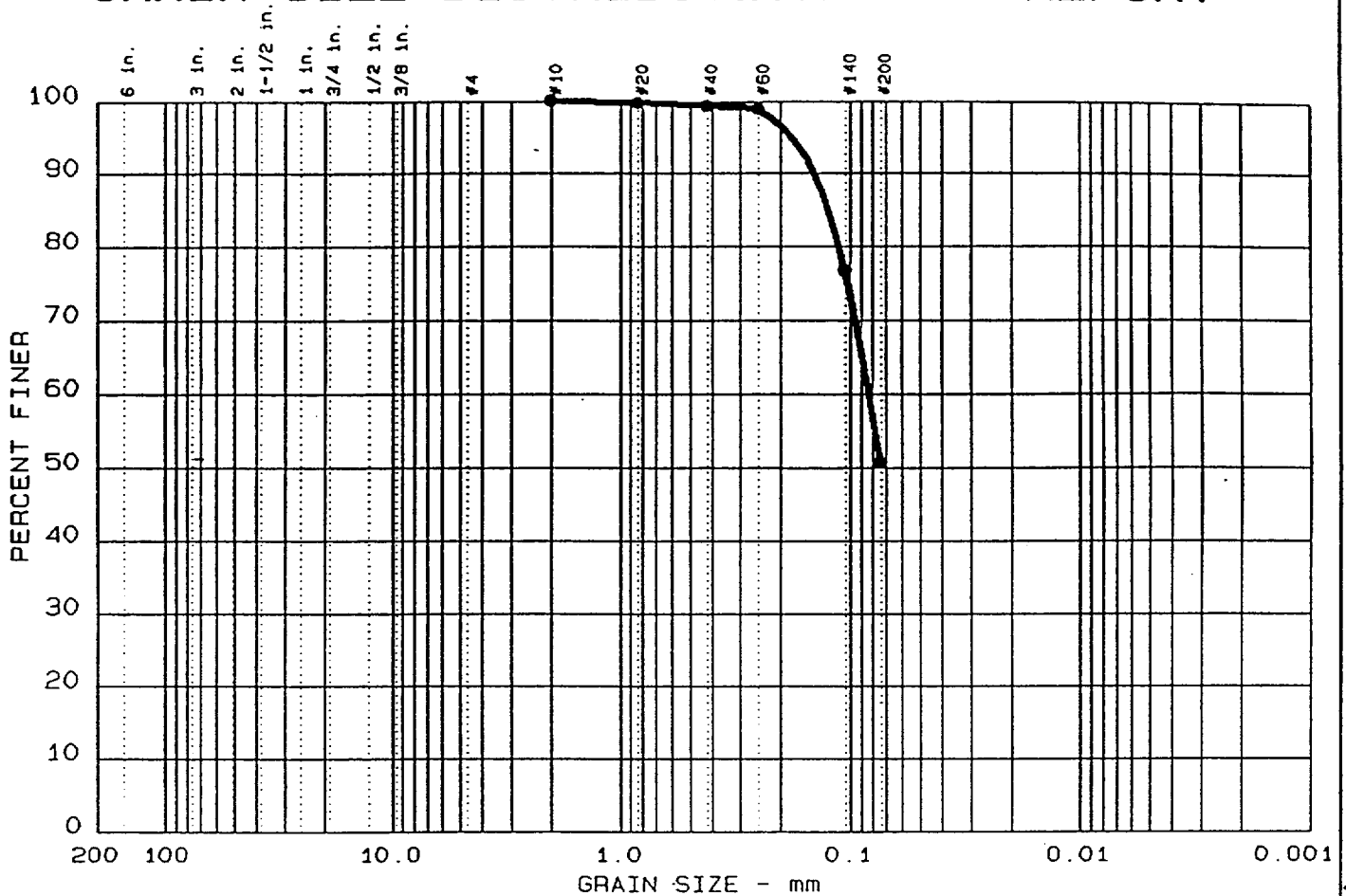
Date: November 3, 1995

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:
 Tested by: *HES*
 Reviewed by: *RLB*

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



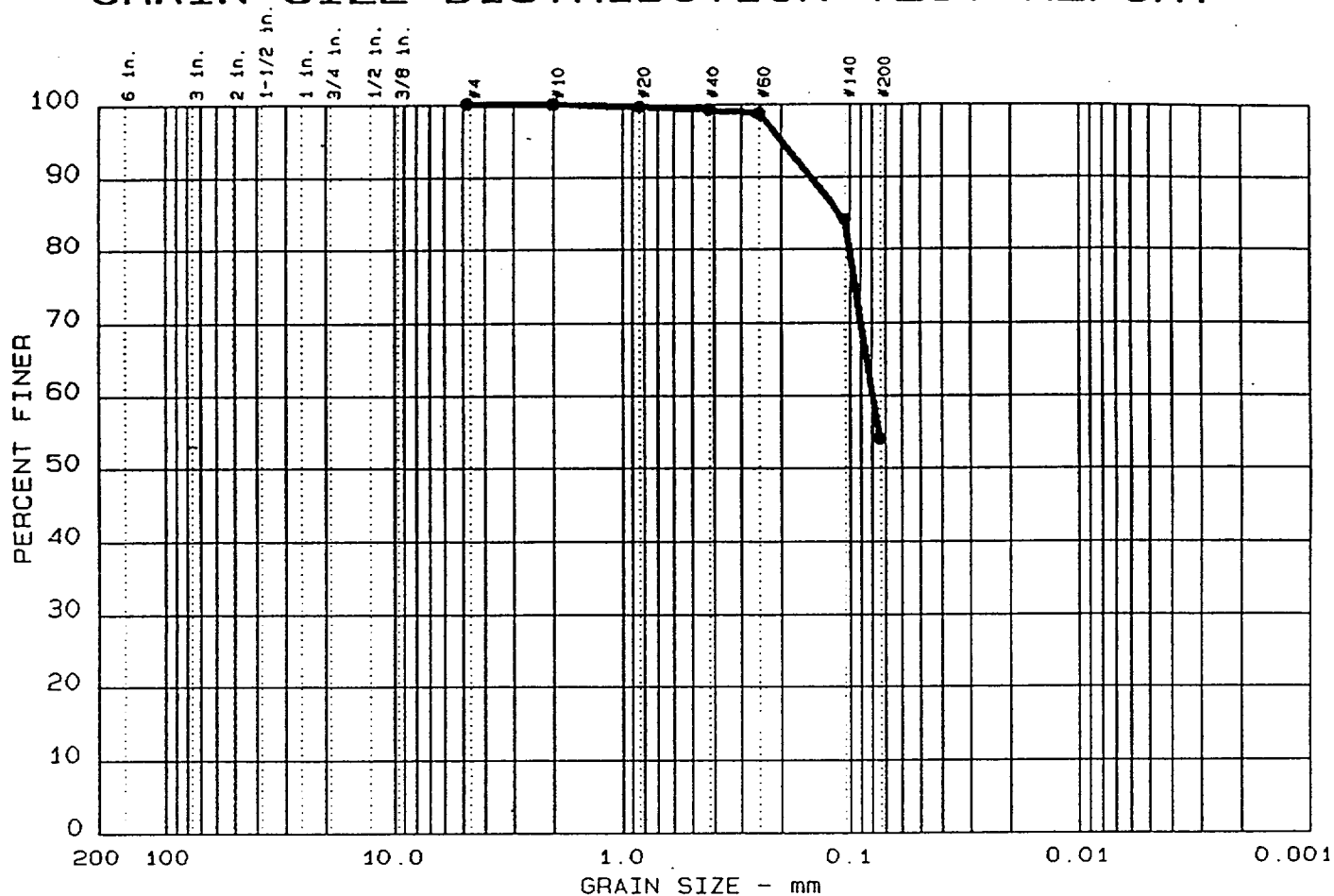
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 6	0.0	0.0	49.2	50.8	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.12	0.08	0.075					

MATERIAL DESCRIPTION	USCS	AASHTO
• Red Brown Sandy Silt		

Project No.: 50161-5-5756 Project: Savannah River Site Task 12 • Location: FB-1 SS-18 @ 32 Ft. Date: November 3, 1995	Remarks: Tested by: HET Reviewed by: RLB
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



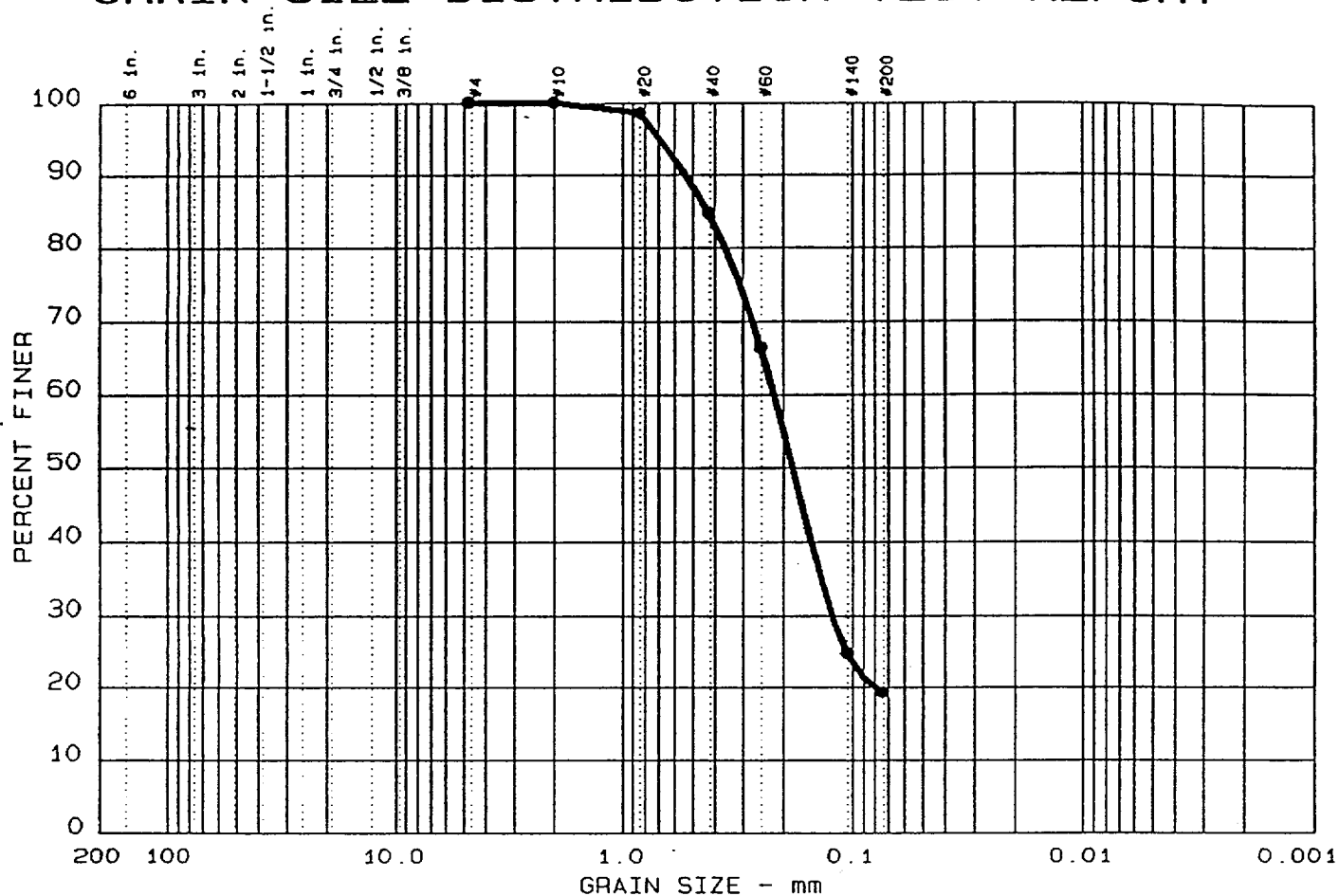
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• B	0.0	0.0	46.0	54.0	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.11	0.08						

MATERIAL DESCRIPTION	USCS	AASHTO
• Purple & Brown Sandy Silt		

Project No.: 50161-5-5756 Project: Savannah River Site Task 12 • Location: FB-1 SS-19 @ 34 Ft. Date: November 3, 1995	Remarks: Tested by: HES Reviewed by: RLB
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	
Figure No.	

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 10	0.0	0.0	80.6	19.4	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.42	0.22	0.18	0.122				

MATERIAL DESCRIPTION	USCS	AASHTO
• Red Brown Silty Sand		

Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: FB-1 SS-24 @ 41 Ft.

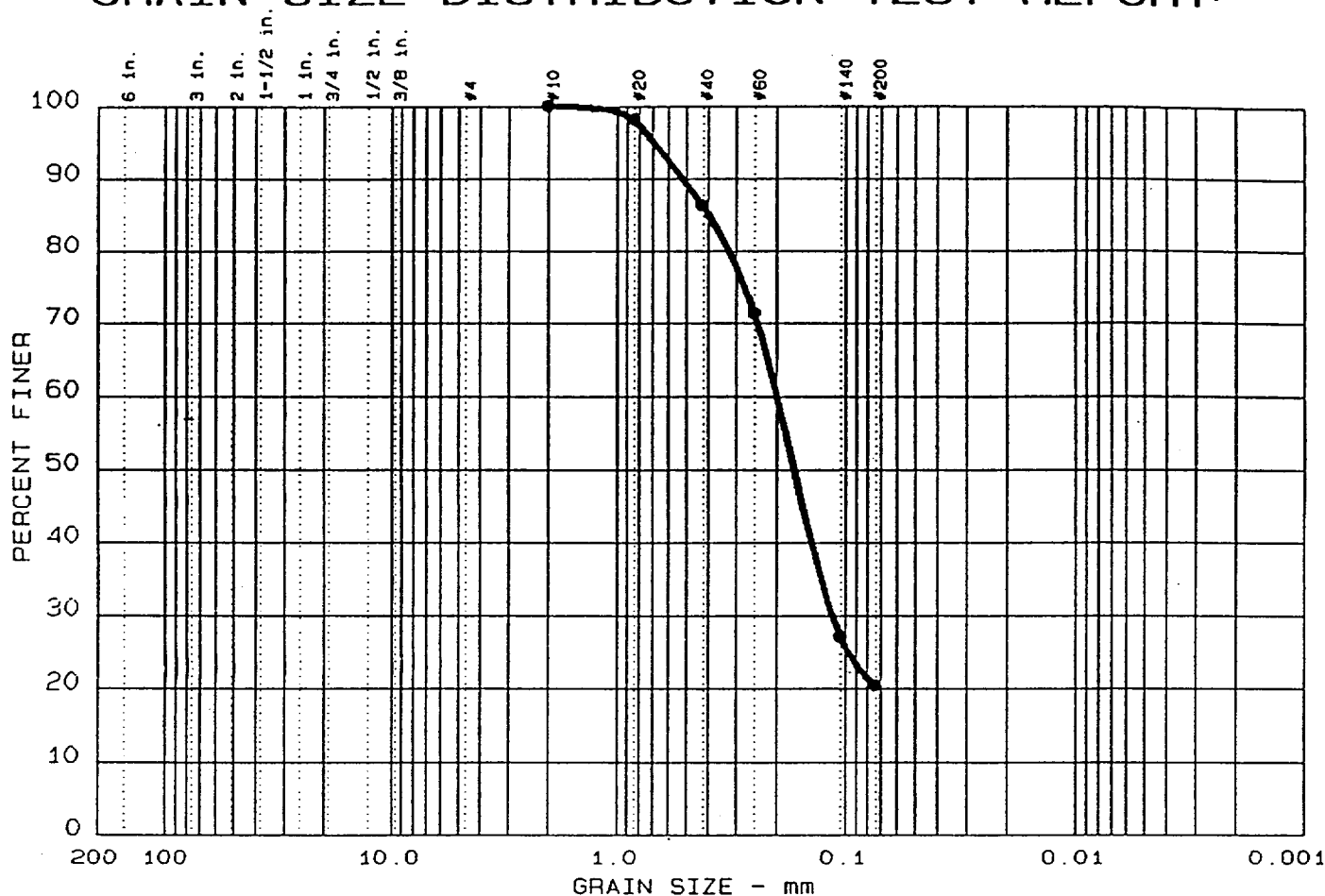
Date: November 3, 1995

Remarks:
 Tested by: HES
 Reviewed by: RLB

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT.



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 3	0.0	0.0	79.5	20.5	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.39	0.20	0.17	0.114				

MATERIAL DESCRIPTION	USCS	AASHTO
• Red Brown Silty Sand		

Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: FB-1 SS-27 @ 46 Ft.
 Date: November 3, 1995

Remarks:
 Tested by: HES
 Reviewed by: RLB

GRAIN SIZE DISTRIBUTION TEST REPORT
 LAW ENGINEERING, INC.

Figure No.

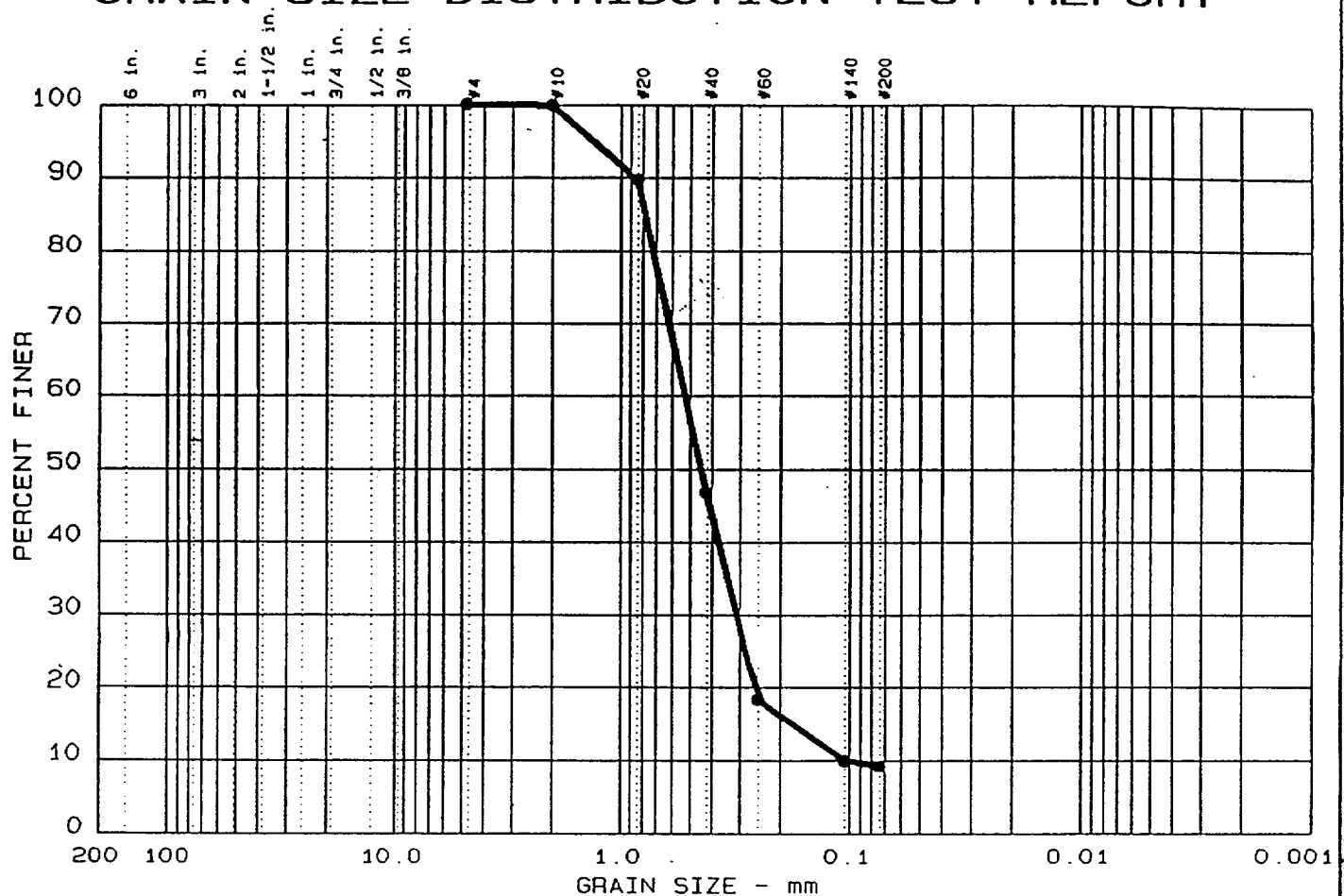
Grain size distribution curve for a soil sample. The graph plots Percent Finer (Y-axis, 0 to 100) against Grain Size in mm (X-axis, logarithmic scale from 200 to 0.001). The curve shows a sharp drop between 0.425 mm and 0.075 mm, indicating a well-graded soil. Key data points are marked: 100% finer at 4.75 mm, 76% finer at 0.425 mm, 38% finer at 0.25 mm, and 14% finer at 0.075 mm.

Grain Size (mm)	Percent Finer (%)
4.75	100
2.0	100
0.85	98
0.425	76
0.25	38
0.15	20
0.075	14

[illegible]

Project No.: 50161-5-5756 Project: Savannah River Site Task 12 ● Location: FB-1 SS-31 @ 52 Ft.	Remarks: Tested by: <i>HES</i> Reviewed by: <i>RLB</i>
Date: November 3, 1995	
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	
	Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 13	0.0	0.0	90.8	9.2	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.78	0.52	0.44	0.309	0.1758	0.1035	1.77	5.0

MATERIAL DESCRIPTION	USCS	AASHTO
• Red Brown Silty Sand		

Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: FB-1 SS-35 @ 58 Ft.

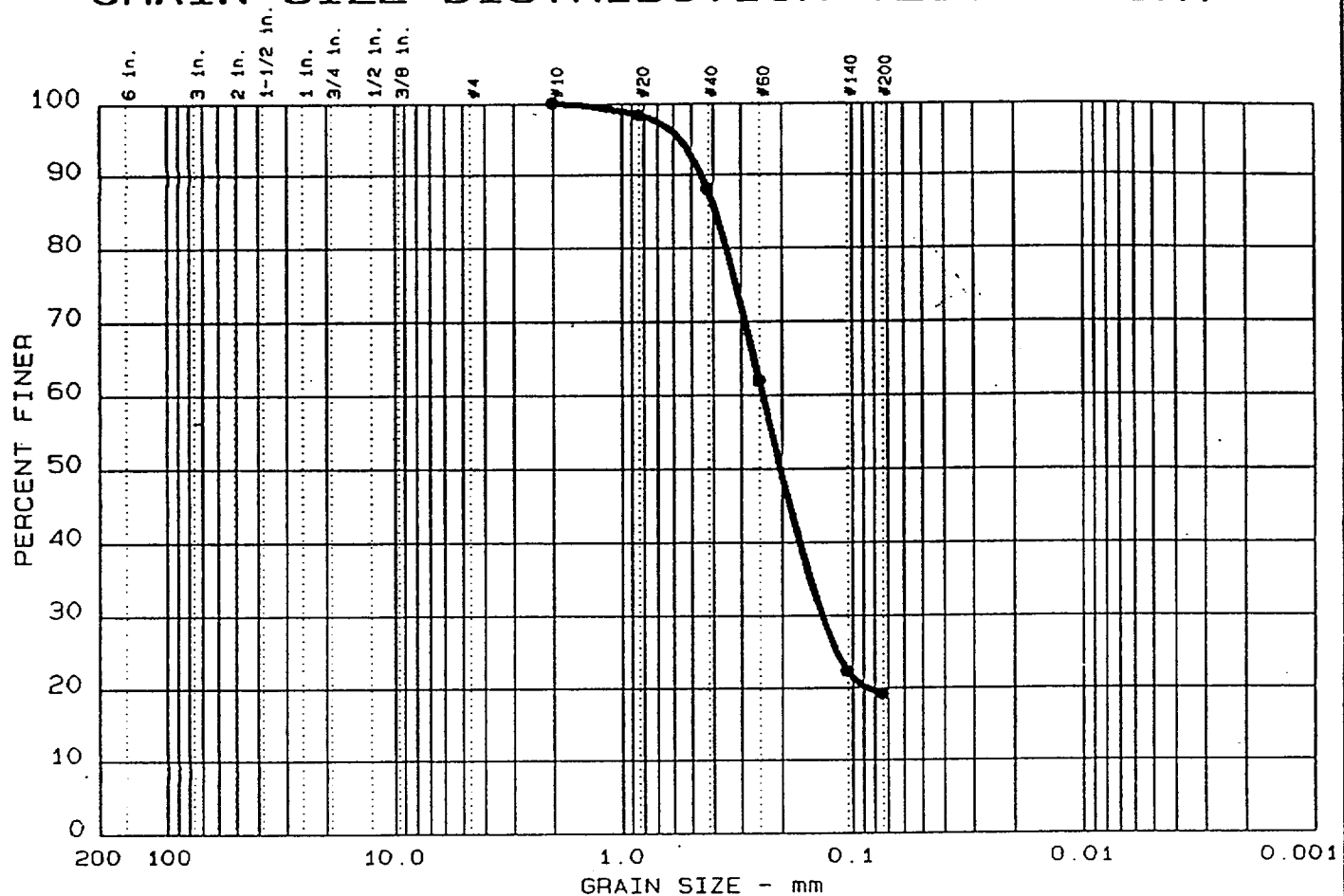
Date: November 3, 1995

Remarks:
 Tested by: *HES*
 Reviewed by: *RLB*

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 5	0.0	0.0	80.8	19.2	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.39	0.24	0.20	0.135				

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan-Brown Silty Sand		

Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: FB-1 SS-34 @ 56 Ft.

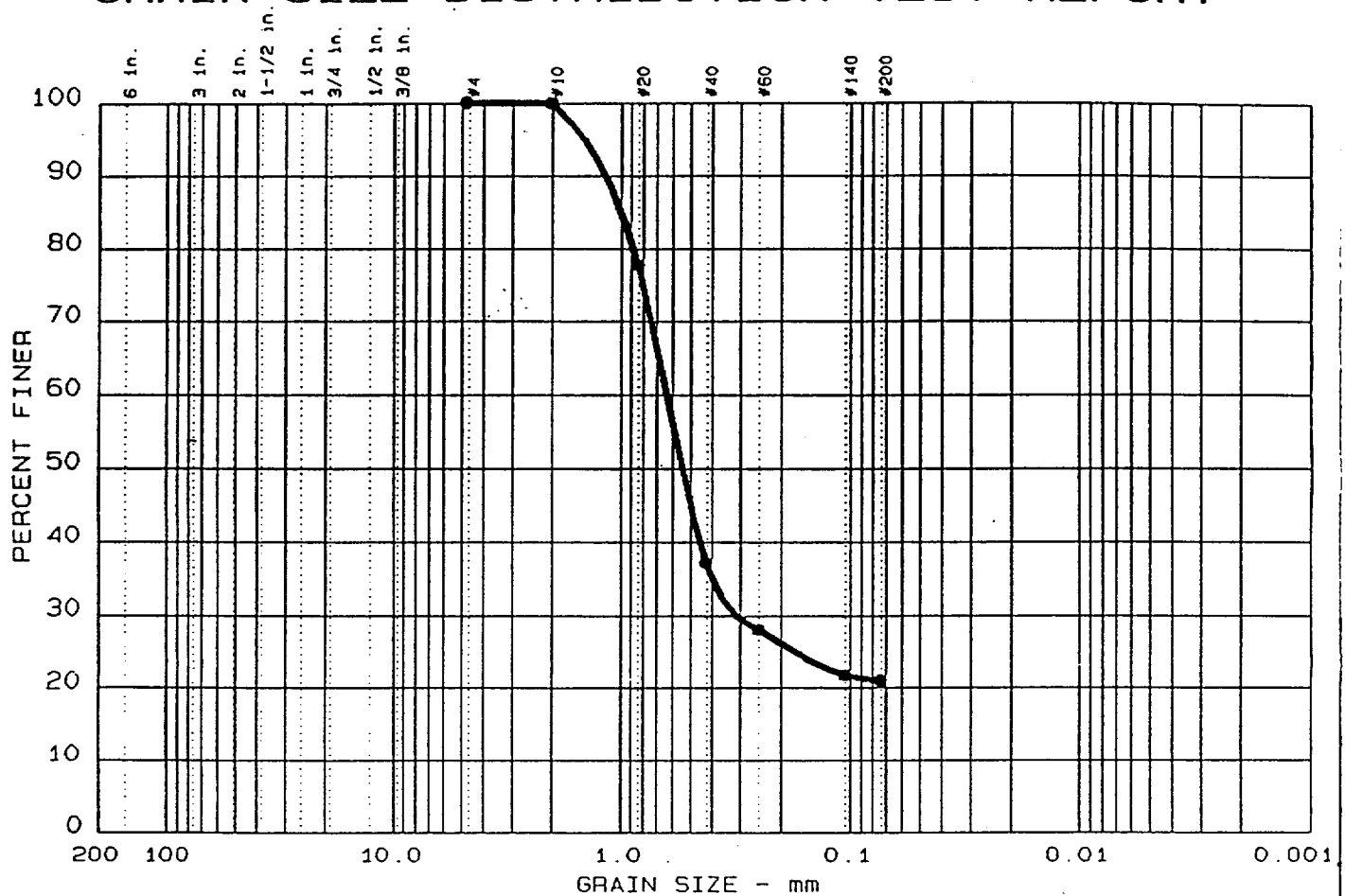
Date: November 3, 1995

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:
 Tested by: *HES*
 Reviewed by: *RUB*

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 11	0.0	0.0	79.0	21.0	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.99	0.63	0.54	0.310				

MATERIAL DESCRIPTION	USCS	AASHTO
• Brown Silty Sand		

Project No.: 50161-5-5756

Project: Savannah River Site Task 12

• Location: FB-1 SS-39 @ 64 Ft.

Date: November 3, 1995

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

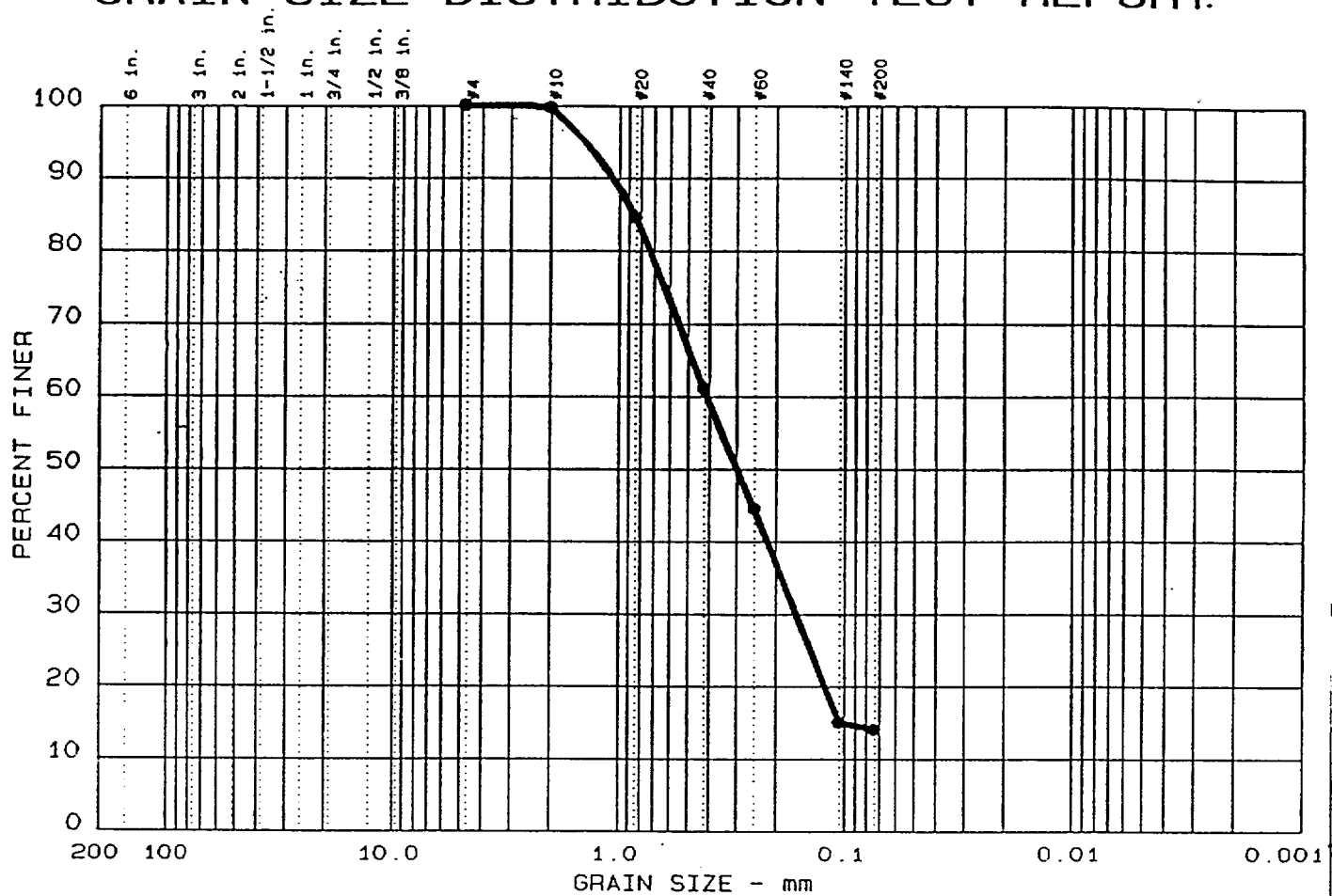
Remarks:

Tested by: *HES*

Reviewed by: *RLB*

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT.



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 12	0.0	0.0	85.9	14.1	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.85	0.41	0.30	0.163	0.0993			

MATERIAL DESCRIPTION	USCS	AASHTO
• Yellow-Tan Silty Sand		

Project No.: 50161-5-5756 Project: Savannah River Site Task 12 • Location: FB-1 SS-42 @ 68 Ft. Date: November 3, 1995	Remarks: Tested by: <i>HET</i> Reviewed by: <i>RLB</i> Figure No.
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	

Grain size distribution curve for Test No. 101. The graph plots Percent Finer (0-100) against Grain Size in mm (log scale, 200 to 0.001). The curve shows a well-graded material with a maximum grain size of approximately 4.75 mm and a minimum of 0.075 mm.

Grain Size (mm)	Percent Finer (%)
4.75 (#4)	100
2.0 (#10)	98
0.85 (#20)	82
0.425 (#40)	70
0.25 (#60)	42
0.15 (#100)	14
0.075 (#200)	12

[illegible]

Project No.: 50161-5-5756
Project: Savannah River Site Task 12
● Location: FB-1 SS-44 @ 71 Ft.

Date: November 3, 1995

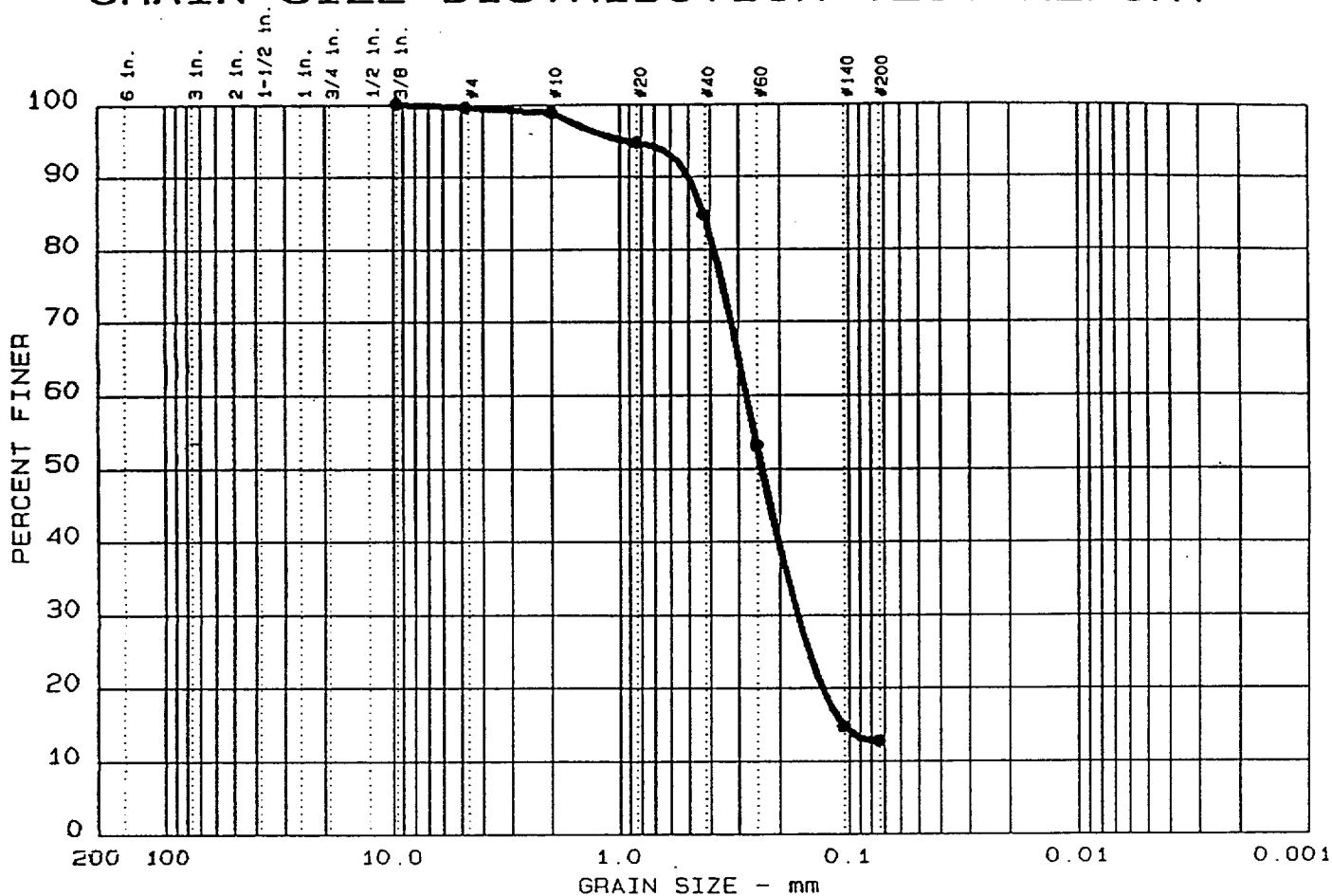
Remarks:

Tested by: *HEJ*

Reviewed by: *RLB*

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 14	0.0	0.5	86.7	12.8	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.42	0.28	0.24	0.167	0.1052			

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Silty Sand		

Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: Fb-1 SS-48 @ 77 Ft.

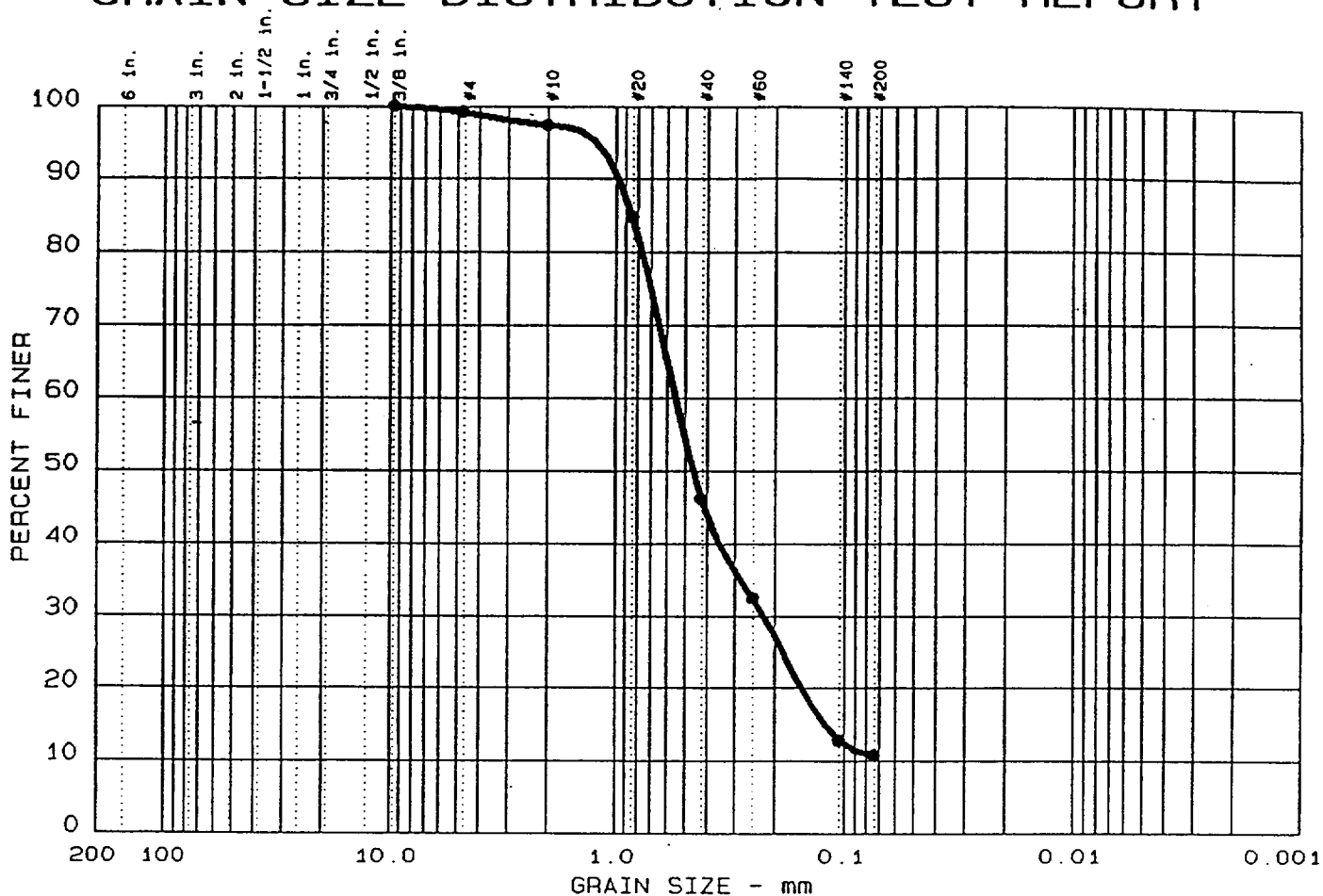
Date: November 3, 1995

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:
 Tested by: *HES*
 Reviewed by: *RLB*

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 17	0.0	0.8	88.4	10.8	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.84	0.54	0.46	0.225	0.1209			

MATERIAL DESCRIPTION	USCS	AASHTO
• Brown Silty Sand		

Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: FB-1 SS-52 @ 83 Ft.

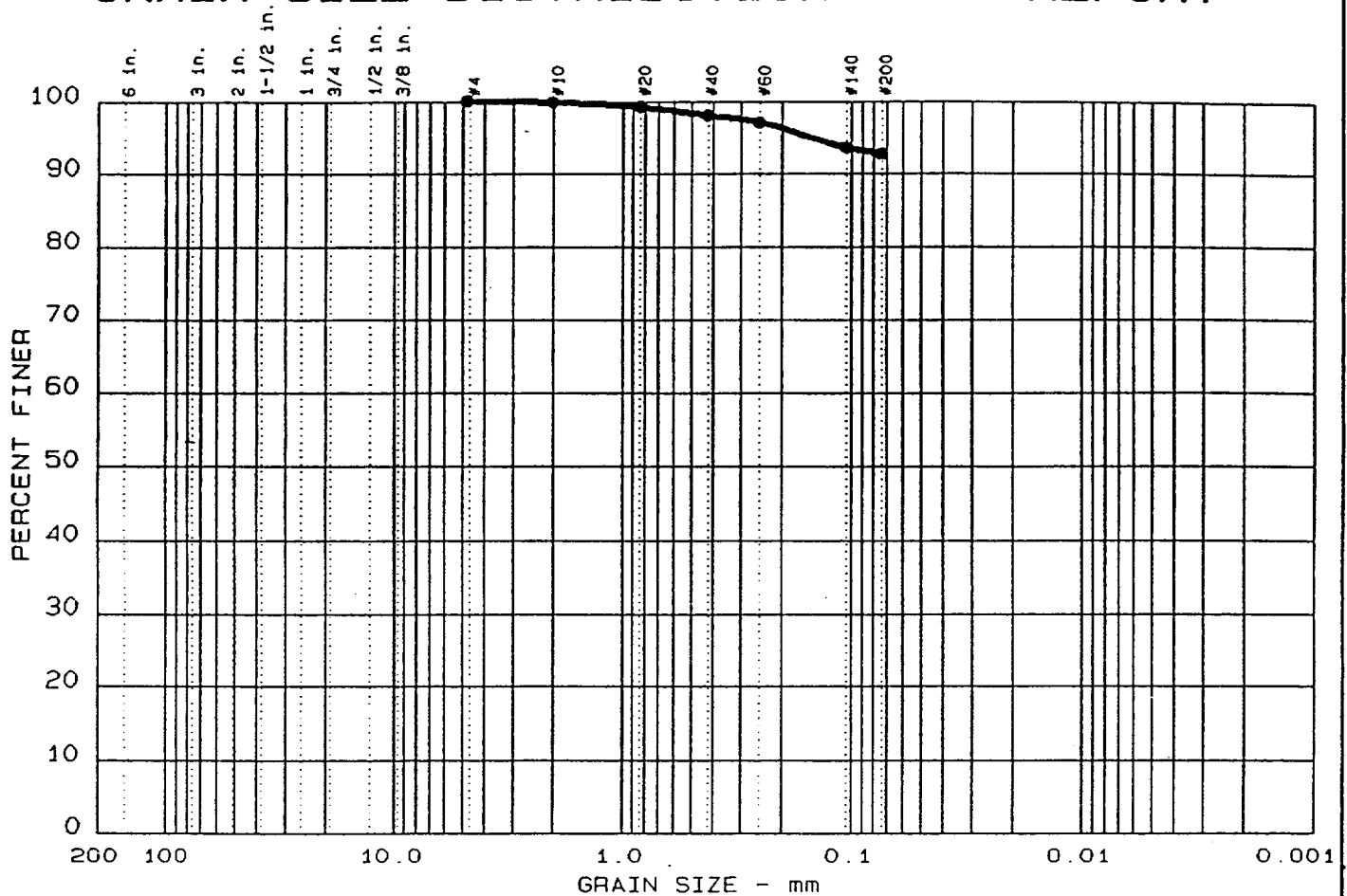
Date: November 3, 1995

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:
 Tested by: *HEJ*
 Reviewed by: *RLB*

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



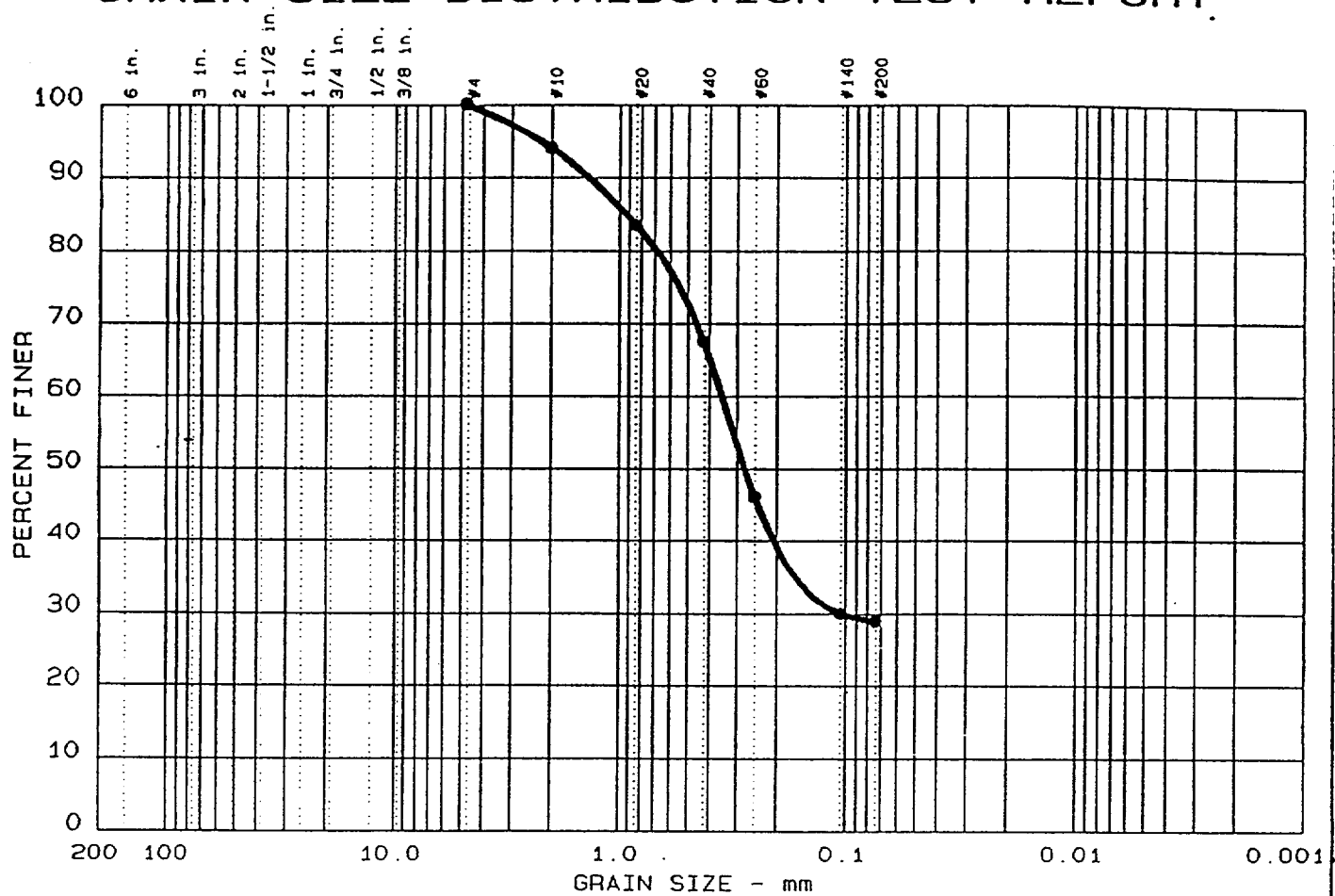
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 10	0.0	0.0	7.3	92.7	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•									

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan-Sandy-Clay		

Project No.: 50161-5-5756 Project: Savannah River Site Task 12 • Location: FB-1SS-54 @ 54 FT. Date: November 3, 1995	Remarks: Tested by: HET Reviewed by: RLS Figure No.
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	

GRAIN SIZE DISTRIBUTION TEST REPORT



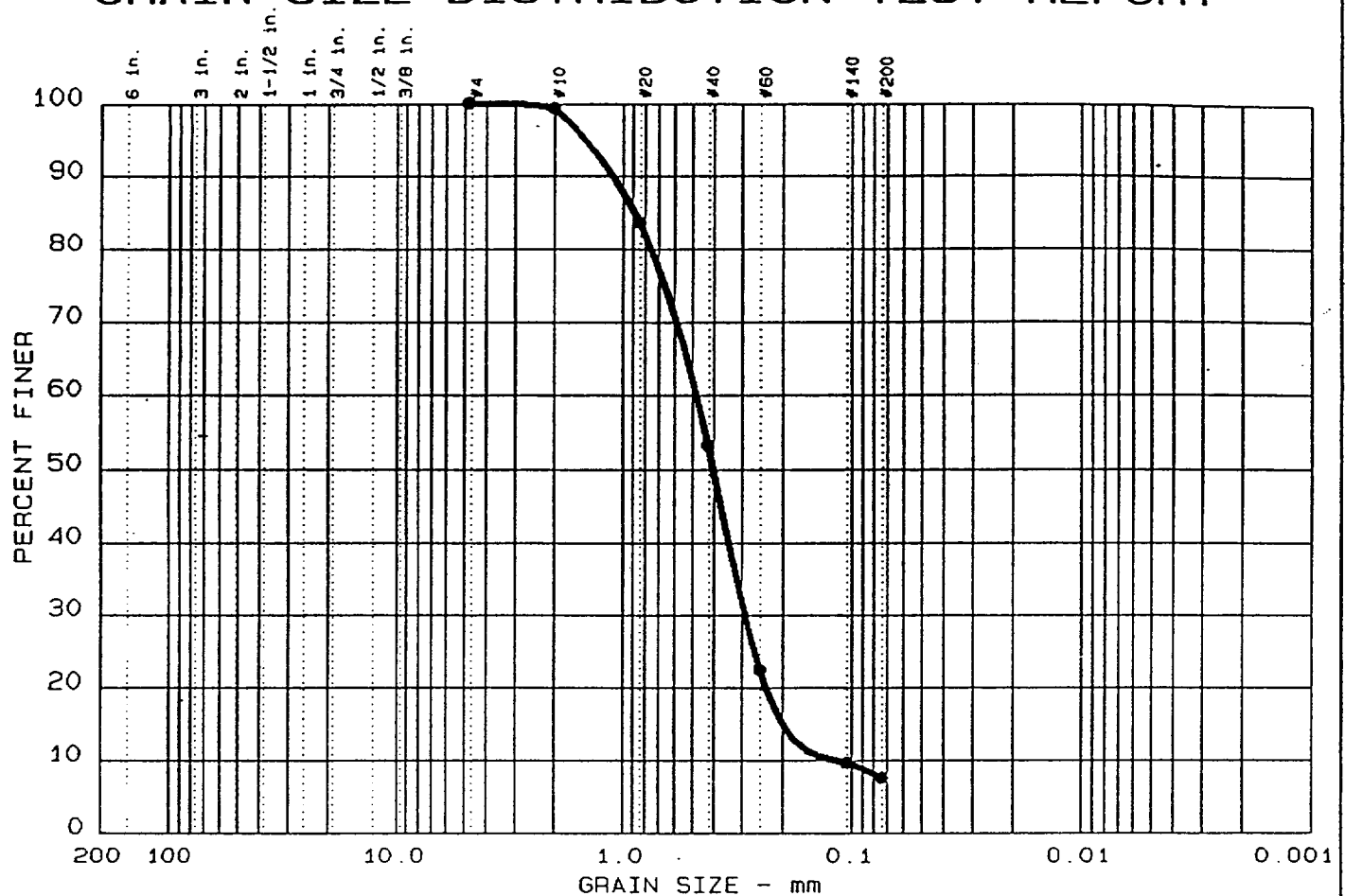
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 13	0.0	0.0	71.1	28.9	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.92	0.35	0.28	0.105				

MATERIAL DESCRIPTION	USCS	AASHTO
• Brown Silty Sand		

Project No.: 50161-5-5755 Project: Savannah River Site Task 12 • Location: FB-1 SS-55 @ 88 Ft. Date: November 3, 1995	Remarks: Tested by: <i>HET</i> Reviewed by: <i>RUB</i>
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	
Figure No.	

GRAIN SIZE DISTRIBUTION TEST REPORT



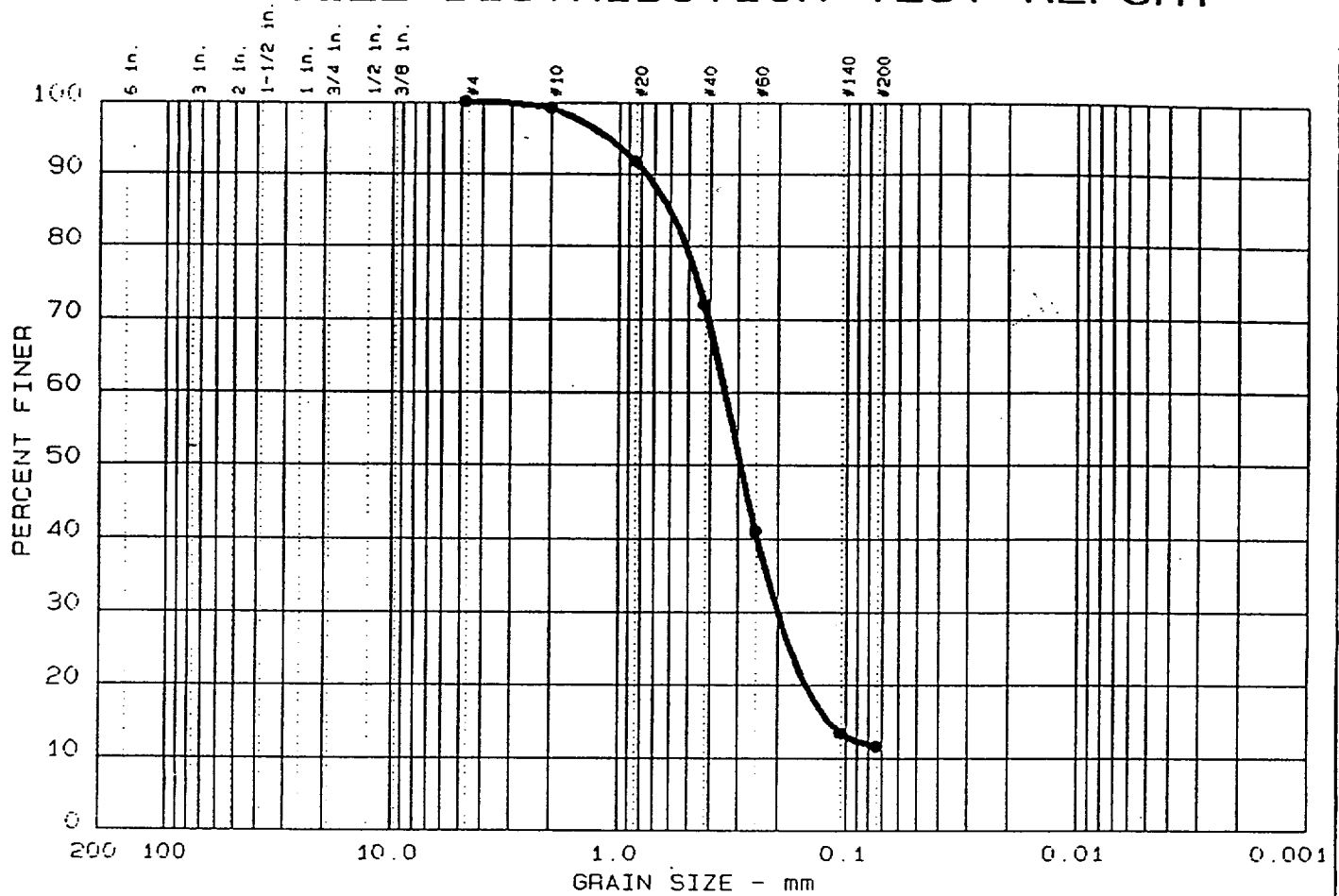
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 16	0.0	0.0	92.4	7.6	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.88	0.47	0.40	0.289	0.1998	0.1123	1.58	4.2

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Silty Sand		

Project No.: 50161-5-5756 Project: Savannah River Site Task 12 • Location: FB-1 SS-57 @ 91 Ft. Date: November 3, 1995	Remarks: Tested by: HES Reviewed by: RLB
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	
Figure No.	

GRAIN SIZE DISTRIBUTION TEST REPORT



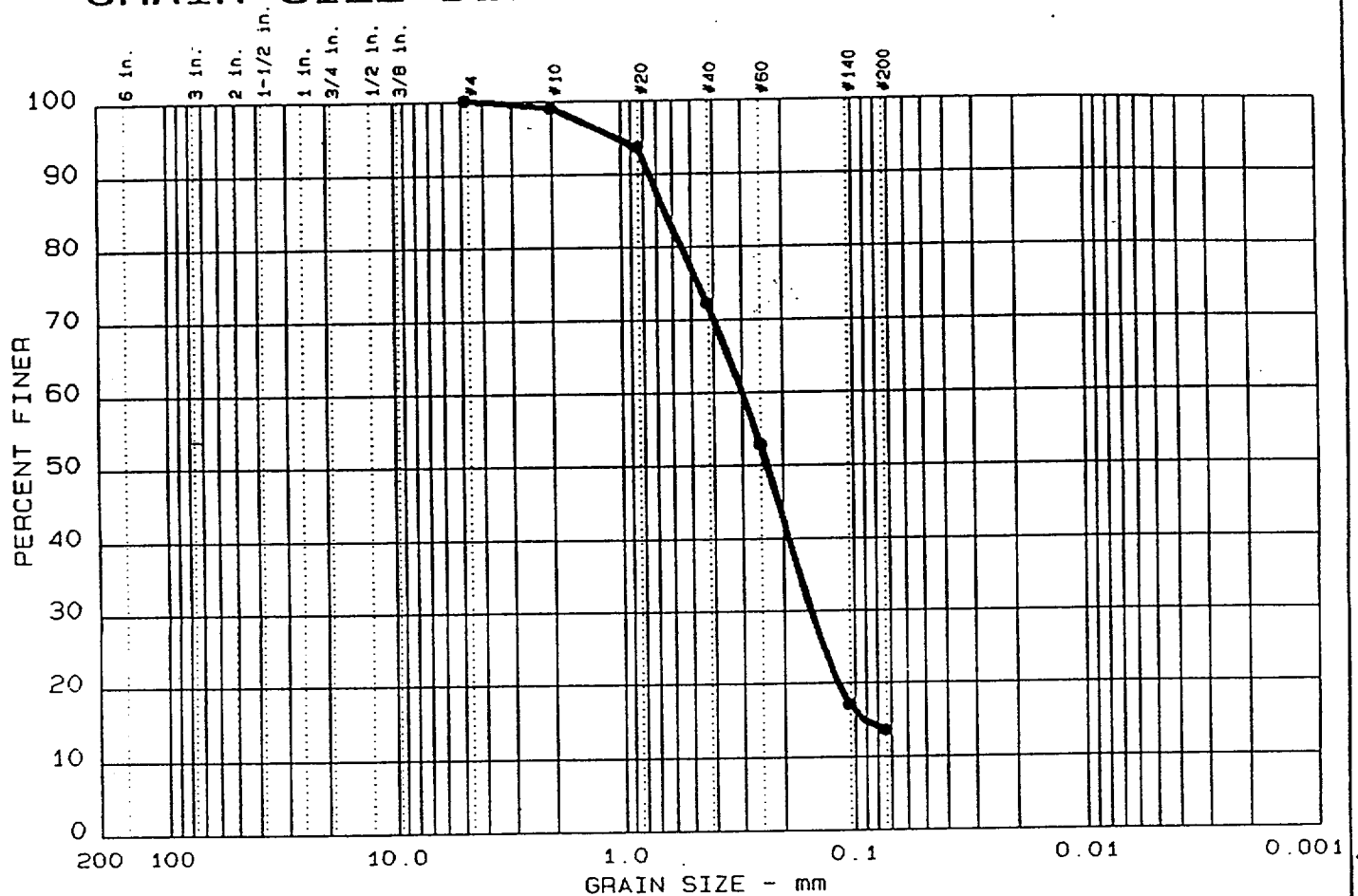
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 20	0.0	0.0	88.4	11.6	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.59	0.34	0.29	0.200	0.1179			

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan. silty Sand.		

Project No.: 50161-5-5756 Project: Savannah River Site Task 12 • Location: FB-1 SS-60 @ 95 ft. Date: November 3, 1995	Remarks: Tested by: HES Reviewed by: RUB
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	
Figure No.	

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 18	0.0	0.0	86.4	13.6	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.64	0.30	0.23	0.153	0.0910			

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Silty Sand		

Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: FB-1 SS-63 @ 100 Ft.

Date: November 3, 1995

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

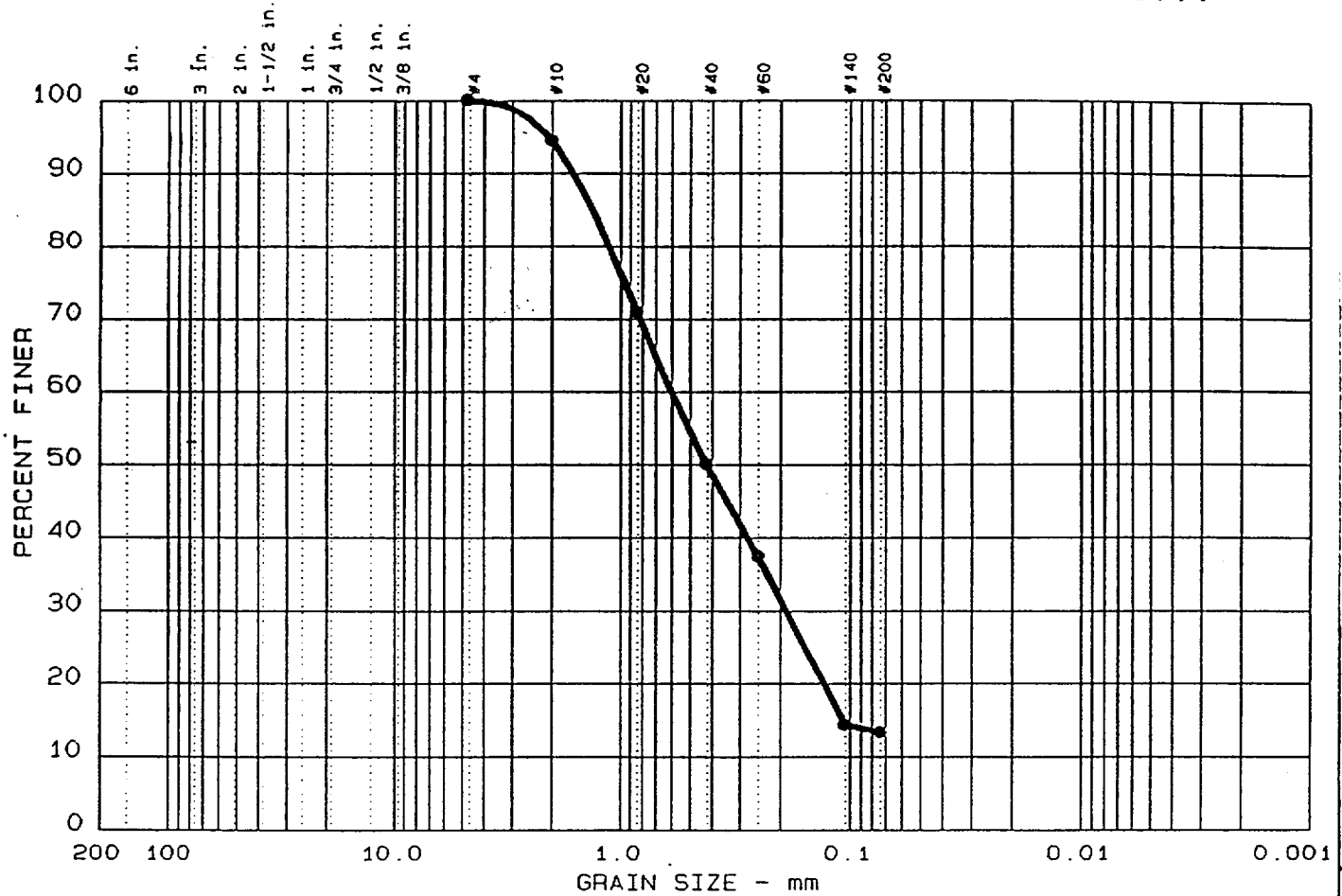
Remarks:

Tested by: *HEJ*

Reviewed by: *RLB*

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 1	0.0	0.0	86.6	13.4	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		1.32	0.59	0.42	0.188	0.1070			

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Silty Sand		

Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: FB-1 SS-65 @ 103 Ft.

Date: November 3, 1995

Remarks:
 Tested by: *HES*
 Reviewed by: *RUB*

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

Grain size distribution plot for Test No. 1001. The y-axis is 'PERCENT FINER' (0-100) and the x-axis is 'GRAIN SIZE - mm' (log scale, 200 to 0.001). The curve shows a high percentage of fine material, with approximately 80% finer than 1.0 mm and 5% finer than 0.075 mm.

Grain Size (mm)	Percent Finer (%)
200	100
100	100
60	100
40	100
30	100
25	100
20	100
15	100
12.5	100
10	100
7.5	100
6	100
4.75	100
3.75	100
3.0	100
2.5	100
2.0	100
1.5	100
1.18	100
1.0	80
0.85	65
0.75	50
0.6	25
0.425	15
0.3	10
0.25	8
0.2	7
0.15	6
0.125	5
0.106	5
0.075	5
0.06	5
0.05	5
0.0425	5
0.0375	5
0.03	5
0.025	5
0.02	5
0.015	5
0.0125	5
0.0106	5
0.0085	5
0.0075	5
0.006	5
0.00425	5
0.003	5
0.0025	5
0.002	5
0.0015	5
0.00125	5
0.00106	5
0.00085	5
0.00075	5
0.0006	5
0.000425	5
0.0003	5
0.00025	5
0.0002	5
0.00015	5
0.000125	5
0.000106	5
0.000085	5
0.000075	5
0.00006	5
0.0000425	5
0.00003	5
0.000025	5
0.00002	5
0.000015	5
0.0000125	5
0.0000106	5
0.0000085	5
0.0000075	5
0.000006	5
0.00000425	5
0.000003	5
0.0000025	5
0.000002	5
0.0000015	5
0.00000125	5
0.00000106	5
0.00000085	5
0.00000075	5
0.0000006	5
0.000000425	5
0.0000003	5
0.00000025	5
0.0000002	5
0.00000015	5
0.000000125	5
0.000000106	5
0.000000085	5
0.000000075	5
0.00000006	5
0.0000000425	5
0.00000003	5
0.000000025	5
0.00000002	5
0.000000015	5
0.0000000125	5
0.0000000106	5
0.0000000085	5
0.0000000075	5
0.000000006	5
0.00000000425	5
0.000000003	5
0.0000000025	5
0.000000002	5
0.0000000015	5
0.00000000125	5
0.00000000106	5
0.00000000085	5
0.00000000075	5
0.0000000006	5
0.000000000425	5
0.0000000003	5
0.00000000025	5
0.0000000002	5
0.00000000015	5
0.000000000125	5
0.000000000106	5
0.000000000085	5
0.000000000075	5
0.00000000006	5
0.0000000000425	5
0.00000000003	5
0.000000000025	5
0.00000000002	5
0.000000000015	5
0.0000000000125	5
0.0000000000106	5
0.0000000000085	5
0.0000000000075	5
0.000000000006	5
0.00000000000425	5

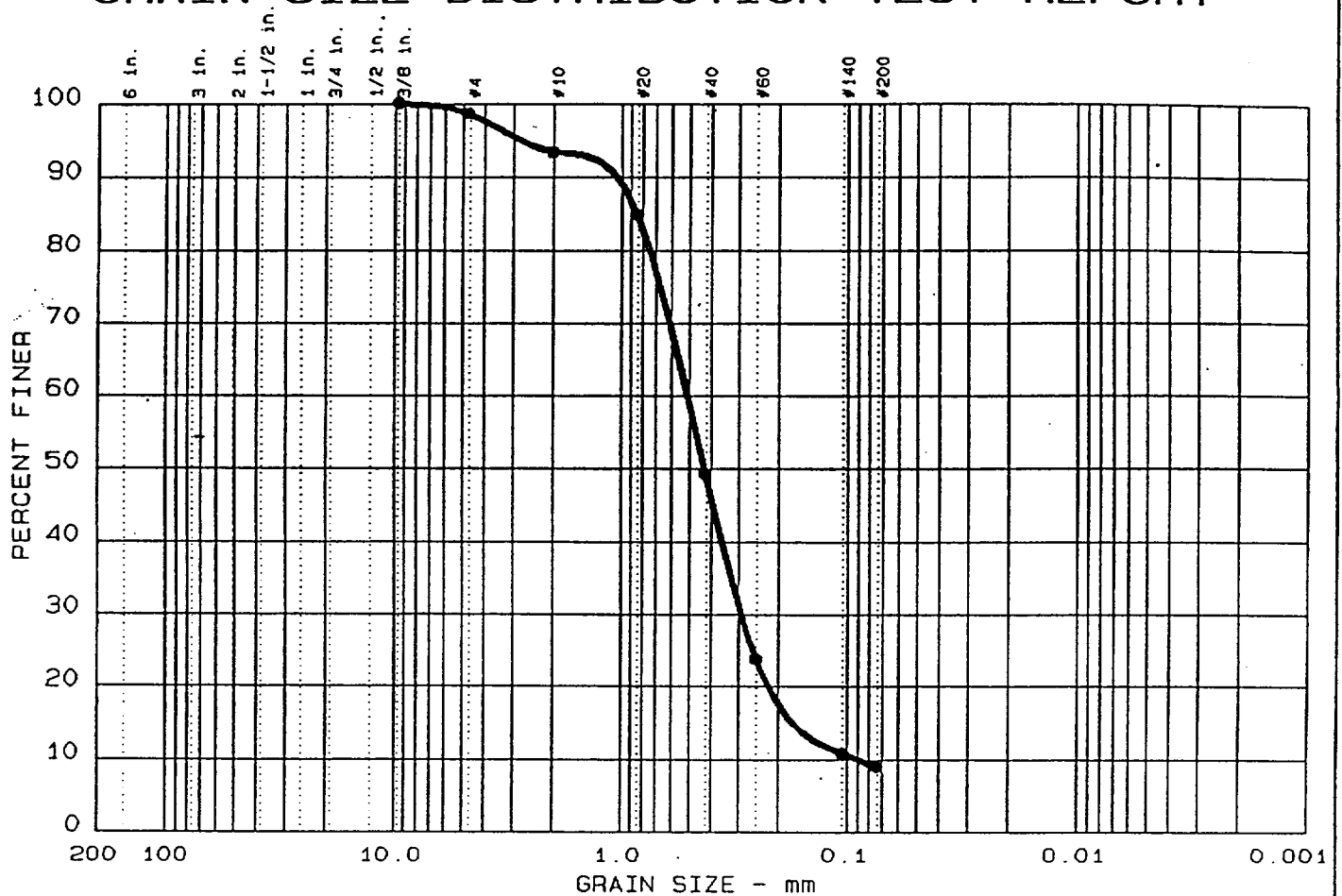
Remarks:

Tested by: *HES*

Reviewed by: *RLB*

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 3	0.0	1.4	89.6	9.0	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.84	0.50	0.42	0.290	0.1730	0.0877	1.91	5.8

MATERIAL DESCRIPTION	USCS	AASHTO
• Light Brown Silty Sand		

Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: FB-1 SS-71 @ 112 Ft.

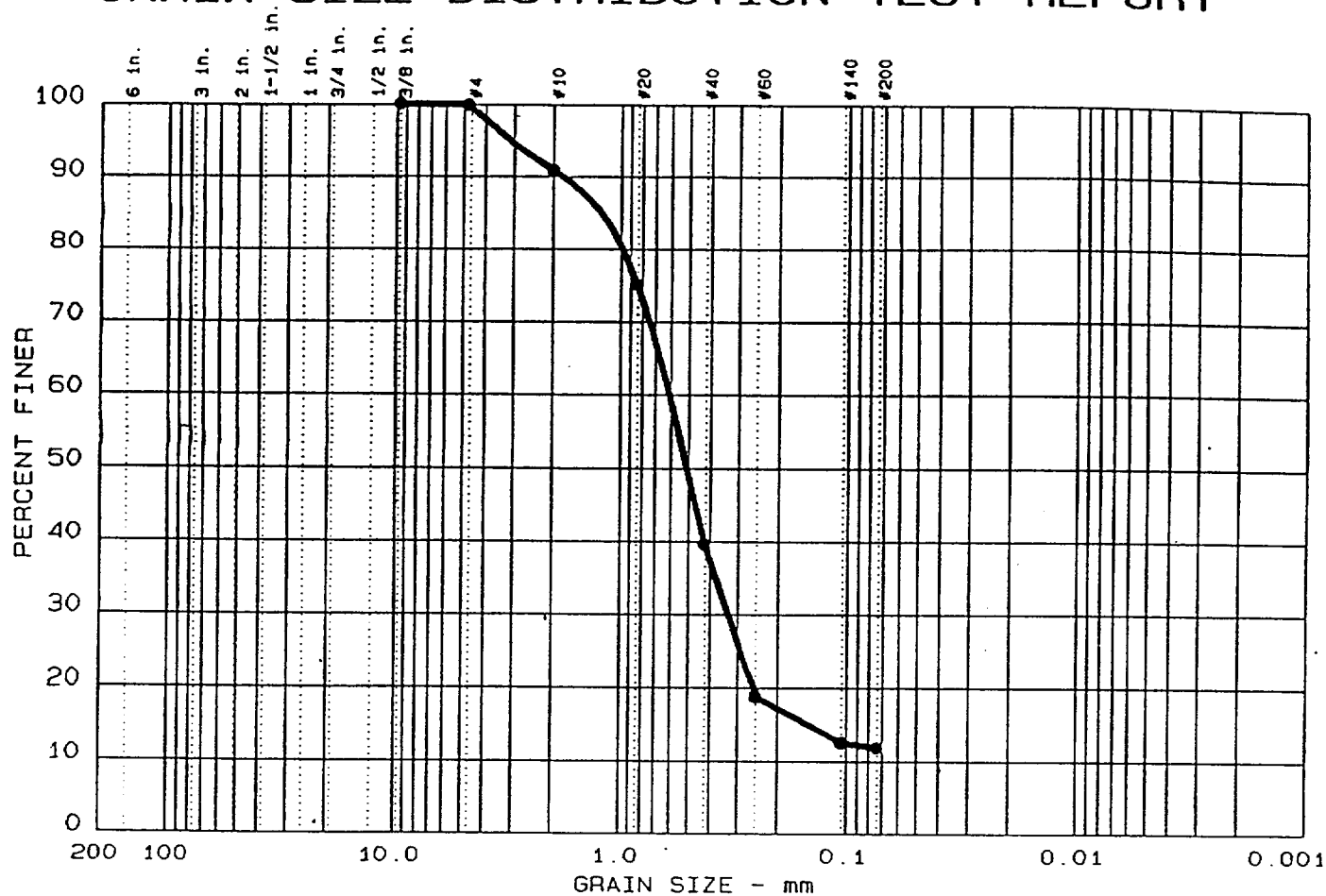
Date: November 3, 1995

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:
 Tested by: *HET*
 Reviewed by: *RLB*

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



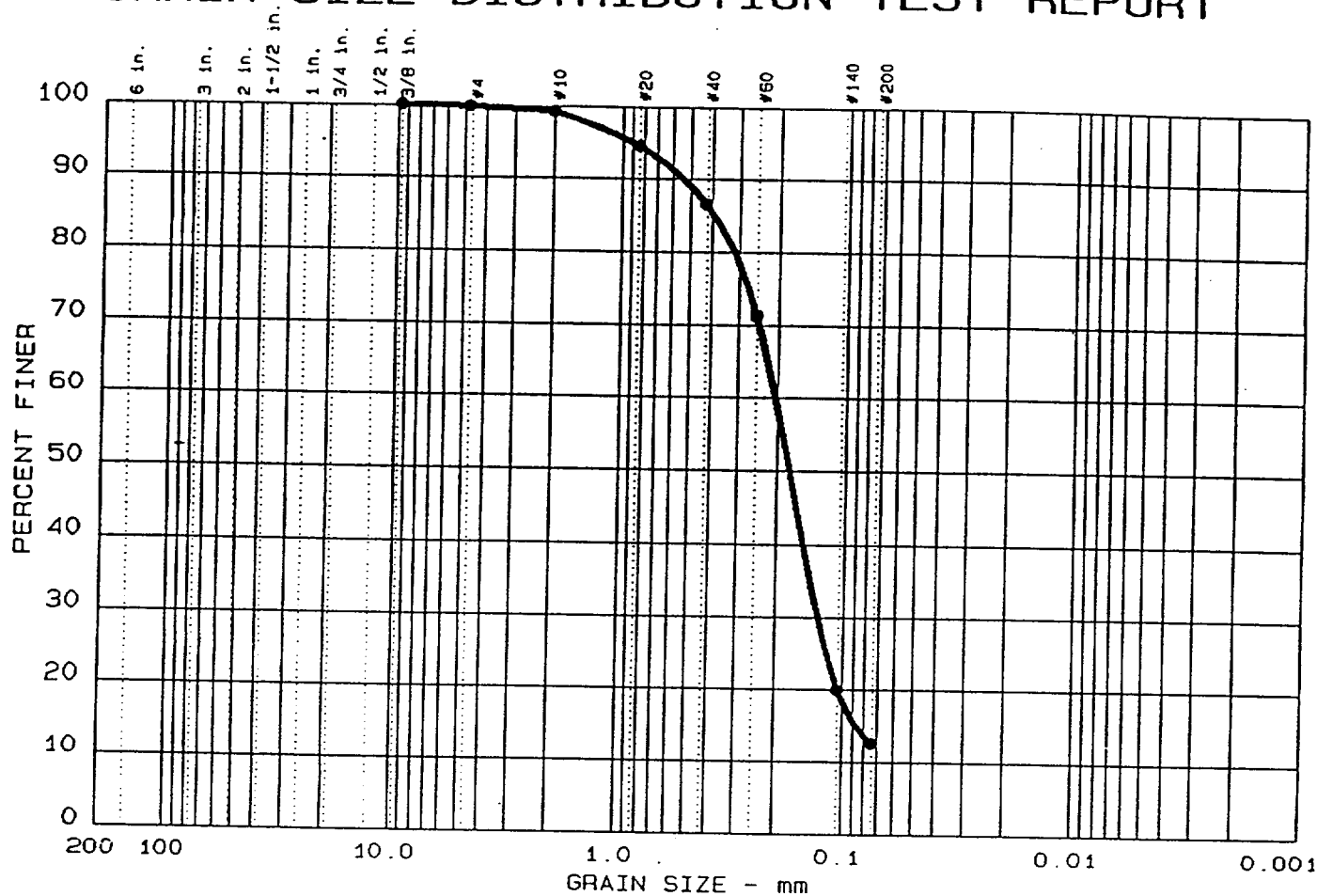
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 2	0.0	0.2	87.9	11.9	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		1.20	0.60	0.50	0.329	0.1454			

MATERIAL DESCRIPTION	USCS	AASHTO
• Light Brown Silty Sand		

Project No.: 50161-5-5756 Project: Savannah River Site Task 12 • Location: FB-1 SS-72 @ 113 Ft. Date: November 3, 1995	Remarks: Tested by: <i>HES</i> Reviewed by: <i>RUB</i> Figure No.
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 5	0.0	0.2	87.2	12.6	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.38	0.20	0.18	0.129	0.0863			

MATERIAL DESCRIPTION	USCS	AASHTO
• Yellow-Tan Silty Sand -		

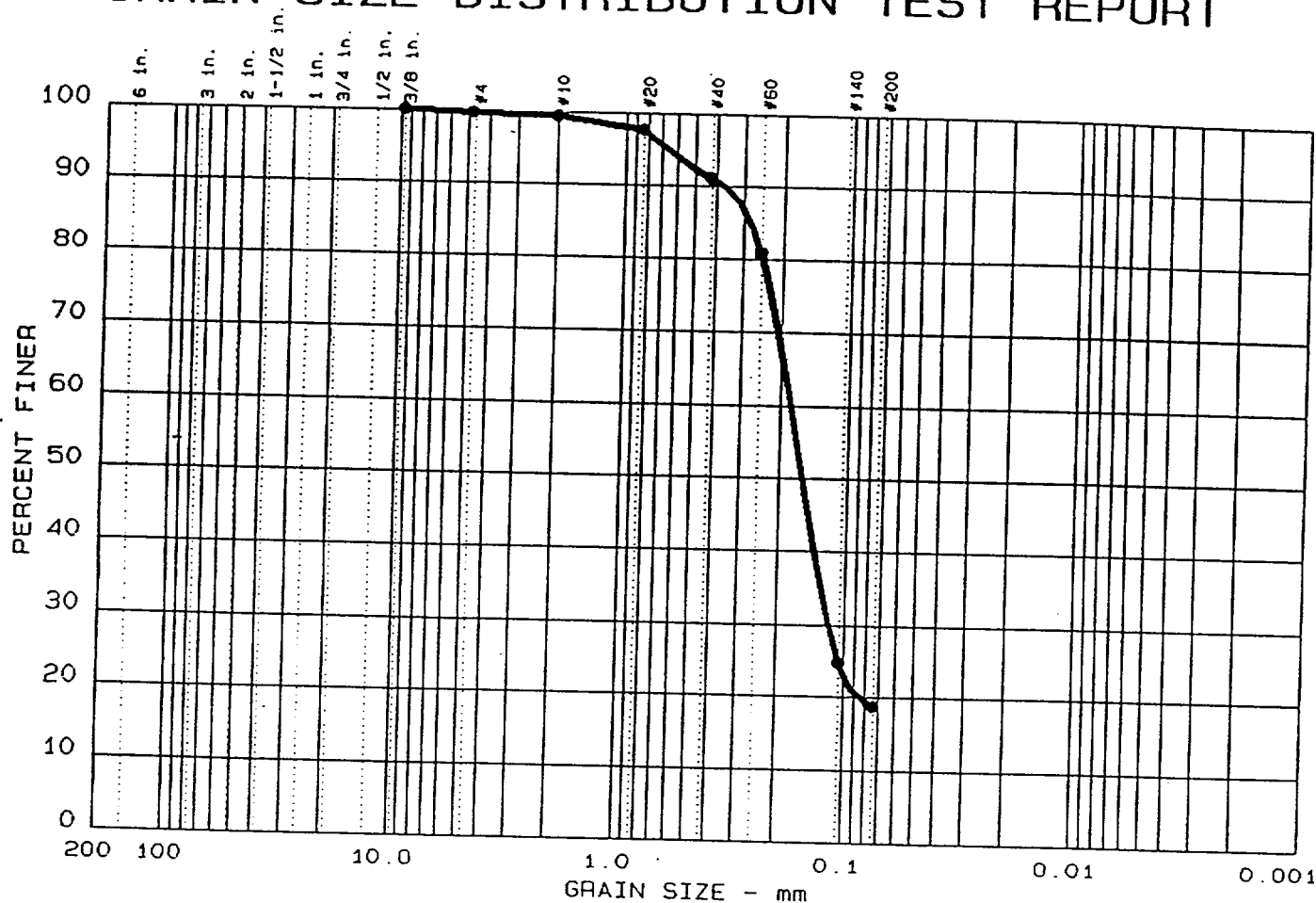
Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: FB-1 SS-75 @ 118 Ft.
 Date: November 3, 1995

Remarks:
 Tested by: HES
 Reviewed by: RLB

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 4	0.0	0.4	80.8	18.8	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.28	0.18	0.16	0.118				

MATERIAL DESCRIPTION	USCS	AASHTO
• Yellow-Tan Silty Sand		

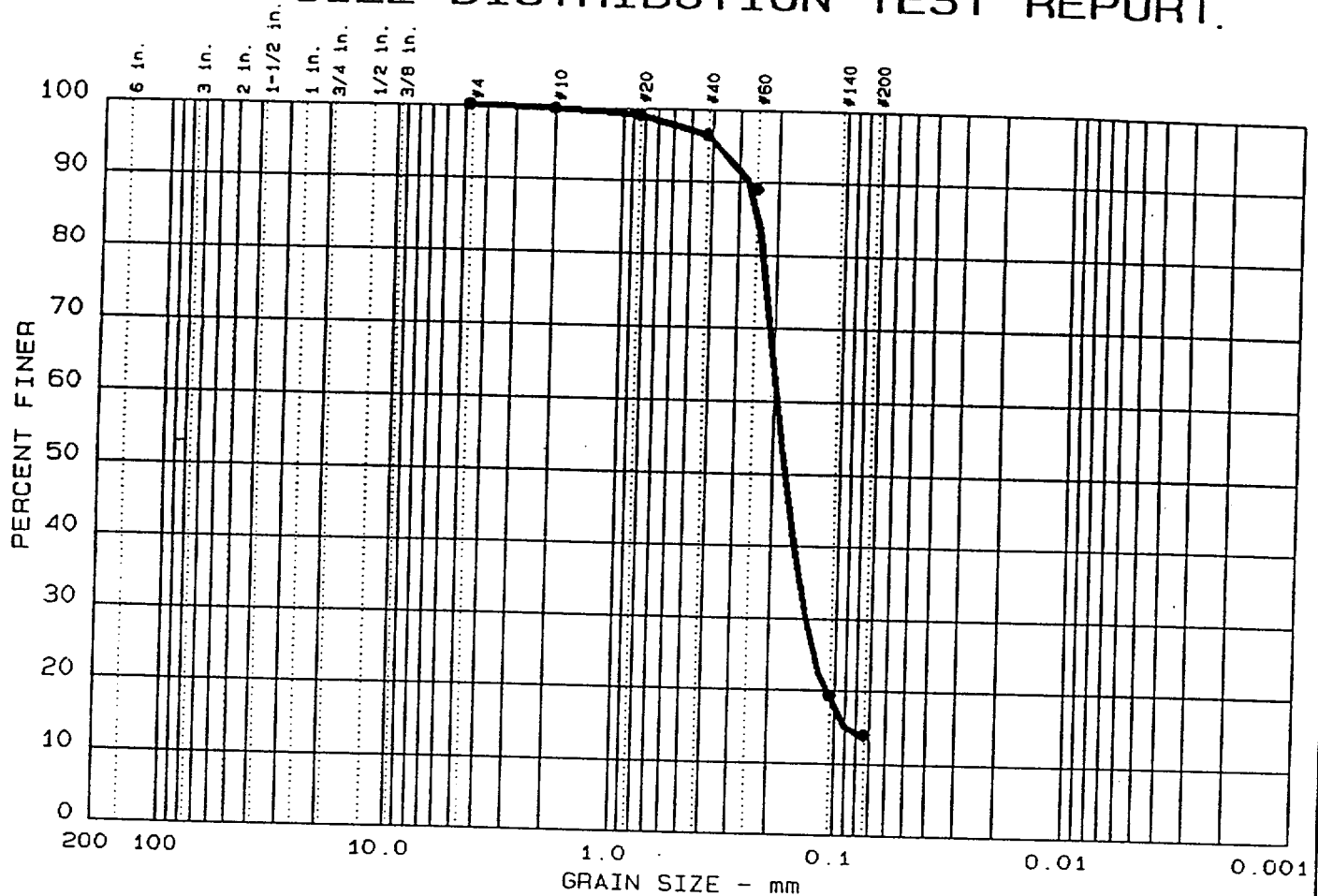
Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: FB-1 SS-79 @ 125 Ft.
 Date: November 3, 1995

Remarks:
 Tested by: *HET*
 Reviewed by: *RLB*

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT.



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
7	0.0	0.0	86.0	14.0	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.24	0.19	0.17	0.137	0.0884			

MATERIAL DESCRIPTION	USCS	AASHTO
Yellow Silty Sand		

Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 Location: FB-1 SS-80 @ 127 Ft.
 Date: November 3, 1995

Remarks:

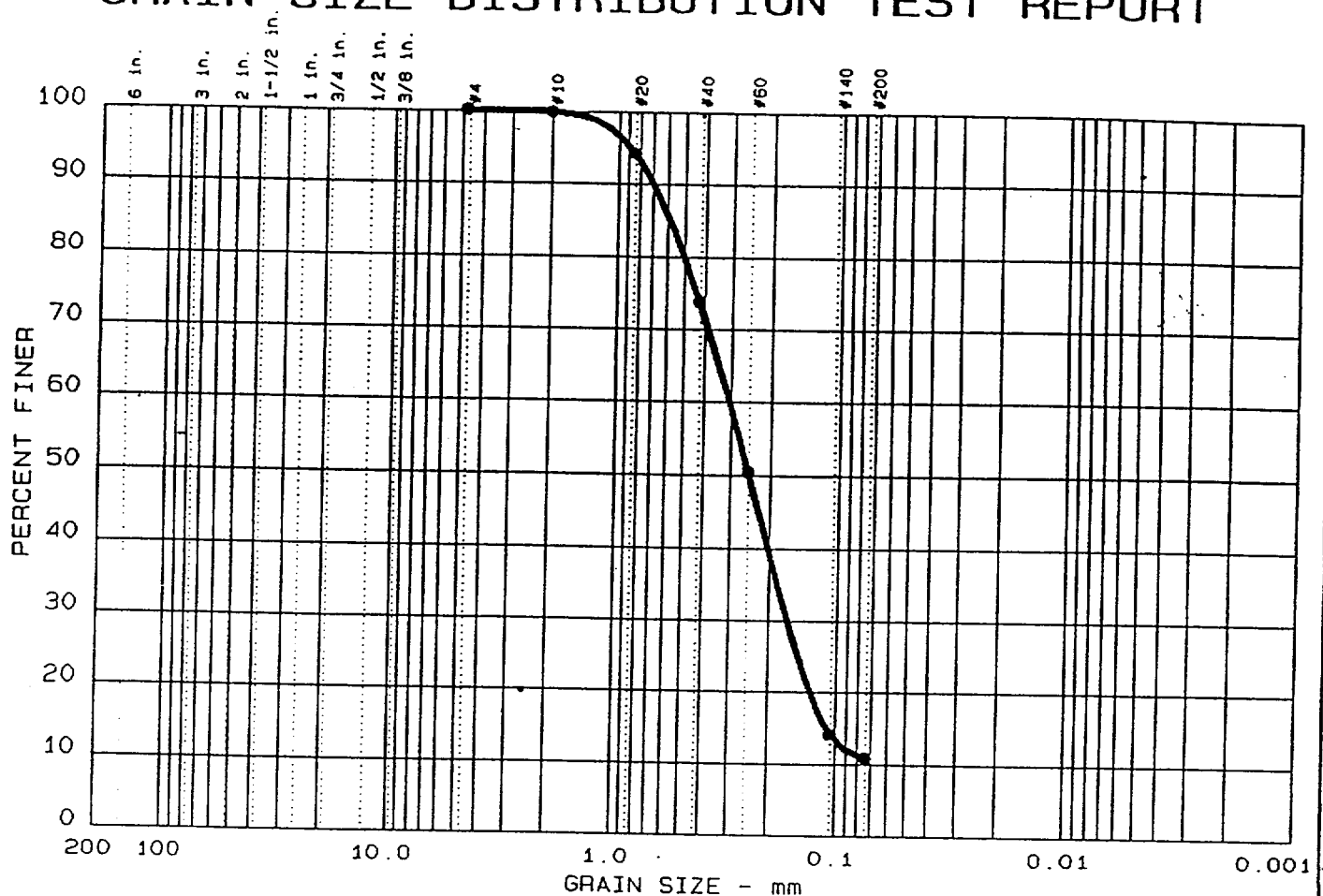
Tested by: HET

Reviewed by: RLB

GRAIN SIZE DISTRIBUTION TEST REPORT
 LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• E	0.0	0.0	89.0	11.0	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.58	0.30	0.25	0.165	0.1091			

MATERIAL DESCRIPTION	USCS	AASHTO
• Yellow-Tan Silty Sand		

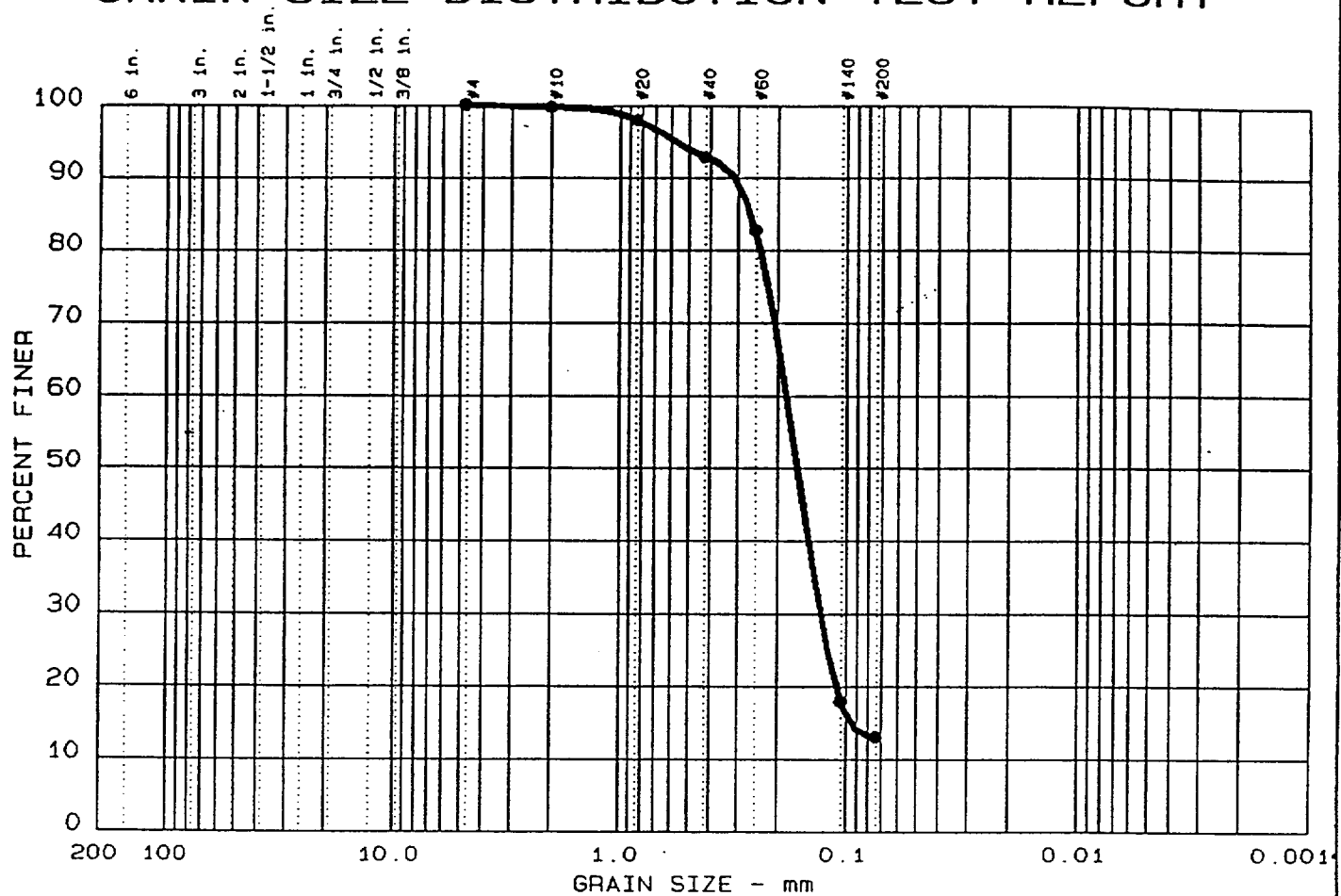
Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: FB-1 SS-81 @ 128 Ft.
 Date: November 3, 1995

Remarks:
 Tested by: HES
 Reviewed by: RLB

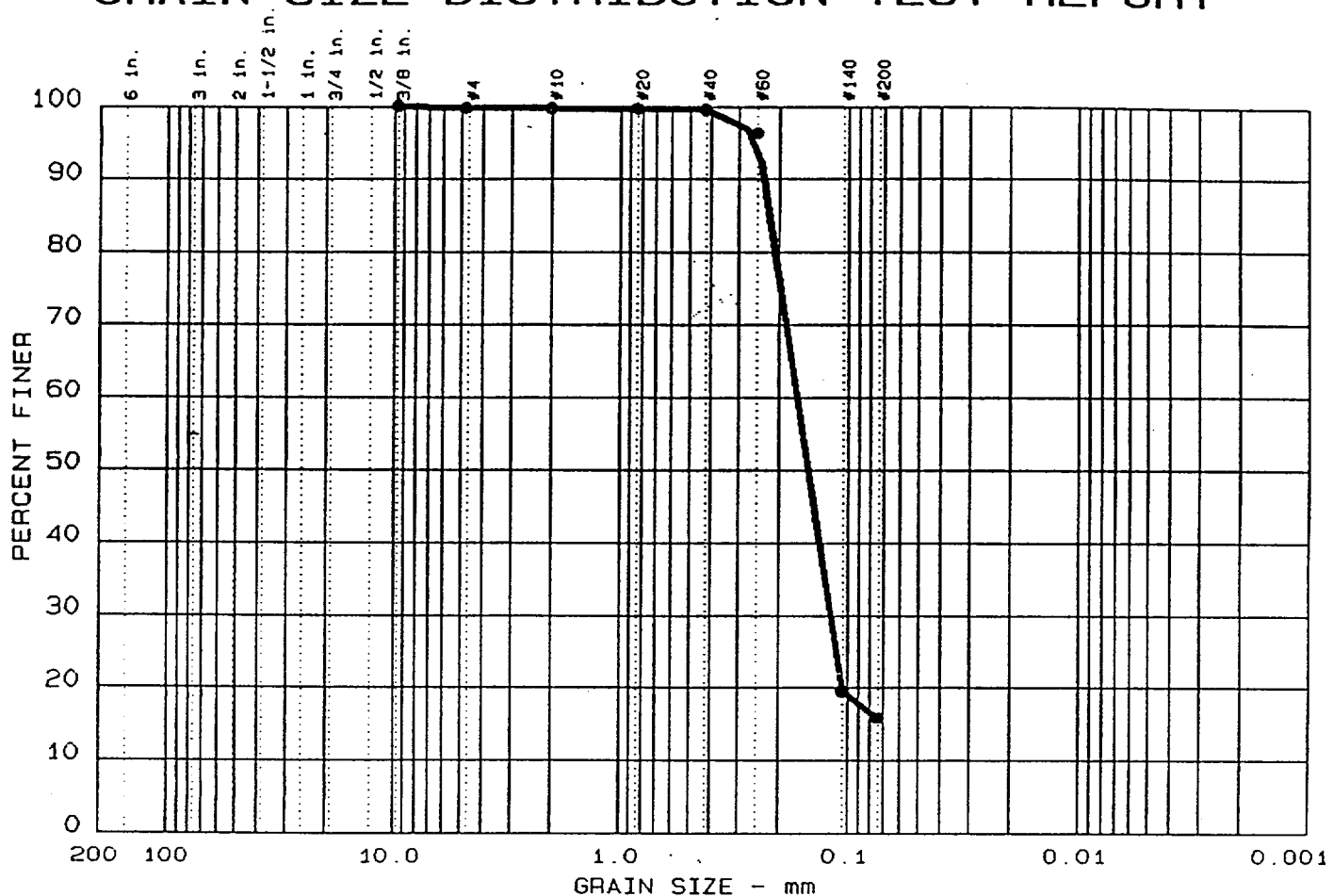
GRAIN SIZE DISTRIBUTION TEST REPORT
 LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
B	0.0	0.3	83.9	15.8	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.22	0.17	0.15	0.118				

MATERIAL DESCRIPTION	USCS	AASHTO
Brown Silty Sand		

Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 Location: FB-1 SS-86 @ 136 Ft.

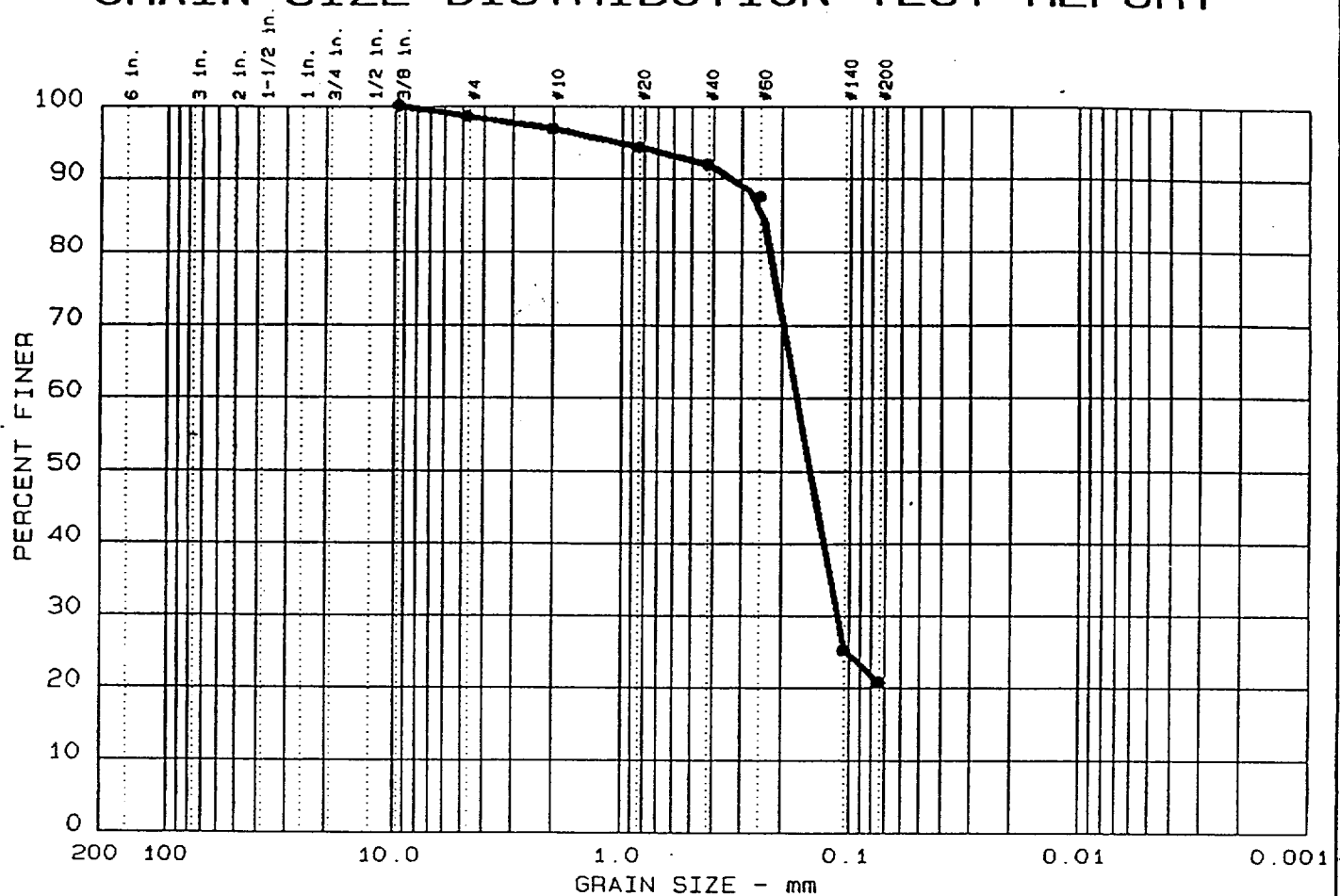
Date: November 3, 1995

GRAIN SIZE DISTRIBUTION TEST REPORT
 LAW ENGINEERING, INC.

Remarks:
 Tested by: HET
 Reviewed by: RLB

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 12	0.0	1.5	77.7	20.8	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.24	0.17	0.15	0.112				

MATERIAL DESCRIPTION	USCS	AASHTO
• Yellow Silty Sand		

Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: FB-1 SS-89 @ 140 Ft.
 Date: November 3, 1995

Remarks:
 Tested by: HET
 Reviewed by: RLB

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

Grain size distribution curve showing Percent Finer versus Grain Size (mm). The curve is plotted on a semi-logarithmic scale. The Y-axis represents Percent Finer (0 to 100), and the X-axis represents Grain Size in mm (logarithmic scale from 200 to 0.001). The curve shows a sharp drop in percent finer between 0.425 mm and 0.075 mm, indicating a well-graded material.

Grain Size (mm)	Percent Finer (%)
200	100
100	100
60	100
40	100
20	100
10	100
4.75	100
2.5	100
1.18	100
0.85	100
0.6	100
0.425	100
0.3	100
0.25	100
0.2	100
0.15	100
0.125	100
0.106	100
0.09	100
0.075	100
0.063	100
0.053	100
0.045	100
0.037	100
0.03	100
0.025	100
0.02	100
0.016	100
0.013	100
0.011	100
0.009	100
0.0075	100
0.006	100
0.005	100
0.00425	100
0.0035	100
0.003	100
0.0025	100
0.002	100
0.0016	100
0.0013	100
0.0011	100
0.0009	100
0.00075	100
0.0006	100
0.0005	100
0.000425	100
0.00035	100
0.0003	100
0.00025	100
0.0002	100
0.00016	100
0.00013	100
0.00011	100
0.00009	100
0.000075	100
0.00006	100
0.00005	100
0.0000425	100
0.000035	100
0.00003	100
0.000025	100
0.00002	100
0.000016	100
0.000013	100
0.000011	100
0.000009	100
0.0000075	100
0.000006	100
0.000005	100
0.00000425	100
0.0000035	100
0.000003	100
0.0000025	100
0.000002	100
0.0000016	100
0.0000013	100
0.0000011	100
0.0000009	100
0.00000075	100
0.0000006	100
0.0000005	100
0.000000425	100
0.00000035	100
0.0000003	100
0.00000025	100
0.0000002	100
0.00000016	100
0.00000013	100
0.00000011	100
0.00000009	100
0.000000075	100
0.00000006	100
0.00000005	100
0.0000000425	100
0.000000035	100
0.00000003	100
0.000000025	100
0.00000002	100
0.000000016	100
0.000000013	100
0.000000011	100
0.000000009	100
0.0000000075	100
0.000000006	100
0.000000005	100
0.00000000425	100
0.0000000035	100
0.000000003	100
0.0000000025	100
0.000000002	100
0.0000000016	100
0.0000000013	100
0.0000000011	100
0.0000000009	100
0.00000000075	100
0.0000000006	100
0.0000000005	100
0.000000000425	100
0.00000000035	100
0.0000000003	100
0.00000000025	100
0.0000000002	100
0.00000000016	100
0.00000000013	100
0.00000000011	100
0.00000000009	100
0.000000000075	100
0.0000	

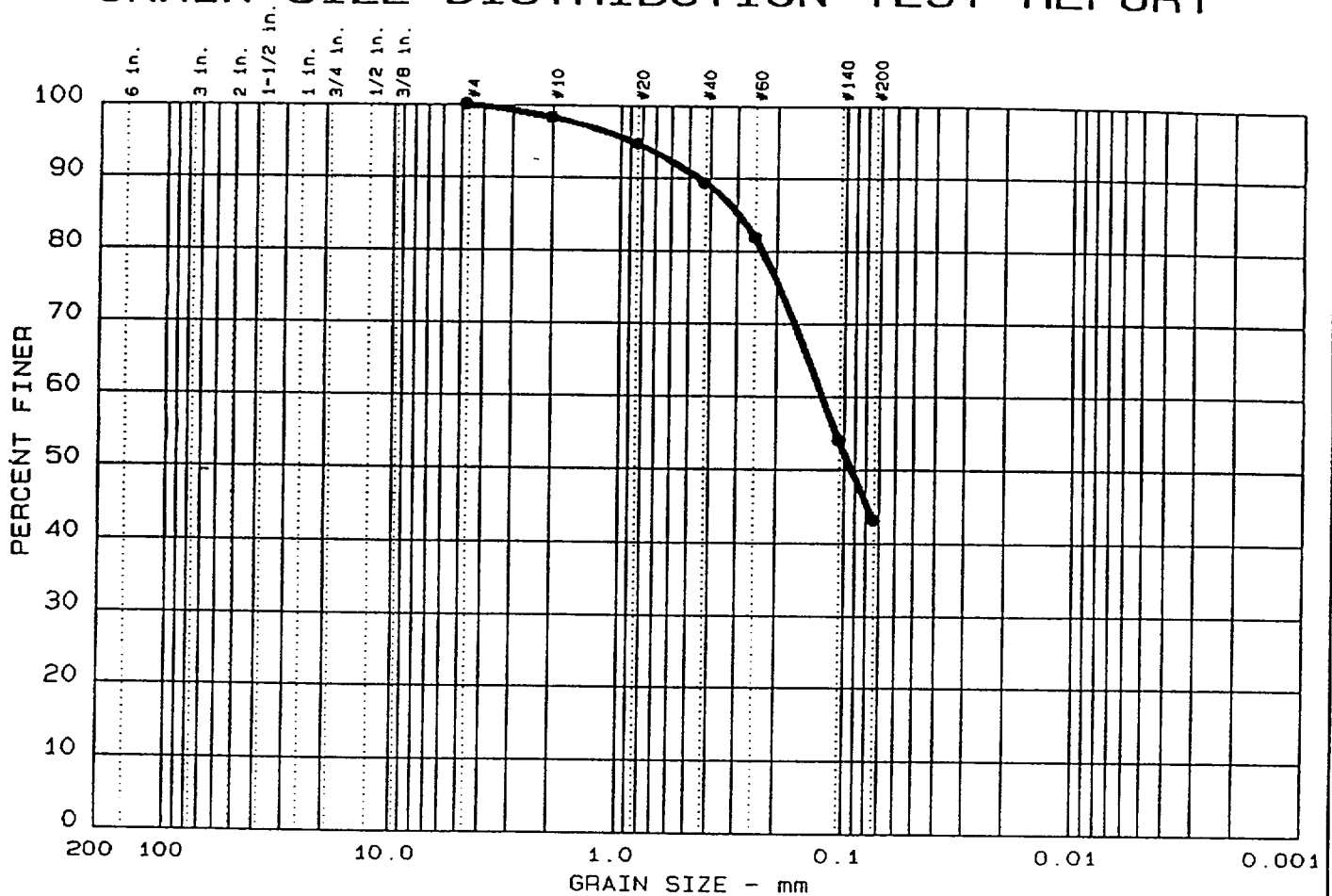
[illegible]

Project No.: 50161-5-5756
Project: Savannah River Site Task 12
● Location: FB-1 SS-92 @ 145 Ft.

Date: November 3, 1995

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 15	0.0	0.0	56.8	43.2	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.29	0.13	0.09					

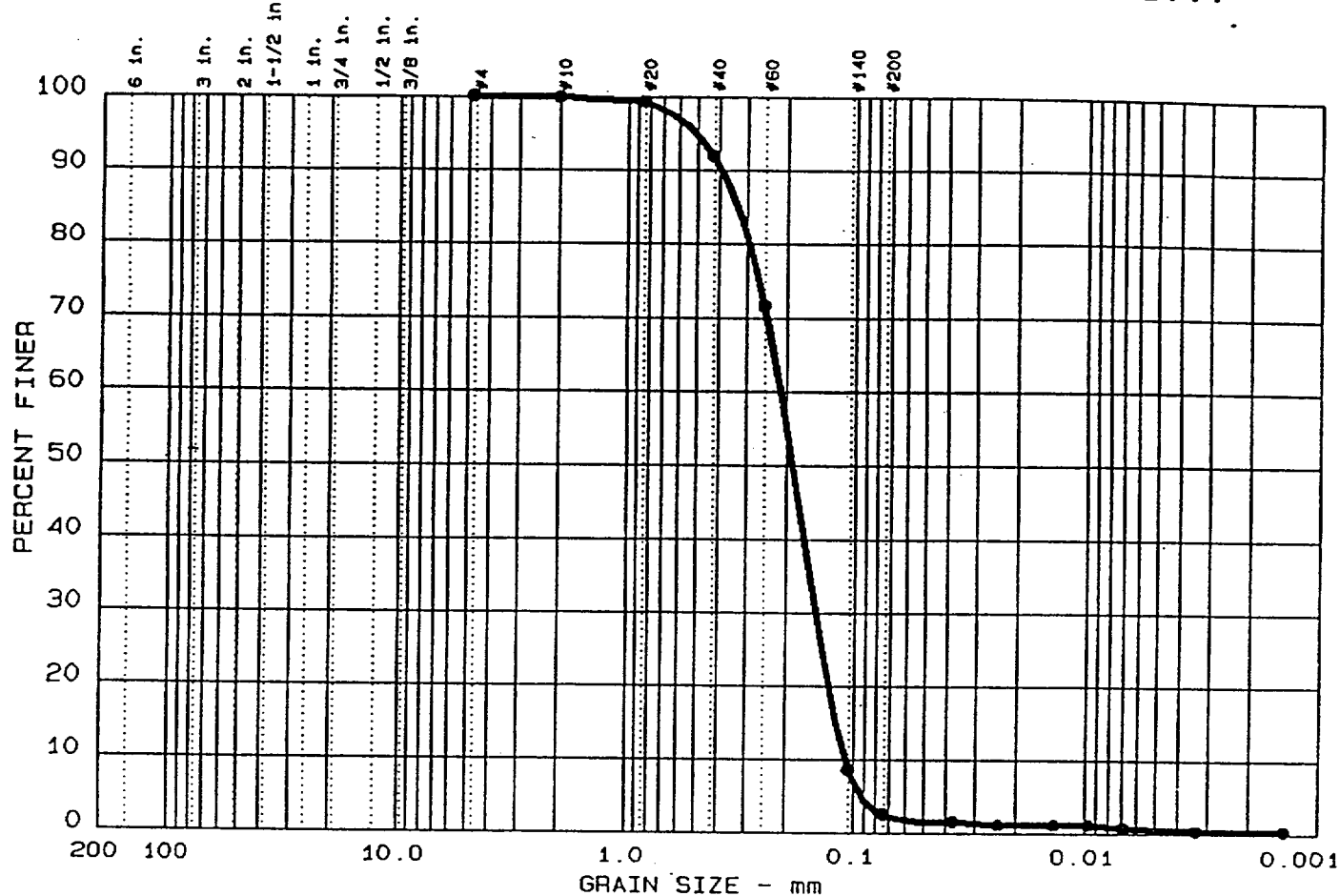
MATERIAL DESCRIPTION	USCS	AASHTO
• Brown Silty Sand		

Project No.: 50161-5-5756
 Project: Savannah River Site Task 12
 • Location: FB-1 SS-96 @ 151 Ft.
 Date: November 3, 1995
 GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:
 Tested by: HES
 Reviewed by: RLB

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 8	0.0	0.0	97.4	1.9	0.7

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• NL	NP	0.33	0.21	0.19	0.148	0.1194	0.1084	0.95	2.0

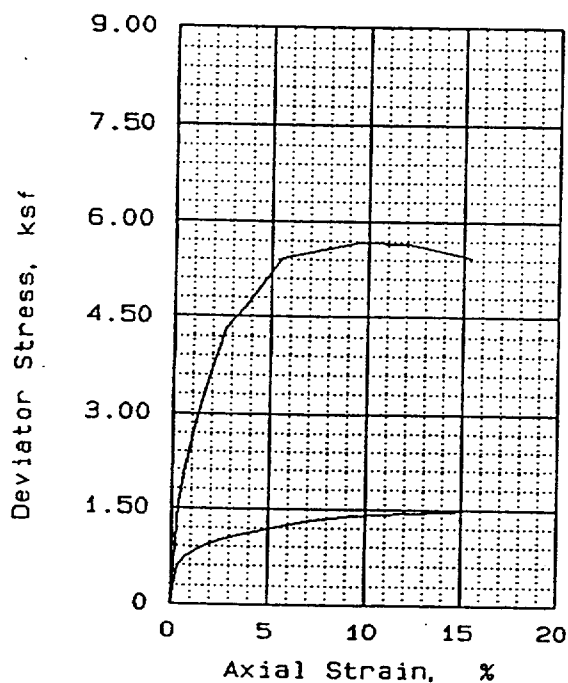
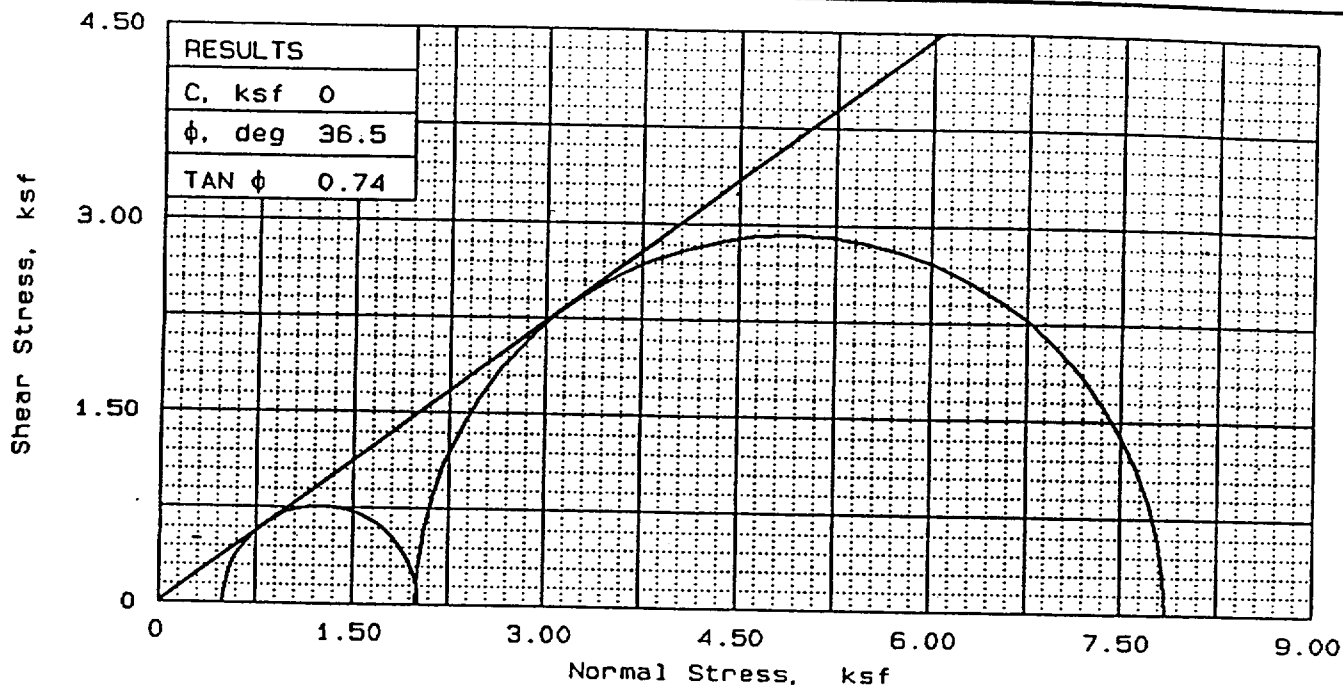
MATERIAL DESCRIPTION	USCS	AASHTO
• Light Tan Poorly Graded Sand	SP	A-3

Project No.: 50161-5-5756
 Project: SRS Task 12
 • Location: FB-2 ST-3 @ 7 Ft.
 Date: January 23, 1996

Remarks:
 Tested by: EM
 Reviewed by: HS

GRAIN SIZE DISTRIBUTION TEST REPORT
 LAW ENGINEERING, INC.

Figure No.



SAMPLE NO.		1	2
INITIAL	WATER CONTENT, %	3.2	5.6
	DRY DENSITY, pcf	91.8	93.4
	SATURATION, %	11.1	20.4
	VOID RATIO	0.735	0.705
	DIAMETER, in	2.87	2.86
AT TEST	HEIGHT, in	6.00	6.00
	WATER CONTENT, %	30.8	29.2
	DRY DENSITY, pcf	89.1	91.2
	SATURATION, %	100.0	100.0
	VOID RATIO	0.786	0.745
	DIAMETER, in	2.91	2.90
	HEIGHT, in	5.98	5.99
	BACK PRESSURE, ksf	4.32	4.32
	CELL PRESSURE, ksf	4.82	6.32
	FAILURE STRESS, ksf	1.52	5.85
	PORE PRESSURE, ksf		
	STRAIN RATE, %/min.	0.100	0.100
	ULTIMATE STRESS, ksf		
	PORE PRESSURE, ksf		
	σ_1 FAILURE, ksf	2.02	7.85
	σ_3 FAILURE, ksf	0.5	2

TYPE OF TEST:

Consolidated drained

SAMPLE TYPE: Undisturbed

DESCRIPTION: Light Tan Poorly
Graded Sand

LL= NL PL= NP PI=

SPECIFIC GRAVITY= 2.55

REMARKS: Tested by: *HS*

Reviewed by: *RLB*

FIG. NO.

CLIENT: Savannah River Site

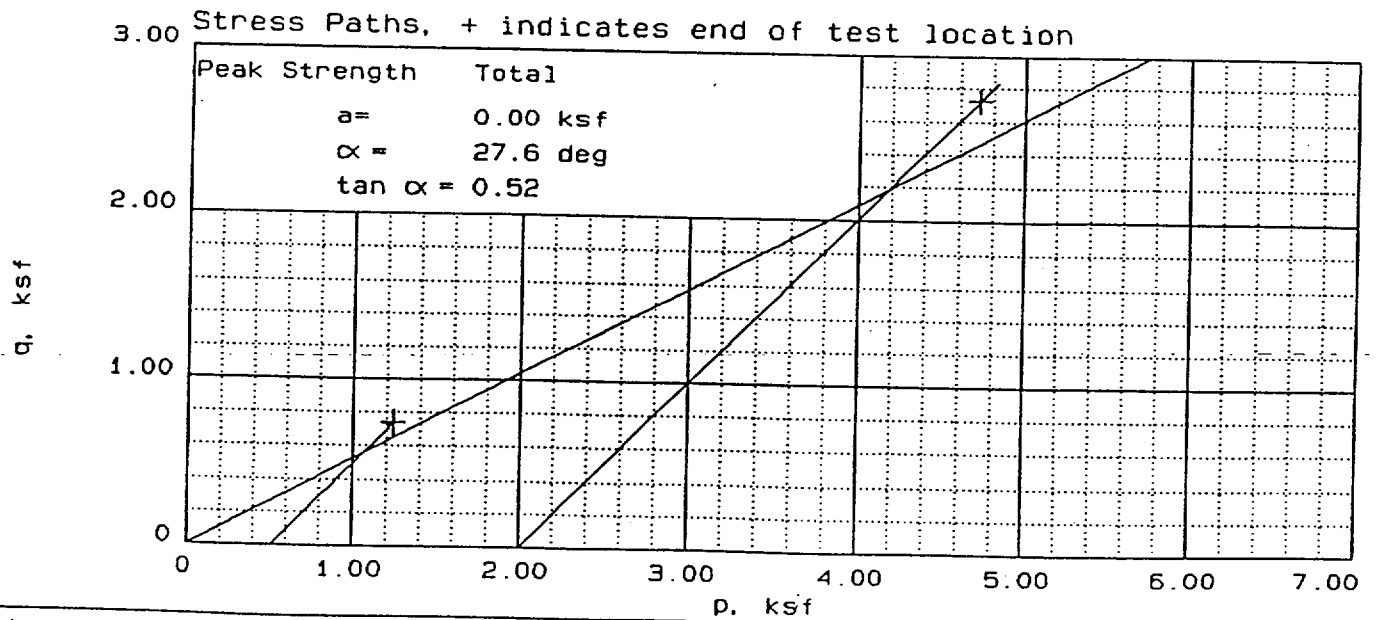
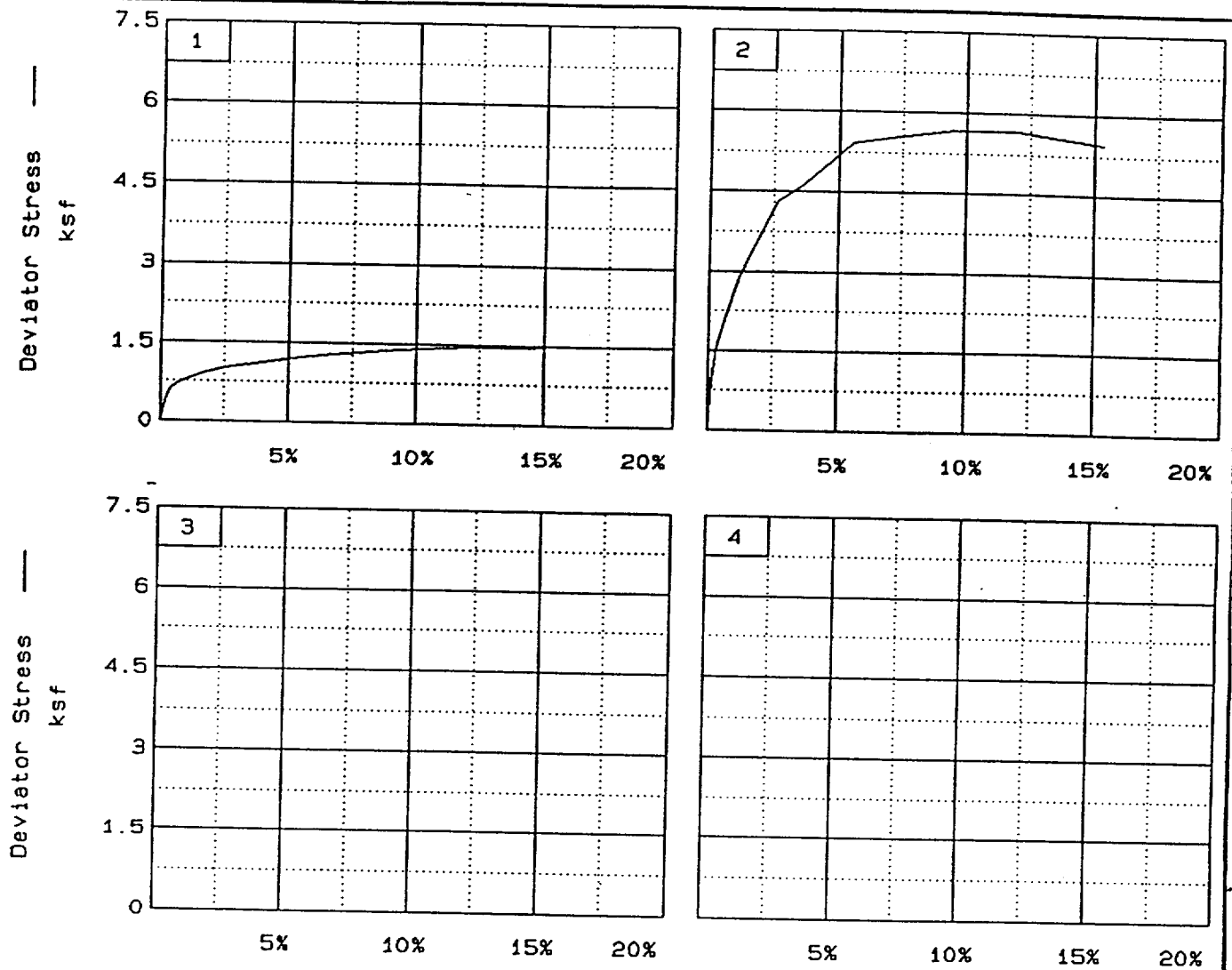
PROJECT: SRS Task 12

SAMPLE LOCATION: FB-2 St-3 @ 7 Ft.

PROJ. NO.: 5016155756 DATE: 12/19/95

TRIAXIAL COMPRESSION TEST

LAW ENGINEERING, INC.



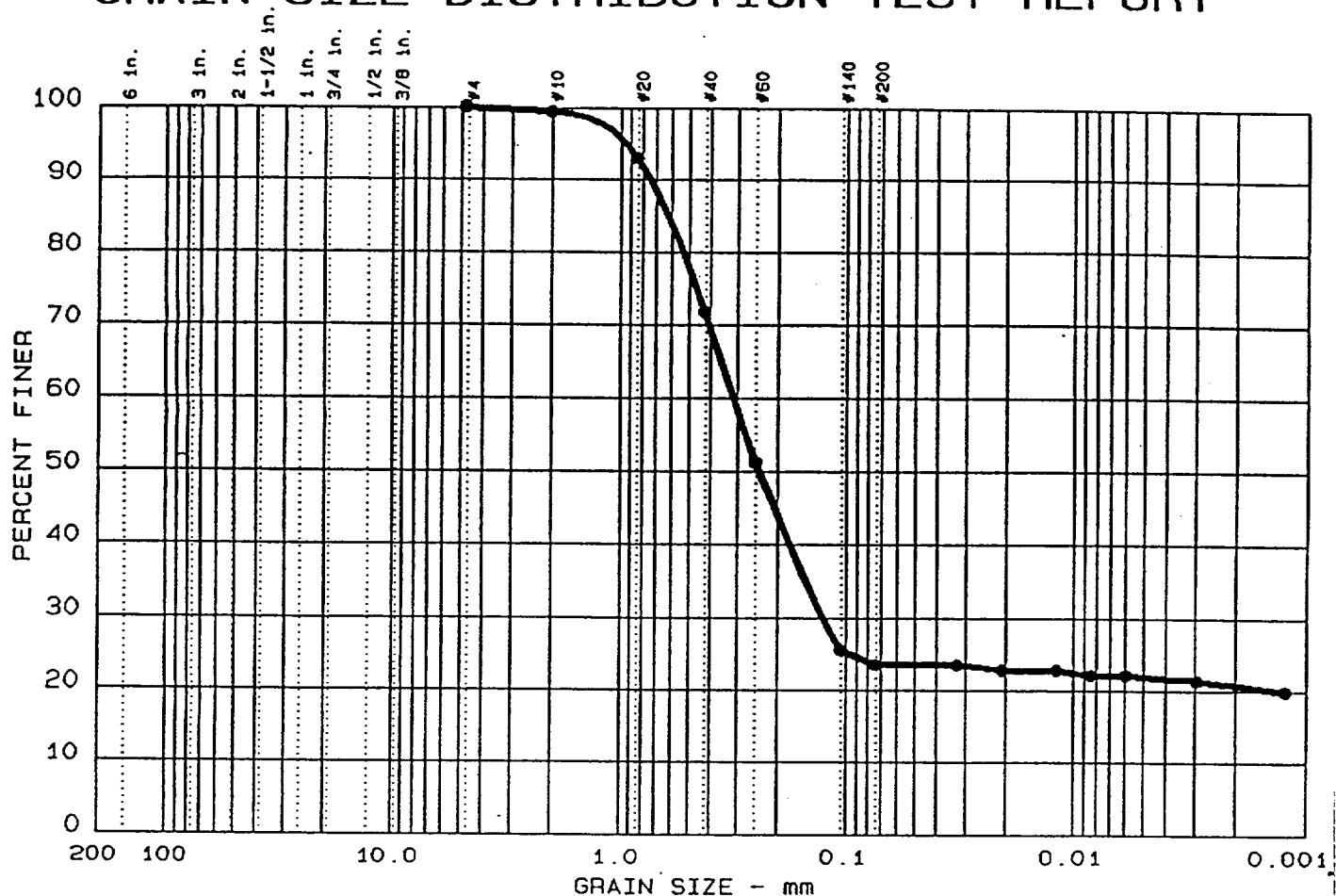
Client: Savannah River Site
 Project: SRS Task 12
 Location: FB-2 St-3 @ 7 Ft.
 File: 5756C

Project No.: 5016155756

Page 2/2

Fig. No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 20	0.0	0.0	76.5	1.6	21.9

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 35	19	0.61	0.31	0.24	0.126				

MATERIAL DESCRIPTION	USCS	AASHTO
• Reddish Brown Clayey Sand	SC	A-7-6 (0.8)

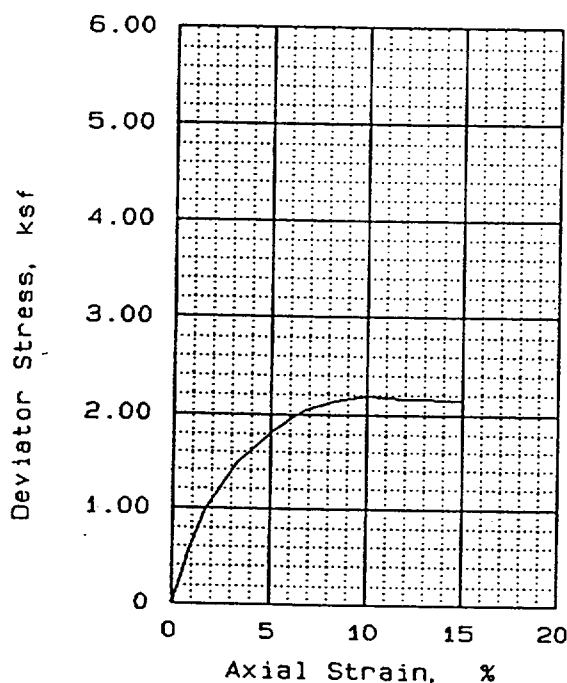
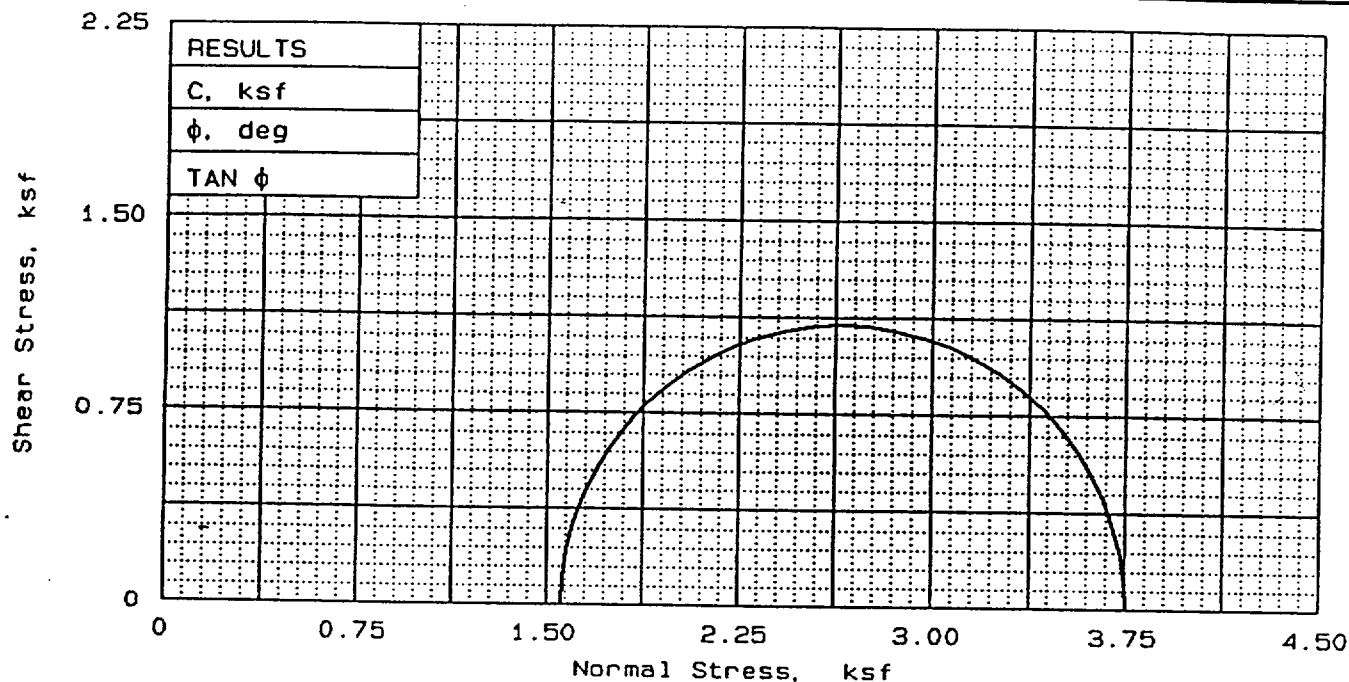
Project No.: 50161-5-5756
 Project: SRS Task 12
 • Location: FB-2 ST-6 @ 13 Ft.

 Date: January 23, 1996

Remarks:
 Tested by: *EM*
 Reviewed by: *HS*

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.



SAMPLE NO.		1
INITIAL	WATER CONTENT, %	15.4
	DRY DENSITY, pcf	114.8
	SATURATION, %	87.5
	VOID RATIO	0.479
	DIAMETER, in	2.86
	HEIGHT, in	6.00
AT TEST	WATER CONTENT, %	15.4
	DRY DENSITY, pcf	114.8
	SATURATION, %	87.5
	VOID RATIO	0.479
	DIAMETER, in	2.86
	HEIGHT, in	6.00
BACK PRESSURE, ksf		0.00
CELL PRESSURE, ksf		1.56
FAILURE STRESS, ksf		2.19
PORE PRESSURE, ksf		
STRAIN RATE, %/min.		1.000
ULTIMATE STRESS, ksf		
PORE PRESSURE, ksf		
σ_1 FAILURE, ksf		3.75
σ_3 FAILURE, ksf		1.56

TYPE OF TEST:

Unconsolidated undrained

SAMPLE TYPE: Undisturbed

DESCRIPTION: Reddish Brown

Clayey Sand

LL= 35 PL= 16 PI= 19.0

SPECIFIC GRAVITY= 2.72

REMARKS: Tested by: *HLB*

Reviewed by: *RLB*

FIG. NO.

CLIENT: Savannah River Site

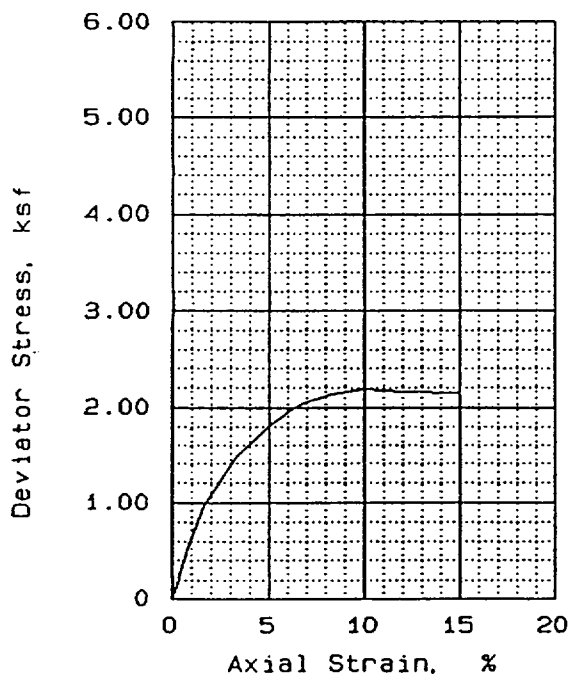
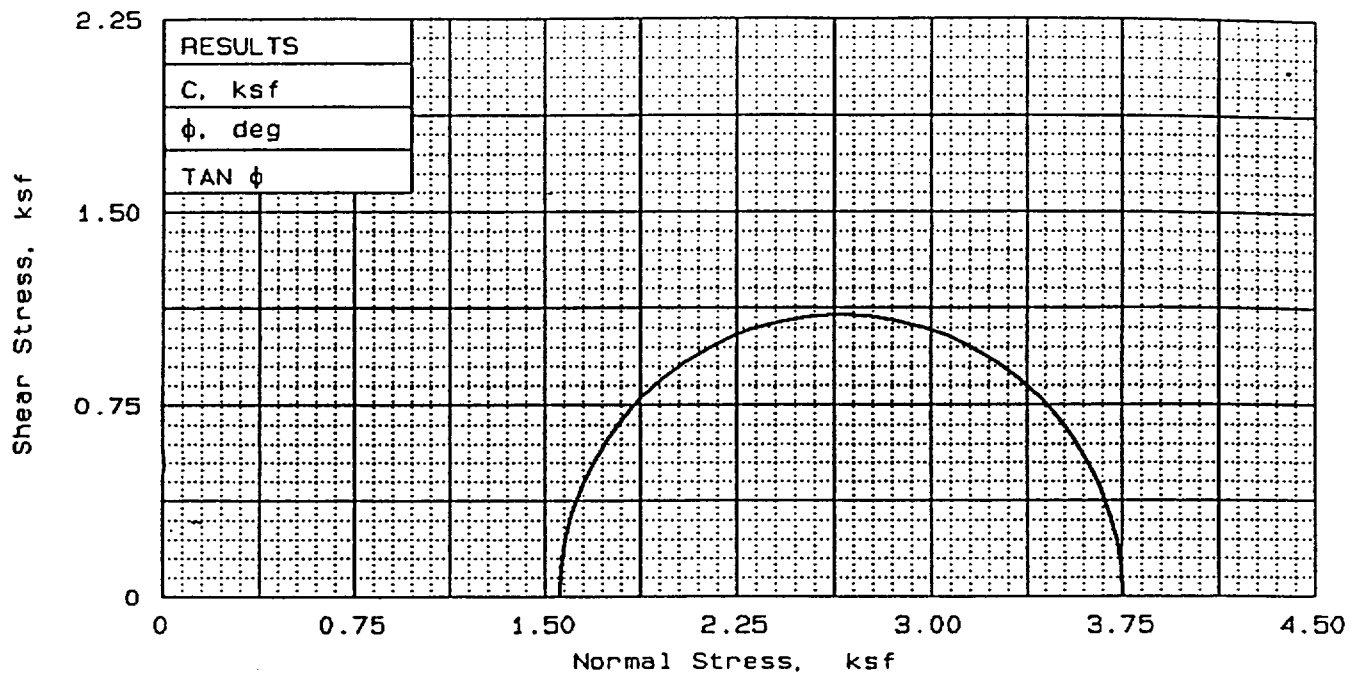
PROJECT: SRS Task 12

SAMPLE LOCATION: FB-2 St-6 @ 13 Ft.

PROJ. NO.: 5016155756 DATE: 12/19/95

TRIAxIAL COMPRESSION TEST

LAW ENGINEERING, INC.



TYPE OF TEST: Unconsolidated undrained

SAMPLE TYPE: Undisturbed

DESCRIPTION: Reddish Brown Clayey Sand

LL= 35 PL= 16 PI= 19.0

SPECIFIC GRAVITY= 2.72

REMARKS: Tested by: *HL*

Reviewed by: *RUB*

FIG. NO.

SAMPLE NO. 1	
INITIAL	WATER CONTENT, % 15.4
	DRY DENSITY, pcf 114.8
	SATURATION, % 87.5
	VOID RATIO 0.479
	DIAMETER, in 2.86
	HEIGHT, in 6.00
AT TEST	WATER CONTENT, % 15.4
	DRY DENSITY, pcf 114.8
	SATURATION, % 87.5
	VOID RATIO 0.479
	DIAMETER, in 2.86
	HEIGHT, in 6.00
BACK PRESSURE, ksf 0.00	
CELL PRESSURE, ksf 1.56	
FAILURE STRESS, ksf 2.19	
PORE PRESSURE, ksf	
STRAIN RATE, %/min. 1.000	
ULTIMATE STRESS, ksf	
PORE PRESSURE, ksf	
σ_1 FAILURE, ksf 3.75	
σ_3 FAILURE, ksf 1.56	

CLIENT: Savannah River Site

PROJECT: SRS Task 12

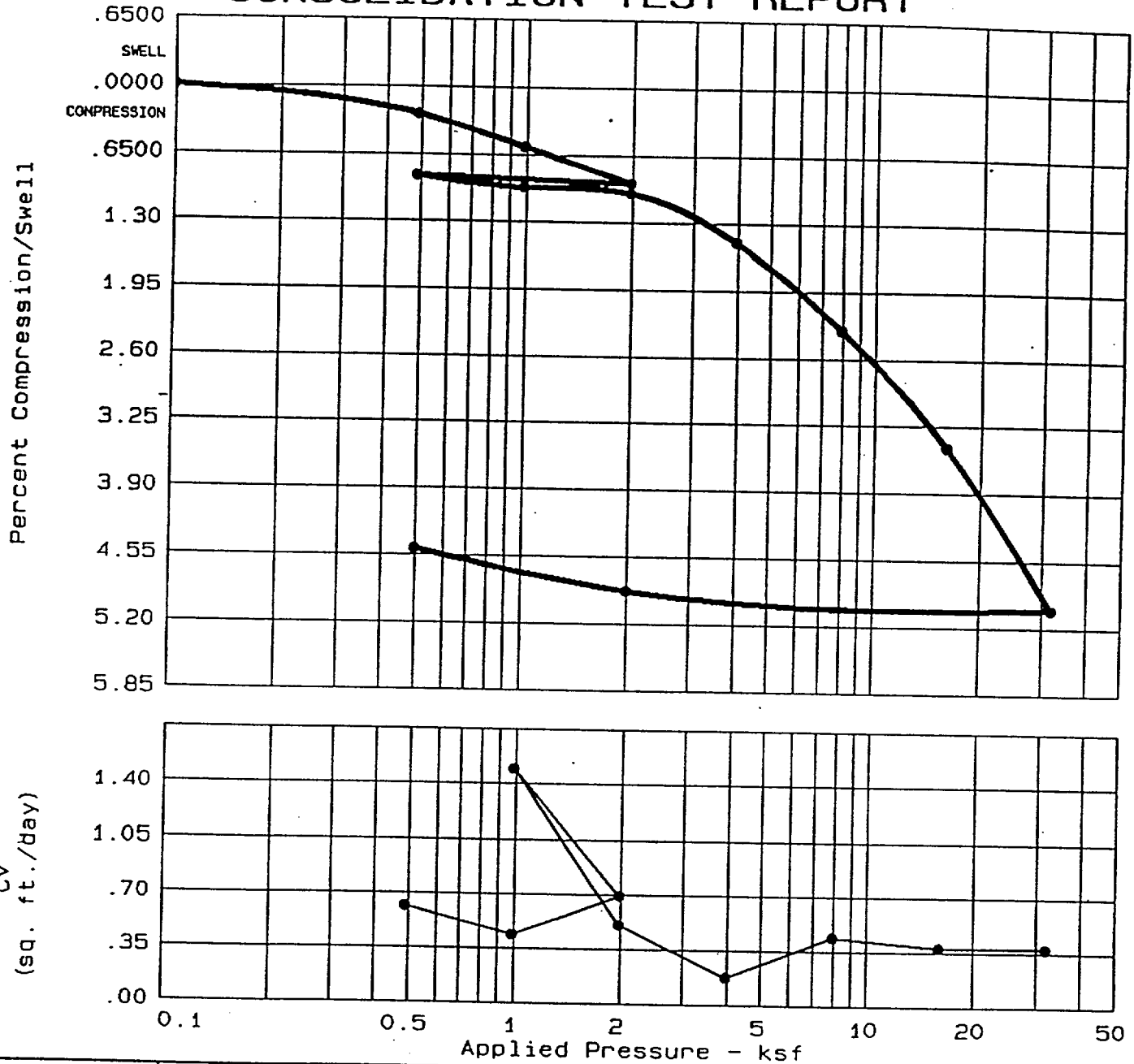
SAMPLE LOCATION: FB-2 St-6 @ 13 Ft.

PROJ. NO.: 5016155756 DATE: 12/19/95

TRIAxIAL COMPRESSION TEST

LAW ENGINEERING, INC.

CONSOLIDATION TEST REPORT



Natural Saturation	Natural Moisture	Dry Density	LL	PI	Sp. Gr.	Precons. press.	C _c	e ₀
81.4 %	15.9	110.7	35	19	2.720	14.67	0.08	0.5321

TEST RESULTS

Compression Index = 0.08

Project No.: 50161-5-5756
 Project: Savannah River Site
 Location: FB-2 ST-6 @ 13 Ft.

Date: 1/22/96

CONSOLIDATION TEST REPORT

LAW ENGINEERING, INC.

MATERIAL DESCRIPTION

Reddish Brown Clayey Sand

Class: SC

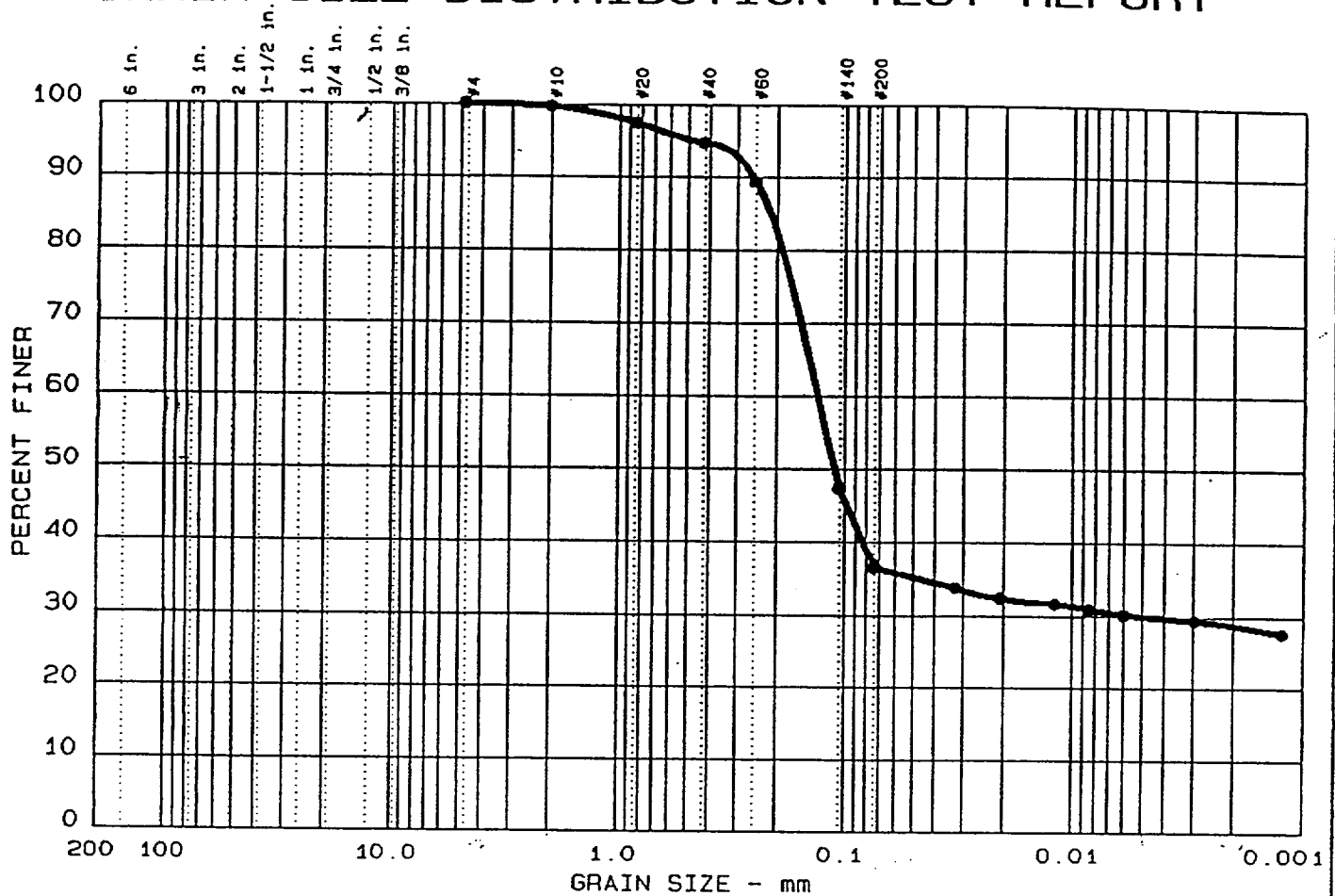
Remarks:

Tested by: *HB*

Reviewed by: *RUB*

Fig. No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT

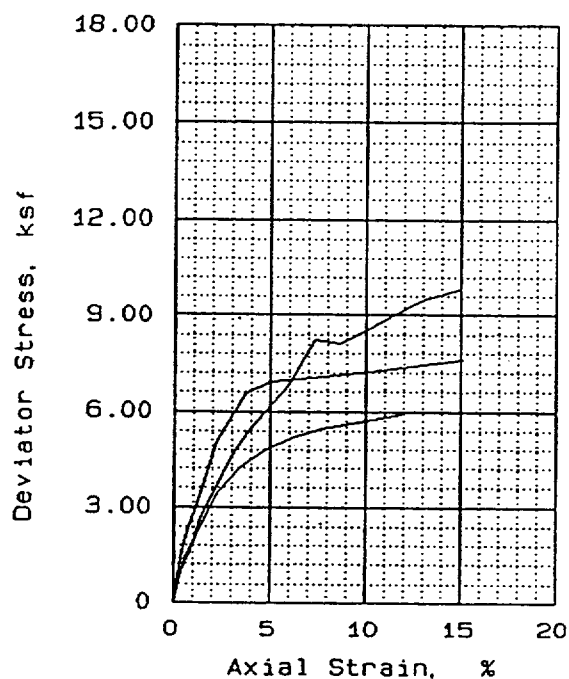
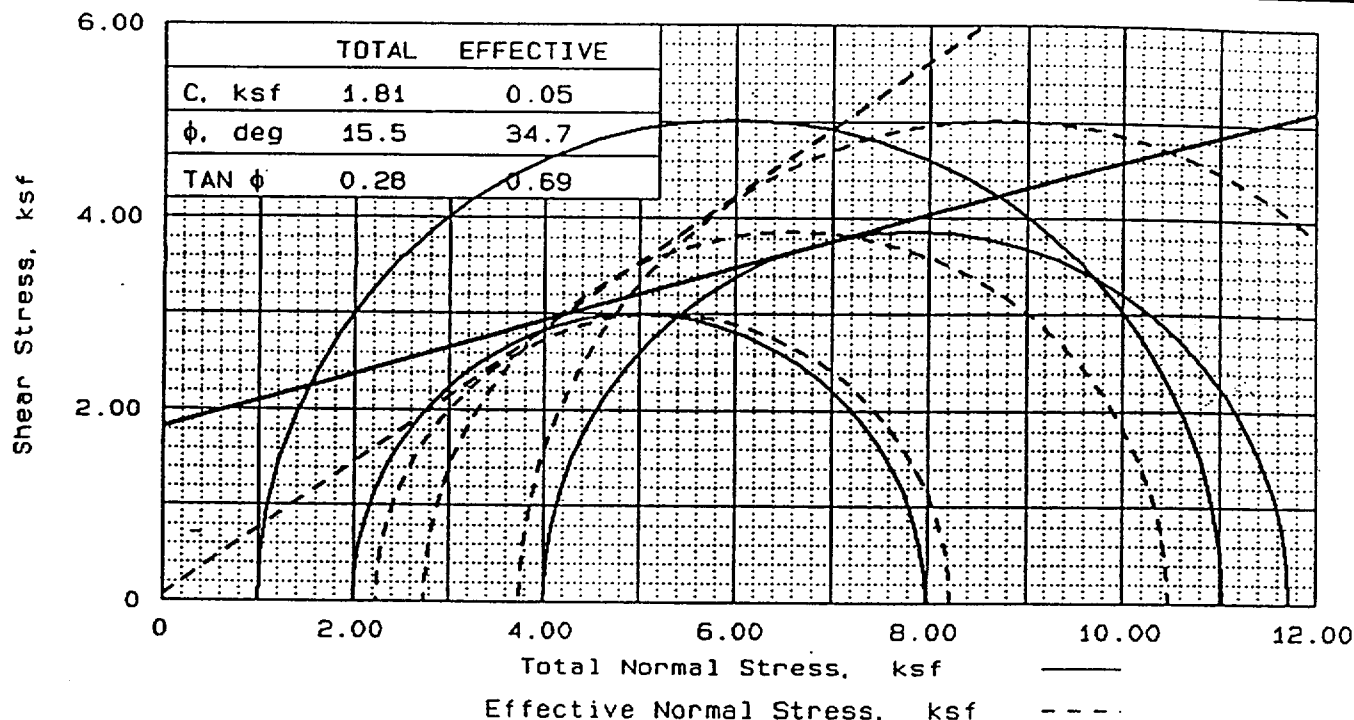


Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
1	0.0	0.0	63.5	6.6	29.9

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
44	27	0.21	0.13	0.11	0.005				

MATERIAL DESCRIPTION	USCS	AASHTO
Tan Clayey Sand	SC	A-7-6(3.8)

Project No.: 50161-5-5756 Project: SRS Task 12 Location: FB-2 ST-7 @ 15 Ft. Date: Dec. 11, 1995	Remarks: Tested by: JCR Reviewed by: HS Figure No.
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	



SAMPLE NO.		1	2	3
INITIAL	WATER CONTENT, %	17.4	19.0	20.5
	DRY DENSITY, pcf	113.7	108.3	103.5
	SATURATION, %	103.1	97.0	91.9
	VOID RATIO	0.444	0.516	0.586
	DIAMETER, in	2.86	2.87	2.84
	HEIGHT, in	6.00	6.00	6.00
AT TEST	WATER CONTENT, %	17.1	18.0	19.2
	DRY DENSITY, pcf	113.2	111.4	109.1
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	0.450	0.474	0.505
	DIAMETER, in	2.86	2.83	2.78
	HEIGHT, in	6.00	5.98	5.94
BACK PRESSURE, ksf		2.89	2.88	2.88
CELL PRESSURE, ksf		3.89	4.88	6.88
FAILURE STRESS, ksf		10.03	5.99	7.72
PORE PRESSURE, ksf		0.14	2.64	4.13
STRAIN RATE, %/min.		0.100	0.100	0.100
ULTIMATE STRESS, ksf				
PORE PRESSURE, ksf				
$\bar{\sigma}_1$ FAILURE, ksf		13.78	8.23	10.47
$\bar{\sigma}_3$ FAILURE, ksf		3.75	2.24	2.75

TYPE OF TEST:
CU with pore pressures
SAMPLE TYPE: Undisturbed
DESCRIPTION: Tan Clayey Sand

LL= 44 PL= 17 PI= 27.0

SPECIFIC GRAVITY= 2.63

REMARKS: Tested by: *HJ*

Reviewed by: *RLB*

FIG. NO.

CLIENT: Savannah River Site

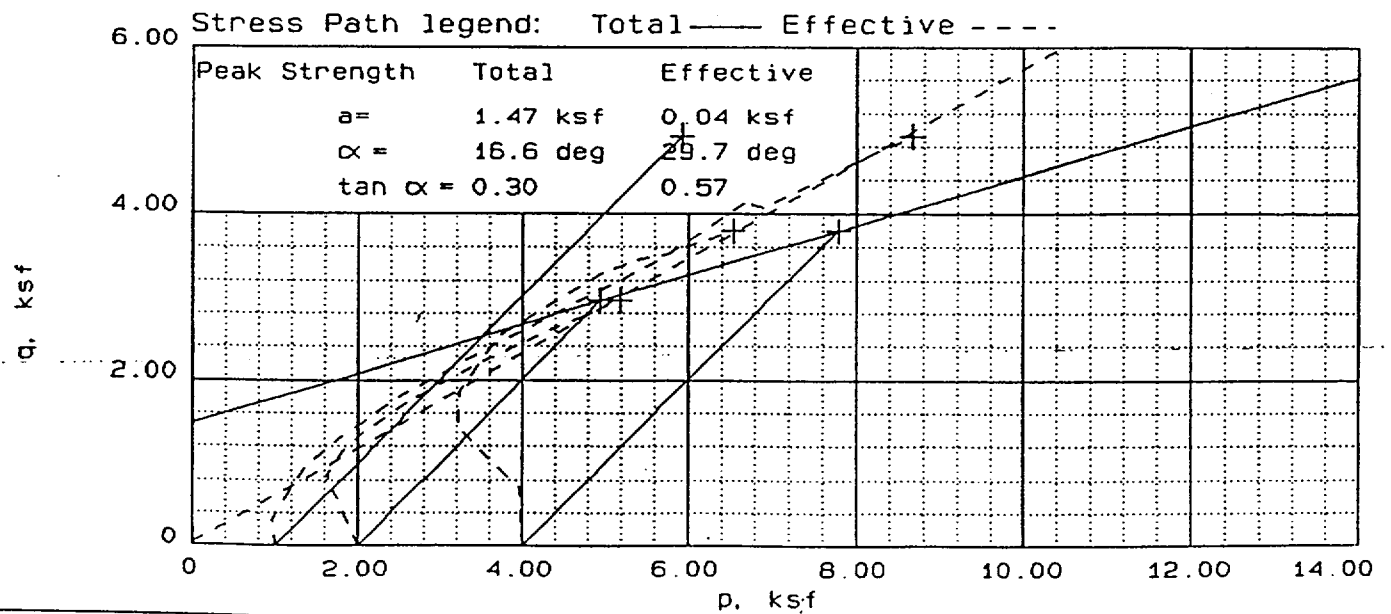
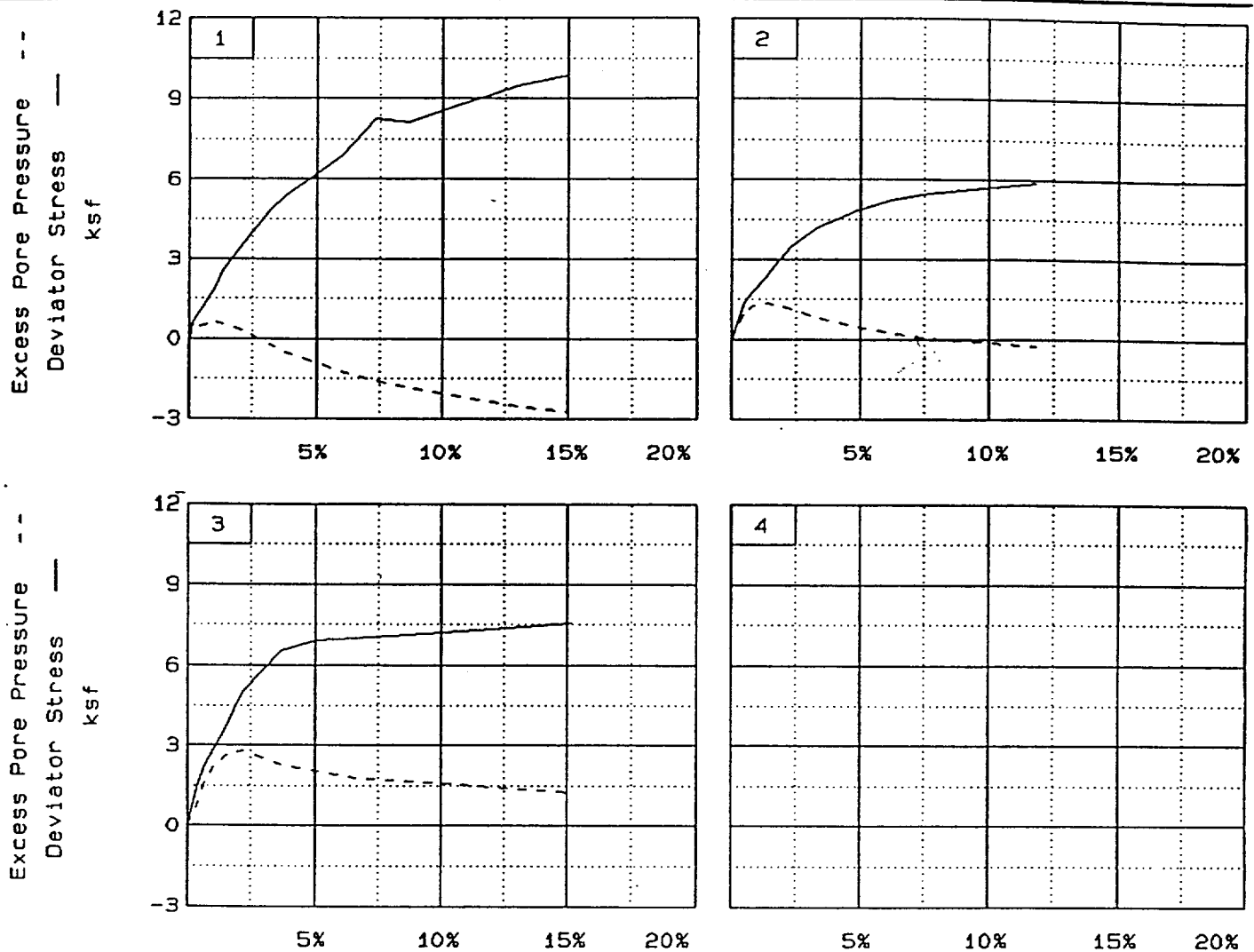
PROJECT: SRS Task 12

SAMPLE LOCATION: FB-2 St-7 @ 15 Ft.

PROJ. NO.: 5016155756 DATE: 12/18/95

TRIAxIAL COMPRESSION TEST

LAW ENGINEERING, INC.



Client: Savannah River Site

Project: SRS Task 12

Location: FB-2 St-7 @ 15 Ft.

File: 5756

Project No.: 5016155756

Page 2/2

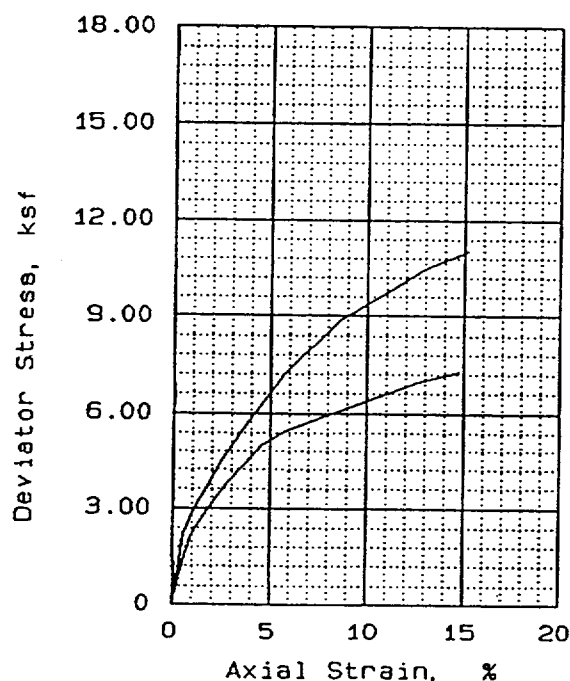
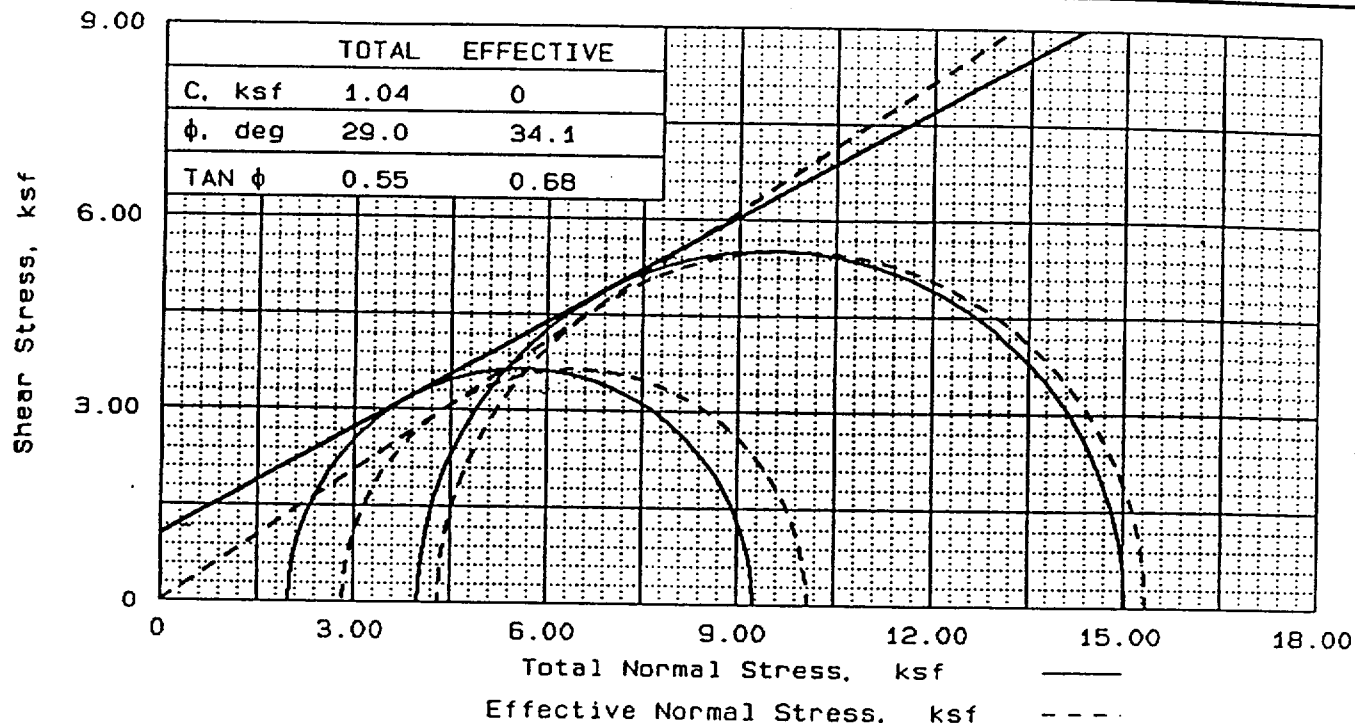
Fig. No. —

Grain size distribution curve for Test No. 1001. The graph plots Percent Finer (0 to 100) against Grain Size in mm (200 to 0.001). The curve shows a sharp drop between 0.1 mm and 0.075 mm, indicating a well-graded material. The curve is labeled with sieve numbers: #10, #20, #40, #60, #140, and #200.

Grain Size (mm)	Percent Finer (%)
2.0 (#10)	98
0.85 (#20)	98
0.425 (#40)	97
0.25 (#60)	95
0.15 (#100)	55
0.075 (#200)	28
0.06 (#140)	25
0.0425 (#40)	22
0.03 (#60)	20
0.025 (#60)	19
0.02 (#100)	18
0.015 (#100)	17
0.01 (#200)	15

[illegible]

Project No.: 50161-5-5756 Project: SRS Task 12 ● Location: FB-2 ST-11 @ 25 Ft.	Remarks: Tested by: <i>EM</i> Reviewed by: <i>HB</i>
Date: January 23, 1996	
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	
	Figure No.



SAMPLE NO.		1	2
INITIAL	WATER CONTENT, %	17.9	18.7
	DRY DENSITY, pcf	100.7	99.8
	SATURATION, %	69.7	71.5
	VOID RATIO	0.705	0.720
	DIAMETER, in	2.84	2.85
	HEIGHT, in	6.00	6.00
AT TEST	WATER CONTENT, %	24.6	24.1
	DRY DENSITY, pcf	102.3	103.3
	SATURATION, %	100.0	100.0
	VOID RATIO	0.678	0.661
	DIAMETER, in	2.83	2.82
	HEIGHT, in	5.97	5.92
BACK PRESSURE, ksf		2.95	2.85
CELL PRESSURE, ksf		4.95	6.85
FAILURE STRESS, ksf		7.27	11.03
PORE PRESSURE, ksf		2.12	2.53
STRAIN RATE, %/min.		0.100	0.100
ULTIMATE STRESS, ksf			
PORE PRESSURE, ksf			
$\bar{\sigma}_1$ FAILURE, ksf		10.11	15.35
$\bar{\sigma}_3$ FAILURE, ksf		2.83	4.32

TYPE OF TEST:

CU with pore pressures

SAMPLE TYPE: Undisturbed

DESCRIPTION: Tan Brown Clayey Sand

LL= 38 PL= 22 PI= 16.0

SPECIFIC GRAVITY= 2.75

REMARKS: Tested by: *HP*

Reviewed by: *RLB*

FIG. NO.

CLIENT: Savannah River Site

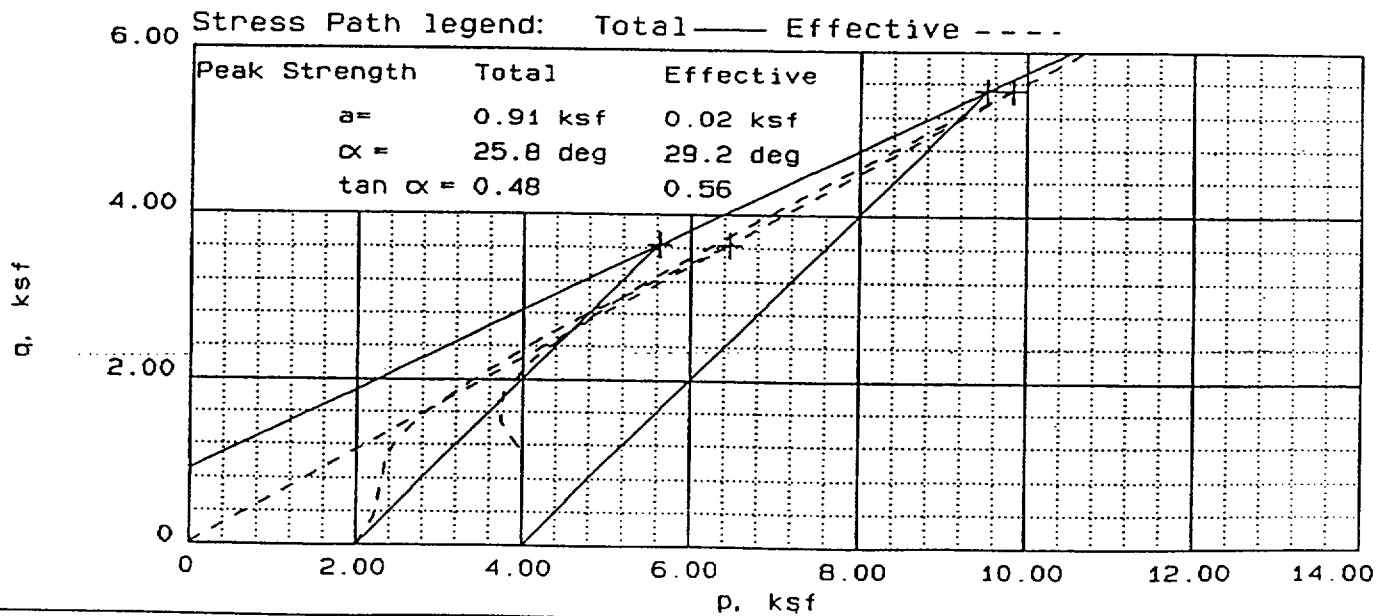
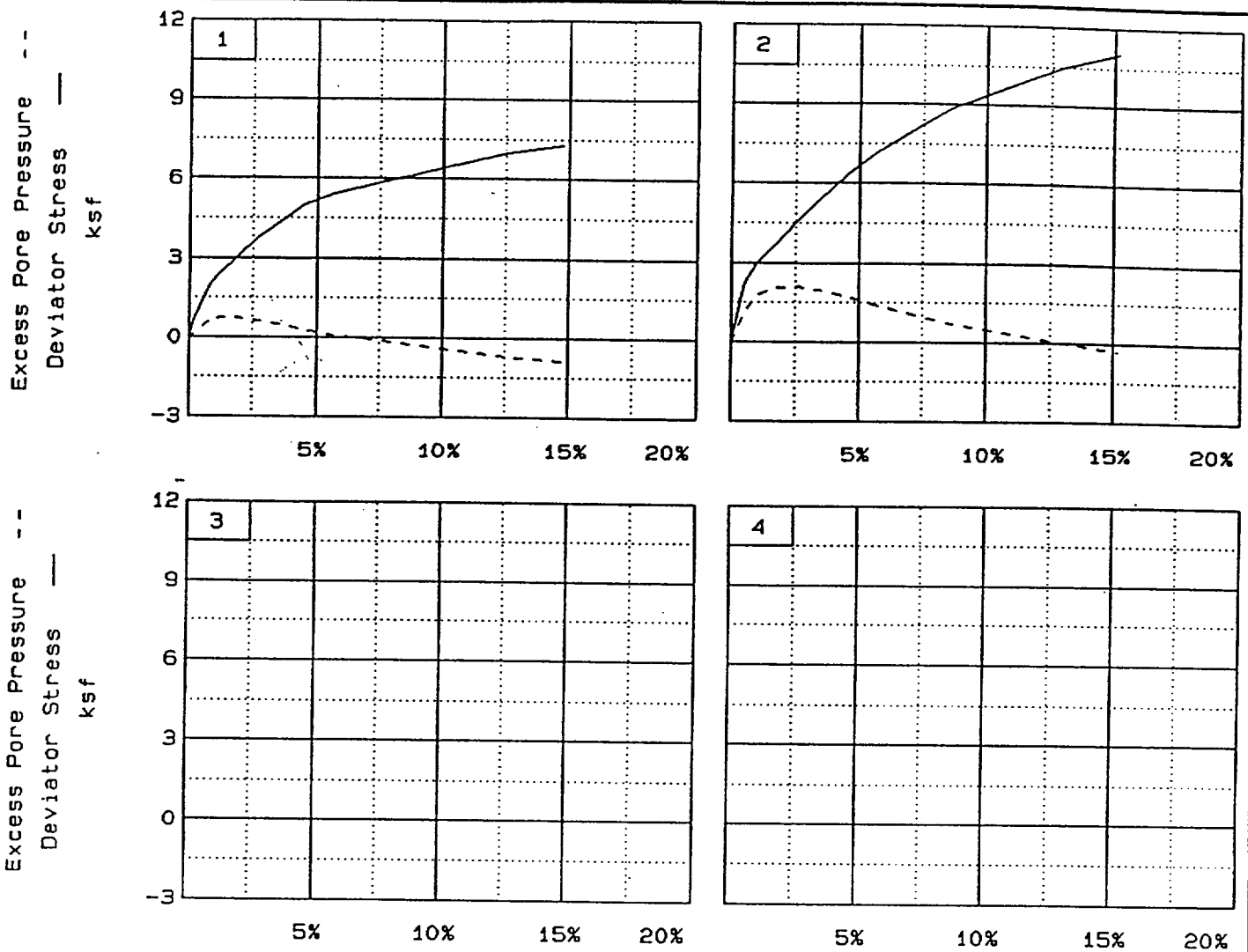
PROJECT: SRS Task 12

SAMPLE LOCATION: FB-2 St-11 @ 25 Ft.

PROJ. NO.: 5016155756 DATE: 1/26/96

TRIAXIAL COMPRESSION TEST

LAW ENGINEERING, INC.



Client: Savannah River Site

Project: SRS Task 12

Location: FB-2 St-11 @ 25 Ft.

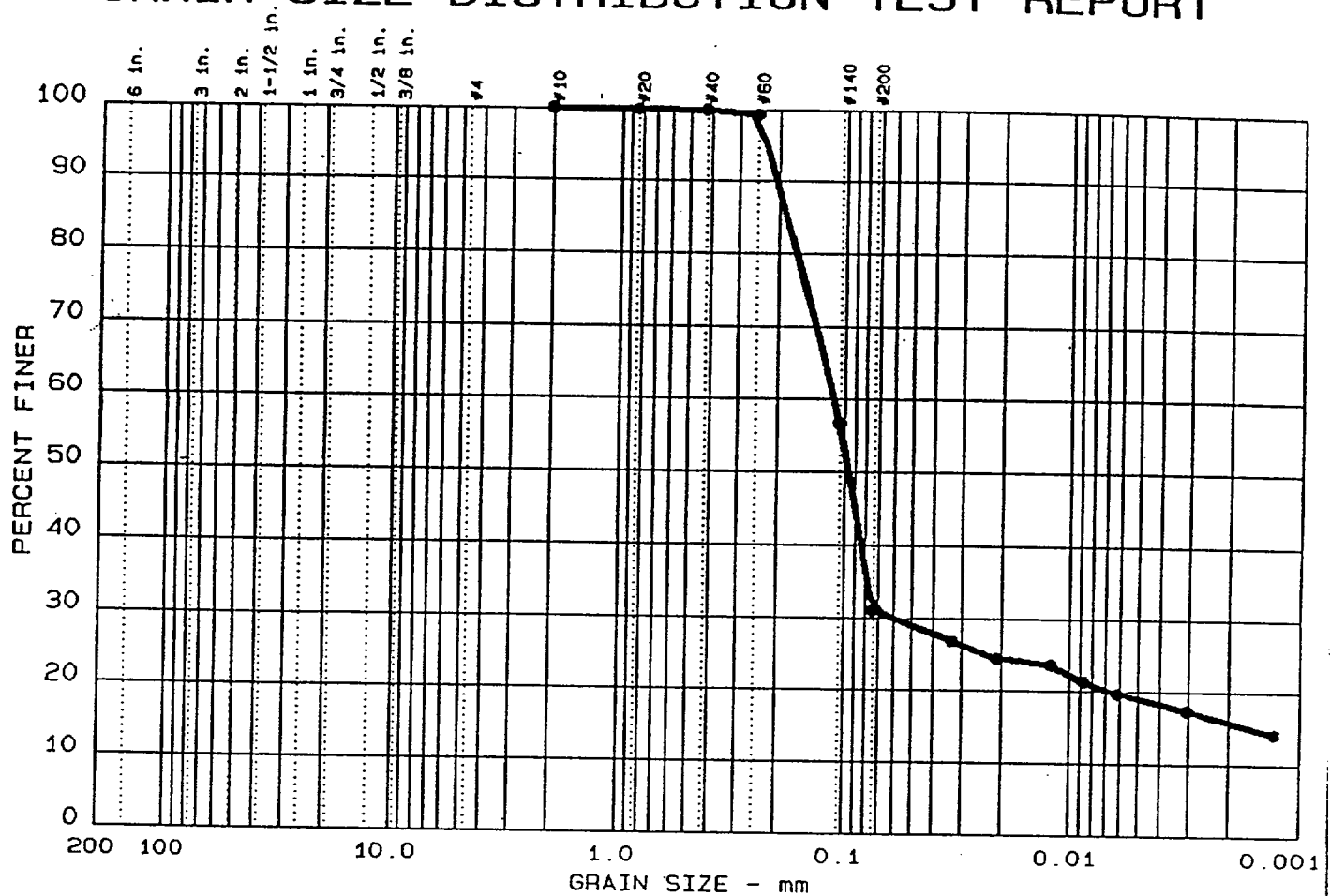
File: 5756E

Project No.: 5016155756

Page 2/2

Fig. No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 6	0.0	0.0	69.1	11.9	19.0

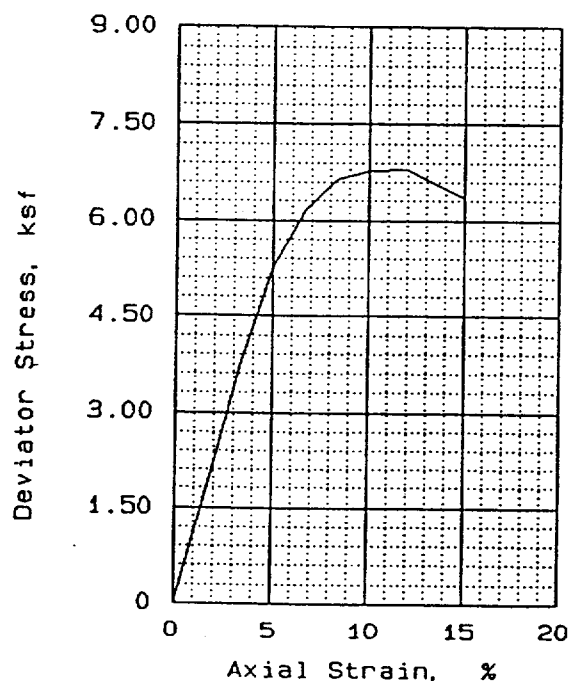
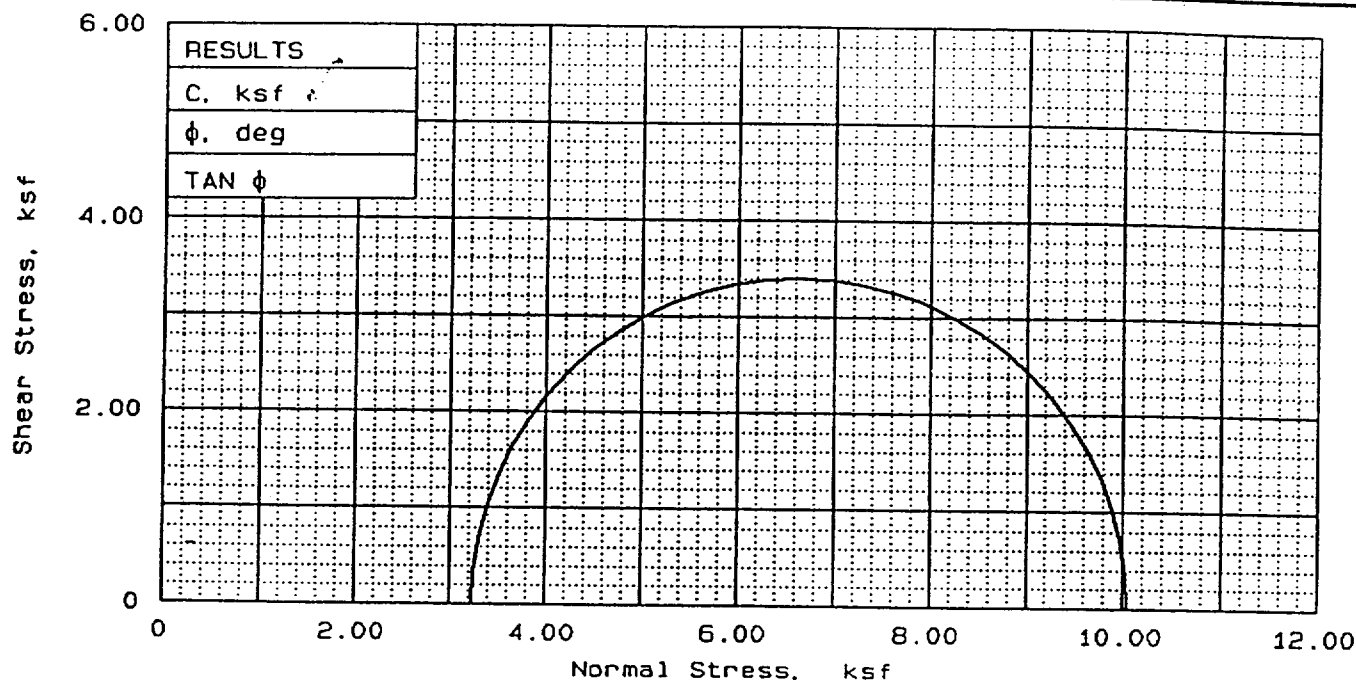
LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 30	7	0.18	0.11	0.10	0.061	0.0015			

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan & Pink Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-5-5756
 Project: SRS Task 12
 • Location: FB-2 ST-13 @ 27 Ft.
 Date: January 23, 1996
 GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:
 Tested by: EM
 Reviewed by: HB

Figure No.



SAMPLE NO. 1

INITIAL	WATER CONTENT, %	21.3
	DRY DENSITY, pcf	98.8
	SATURATION, %	82.4
	VOID RATIO	0.694
	DIAMETER, in	2.86
	HEIGHT, in	6.00

AT TEST	WATER CONTENT, %	21.3
	DRY DENSITY, pcf	98.8
	SATURATION, %	82.4
	VOID RATIO	0.694
	DIAMETER, in	2.86
	HEIGHT, in	6.00

BACK PRESSURE, ksf 0.00

CELL PRESSURE, ksf 3.24

FAILURE STRESS, ksf 6.81

PORE PRESSURE, ksf

STRAIN RATE, %/min. 1.000

ULTIMATE STRESS, ksf

PORE PRESSURE, ksf

σ_1 FAILURE, ksf 10.05

σ_3 FAILURE, ksf 3.24

TYPE OF TEST:

Unconsolidated undrained

SAMPLE TYPE: Undisturbed

DESCRIPTION: Tan & Pink Silty Sand

LL= 30 PL= 23 PI= 7.0

SPECIFIC GRAVITY= 2.68

REMARKS: Tested by: HS

Reviewed by: RLB

CLIENT: Savannah River Site

PROJECT: SRS Task 12

SAMPLE LOCATION: FB-2 St-13 @ 27 Ft.

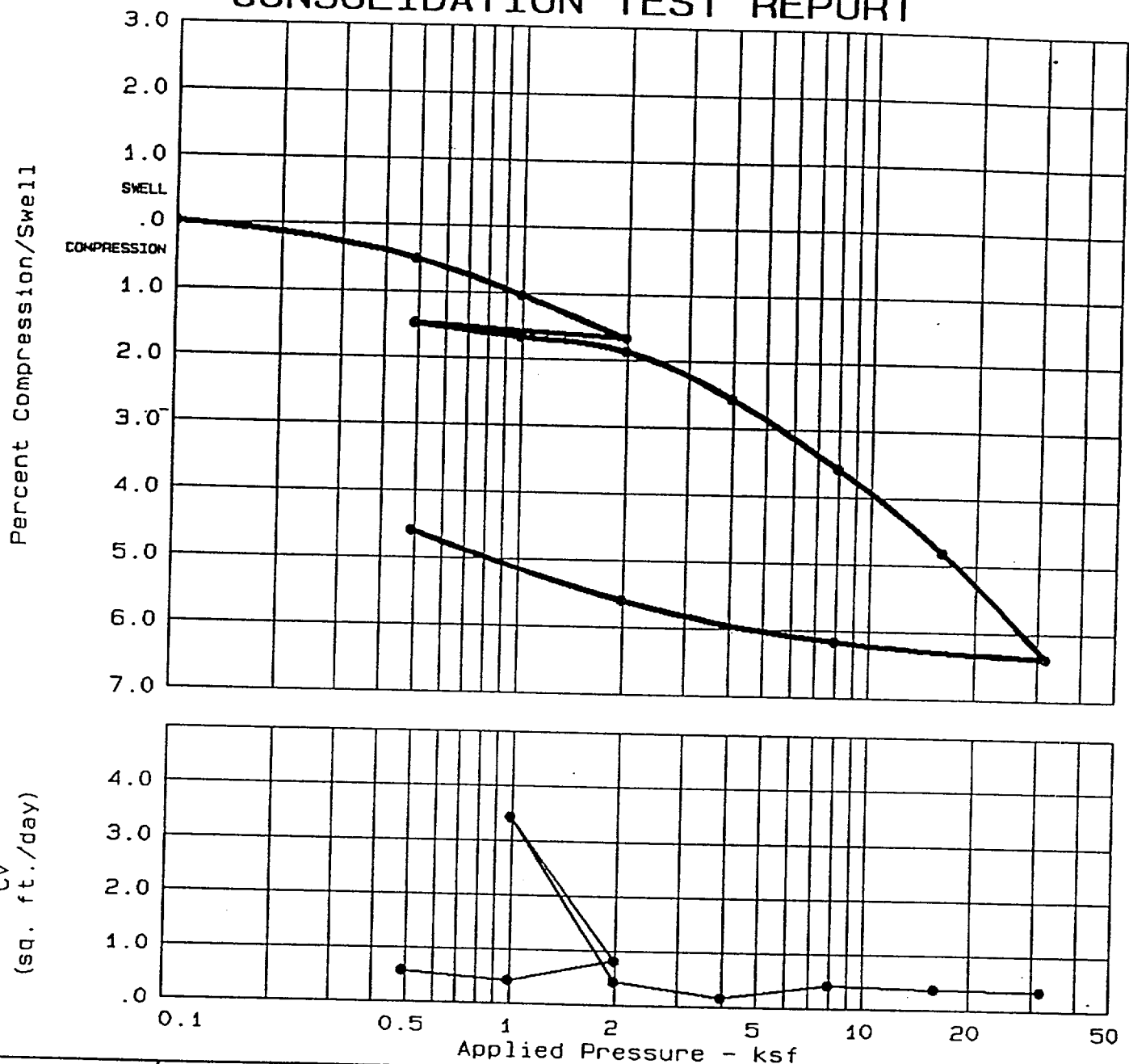
PROJ. NO.: 5016155756 DATE: 12/19/95

TRIAxIAL COMPRESSION TEST

LAW ENGINEERING, INC.

FIG. NO.

CONSOLIDATION TEST REPORT



Natural Saturation	Natural Moisture	Dry Density	LL	PI	Sp. Gr.	Precons. press.	C _c	e ₀
64.0 %	18.0	95.4	30	7	2.680	5.16	0.09	0.7540

TEST RESULTS

Compression Index = 0.09

Project No.: 50161-5-5756
 Project: Savannah River Site
 Location: FB-2 ST-13 @ 27 Ft.

Date: 1/22/96

CONSOLIDATION TEST REPORT

LAW ENGINEERING, INC.

MATERIAL DESCRIPTION

Tan & Pink Silty Sand

Class: SM

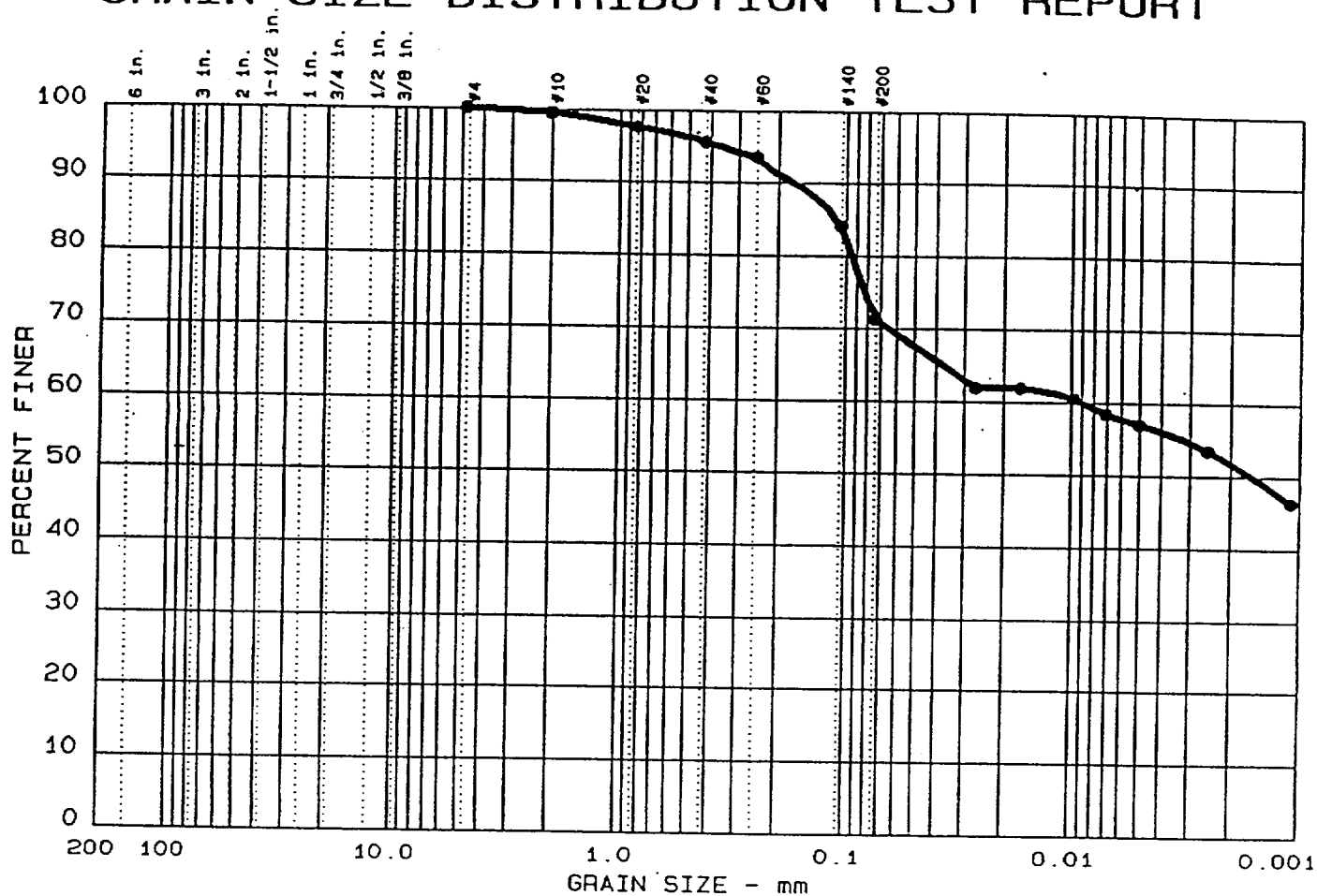
Remarks:

Tested by: *HJ*

Reviewed by: *RLB*

Fig. No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 19	0.0	0.0	28.7	14.3	57.0

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 82	54	0.11		0.00					

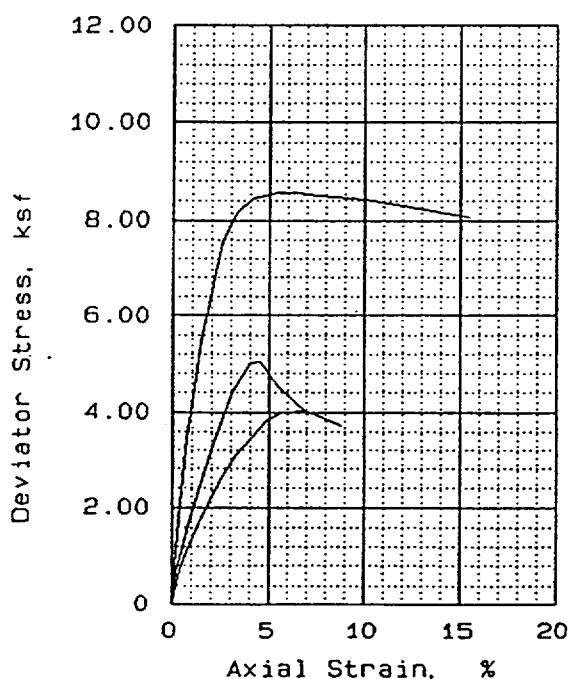
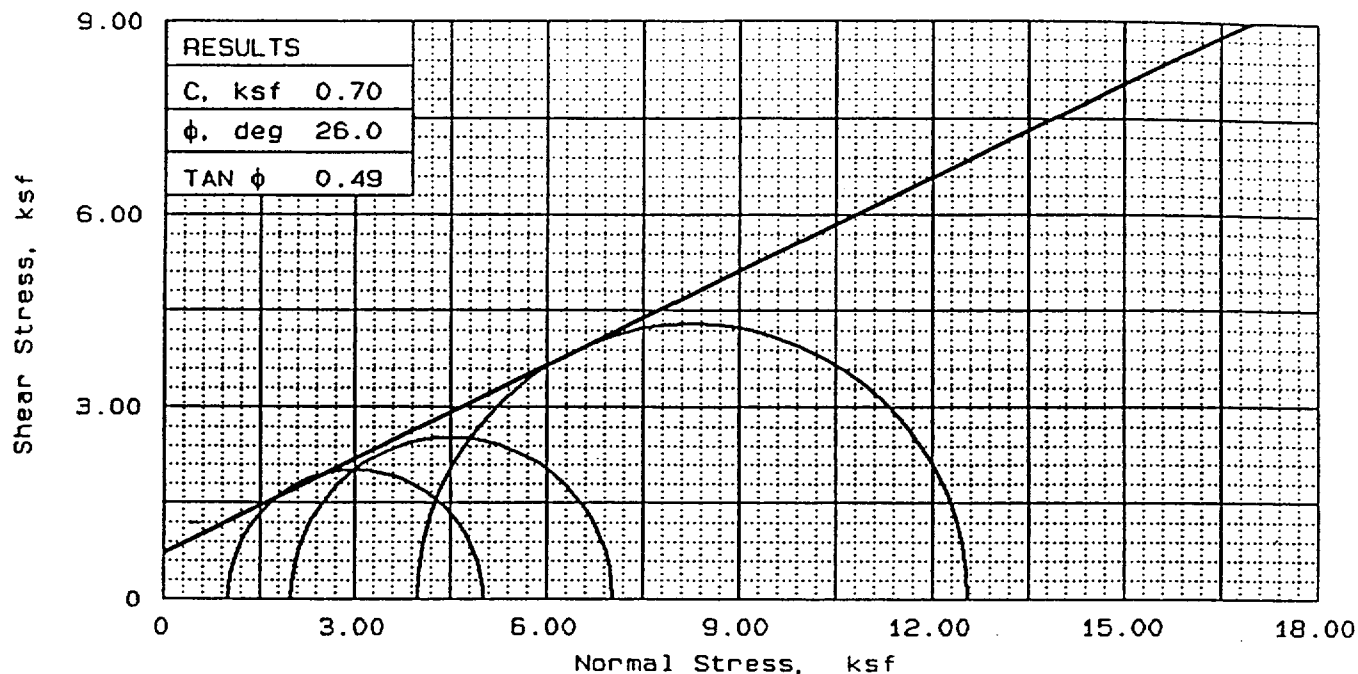
MATERIAL DESCRIPTION	USCS	AASHTO
• Tan & Pink Sandy Fat Clay	CH	A-7-6 (39.4)

Project No.: 50161-5-5756
 Project: SRS Task 12
 • Location: FB-2 ST-14 @ 29 Ft.
 Date: January 23, 1996

Remarks:
 Tested by: *EM*
 Reviewed by: *HB*

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.



SAMPLE NO.		1	2	3
INITIAL	WATER CONTENT, %	24.5	22.2	19.9
	DRY DENSITY, pcf	97.1	94.4	92.2
	SATURATION, %	90.4	76.6	65.2
	VOID RATIO	0.730	0.779	0.822
	DIAMETER, in	2.86	2.84	2.86
	HEIGHT, in	5.60	5.60	5.60
AT TEST	WATER CONTENT, %	26.7	27.5	29.0
	DRY DENSITY, pcf	97.7	96.6	94.3
	SATURATION, %	100.0	100.0	100.0
	VOID RATIO	0.719	0.739	0.780
	DIAMETER, in	2.85	2.82	2.84
	HEIGHT, in	5.59	5.55	5.56
BACK PRESSURE, ksf		2.88	3.60	2.88
CELL PRESSURE, ksf		3.88	5.60	6.88
FAILURE STRESS, ksf		4.02	5.04	8.58
PORE PRESSURE, ksf				
STRAIN RATE, %/min.		0.100	0.100	0.100
ULTIMATE STRESS, ksf				
PORE PRESSURE, ksf				
σ_1 FAILURE, ksf		5.02	7.04	12.58
σ_3 FAILURE, ksf		1	2	4

TYPE OF TEST: Consolidated drained

SAMPLE TYPE: Undisturbed

DESCRIPTION: Tan & Pink Sandy Fat Clay

LL= 82 PL= 28 PI= 54.0

SPECIFIC GRAVITY= 2.69

REMARKS: Tested by: *HS*

Reviewed by: *RLB*

FIG. NO.

CLIENT: Savannah River Site

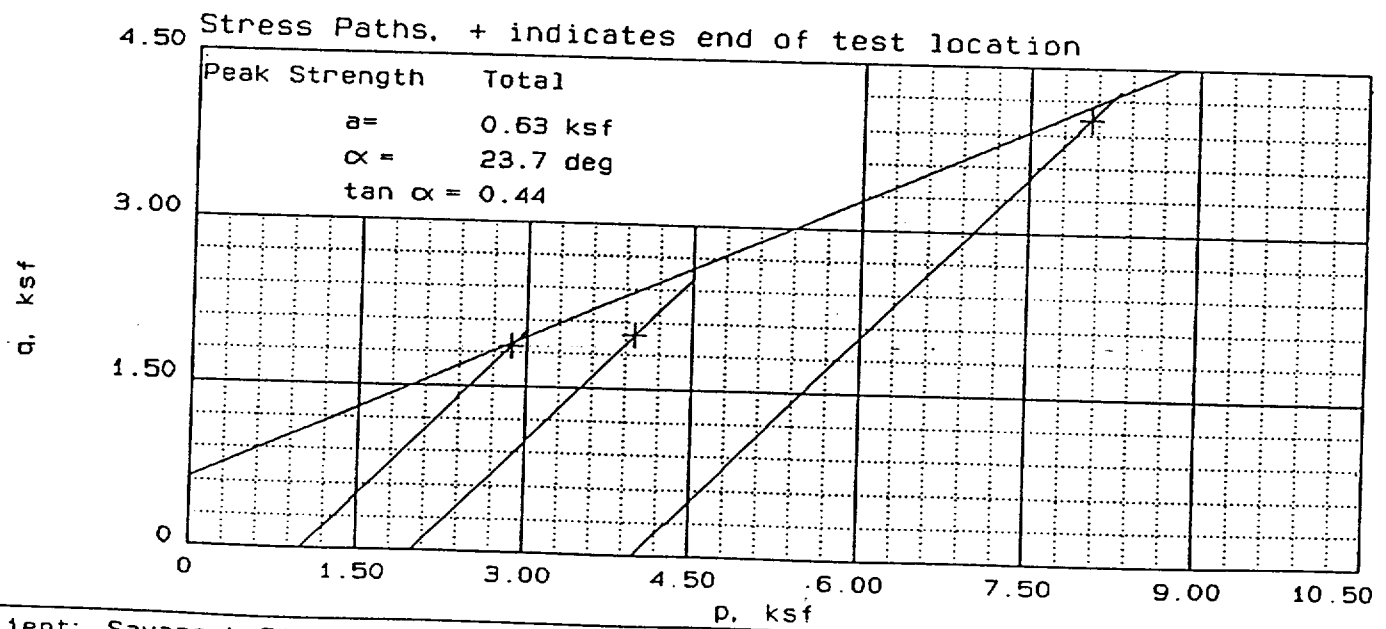
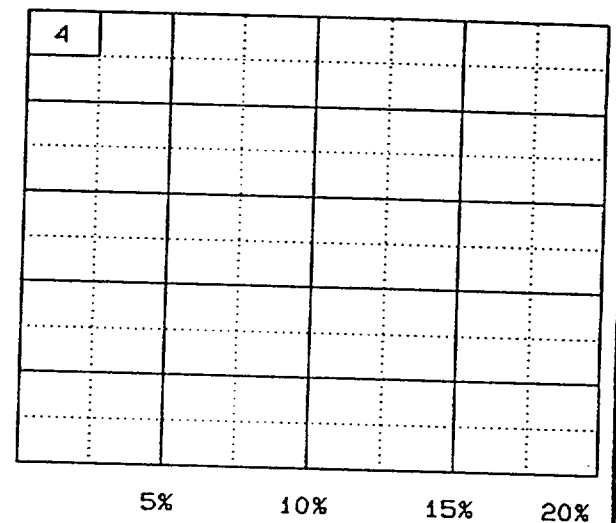
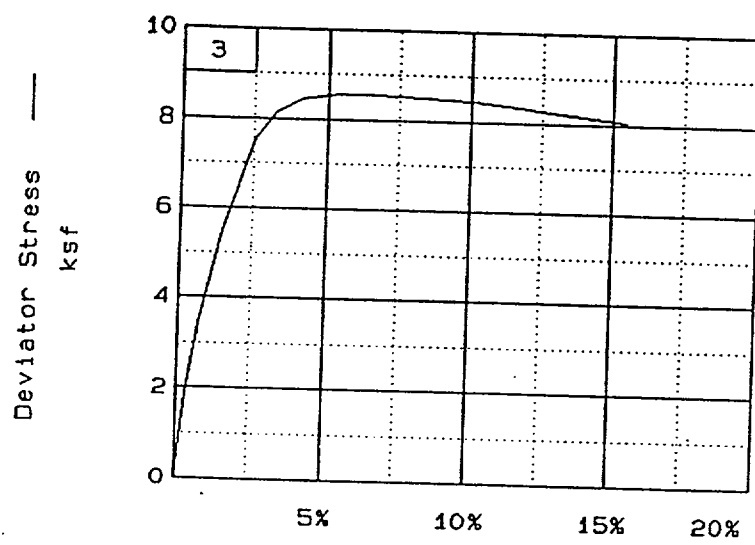
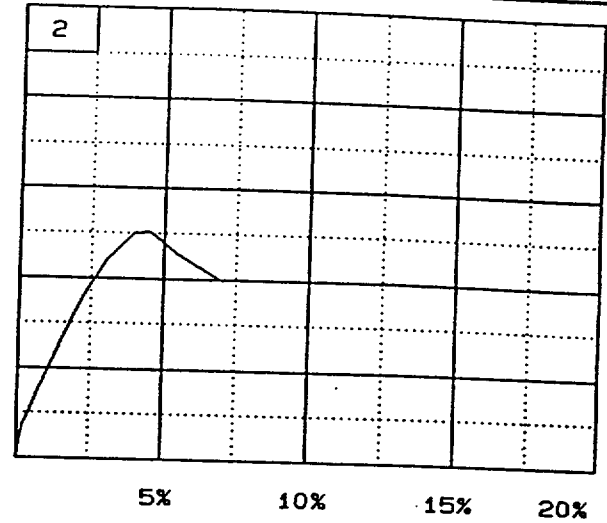
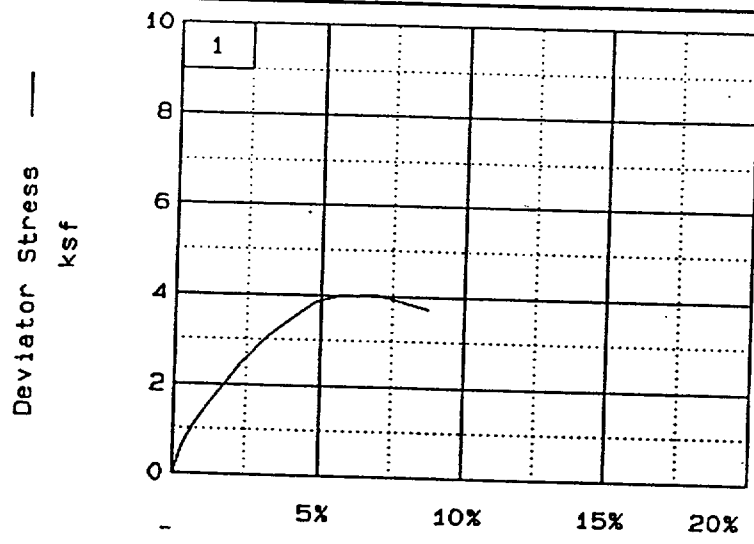
PROJECT: SRS Task 12

SAMPLE LOCATION: FB-2 St-14 @ 29 Ft.

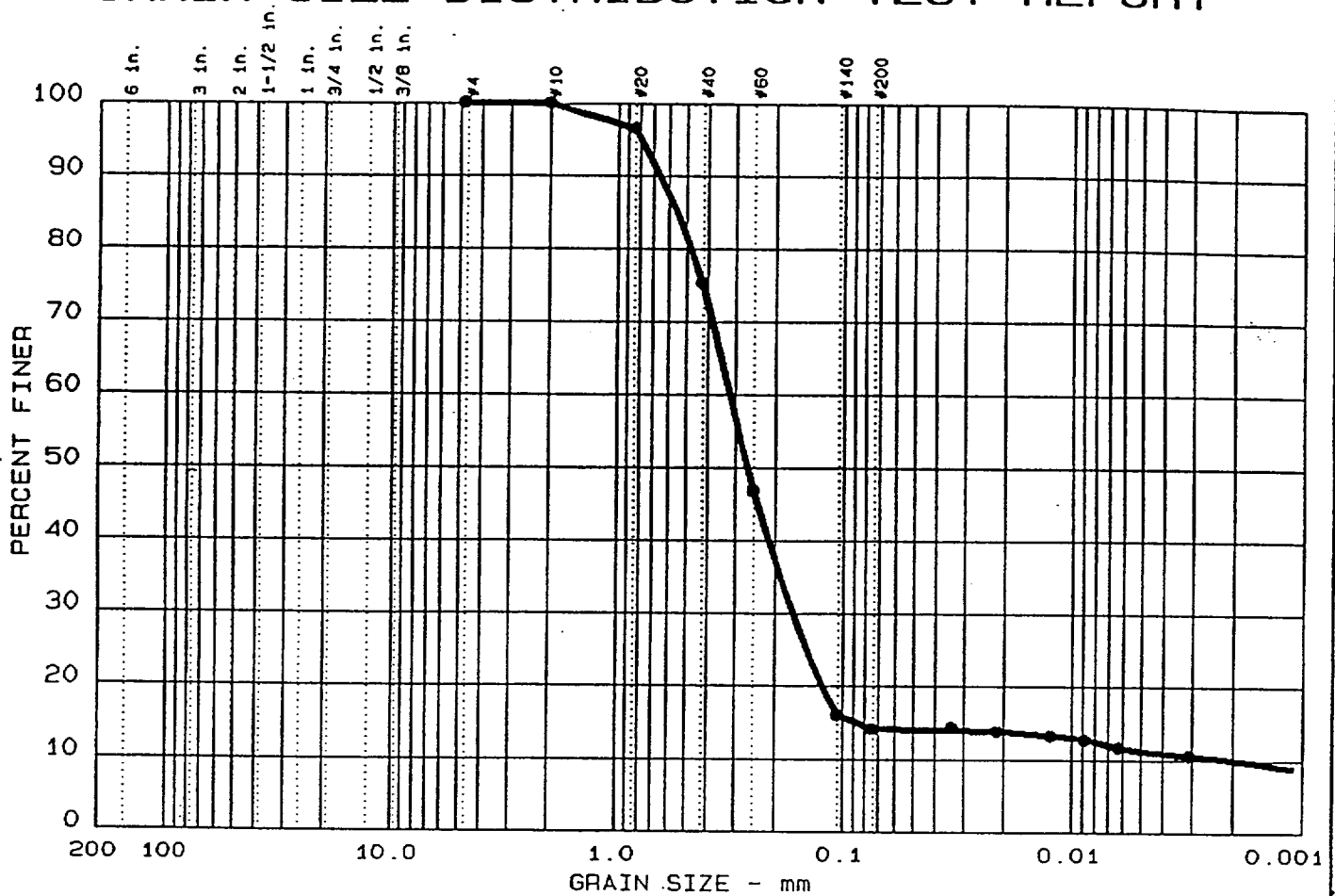
PROJ. NO.: 5016155756 DATE: 1/26/96

TRIAXIAL COMPRESSION TEST

LAW ENGINEERING, INC.



GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 4	0.0	0.0	85.8	2.9	11.3

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 31	10	0.54	0.32	0.26	0.167	0.0854	0.0019	45.45	163.1

MATERIAL DESCRIPTION	USCS	AASHTO
• Brown Clayey Sand	SC	A-2-4 (0.0)

Project No.: 50161-5-5756
 Project: SRS Task 12
 • Location: FB-2 St-17 @ 50 Ft.
 Date: January 29, 1996

Remarks:
 Tested by: *DmJ*
 Reviewed by: *HS*

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

ATTACHMENT 3

Tested by: CS

Reviewed by: RLB

Law Job No. 50161-5-5756

Date: 11/08/95

Date: 01/30/96

Job Name SRS Task 12

TP-4A: UNIT WEIGHT OF SAMPLE "TYPICAL"

Sample: Boring No.: FB-2
Depth: 50-52 ft.
Sample ID: ST-17

MEASUREMENTS (Nominal 6-inch cut sample height):

TOTAL SAMPLE HEIGHT (inches)	INSIDE DIAMETER OF CUT TUBE (inches)
1 <u>7.625</u>	
2 <u>7.625</u>	top <u>2.865</u>
3 <u>7.625</u>	bottom <u>2.865</u>
Avg. <u>7.625 (H)</u>	Avg. <u>2.865 (D)</u>

MOISTURE CONTENT DETERMINATION

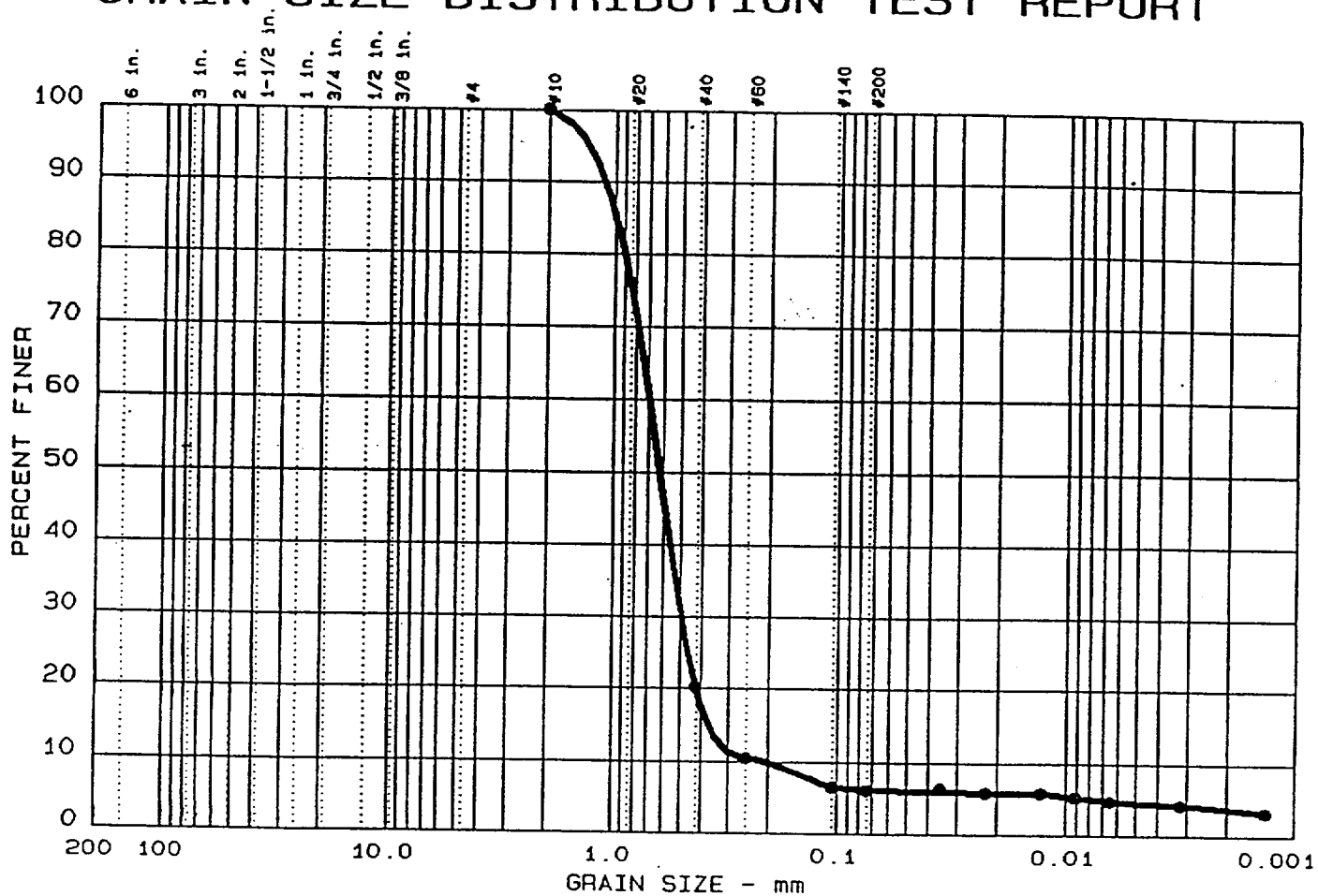
MOISTURE CONTENT	
Tare No.	<u>T-8</u>
Tare Weight	<u>52.40 gm</u>
Wet Wt. + Tare	<u>422.30 gm</u>
Dry Wt. + Tare	<u>351.00 gm</u>
Wt. of Water	<u>71.30 gm</u>
Dry Weight	<u>298.60 gm</u>
Moisture Content, w	<u>23.9 %</u>

TOTAL WEIGHT OF SOIL + TUBE SECTION
WEIGHT OF CLEAN, DRY TUBE SECTION
WET WEIGHT OF SOIL, $[(W_{st} - W_t)/454]$
VOLUME OF SAMPLE, $[(\pi \cdot D^2/4) \cdot H/1728]$
WET DENSITY, $[W_s/V]$
DRY DENSITY, $[D_w/(1+w/100)]$

$W_{st} =$ 2062.4 gm
 $W_t =$ 548.85 gm
 $W_s =$ 3.334 lbs
 $V =$ 0.028 ft³
 $D_w =$ 117.2 pcf
 $D_o =$ 94.6 pcf

 h:\users\lab\soil\program\campdens.wk3

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 7	0.0	0.0	93.9	1.6	4.5

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 30	10	0.97	0.69	0.62	0.489	0.3698	0.2056	1.69	3.3

MATERIAL DESCRIPTION	USCS	AASHTO
• Yellow Tan Poorly Graded Sand with Clay	SP-SC	A-2-4 (0.0)

Project No.: 50161-5-5756
 Project: SRS Task 12
 • Location: FB-2 ST-18 @ 60 Ft.
 Date: January 23, 1996

Remarks:
 Tested by: EM
 Reviewed by: HS

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

ATTACHMENT 3

Tested by: DMJ

Reviewed by: RLB

Law Job No. 50161-5-5756

Date: 01/30/96

Date: 01/30/96

Job Name SRS Task 12

TP-4A: UNIT WEIGHT OF SAMPLE "TYPICAL"

Sample: Boring No.: FB-2
Depth: 60-62 ft.
Sample ID: ST-18

MEASUREMENTS (Nominal 6-inch cut sample height):

TOTAL SAMPLE HEIGHT (inches)	INSIDE DIAMETER OF CUT TUBE (inches)
1 <u>3.939</u>	
2 <u>3.917</u>	top <u>2.859</u>
3 <u>3.918</u>	bottom <u>2.848</u>
Avg. <u>3.925 (H)</u>	Avg. <u>2.854 (D)</u>

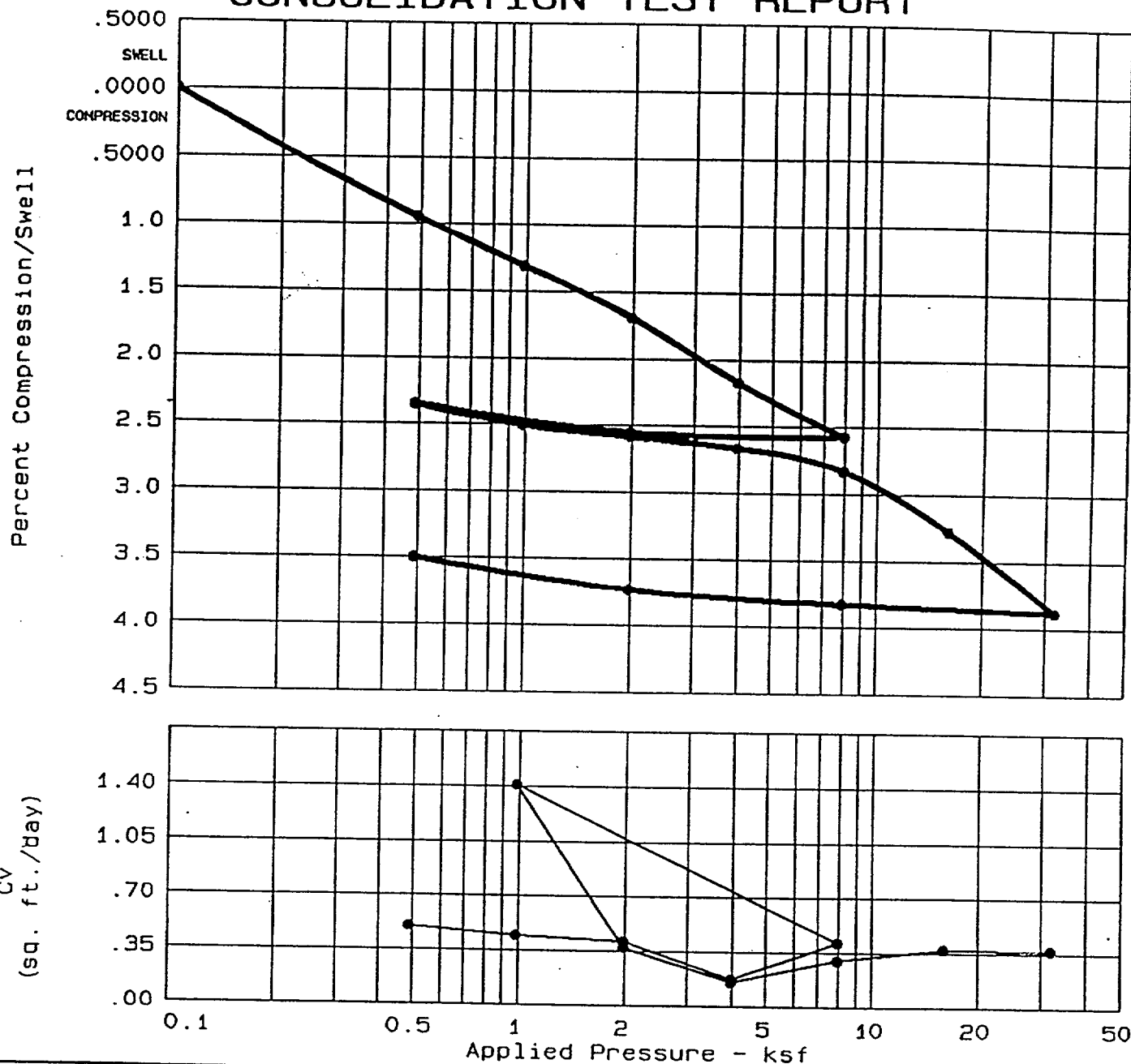
MOISTURE CONTENT DETERMINATION

MOISTURE CONTENT	
Tare No.	
Tare Weight	<u>218.56 gm</u>
Wet Wt. + Tare	<u>339.24 gm</u>
Dry Wt. + Tare	<u>319.61 gm</u>
Wt. of Water	<u>19.63 gm</u>
Dry Weight	<u>101.05 gm</u>
Moisture Content, w	<u>19.4 %</u>

TOTAL WEIGHT OF SOIL + TUBE SECTION
WEIGHT OF CLEAN, DRY TUBE SECTION
WET WEIGHT OF SOIL, $[(W_{st} - W_t)/454]$
VOLUME OF SAMPLE, $[(\pi \cdot D^2/4) \cdot H/1728]$
WET DENSITY, $[W_s/V]$
DRY DENSITY, $[D_w/(1+w/100)]$

$W_{st} =$ 1106.56 gm
 $W_t =$ 282.52 gm
 $W_s =$ 1.815 lbs
 $V =$ 0.015 ft³
 $D_w =$ 125.0 pcf
 $D_o =$ 104.6 pcf

CONSOLIDATION TEST REPORT



Natural Saturation	Natural Moisture	Dry Density	LL	PI	Sp.Gr.	Precons. press.	C _c	e ₀
74.8 %	19.4	98.2	30	10	2.650	10.47	0.03	0.6886

TEST RESULTS

Compression Index = 0.03

Project No.: 50161-5-5756
 Project: Savannah River Site
 Location: FB-2 ST-18" @ 60 Ft.

Date: 1/22/96

CONSOLIDATION TEST REPORT

LAW ENGINEERING, INC.

MATERIAL DESCRIPTION

Yellow Tan Poorly Graded Sand w/ Clay

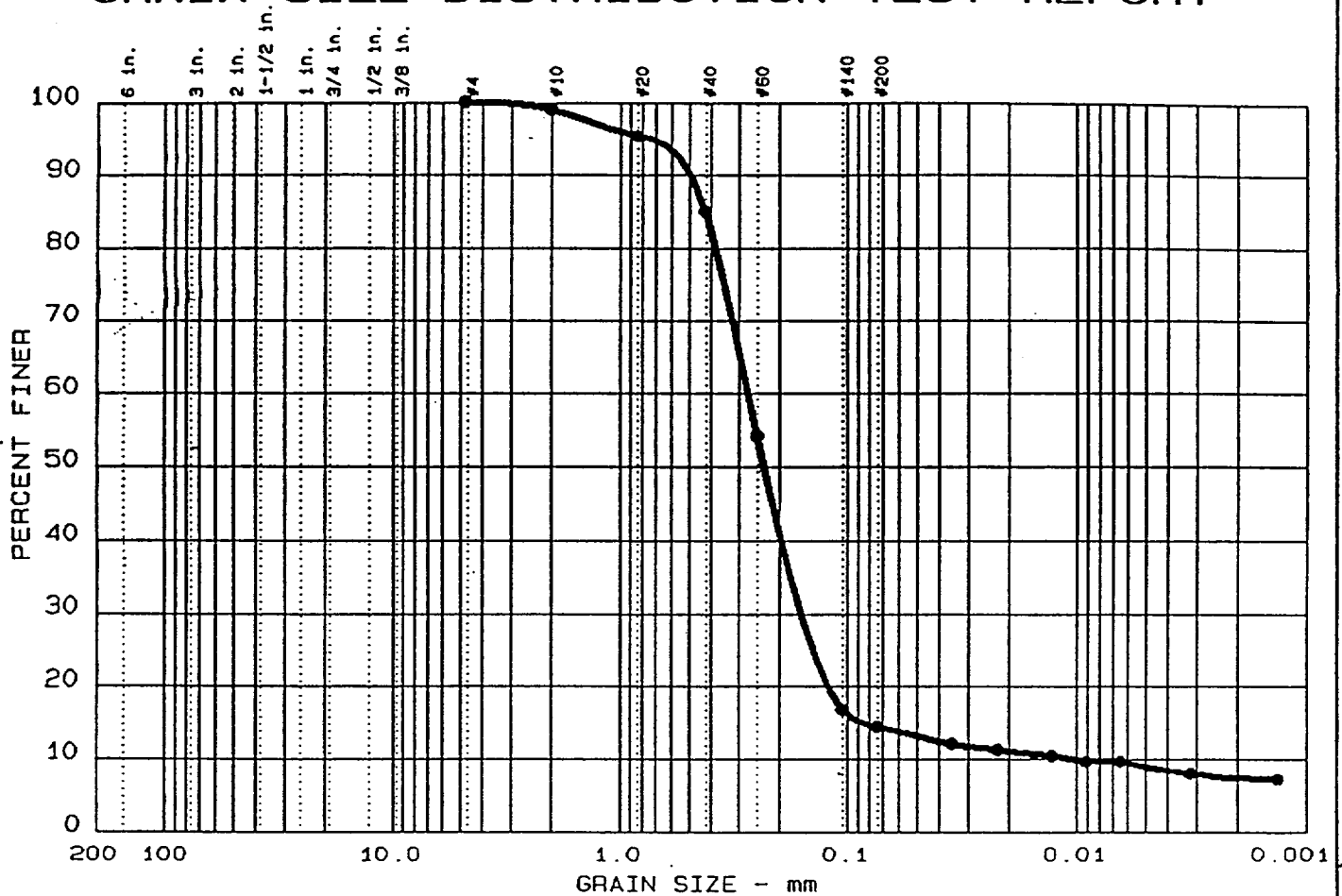
Remarks:

Tested by: *HB*

Reviewed by: *RLB*

Fig. No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



ATTACHMENT 3

Tested by: CS
Date: 11/08/95

Reviewed by: RLB
Date: 01/30/96

Law Job No. 50161-5-5756
Job Name SRS Task 12

TP-4A: UNIT WEIGHT OF SAMPLE "TYPICAL"

Sample: Boring No.: FB-2
Depth: 75-77 ft.
Sample ID: ST-19

MEASUREMENTS (Nominal 6-inch cut sample height):

TOTAL SAMPLE HEIGHT (inches)		INSIDE DIAMETER OF CUT TUBE (inches)	
1	<u>10.750</u>		
2	<u>10.750</u>	top	<u>2.865</u>
3	<u>10.750</u>	bottom	<u>2.865</u>
Avg.	<u>10.750 (H)</u>	Avg.	<u>2.865 (D)</u>

MOISTURE CONTENT DETERMINATION

MOISTURE CONTENT	
Tare No.	<u>K-49</u>
Tare Weight	<u>50.10 gm</u>
Wet Wt. + Tare	<u>559.20 gm</u>
Dry Wt. + Tare	<u>459.40 gm</u>
Wt. of Water	<u>99.80 gm</u>
Dry Weight	<u>409.30 gm</u>
Moisture Content, w	<u>24.4 %</u>

TOTAL WEIGHT OF SOIL + TUBE SECTION
WEIGHT OF CLEAN, DRY TUBE SECTION
WET WEIGHT OF SOIL, $[(W_{st} - W_t)/454]$
VOLUME OF SAMPLE, $[(\pi \cdot D^2/4) \cdot H/1728]$
WET DENSITY, $[W_s/V]$
DRY DENSITY, $[D_w/(1+w/100)]$

$W_{st} =$ 2975.8 gm
 $W_t =$ 773.79 gm
 $W_s =$ 4.850 lbs
 $V =$ 0.040 ft³
 $D_w =$ 120.9 pcf
 $D_o =$ 97.2 pcf

h:\users\lab\soil\program\sampledens.wk3

The graph shows a grain size distribution curve for a soil sample. The y-axis represents 'PERCENT FINER' from 0 to 100. The x-axis represents 'GRAIN SIZE - mm' on a logarithmic scale from 200 to 0.001. The curve starts at 100% finer for grain sizes down to about 4.75 mm, then drops sharply between 1.0 mm and 0.075 mm, and finally levels off to about 17% finer at 0.001 mm.

Grain Size (mm)	Percent Finer (%)
4.75	100
2.0	98
1.0	88
0.6	68
0.425	45
0.25	32
0.15	28
0.075	25
0.06	24
0.0425	23
0.03	20
0.02	18

[illegible]

Project No.: 50161-5-5756
Project: SRS Task 12
• Location: FB-2 ST-20 @ 83 Ft.

Date: January 23, 1996

Figure No.

ATTACHMENT 3

Tested by: DMJ
Date: 01/30/96

Reviewed by: RLB
Date: 01/30/96

Law Job No. 50161-5-5756
Job Name SRS Task 12

TP-4A: UNIT WEIGHT OF SAMPLE "TYPICAL"

Sample: Boring No.: FB-2
Depth: 83-85 ft.
Sample ID: ST-20

MEASUREMENTS (Nominal 6-inch cut sample height):

TOTAL SAMPLE HEIGHT (inches)		INSIDE DIAMETER OF CUT TUBE (inches)	
1	18.250		
2	18.250	top	2.833
3	18.250	bottom	2.812
Avg.	18.250 (H)	Avg.	2.823 (D)

MOISTURE CONTENT DETERMINATION

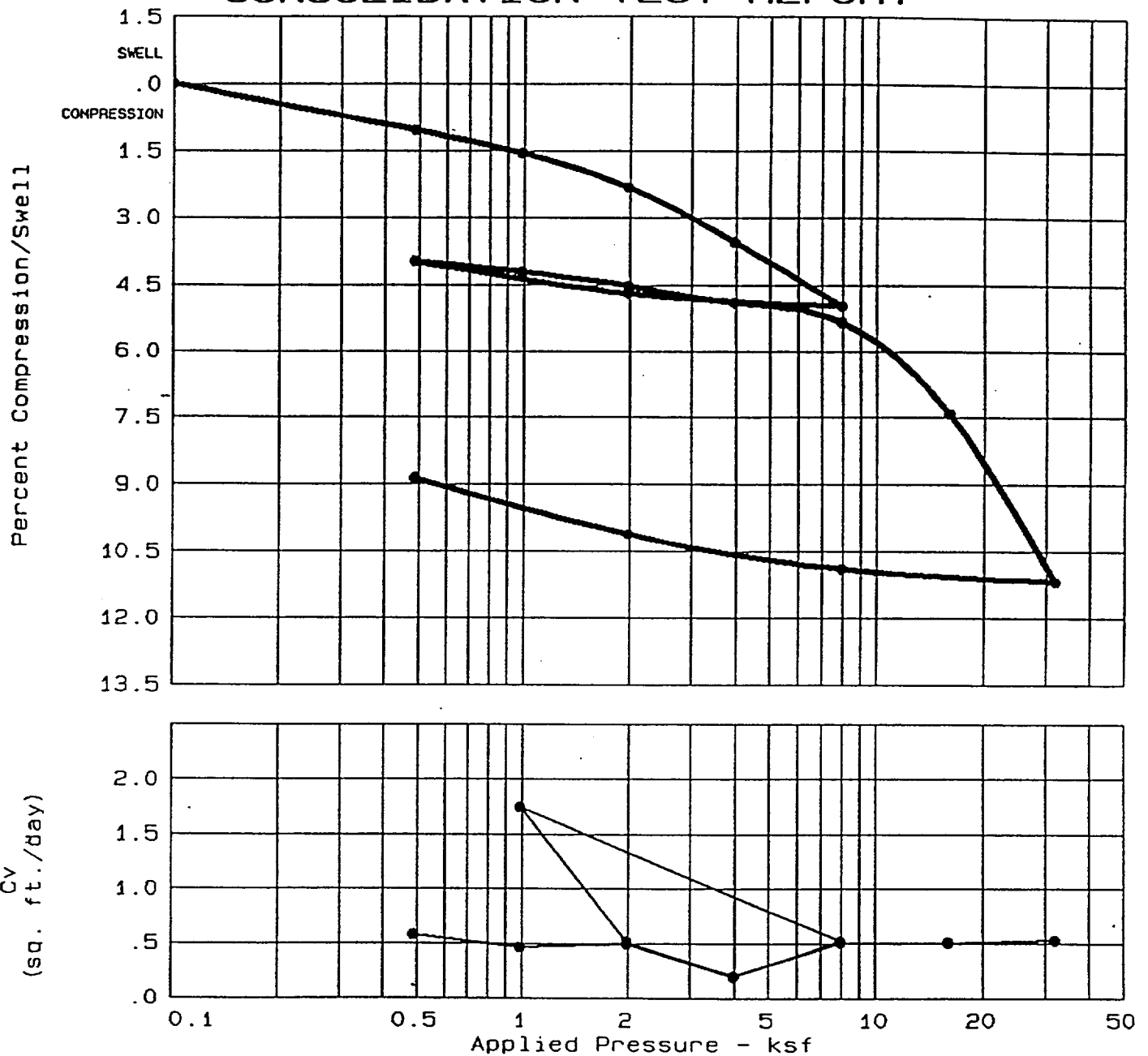
MOISTURE CONTENT	
Tare No.	
Tare Weight	218.20 gm
Wet Wt. + Tare	341.28 gm
Dry Wt. + Tare	317.68 gm
Wt. of Water	23.60 gm
Dry Weight	99.48 gm
Moisture Content, w	23.7 %

TOTAL WEIGHT OF SOIL + TUBE SECTION
WEIGHT OF CLEAN, DRY TUBE SECTION
WET WEIGHT OF SOIL, $[(W_{stt} - W_t)/454]$
VOLUME OF SAMPLE, $[(\pi \cdot D^2/4) \cdot H/1728]$
WET DENSITY, $[W_s/V]$
DRY DENSITY, $[D_w/(1+w/100)]$

$W_{stt} = 4540.6 \text{ gm}$
 $W_t = 1313.64 \text{ gm}$
 $W_s = 7.108 \text{ lbs}$
 $V = 0.066 \text{ ft}^3$
 $D_w = 107.6 \text{ pcf}$
 $D_p = 86.9 \text{ pcf}$

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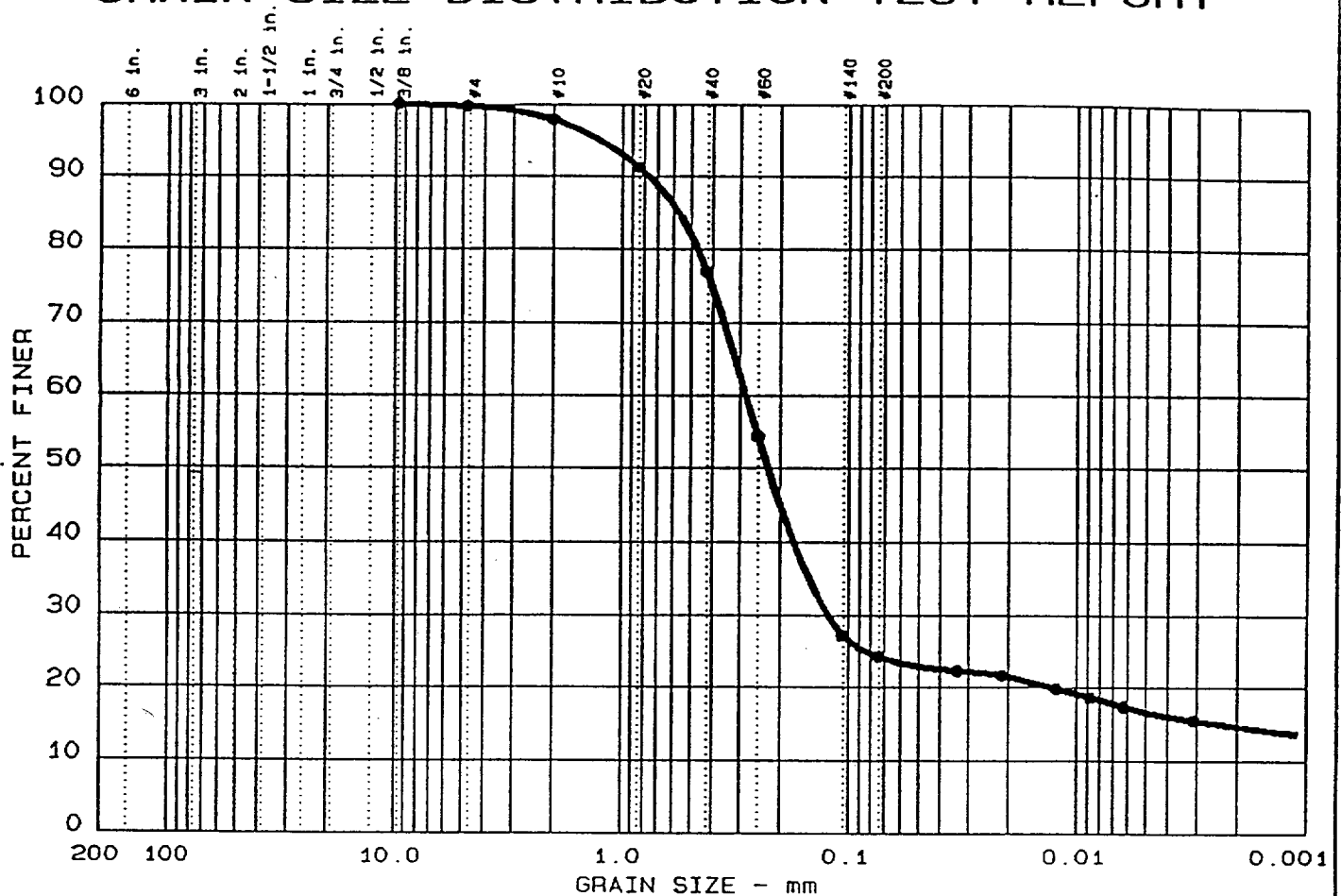
CONSOLIDATION TEST REPORT



Natural Saturation	Natural Moisture	Dry Density	LL	PI	Sp. Gr.	Precons. press.	C _c	e ₀
85.1 %	23.7	96.8	59	40	2.730	11.71	0.22	0.7606

TEST RESULTS	MATERIAL DESCRIPTION
Compression Index = 0.22	Tan Brown Clayey Sand
Project No.: 50161-5-5756 Project: Savannah River Site Location: FB-2 ST-20 @ 83 Ft.	Class: SC
Date: 1/22/96	Remarks:
CONSOLIDATION TEST REPORT LAW ENGINEERING, INC.	Tested by: <i>HB</i> Reviewed by: <i>RUB</i>
	Fig. No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 1	0.0	0.3	75.4	7.6	16.7

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 37	18	0.56	0.28	0.23	0.123	0.0024			

MATERIAL DESCRIPTION	USCS	AASHTO
• Brown Clayey Sand	SC	A-2-60.7

Project No.: 50161-5-5756 Project: SRS Task 12 • Location: FB-2 St-21 @ 100 Ft. Date: January 23, 1996	Remarks: Tested by: <i>DMJ</i> Reviewed by: <i>HS</i> Figure No.
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	

ATTACHMENT 3

Tested by: CS

Reviewed by: RLB

Law Job No. 50161-5-5756

Date: 11/08/95

Date: 01/30/96

Job Name SRS Task 12

TP-4A: UNIT WEIGHT OF SAMPLE "TYPICAL"

Sample: Boring No.: FB-2
Depth: 100-102 ft.
Sample ID: ST-21

MEASUREMENTS (Nominal 6-inch cut sample height):

TOTAL SAMPLE HEIGHT (inches)		INSIDE DIAMETER OF CUT TUBE (inches)	
1	10.875		
2	10.875	top	2.865
3	10.875	bottom	2.865
Avg.	10.875 (H)	Avg.	2.865 (D)

MOISTURE CONTENT DETERMINATION

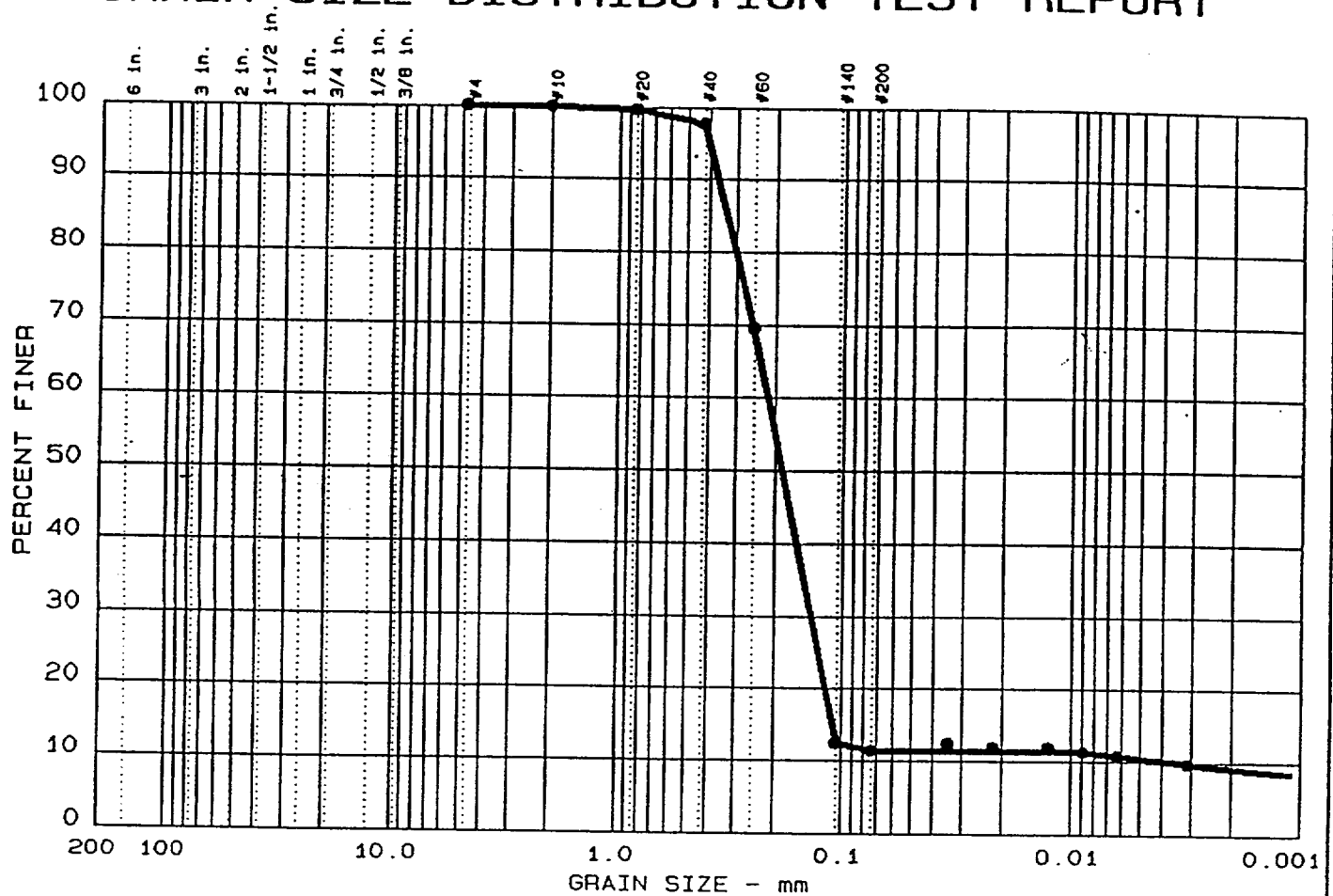
MOISTURE CONTENT	
Tare No.	AB-17
Tare Weight	90.60 gm
Wet Wt. + Tare	679.40 gm
Dry Wt. + Tare	561.90 gm
Wt. of Water	117.50 gm
Dry Weight	471.30 gm
Moisture Content, w	24.9 %

TOTAL WEIGHT OF SOIL + TUBE SECTION
WEIGHT OF CLEAN, DRY TUBE SECTION
WET WEIGHT OF SOIL, $[(W_{st} - W_t)/454]$
VOLUME OF SAMPLE, $[(\pi \cdot D^2/4) \cdot H/1728]$
WET DENSITY, $[W_s/V]$
DRY DENSITY, $[D_w/(1+w/100)]$

$W_{st} = 3076 \text{ gm}$
 $W_t = 782.78 \text{ gm}$
 $W_s = 5.051 \text{ lbs}$
 $V = 0.041 \text{ ft}^3$
 $D_w = 124.5 \text{ pcf}$
 $D_o = 99.7 \text{ pcf}$

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GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 3	0.0	0.0	88.6	1.0	10.4

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• NL	NP	0.33	0.22	0.19	0.137	0.1088	0.0035	24.72	61.2

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Poorly Graded Sand with Silt	SP-SM	A-2-4 (0.4)

Project No.: 50161-5-5755
 Project: SRS Task 12
 • Location: FB-2 St-22 @ 120 Ft.
 Date: January 29, 1996

Remarks:

Tested by: *DMJ*

Reviewed by: *HB*

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

ATTACHMENT 3

Tested by: CS
Date: 11/08/95

Reviewed by: RLB
Date: 01/30/96

Law Job No. 50161-5-5756
Job Name SRS Task 12

TP-4A: UNIT WEIGHT OF SAMPLE "TYPICAL"

Sample: Boring No.: FB-2
Depth: 120-122 ft.
Sample ID: ST-22

MEASUREMENTS (Nominal 6-inch cut sample height):

TOTAL SAMPLE HEIGHT (inches)		INSIDE DIAMETER OF CUT TUBE (inches)	
1	<u>13.813</u>		
2	<u>13.813</u>	top	<u>2.865</u>
3	<u>13.813</u>	bottom	<u>2.865</u>
Avg.	<u>13.813 (H)</u>	Avg.	<u>2.865 (D)</u>

MOISTURE CONTENT DETERMINATION

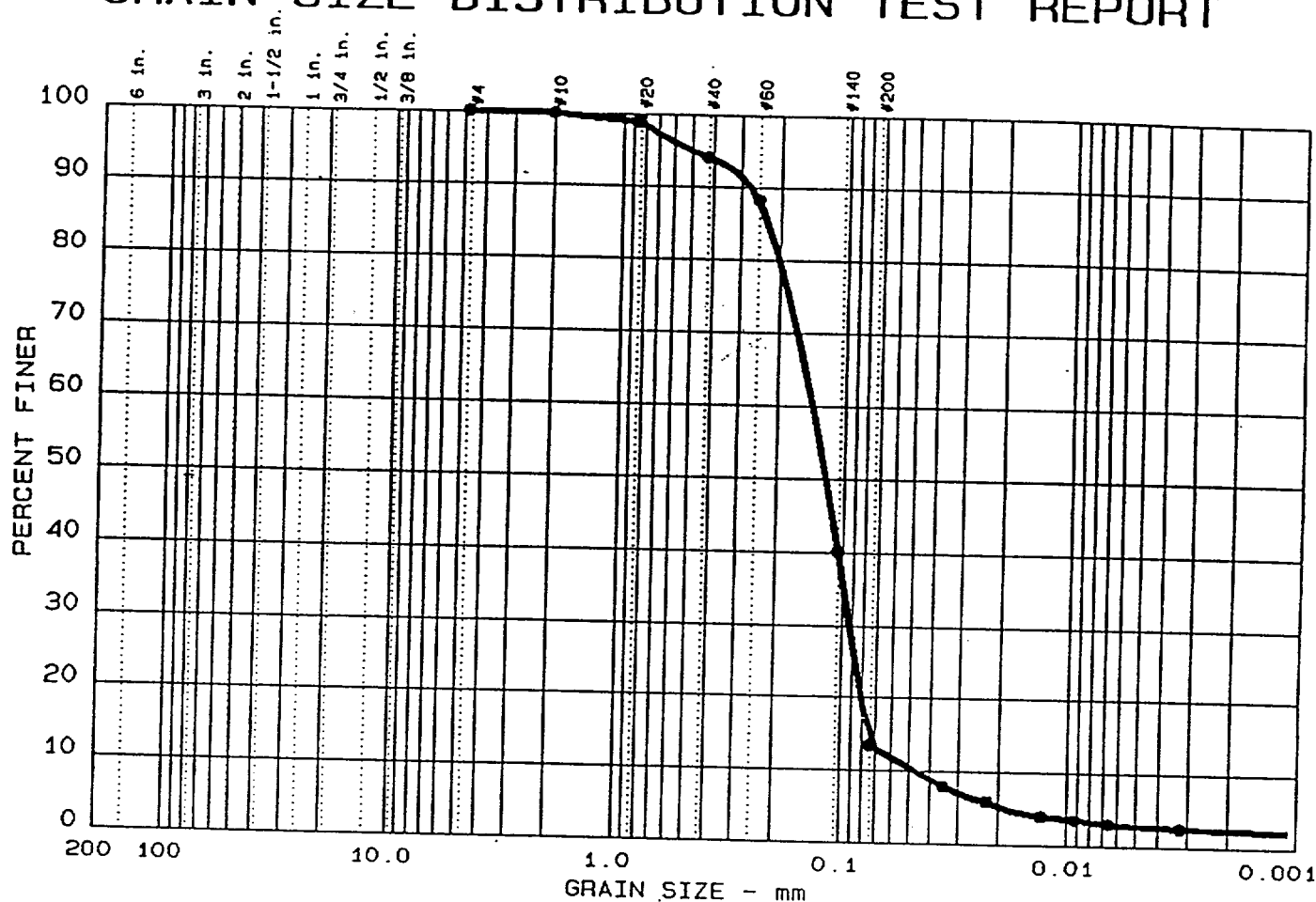
MOISTURE CONTENT	
Tare No.	<u>L-20</u>
Tare Weight	<u>91.10 gm</u>
Wet Wt. + Tare	<u>860.50 gm</u>
Dry Wt. + Tare	<u>702.20 gm</u>
Wt. of Water	<u>158.30 gm</u>
Dry Weight	<u>611.10 gm</u>
Moisture Content, w	<u>25.9 %</u>

TOTAL WEIGHT OF SOIL + TUBE SECTION
WEIGHT OF CLEAN, DRY TUBE SECTION
WET WEIGHT OF SOIL, $[(W_{st} - W_t)/454]$
VOLUME OF SAMPLE, $[(\pi \cdot D^2/4) \cdot H/1728]$
WET DENSITY, $[W_s/V]$
DRY DENSITY, $[D_w/(1+w/100)]$

$W_{st} =$ 3814.2 gm
 $W_t =$ 994.22 gm
 $W_s =$ 6.211 lbs
 $V =$ 0.052 ft³
 $D_w =$ 120.5 pcf
 $D_s =$ 95.7 pcf

 h:\users\lab\soil\program\sampdons.wk3

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 2	0.0	0.0	86.6	10.6	2.8

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• NL	NP	0.23	0.14	0.12	0.092	0.0755	0.0460	1.32	3.0

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Silty Sand	SM	A-2-4 (0.4)

Project No.: 50161-5-5756
 Project: SRS Task 12
 • Location: FB-2 St-24 @ 147 Ft.
 Date: January 29, 1996

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:
 Tested by: *DM*
 Reviewed by: *HS*

Figure No.

ATTACHMENT 3

Tested by: DMJ
Date: 01/30/96

Reviewed by: RLB
Date: 01/30/96

Law Job No. 50161-5-5756

Job Name SRS Task 12

TP-4A: UNIT WEIGHT OF SAMPLE "TYPICAL"

Sample: Boring No.: FB-2
Depth: 147-149 ft.
Sample ID: ST-24

MEASUREMENTS (Nominal 6-inch cut sample height):

TOTAL SAMPLE HEIGHT (inches)		INSIDE DIAMETER OF CUT TUBE (inches)	
1	8.092		
2	8.096	top	2.847
3	8.154	bottom	2.840
Avg.	8.114 (H)	Avg.	2.844 (D)

MOISTURE CONTENT DETERMINATION

MOISTURE CONTENT	
Tare No.	C-16
Tare Weight	15.97 gm
Wet Wt. + Tare	141.69 gm
Dry Wt. + Tare	116.63 gm
Wt. of Water	25.06 gm
Dry Weight	100.66 gm
Moisture Content, w	24.9 %

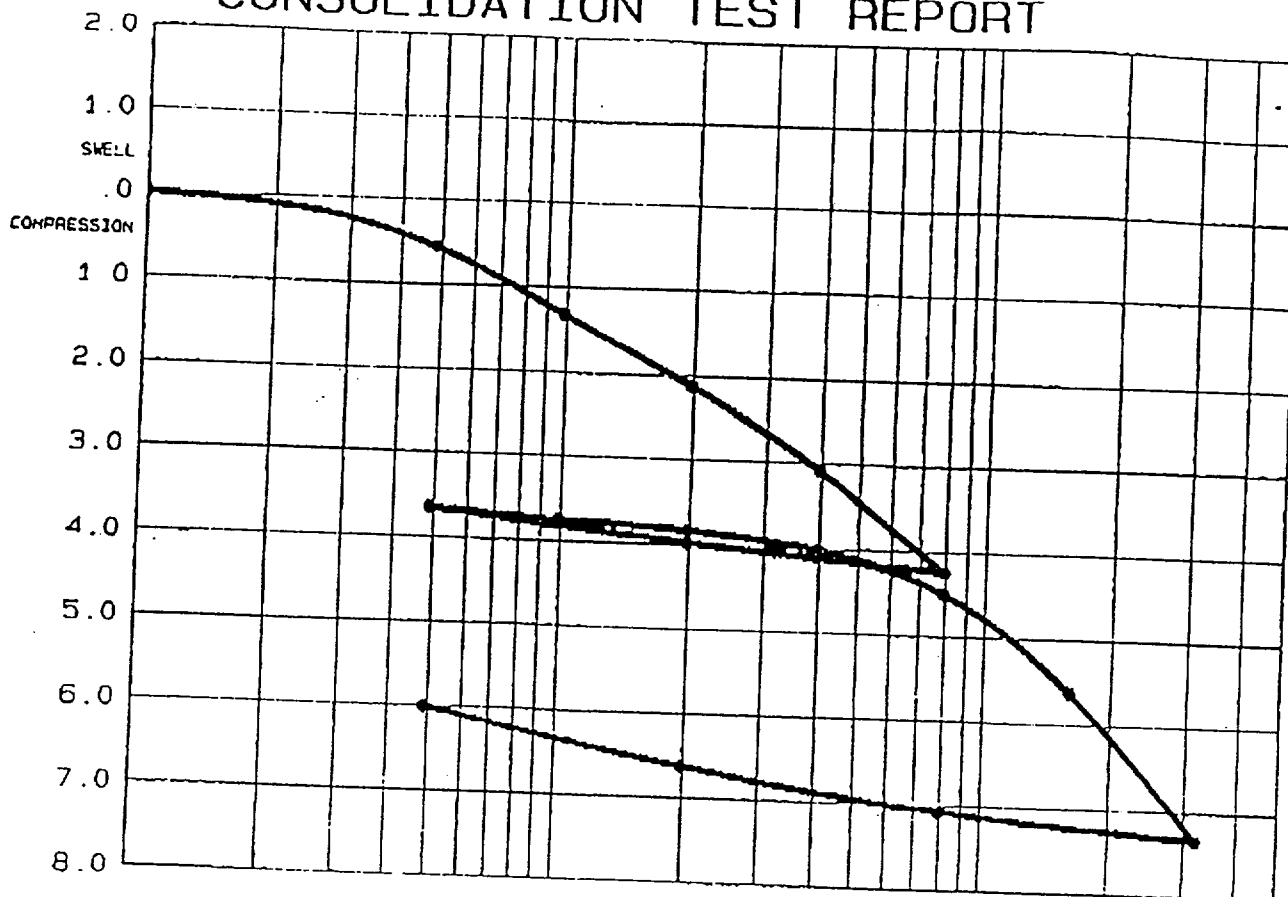
TOTAL WEIGHT OF SOIL + TUBE SECTION
WEIGHT OF CLEAN, DRY TUBE SECTION
WET WEIGHT OF SOIL, $[(W_{st} - W_t)/454]$
VOLUME OF SAMPLE, $[(\pi \cdot D^2/4) \cdot H/1728]$
WET DENSITY, $[W_s/V]$
DRY DENSITY, $[D_w/(1+w/100)]$

$W_{st} = 2223.8$ gm
 $W_t = 584.05$ gm
 $W_s = 3.612$ lbs
 $V = 0.030$ ft³
 $D_w = 121.1$ pcf
 $D_o = 97.0$ pcf

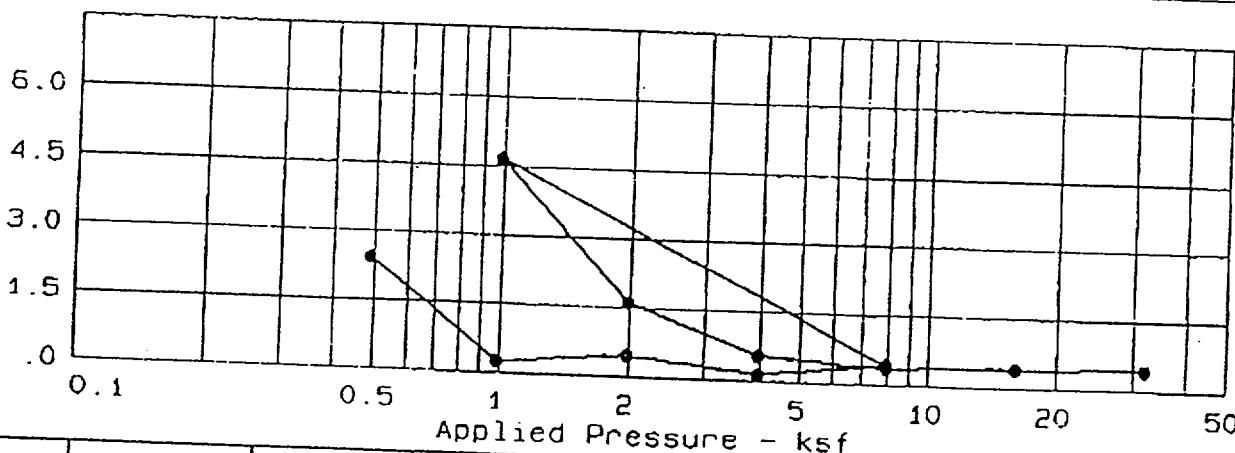
h:\user\table\oil\program\sampledens.wk3

CONSOLIDATION TEST REPORT

Percent Compression/Swell



Cv
(sq. ft./day)



Natural Saturation	Natural Moisture	Dry Density	LL	PI	Sp. Gr.	Precons. press.	C_c	e_0
83.5%	28.6	85.9	NL	NP	2.610	11.08	0.11	0.8949

TEST RESULTS

Compression Index = 0.11

Project No.: 50161-5-5756
 Project: SRS Task 12
 Location: FB-2
 ST-24 @ 147 Ft.
 Date: 2/14/96

CONSOLIDATION TEST REPORT

LAW ENGINEERING, INC.

MATERIAL DESCRIPTION

Tan Brown Silty Sand

Remarks:

Tested by: HES

Reviewed by: RLB

Fig. No. _____

Job Number 50161-7-0108 Task 16
Job Name APSF Confirmatory Testing

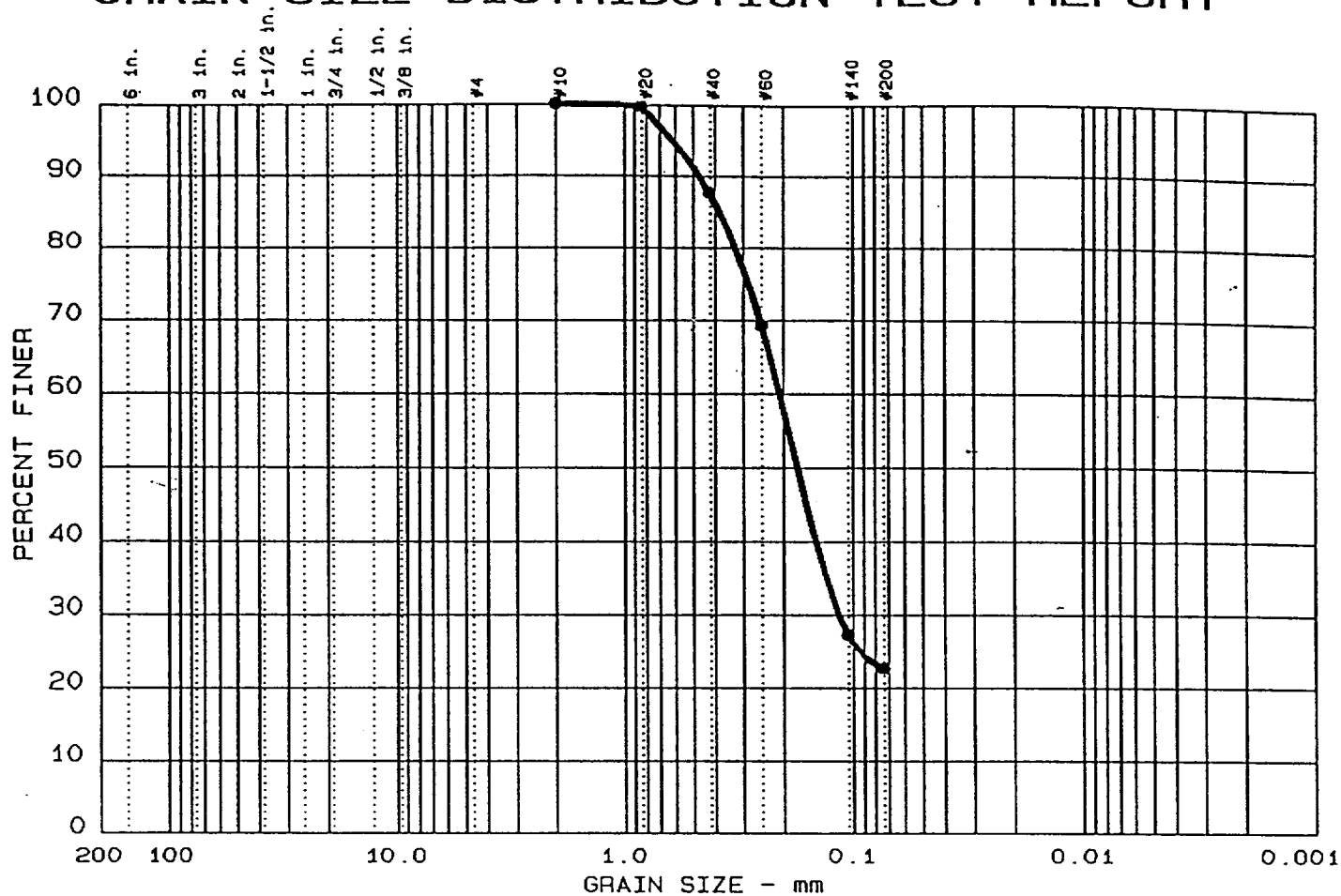
Tested by: SC
Reviewed by: HJ

Moisture Content (ASTM D2216)

Boring Number FB-3

Sample Number	Depth(Ft.)	Moisture Content (%)
SS-1	6	16.2
SS-7	15	19.2
SS-9	18	20.2
SS-11	21	20.1
SS-16	28.5	19.8
SS-35	63	26.0
SS-41	73.2	22.9
SS-45	79.2	31.9
SS-46	80.7	33.8
SS-53	91.2	27.9
SS-60	102.8	27.6
SS-68	115.3	30.7
SS-69	116.8	37.0
SS-70	118.3	29.5
SS-81	134.8	35.0
SS-83	138.7	37.2
SS-86	143.2	36.3
SS-90	149.2	31.7
SS-92	152.2	23.8

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	77.3	22.7	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
30	11	0.38	0.21	0.17	0.115				

MATERIAL DESCRIPTION	USCS	AASHTO
● Tan & Red Brown Clayey Sand	SC	A-2-6 (0.1)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 ● Location: FB-3 SS-1 @ 6-7.5 Ft.

Date: March 16, 1998

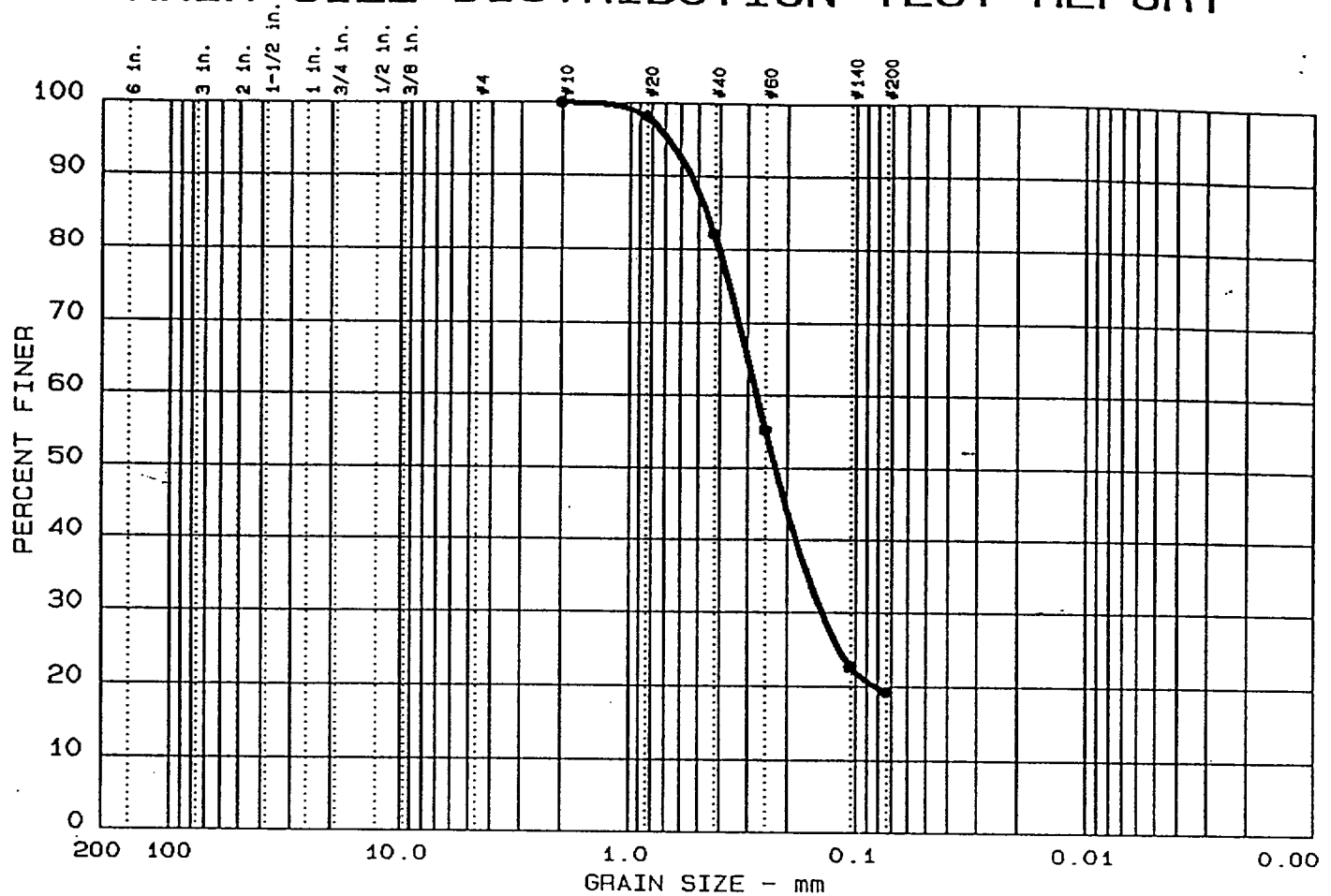
GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

Tested by: SC
 Reviewed by: HB
 ASTM D 422
 &
 ASTM D 4318

Figure No. 11

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	80.7	19.3	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.45	0.27	0.23	0.141				

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-3 @ 9-10.5 Ft.

Date: March 16, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

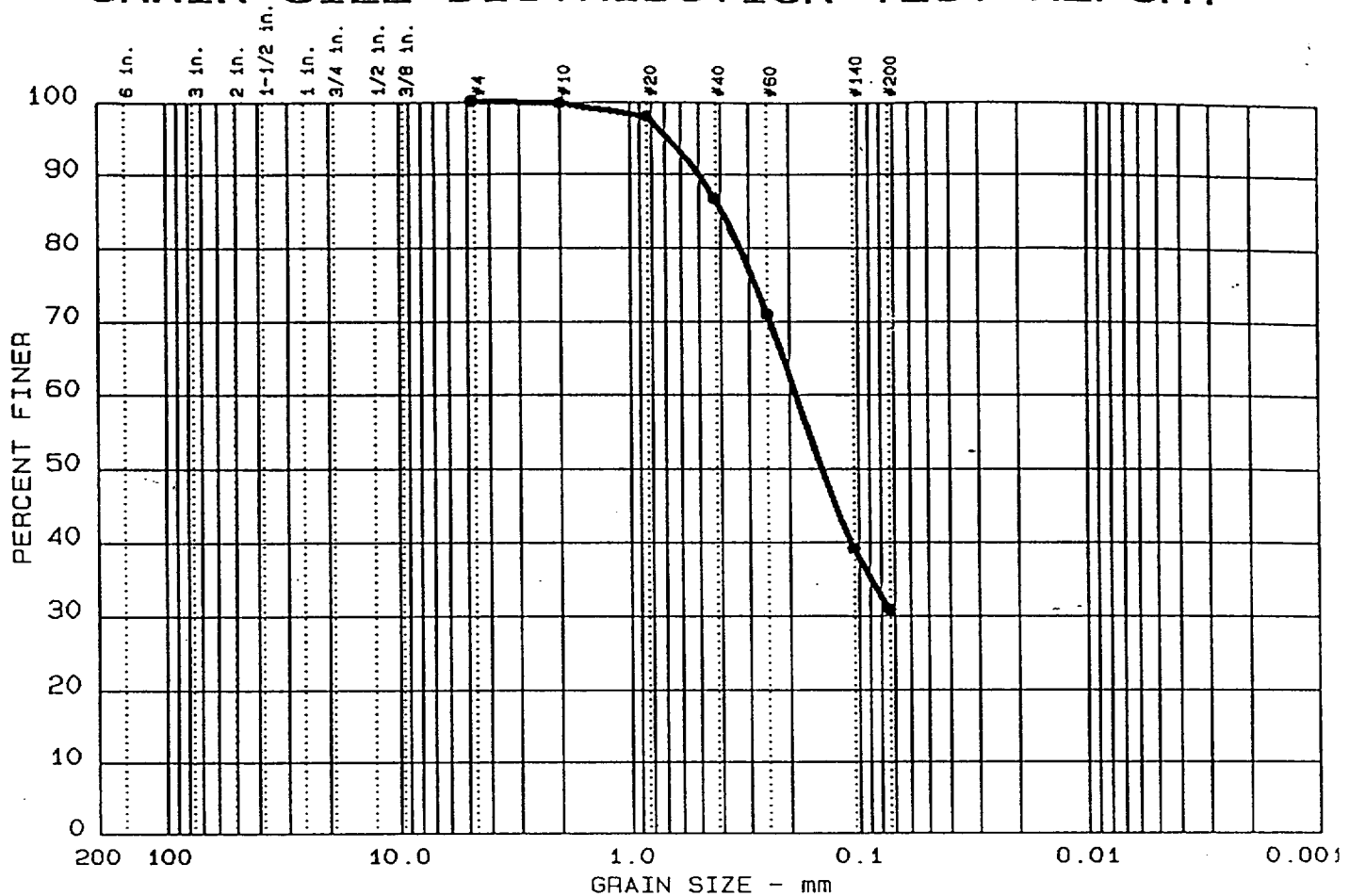
Tested by: SC

Reviewed by: HB

ASTM D422

Figure No. 11

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	69.2	30.8	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.39	0.19	0.15					

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-4 @ 10.5-12 Ft.

Date: March 16, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

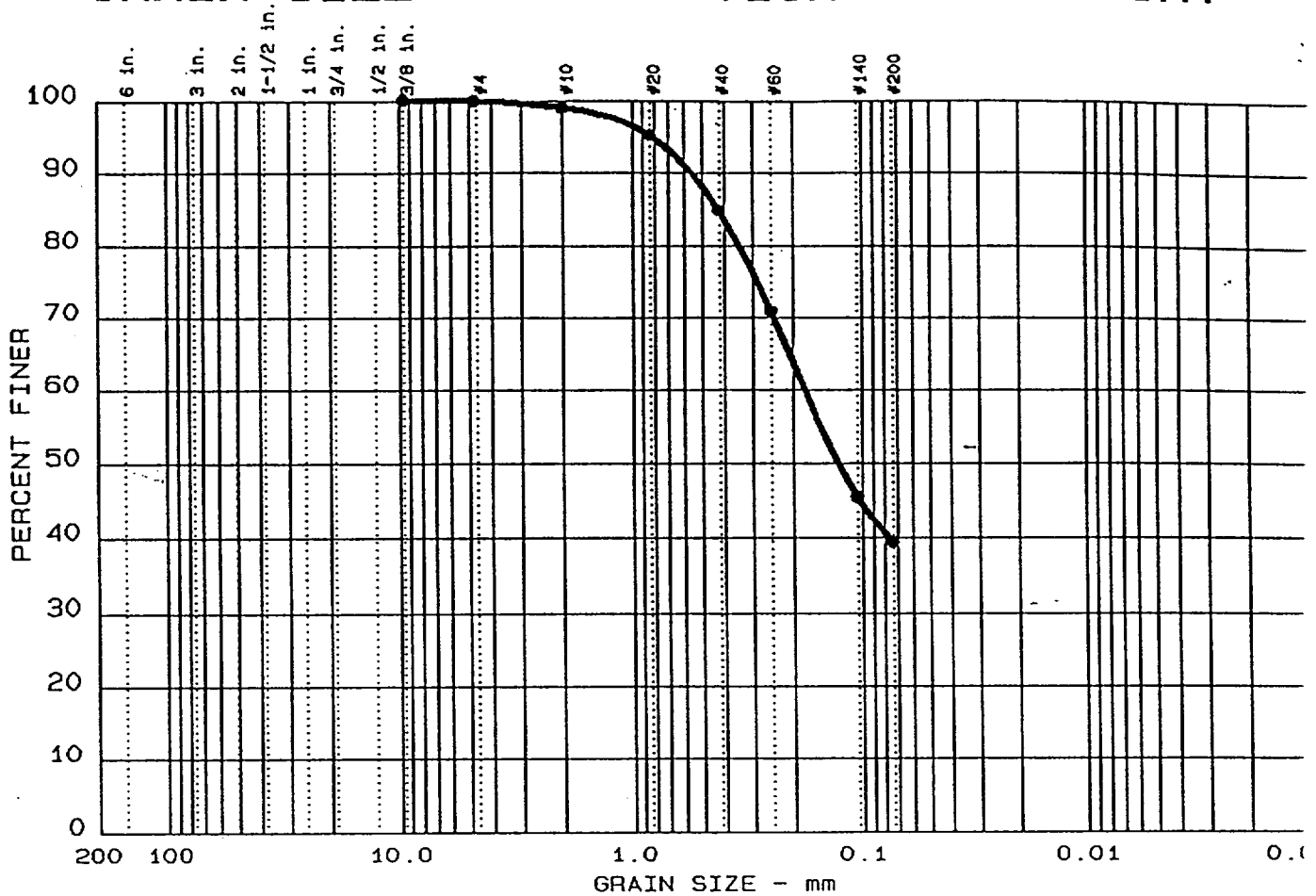
Tested by: SC

Reviewed by: HB

ASTM D422

Figure No. 11

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.1	60.5	39.4	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.42	0.18	0.13					

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan & Red Brown Silty Sand	SM	A-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-5 @ 12-13.5 Ft.

Date: March 16, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

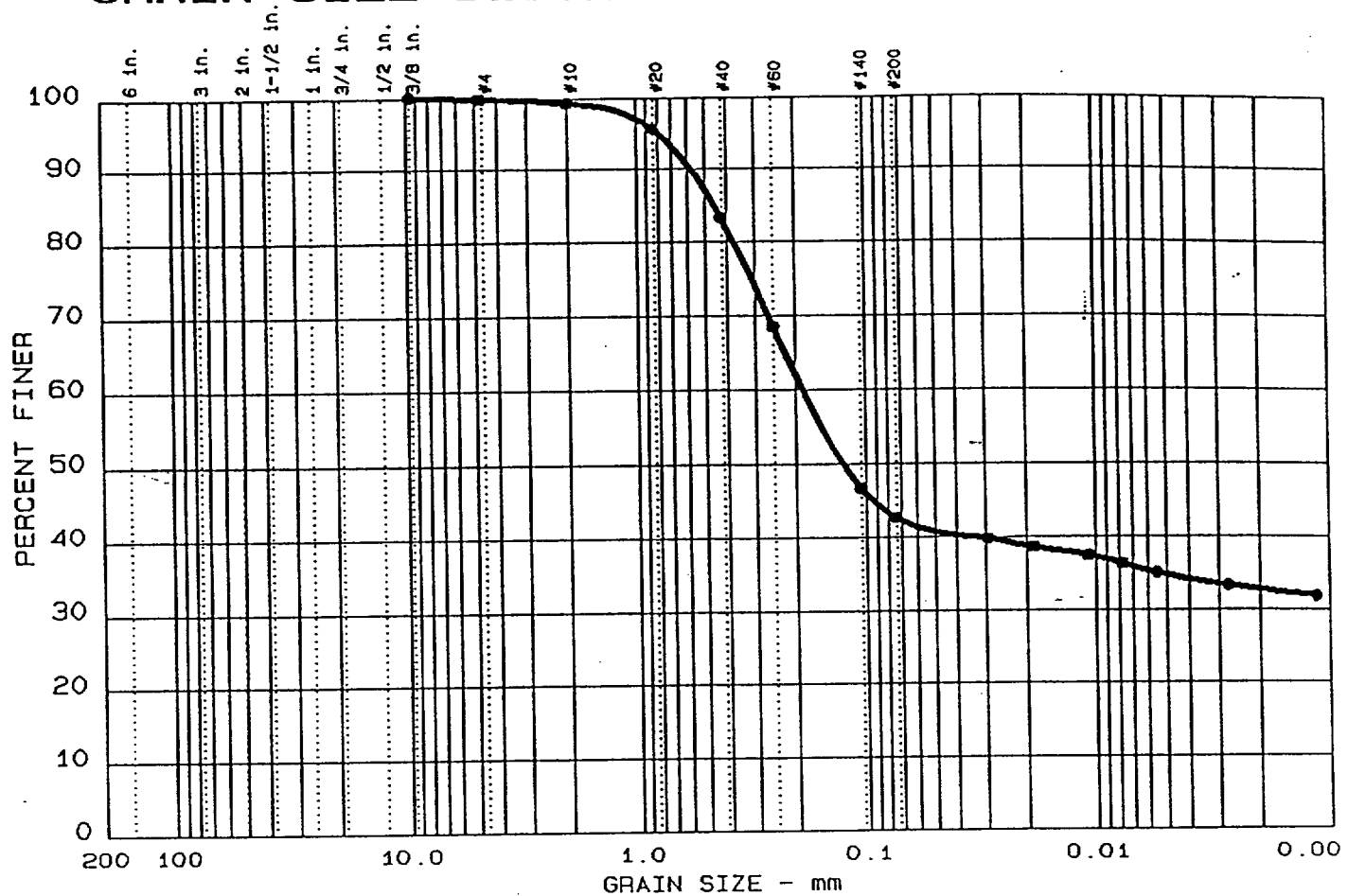
Tested by: *SC*

Reviewed by: *HB*

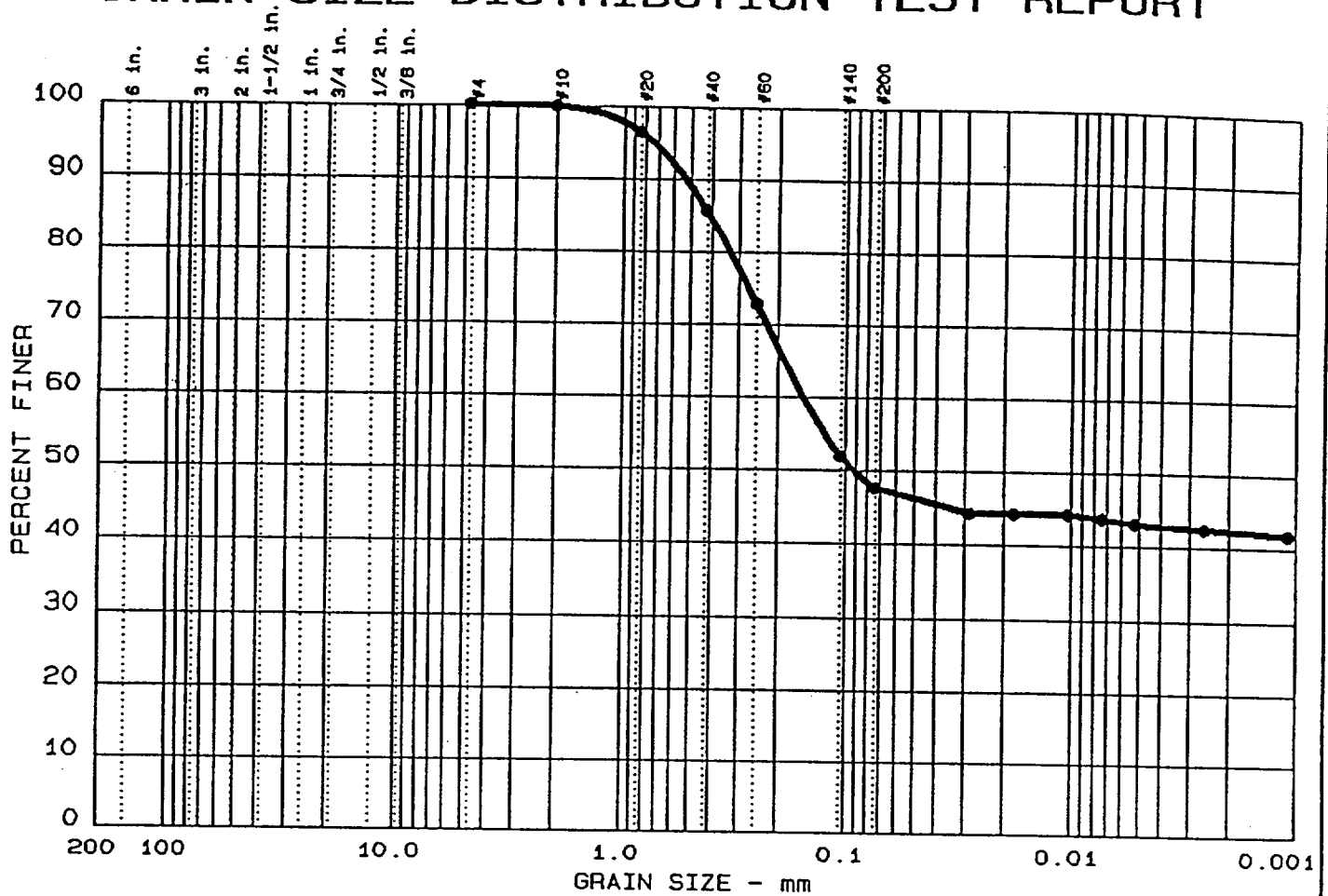
ASTM D 422

Figure No. 11

GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
1	0.0	0.0	52.4	4.6	43.0

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
54	28	0.40	0.15	0.09					

MATERIAL DESCRIPTION	USCS	AASHTO
Red Brown Clayey Sand	SC	A-7-6 (9.5)

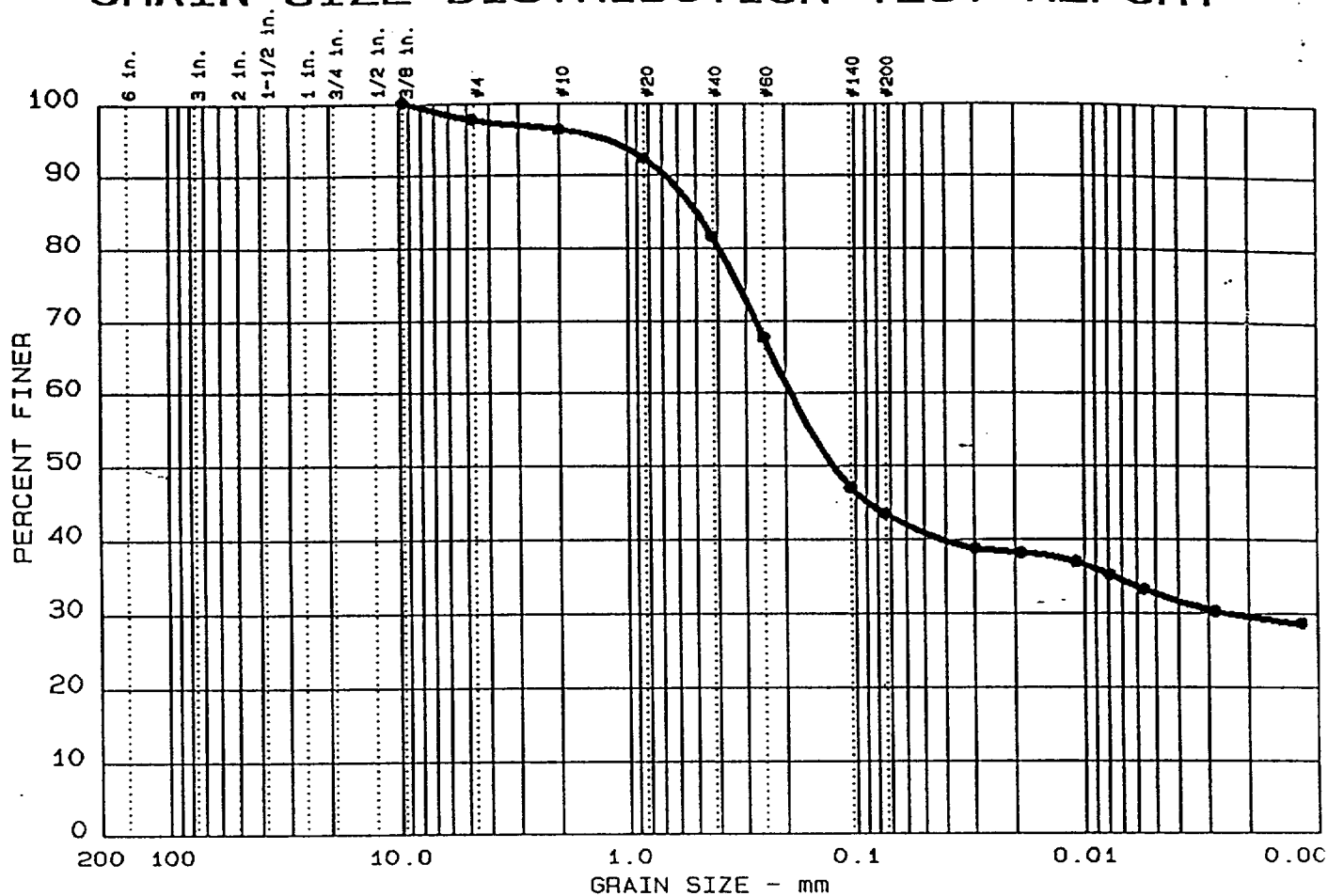
Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 Location: FB-3 SS-7 @ 15-16.5 Ft.
 Date: March 19, 1998

Remarks:
 Tested by: SC & Jm
 Reviewed by: H
 ASTM D422
 &
 ASTM D4318

GRAIN SIZE DISTRIBUTION TEST REPORT
 LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	2.3	54.3	10.8	32.6

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.49	0.19	0.13	0.002				

MATERIAL DESCRIPTION	USCS	AASHTO
● Red Brown Silty Sand	SM	A-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 ● Location: FB-3 SS-8 16.5-18 Ft.

Date: March 16, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

Tested by: *SCJ/JM*

Reviewed by: *HS*

ASTM D422

Figure No. 11

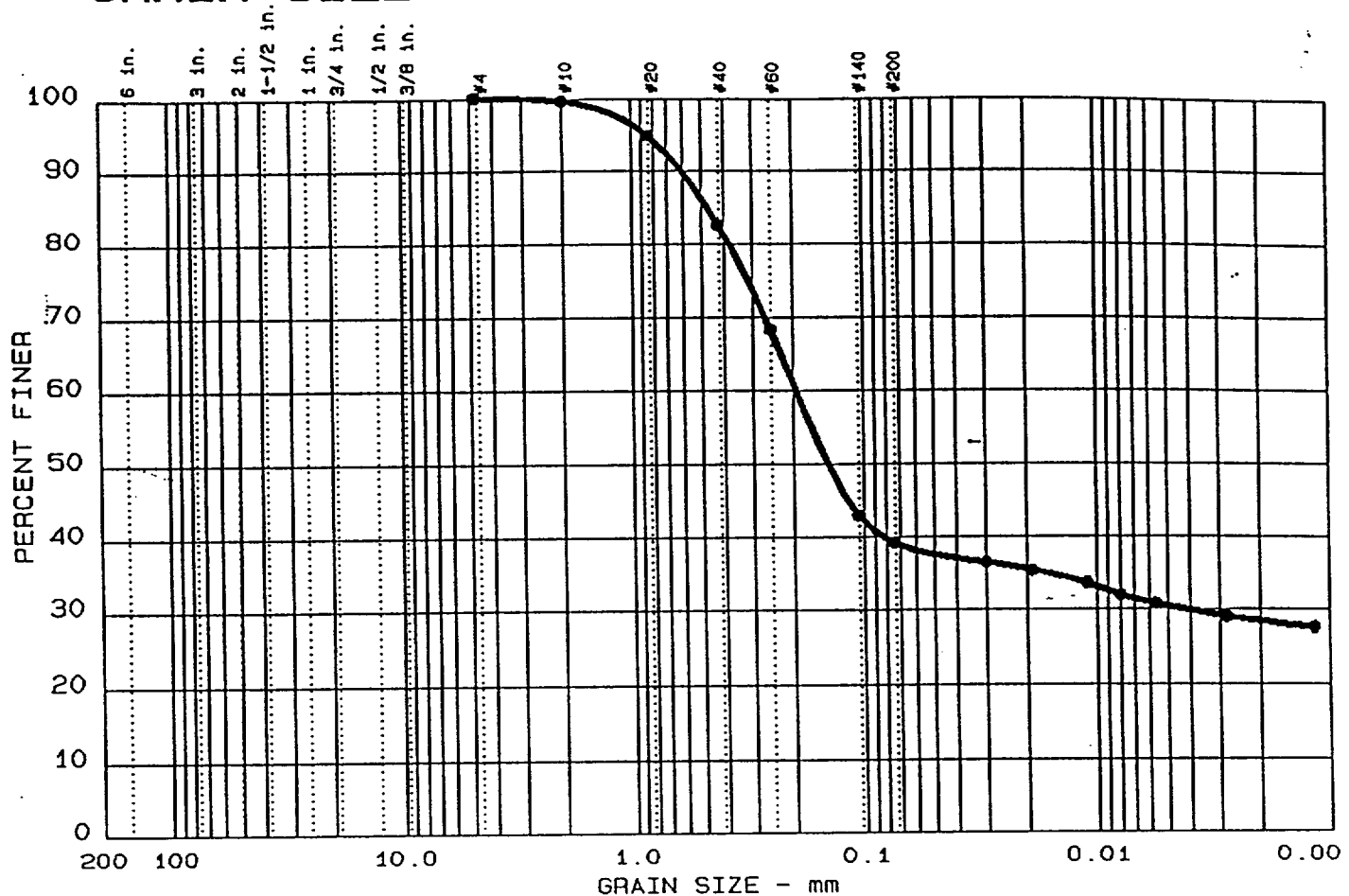
Grain size distribution test report graph showing Percent Finer vs Grain Size (mm). The curve starts at 100% finer for grain sizes down to approximately 2.0 mm and then drops sharply, reaching about 27% finer at 0.075 mm.

Grain Size (mm)	Percent Finer (%)
200	100
100	100
60	100
40	100
30	100
20	100
15	100
10	100
7.5	100
5	100
4	100
3	100
2.5	100
2.0	100
1.5	98
1.0	92
0.75	78
0.6	63
0.425	42
0.3	38
0.25	36
0.2	35
0.15	34
0.125	33
0.106	32
0.09	31
0.075	28
0.06	27

[illegible]

Project No.: 50161-7-0108 Task 16 Project: APSF Confirmatory Testing ● Location: FB-3 SS-9 @ 18-19.5 Ft.	Remarks: Tested by: <i>SCJ/TM</i> Reviewed by: <i>HB</i> ASTM D 422 & ASTM D 4318
Date: March 16, 1998	
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	Figure No. 11

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	60.9	8.8	30.3

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
49	24	0.46	0.19	0.14	0.004				

MATERIAL DESCRIPTION	USCS	AASHTO
● Red Brown Clayey Sand	SC	A-7-6 (4.3)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 ● Location: FB-3 SS-11 @ 21-22.5 Ft.

Date: March 16, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

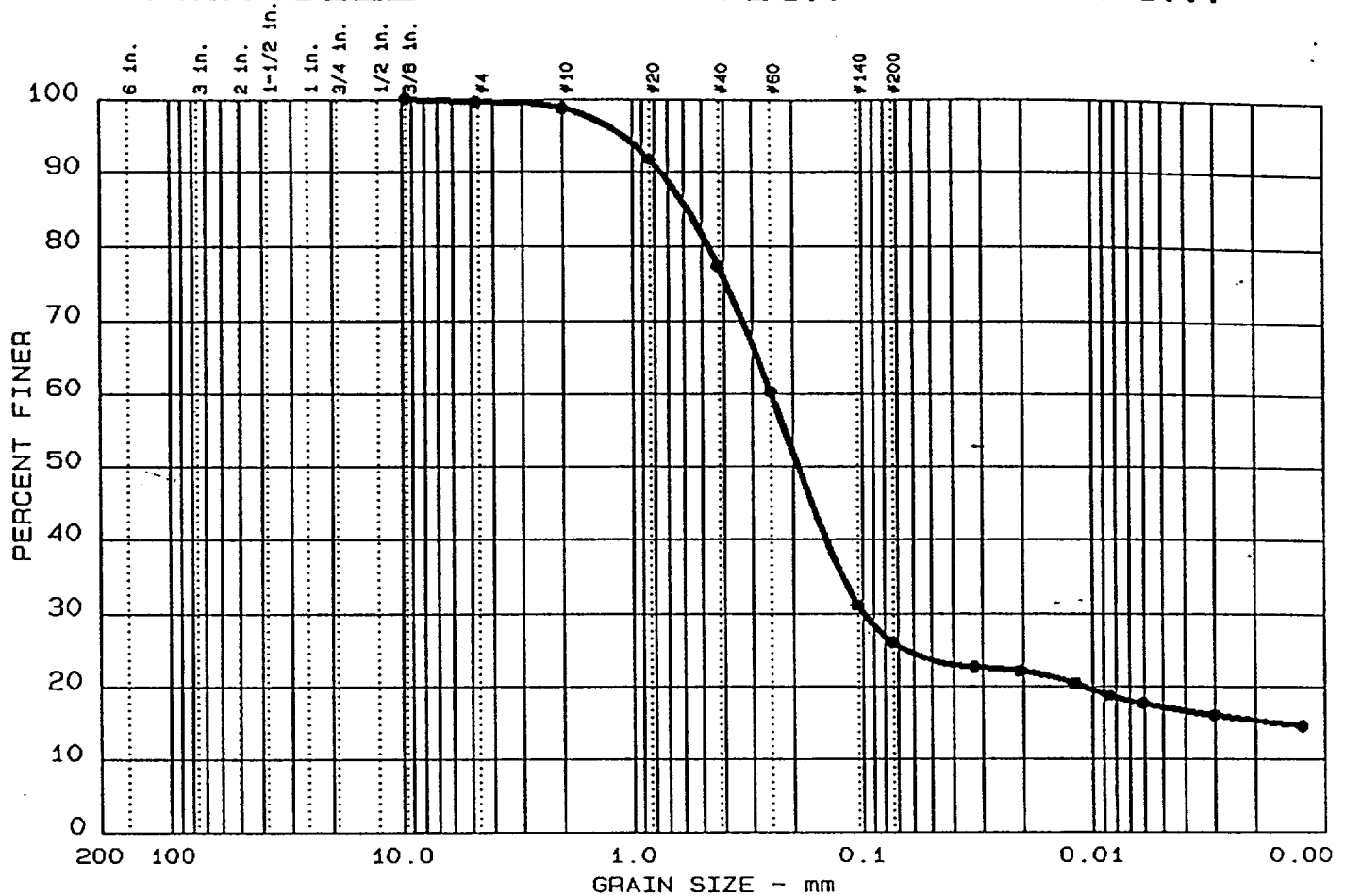
Tested by: *SC/STM*

Reviewed by: *HB*

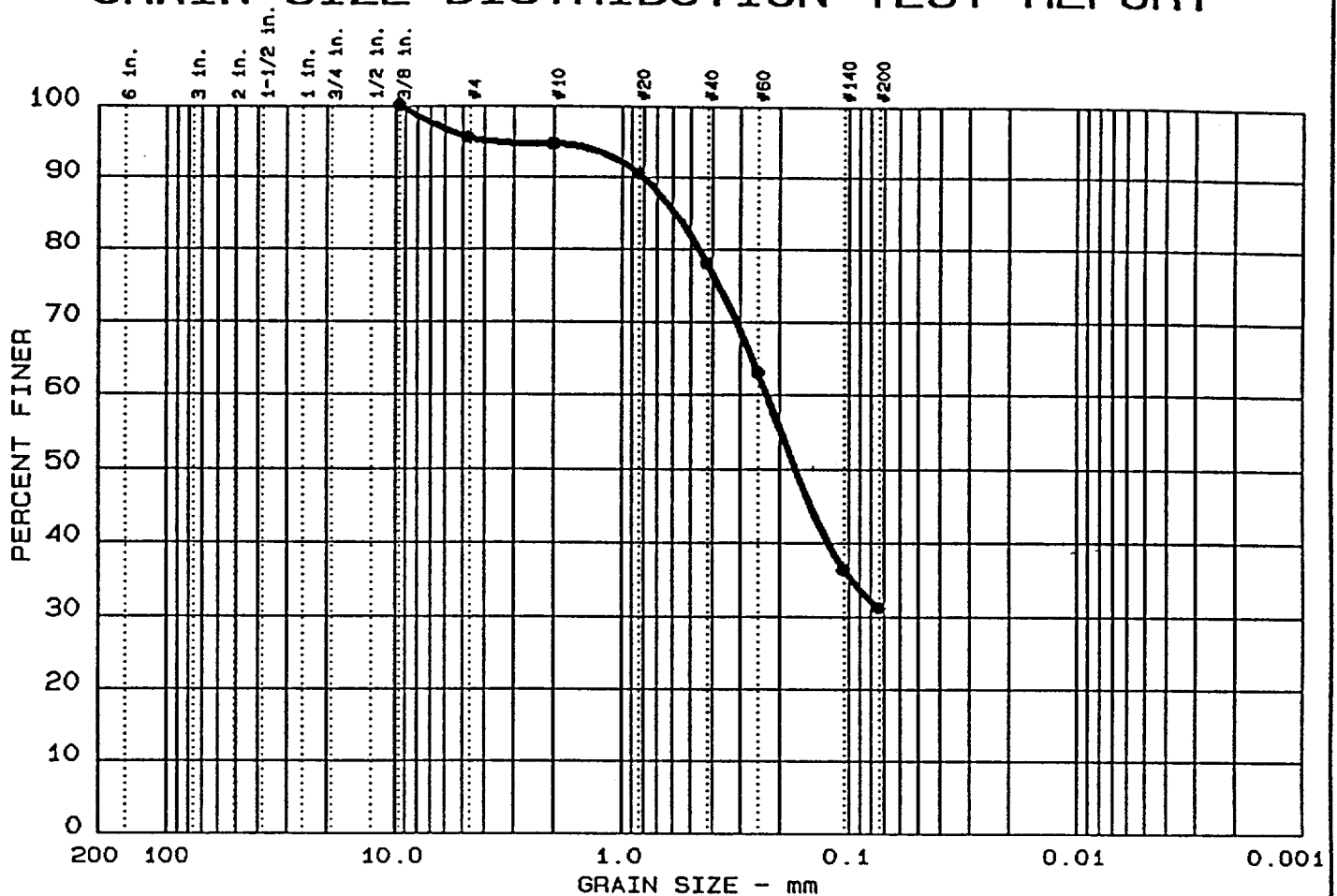
ASTM D 422
 &
 ASTM D 4318

Figure No. 11

GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
1	0.0	4.5	64.4	31.1	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.58	0.23	0.17					

MATERIAL DESCRIPTION	USCS	AASHTO
Tan Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-14 @ 25.5-27 Ft.

Date: March 16, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

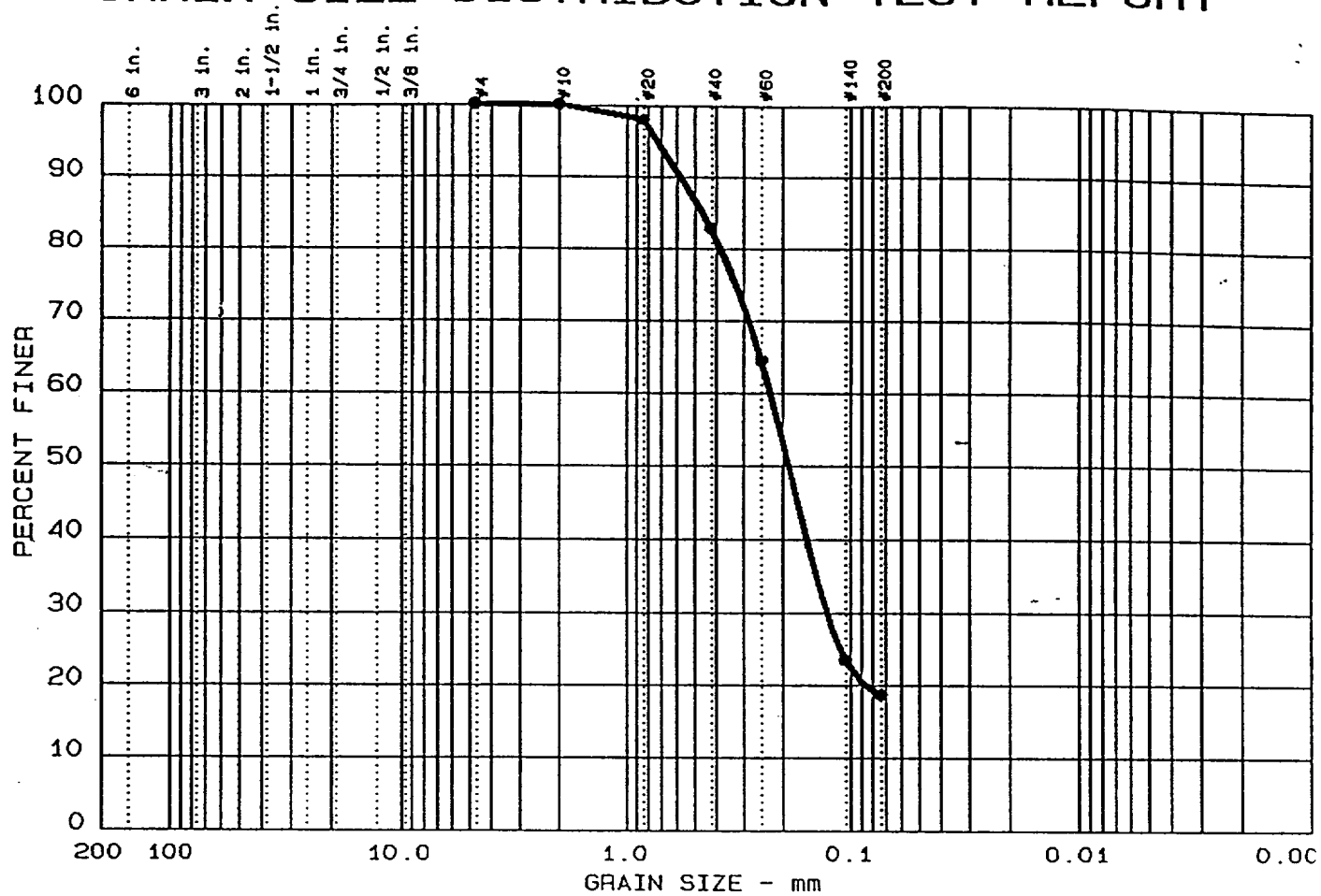
Remarks:

Tested by: *SC*
 Reviewed by: *HB*

ASTM D422

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	81.3	18.7	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.46	0.23	0.19	0.127				

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-15 @ 27-28.5 Ft.

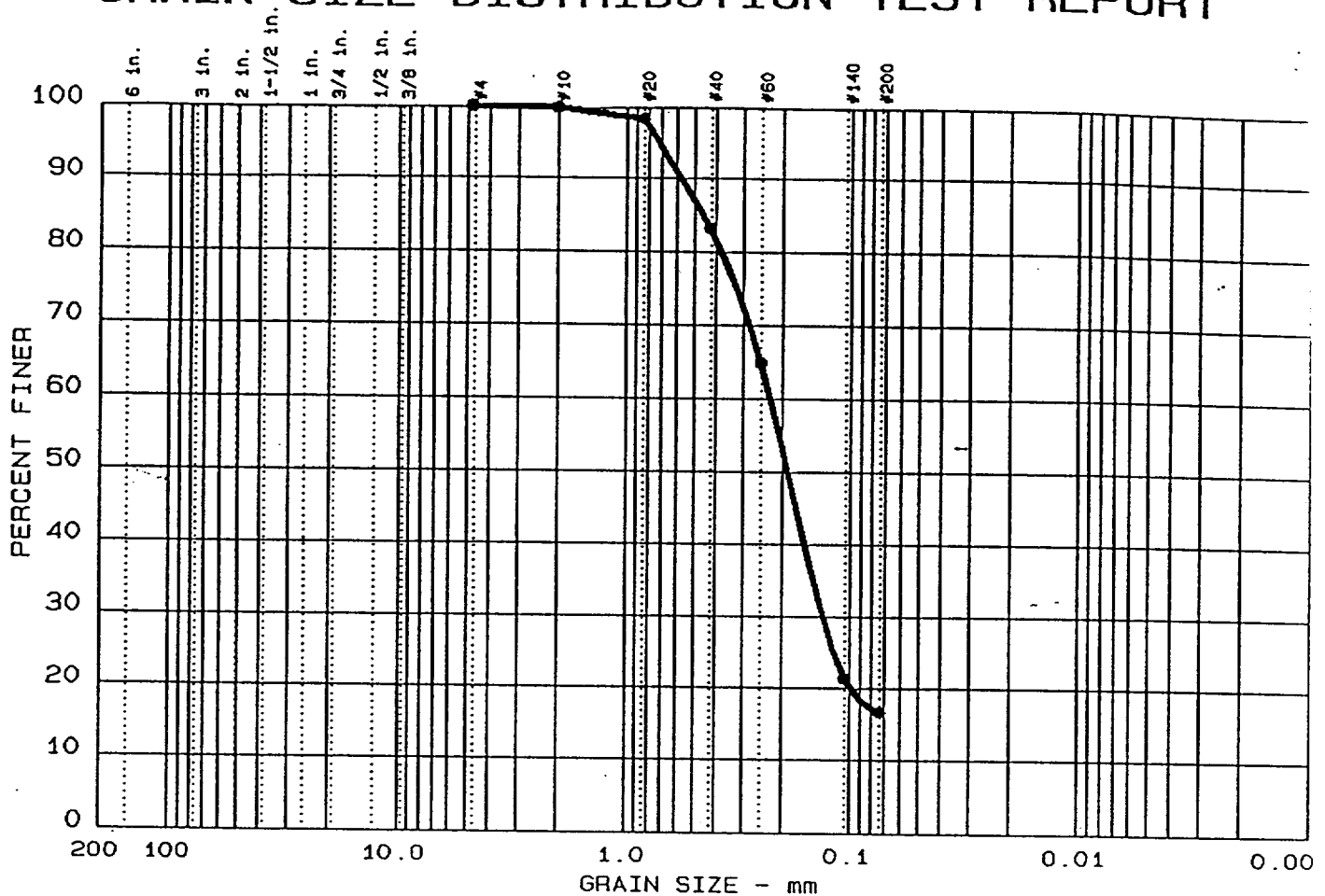
Date: March 16, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:
 Tested by: SC
 Reviewed by: HS
 ASTM D 422

Figure No. 11

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	83.3	16.7	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
30	7	0.45	0.23	0.19	0.132				

MATERIAL DESCRIPTION	USCS	AASHTO
● Red Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 ● Location: FB-3 SS-16 @ 28.5-30 Ft.

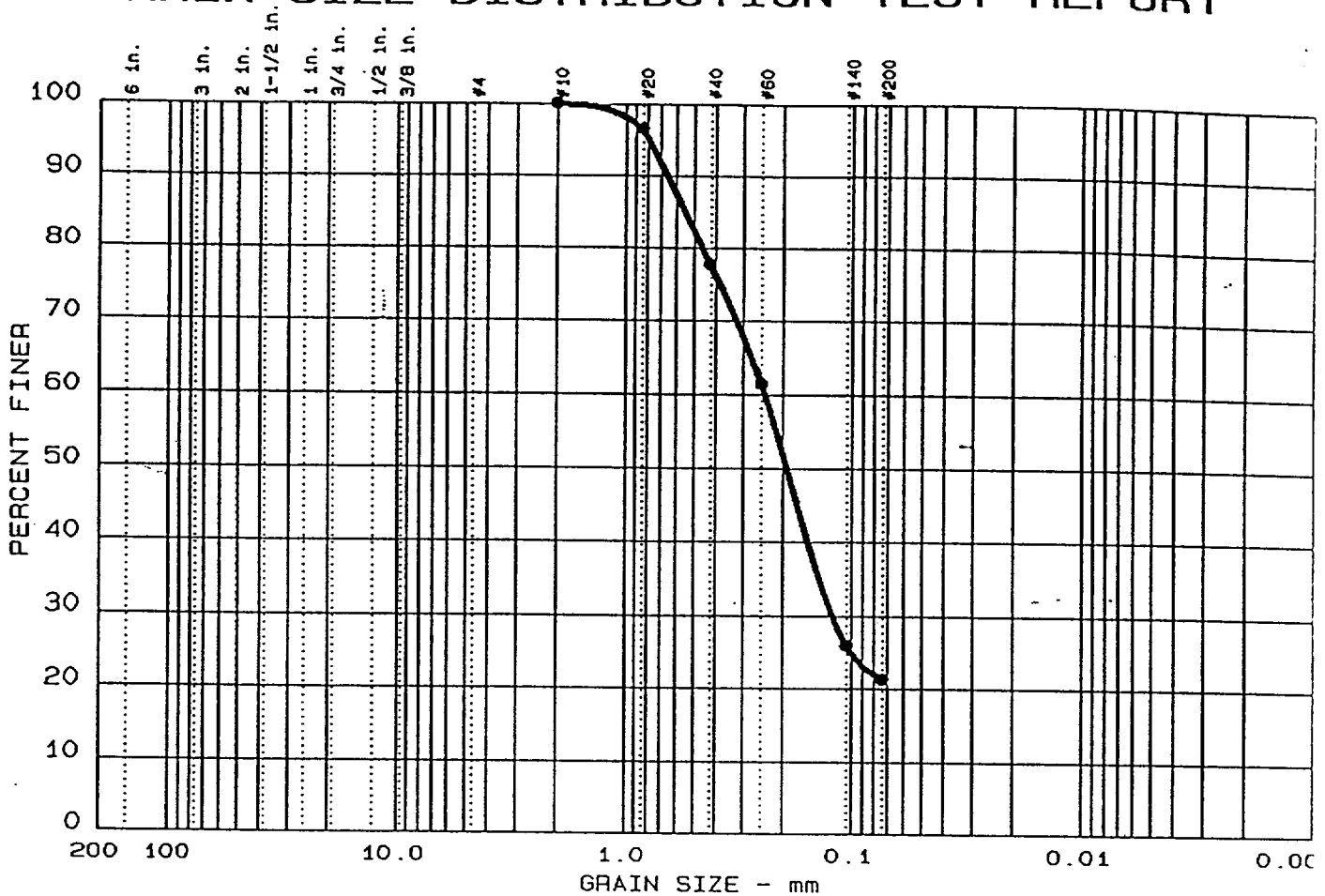
Date: March 16, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:
 Tested by: SC
 Reviewed by: HB
 ASTM D422
 &
 ASTM D4318

Figure No. 11

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	78.7	21.3	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.54	0.24	0.19	0.121				

MATERIAL DESCRIPTION	USCS	AASHTO
Red Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 Location: FB-3 SS-17 @ 30-31.5 Ft.

Date: March 16, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
 LAW ENGINEERING, INC.

Remarks:

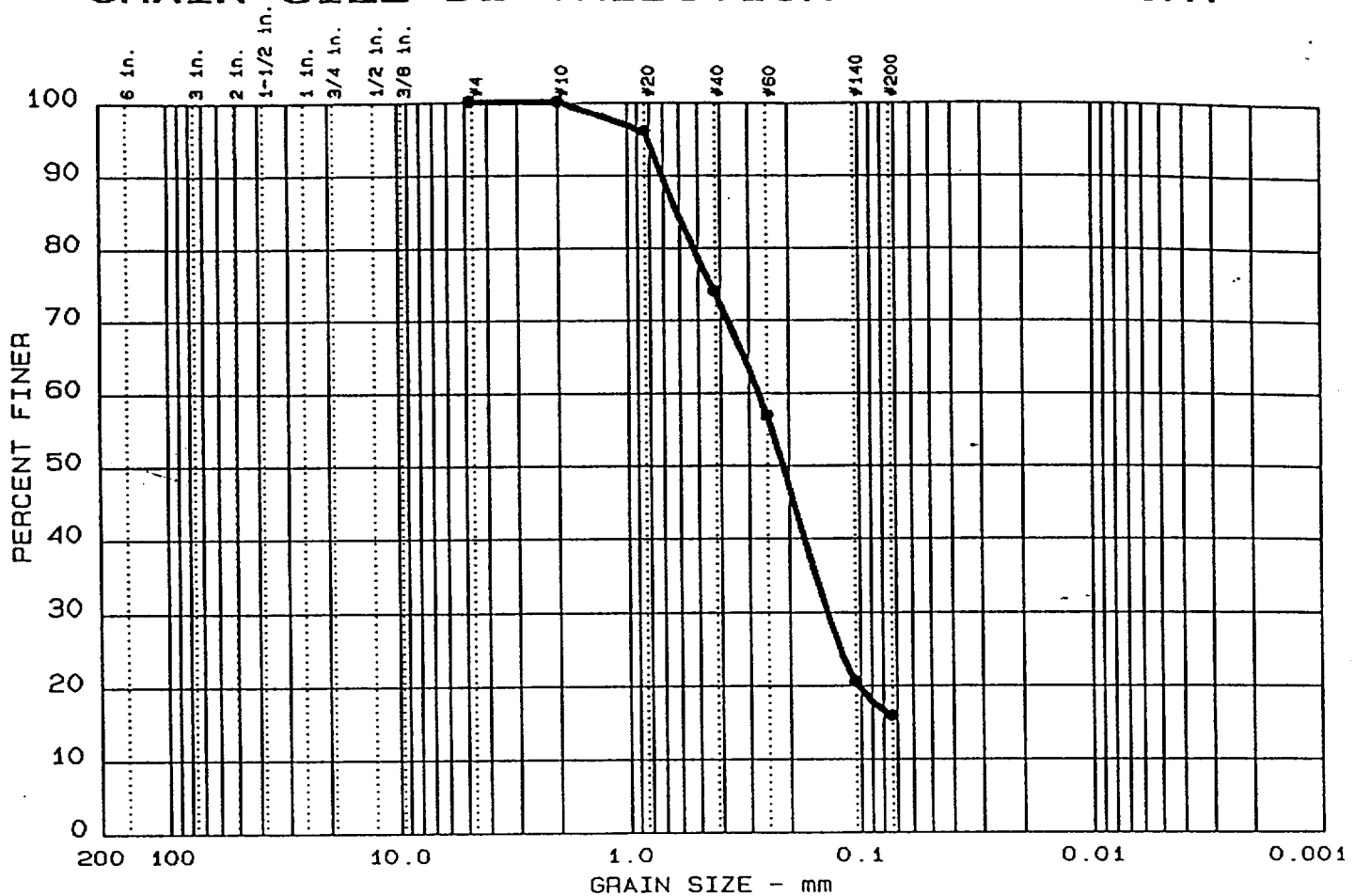
Tested by: SC

Reviewed by: HJ

ASTM D 422

Figure No. 11

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	84.0	16.0	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.61	0.27	0.21	0.138				

MATERIAL DESCRIPTION	USCS	AASHTO
● Red Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 ● Location: FB-3 SS-18 @ 31.5-33 Ft.

Date: March 16, 1998

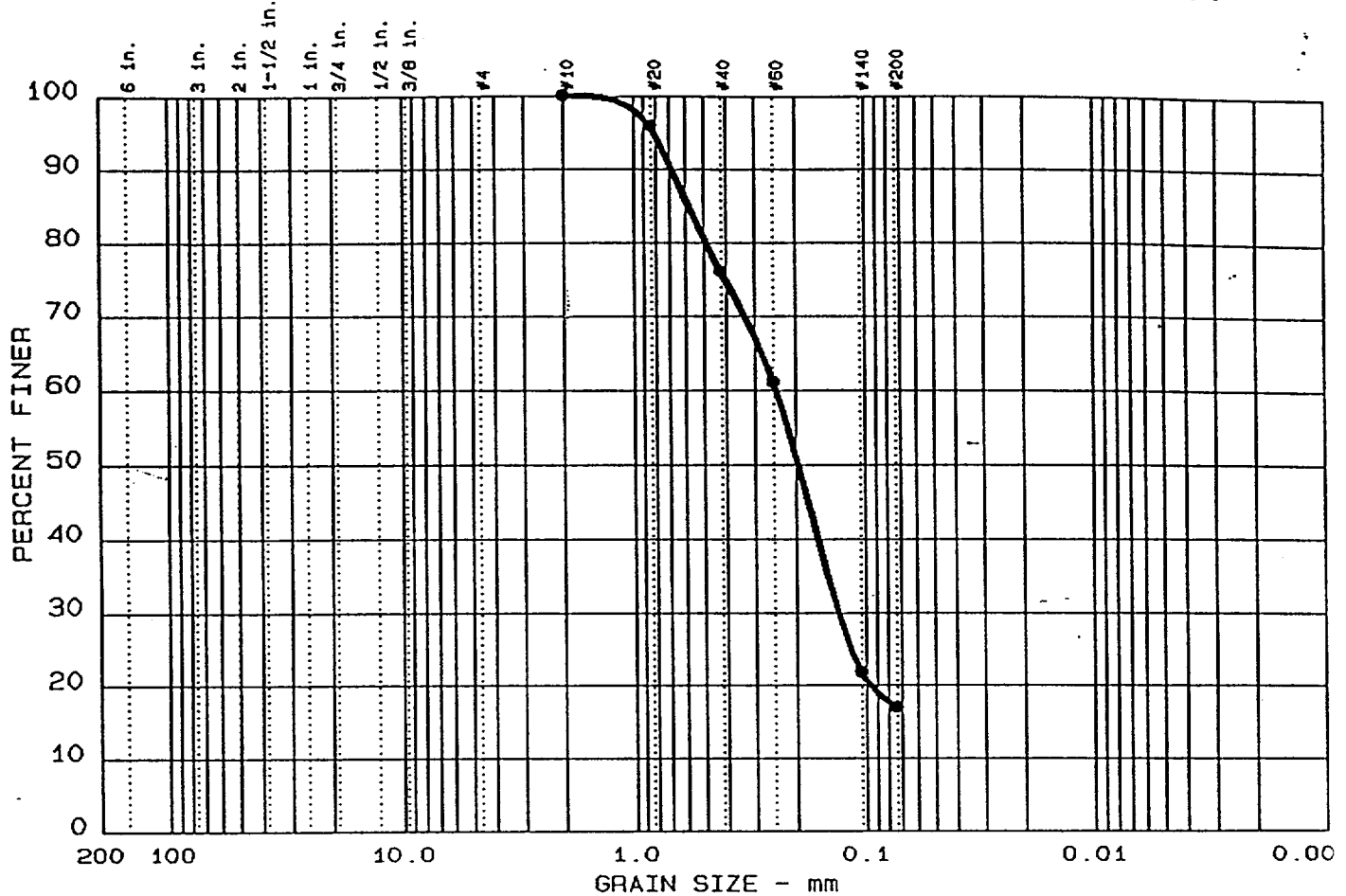
GRAIN SIZE DISTRIBUTION TEST REPORT
 LAW ENGINEERING, INC.

Remarks:

Tested by: SC
 Reviewed by: HS
 ASTM D422

Figure No. 11

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	83.0	17.0	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.57	0.24	0.20	0.132				

MATERIAL DESCRIPTION	USCS	AASHTO
● Red Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 ● Location: FB-3 SS-19 @ 33-34.5 Ft.

Date: March 16, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

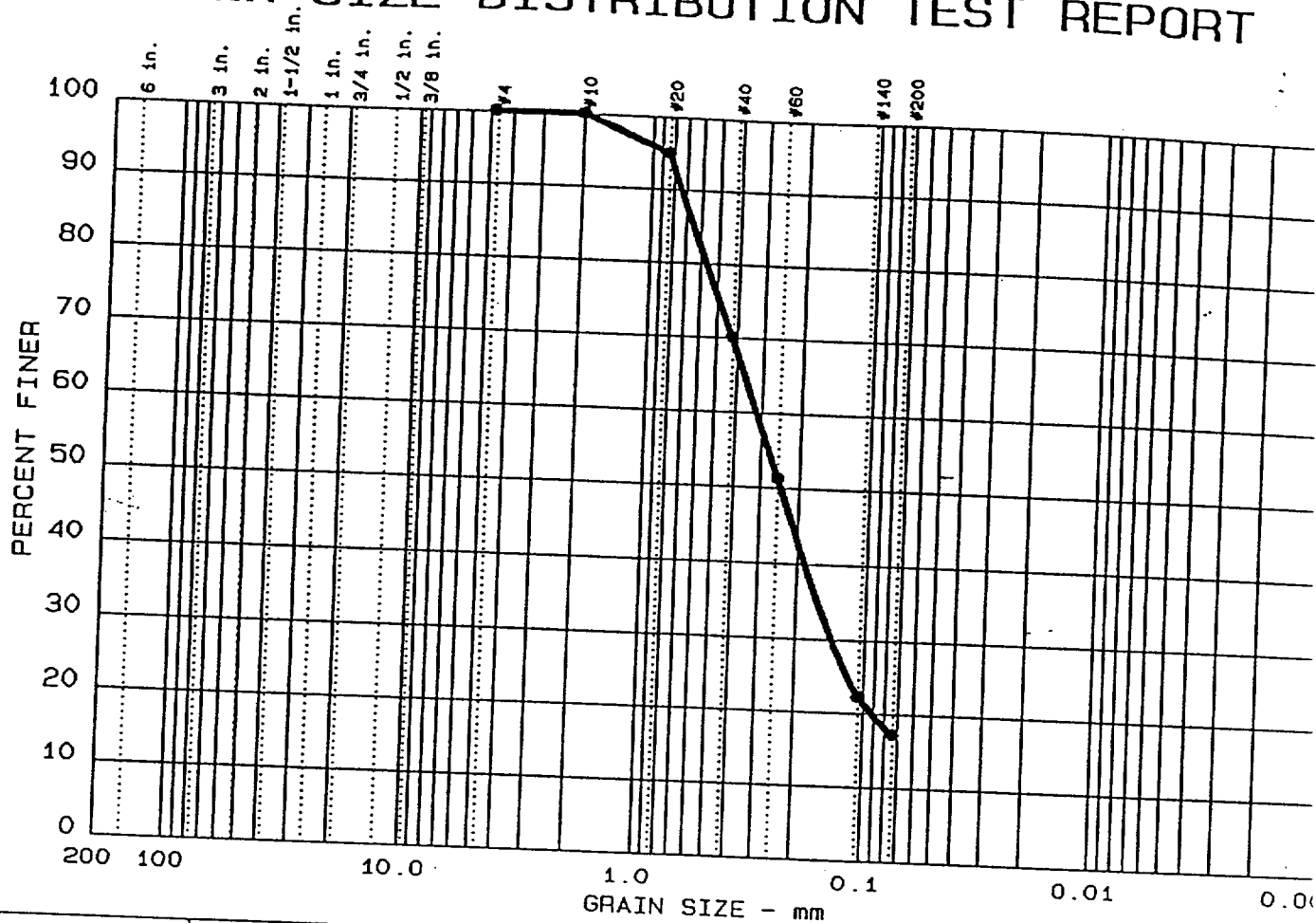
Tested by: SC

Reviewed by: HD

ASTM D 422

Figure No. 11

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	82.7	17.3	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.64	0.32	0.24	0.140				

MATERIAL DESCRIPTION

• Tan Brown Silty Sand

USCS

SM

AASHTO

A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-20 @ 34.5-36 Ft.

Date: March 16, 1998

Remarks:

Tested by: SC

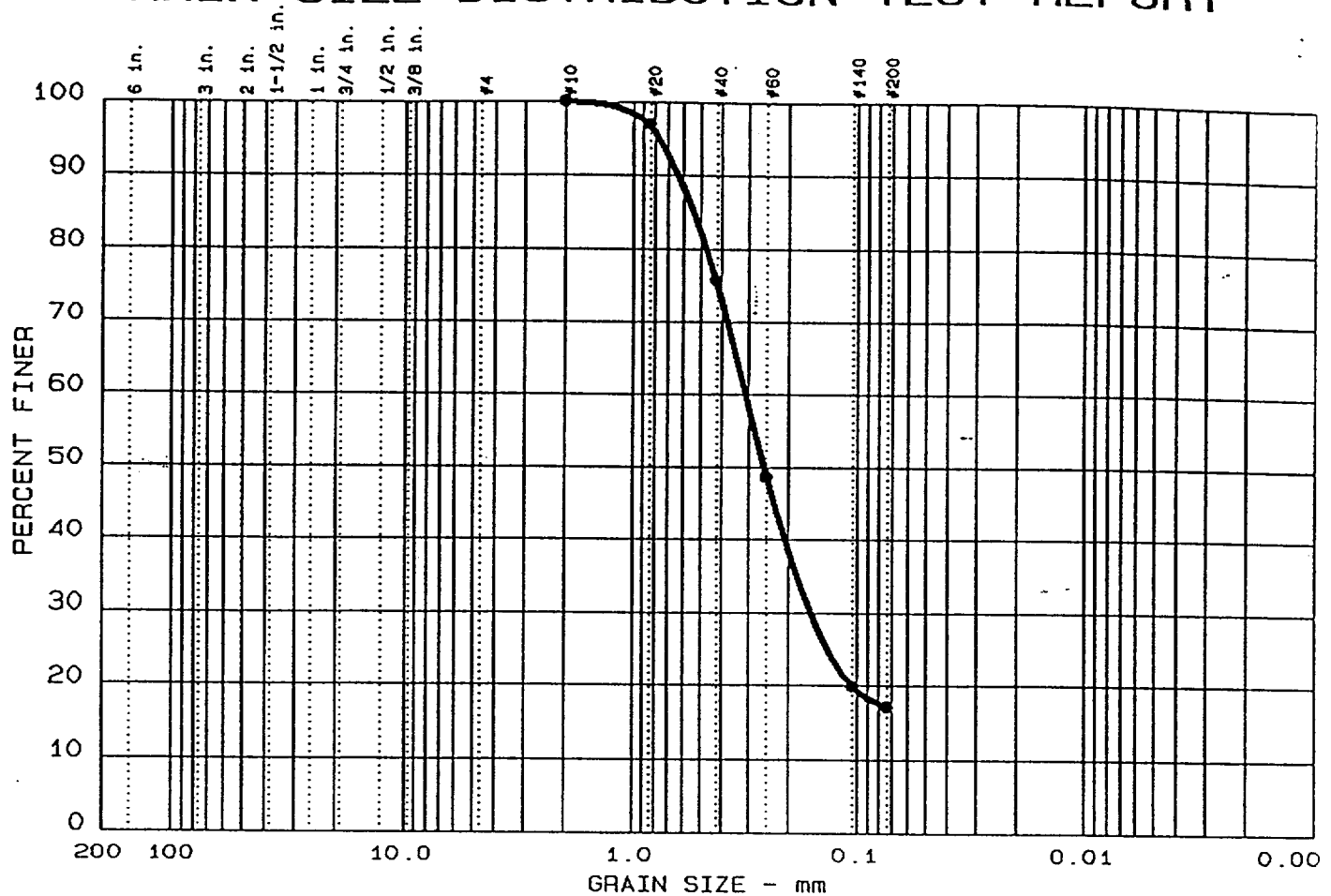
Reviewed by: HB

ASTM D 422

GRAIN SIZE DISTRIBUTION TEST REPORT
 LAW ENGINEERING, INC.

Figure No. 11

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	82.8	17.2	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.53	0.31	0.26	0.160				

MATERIAL DESCRIPTION	USCS	AASHTO
Tan Brown Silty Sand	SM	A-2-4 (0.0) ...

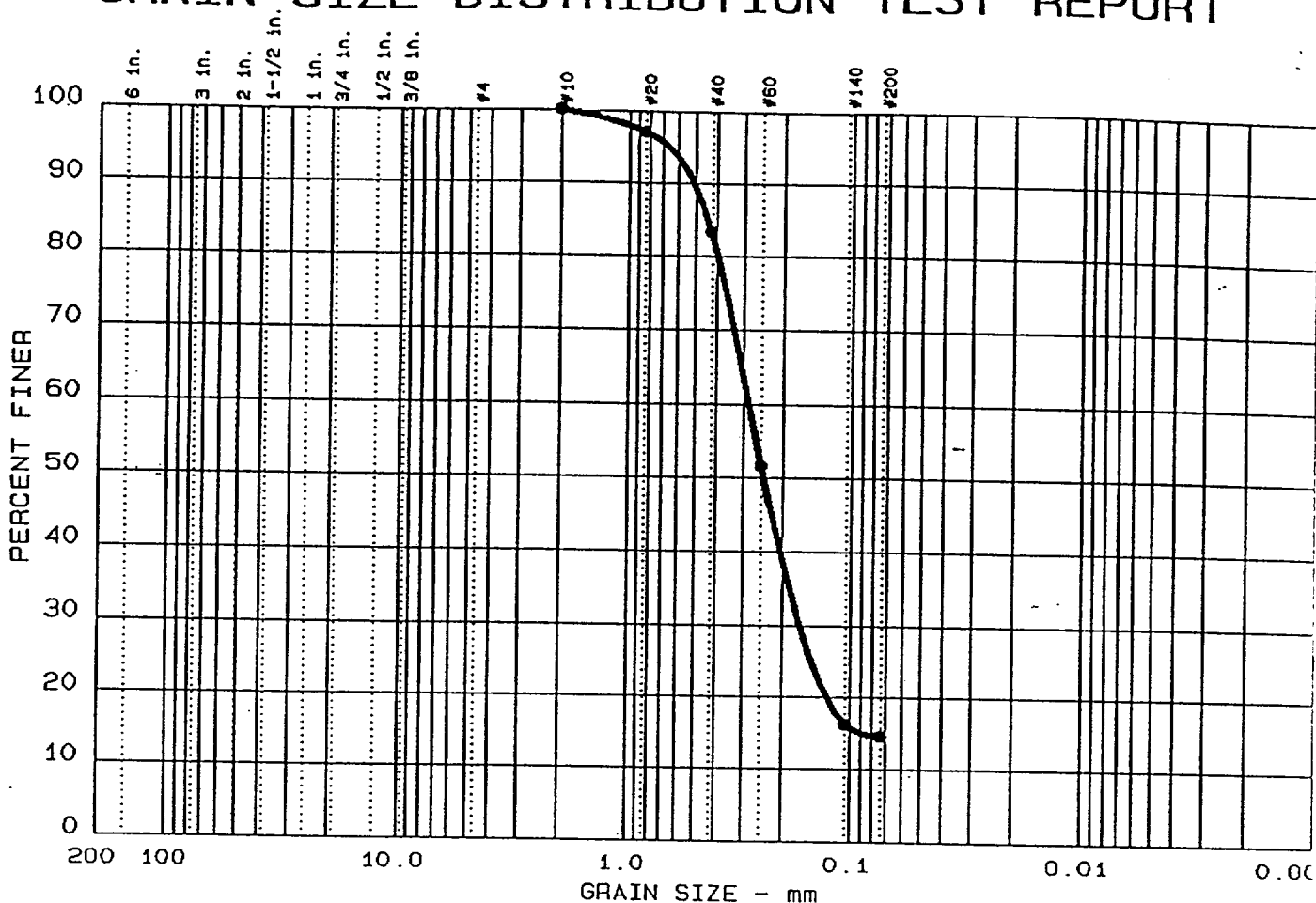
Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-21 @ 36-37.5 Ft.

Date: March 16, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:
 Tested by: SC
 Reviewed by: LD
 ASTM D422

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	85.5	14.5	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.44	0.28	0.24	0.168	0.0911			

MATERIAL DESCRIPTION	USCS	AASHTO
● Red Brown Silty Sand	SM	A-2-4 (0.0)

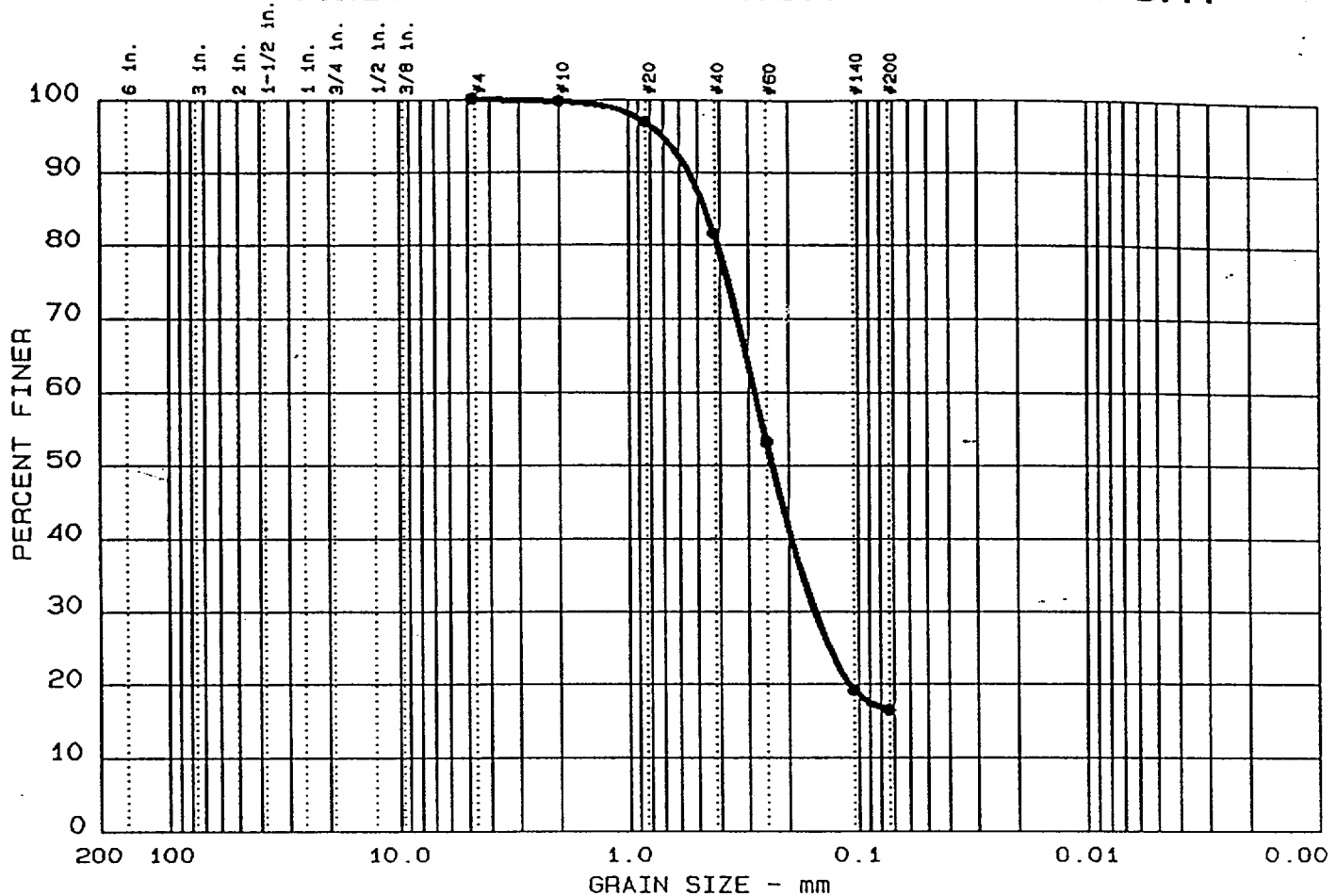
Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 ● Location: FB-3 SS-23 @ 40-41.5 Ft.
 Date: March 16, 1998

Remarks:
 Tested by: SC
 Reviewed by: RD
 ASTM D 422

GRAIN SIZE DISTRIBUTION TEST REPORT
 LAW ENGINEERING, INC.

Figure No. 11

GRAIN SIZE DISTRIBUTION TEST REPORT



% +3"	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	83.5	16.5	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.46	0.28	0.24	0.155				

MATERIAL DESCRIPTION	USCS	AASHTO
● Red Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 ● Location: FB-3 SS-24 @ 41.5-43 Ft.

Date: March 16, 1998

Remarks:

Tested by: SC

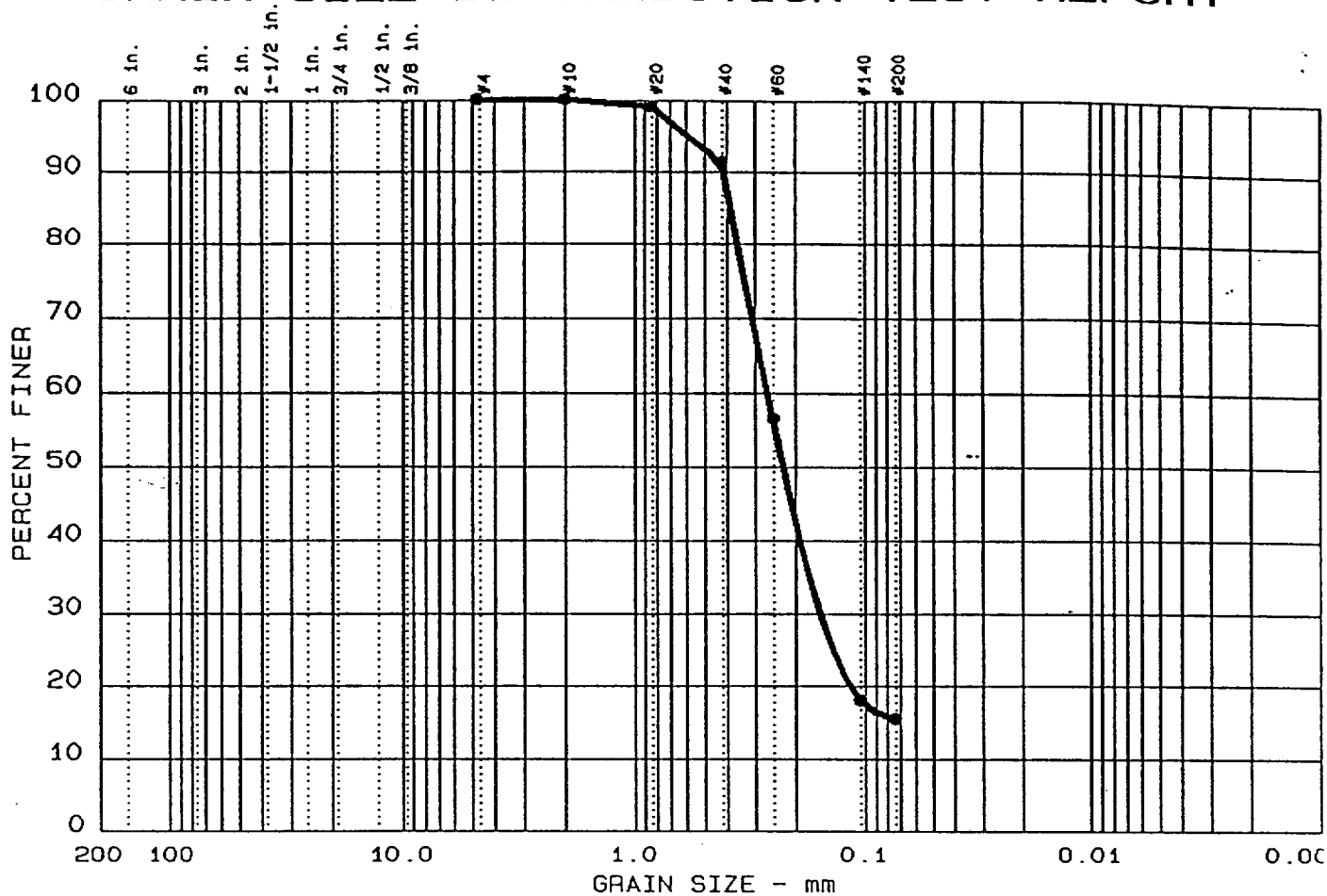
Reviewed by: HD

ASTM D 422

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No. 11

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 2	0.0	0.0	84.4	15.6	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.38	0.26	0.23	0.157				

MATERIAL DESCRIPTION	USCS	AASHTO
• Red Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-25 @ 43-44.5 Ft.

Date: March 15, 1998

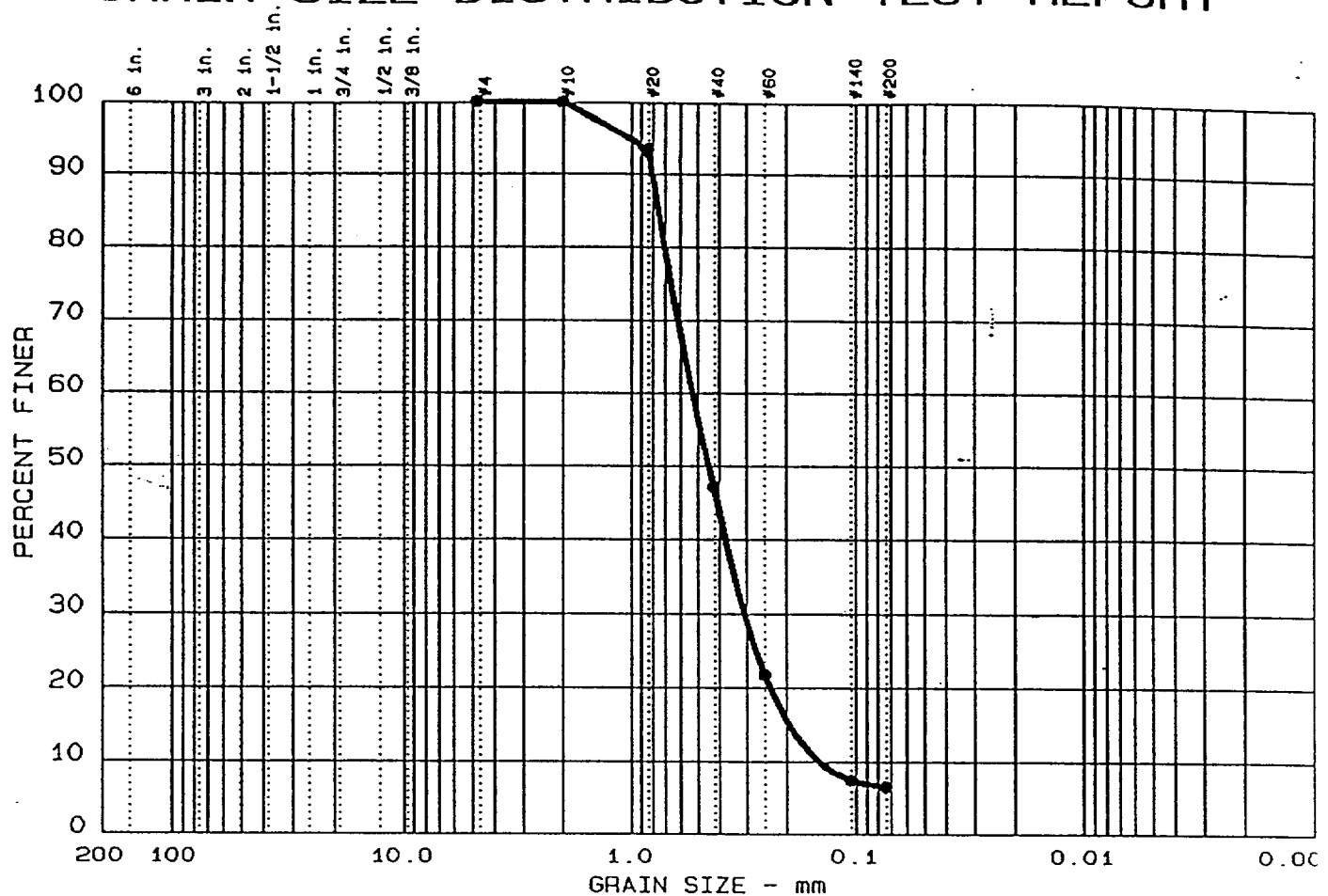
GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

Tested by: *SC*
 Reviewed by: *HJ*
 ASTM D422

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 3	0.0	0.0	93.4	6.6	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.75	0.52	0.44	0.307	0.1936	0.1435	1.25	3.7

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Poorly Graded Sand with Silt	SP-SM	A-1-b

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-26 @ 44.5-46 Ft.

Date: March 15, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

Tested by: SC

Reviewed by: HS

ASTM D422

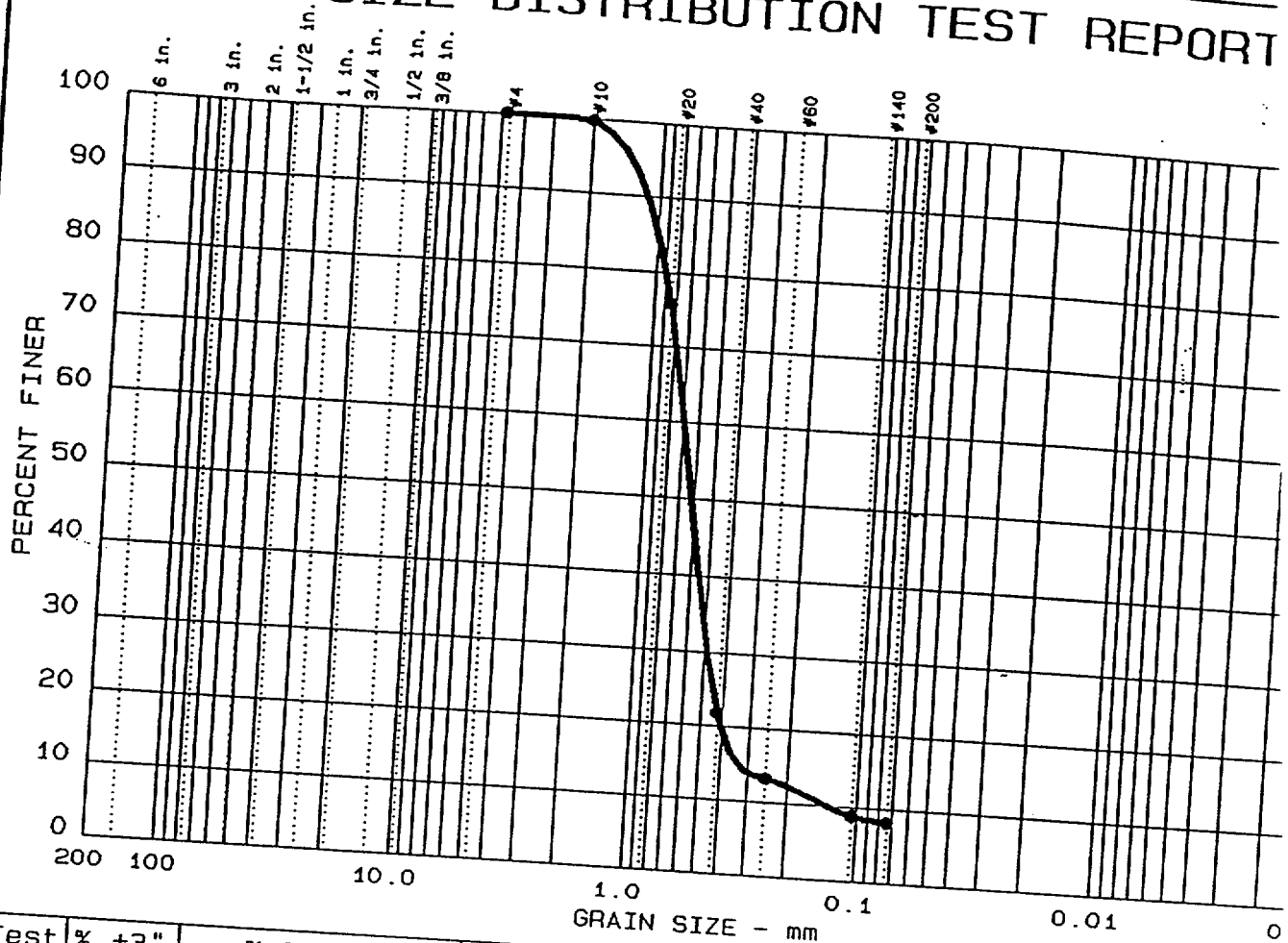
Figure No.

Grain size distribution curve for a soil sample. The graph plots Percent Finer (0 to 100) against Grain Size in mm (logarithmic scale from 200 to 0.0075). The curve shows a well-graded soil with a maximum grain size of approximately 4.75 mm (No. 10 sieve) and a minimum grain size of approximately 0.075 mm (No. 200 sieve).

Grain Size (mm)	Percent Finer (%)
4.75 (No. 10)	100
2.0 (No. 10)	100
0.85 (No. 20)	85
0.425 (No. 40)	45
0.25 (No. 60)	25
0.15 (No. 100)	15
0.075 (No. 200)	13

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
5	0.0	0.0	91.8	8.2	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.99	0.69	0.61	0.480	0.3323	0.1338	2.51	5.2

MATERIAL DESCRIPTION

- Tan Brown Poorly Graded Sand with Silt

USCS

SP-SM

AASHTO

A-1-b

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 Location: FB-3 SS-28 @ 47.5-49 Ft.

Date: March 15, 1998

Remarks:

Tested by: SC

Reviewed by: HB

ASTM D422

GRAIN SIZE DISTRIBUTION TEST REPORT
 LAW ENGINEERING, INC.

Figure No.

Grain size distribution curve for a sample of sand. The graph plots Percent Finer (0 to 100) against Grain Size in mm (200 to 0.0075). The curve shows that approximately 100% of the sand is finer than 4.75 mm, and about 18% is finer than 0.075 mm.

Grain Size (mm)	Percent Finer (%)
200	100
100	100
60	100
40	100
20	100
10	100
4.75	100
2.5	100
1.18	100
0.85	100
0.60	100
0.425	100
0.30	100
0.25	100
0.20	100
0.15	100
0.125	100
0.106	100
0.085	100
0.075	100
0.063	100
0.053	100
0.045	100
0.037	100
0.030	100
0.025	100
0.020	100
0.016	100
0.013	100
0.010	100
0.0085	100
0.0075	100

[illegible]

Project No.: 50161-7-0108 Task 16
Project: APSF Confirmatory Testing
◆ Location: FB-3 SS-30 @ 50.5-52 Ft.

Date: March 15, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

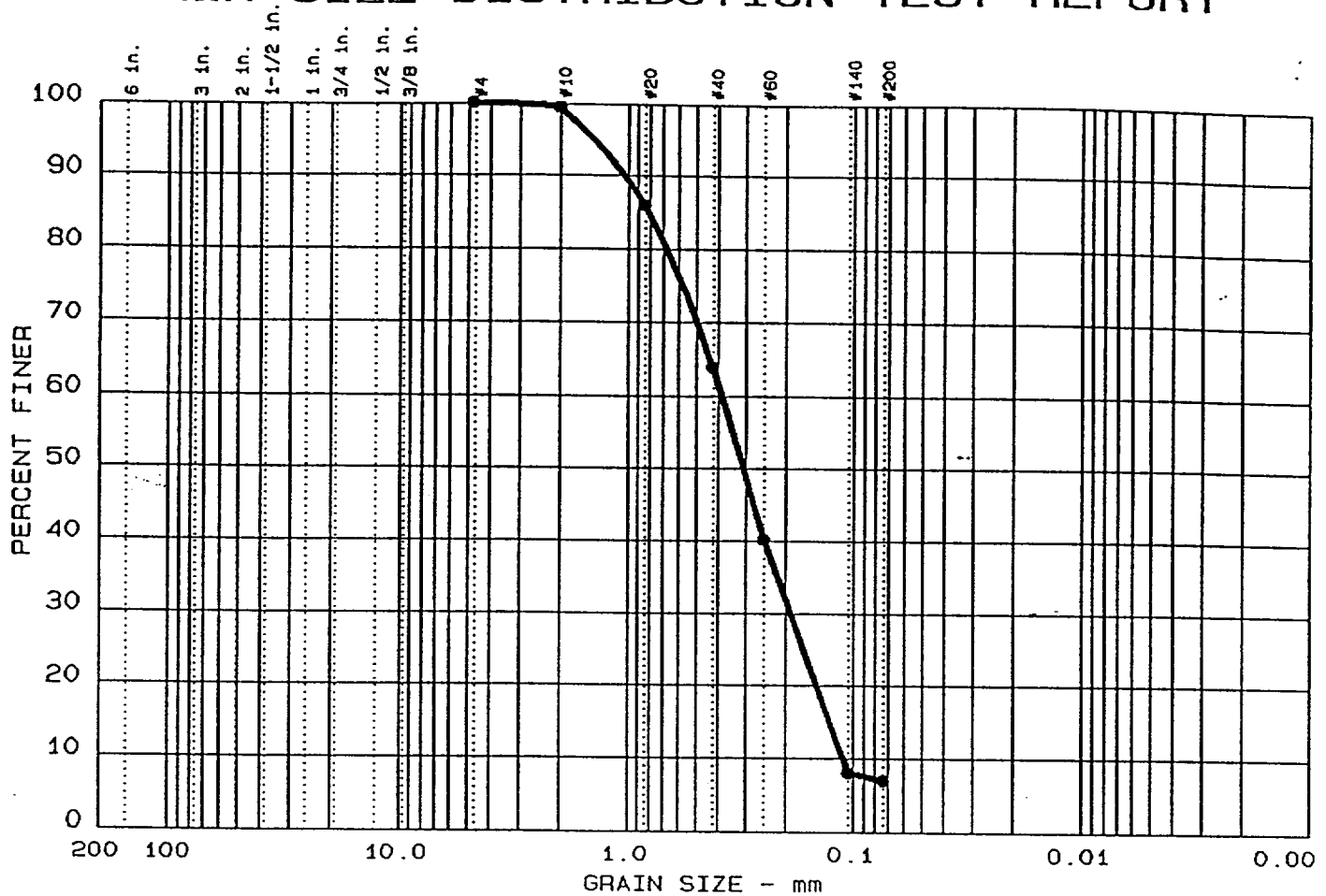
Tested by: SC

Reviewed by: *AS*

ASTM D 422

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



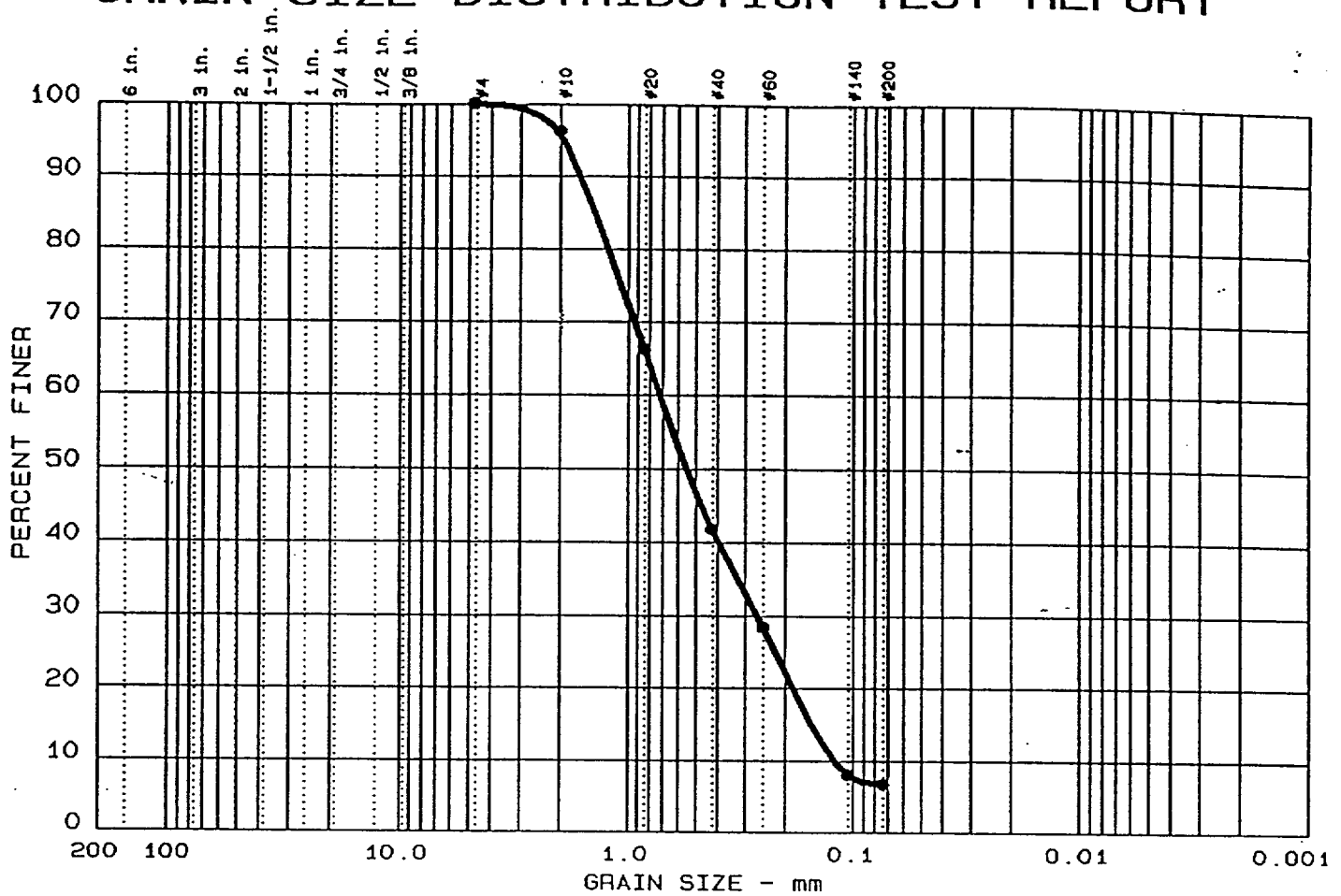
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
7	0.0	0.0	93.0	7.0	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.80	0.38	0.31	0.190	0.1269	0.1105	0.86	3.5

MATERIAL DESCRIPTION	USCS	AASHTO
Red Brown Poorly Graded Sand with Silt	SP-SM	A-3

Project No.: 50161-7-0108 Task 16 Project: APSF Confirmatory Testing Location: FB-3 SS-31 @ 57-58.5 Ft. Date: March 15, 1998	Remarks: Tested by: SC Reviewed by: <i>[Signature]</i> ASTM D422
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 8	0.0	0.0	93.2	6.8	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		1.41	0.72	0.54	0.264	0.1517	0.1205	0.80	6.0

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Poorly Graded Sand with Silt	SP-SM	A-1-b

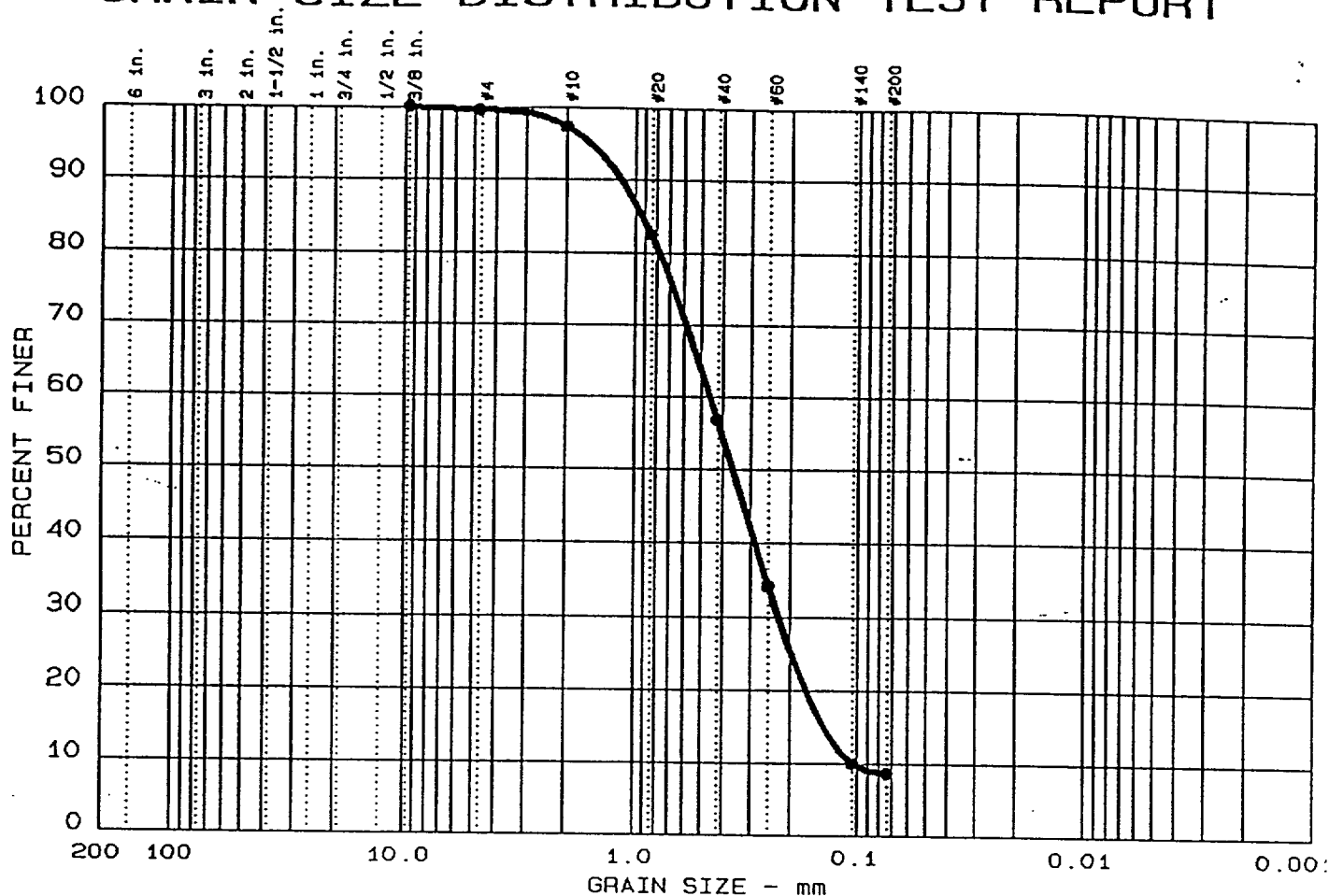
Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-32 @ 58.5-60 Ft.
 Date: March 15, 1998

Remarks:
 Tested by: SC
 Reviewed by: H
 ASTM D422

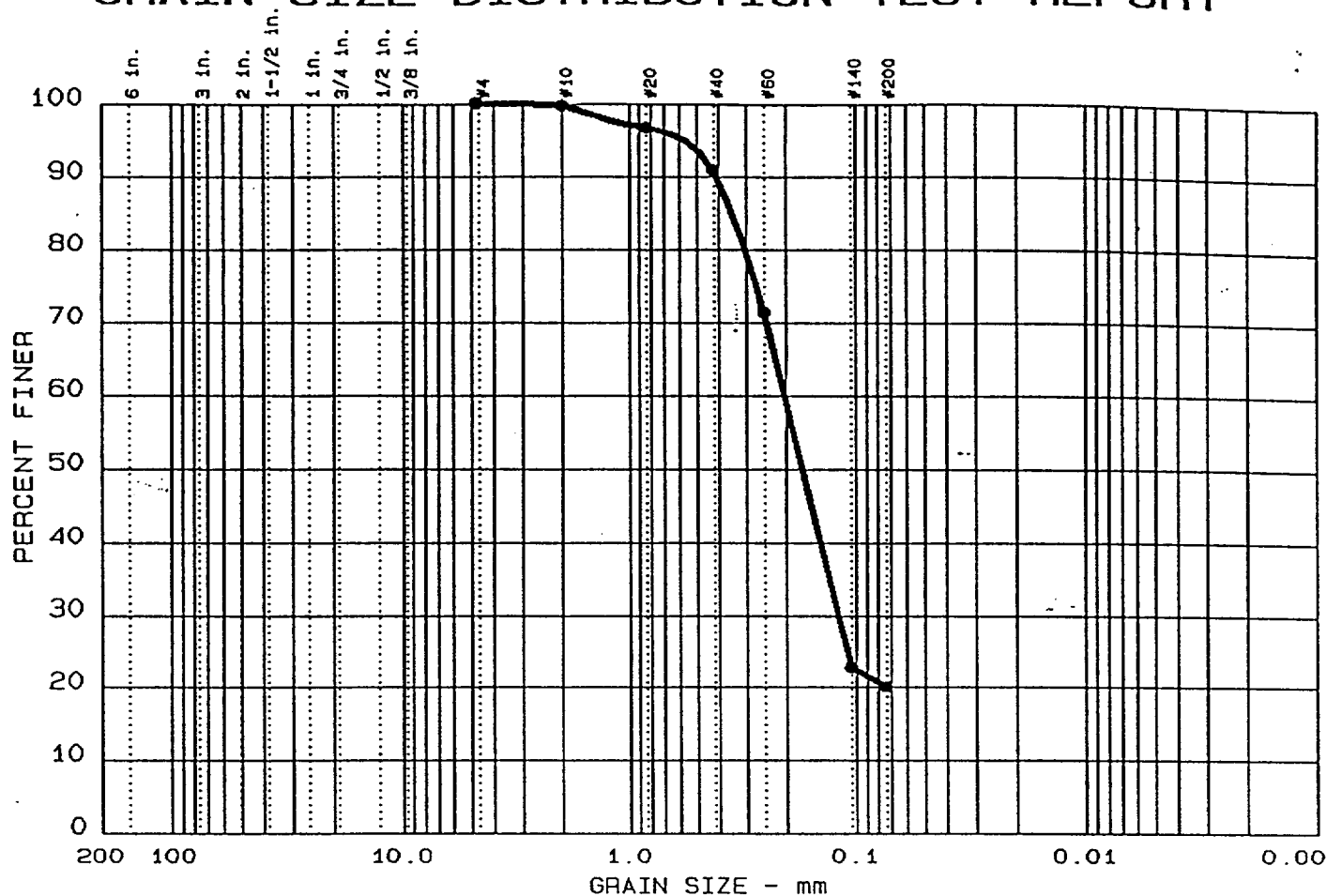
GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 10	0.0	0.0	79.9	20.1	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.35	0.20	0.17	0.119				

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-34 @ 61.5-63 Ft.

Date: March 15, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

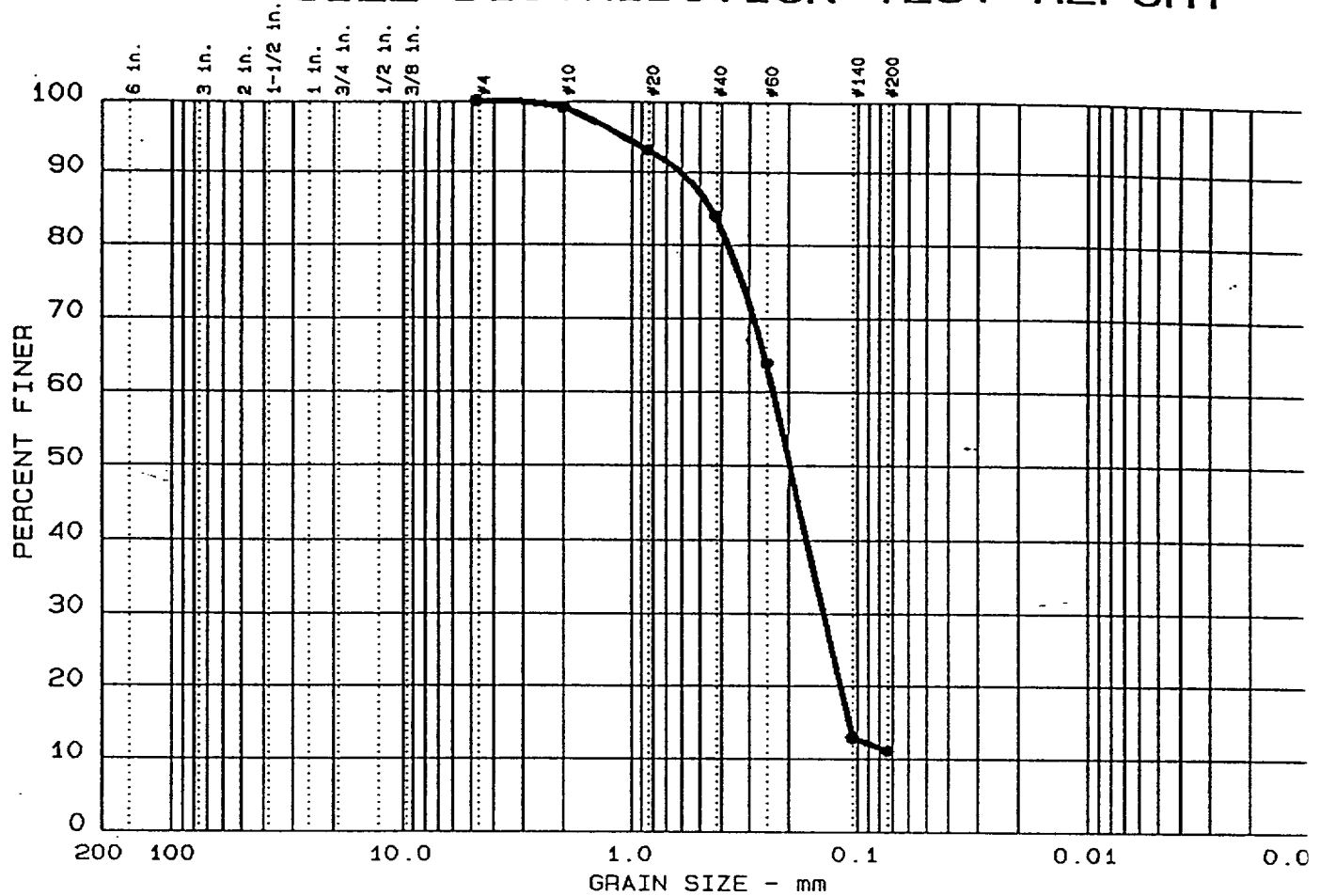
Tested by: SC

Reviewed by: HS

ASTM D422

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
● 11	0.0	0.0	88.9	11.1	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
●		0.44	0.23	0.20	0.140	0.1086			

MATERIAL DESCRIPTION	USCS	AASHTO
● Tan Brown Poorly Graded Sand with Silt	SP-SM	A-2-4 (0.4)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 ● Location: FB-3 SS-35 @ 63-64.5 Ft.

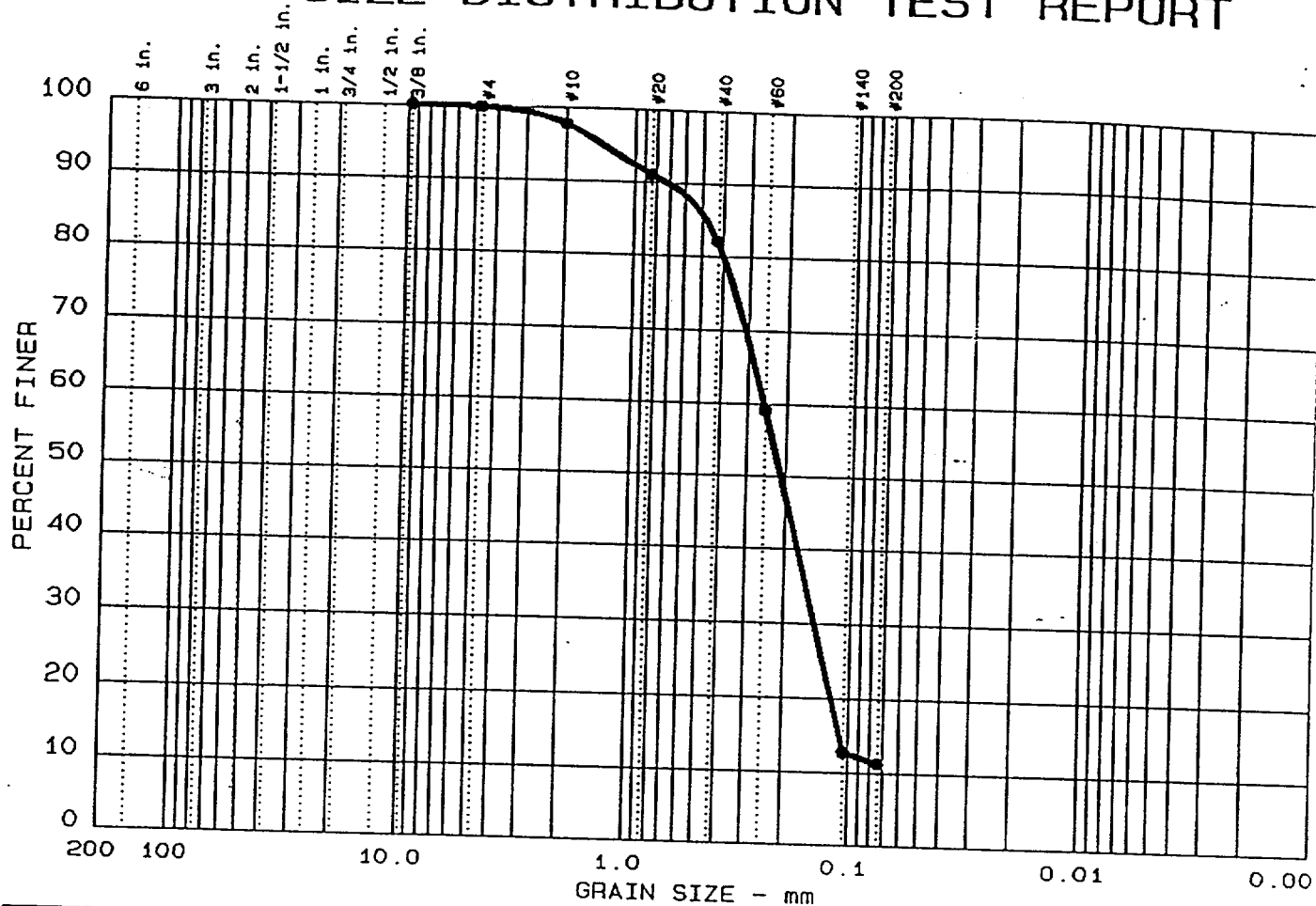
Date: March 15, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:
 Tested by: *Satish*
 Reviewed by: *HS*
 ASTM D422

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



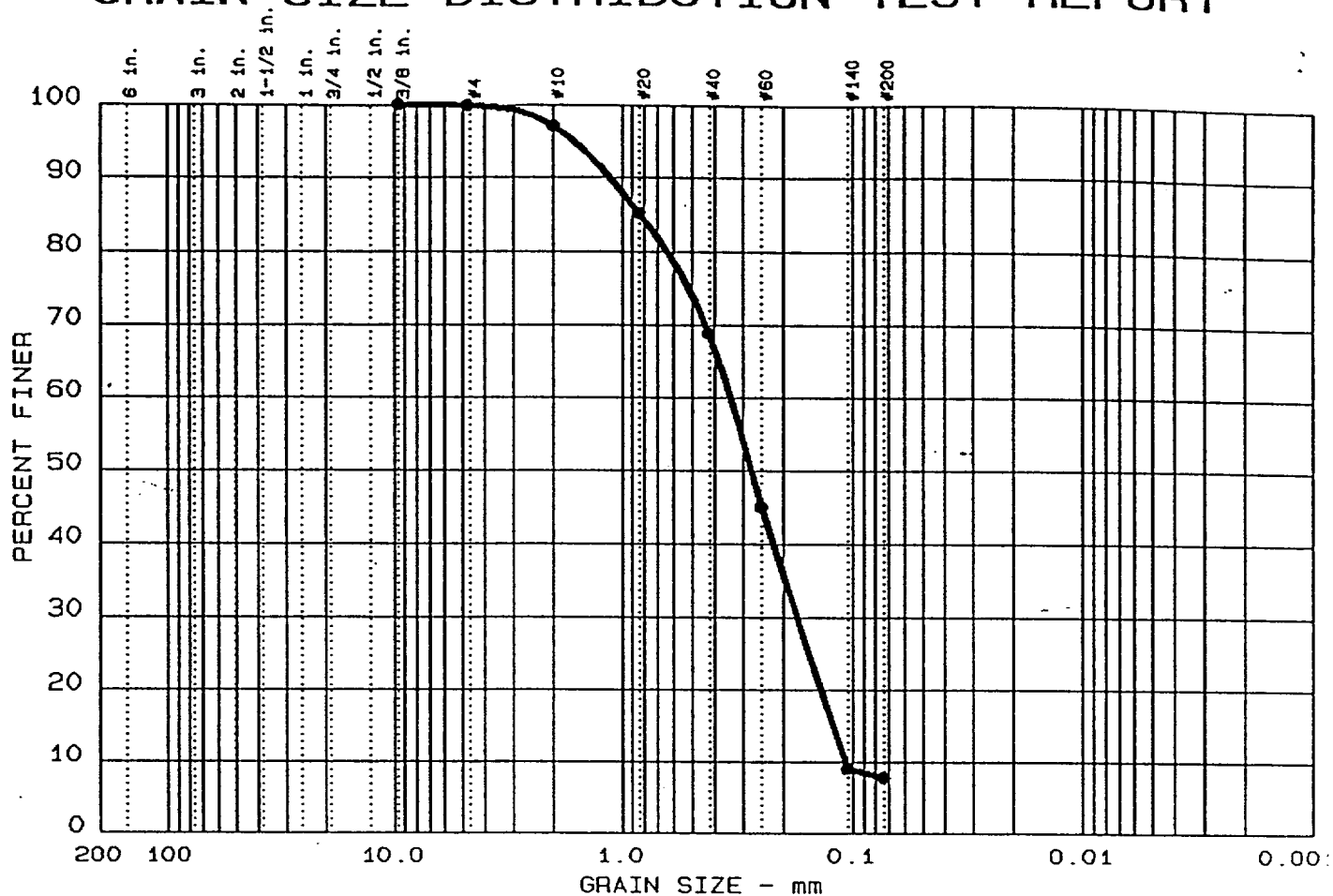
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 12	0.0	0.2	88.5	11.3	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.47	0.25	0.21	0.145	0.1094			

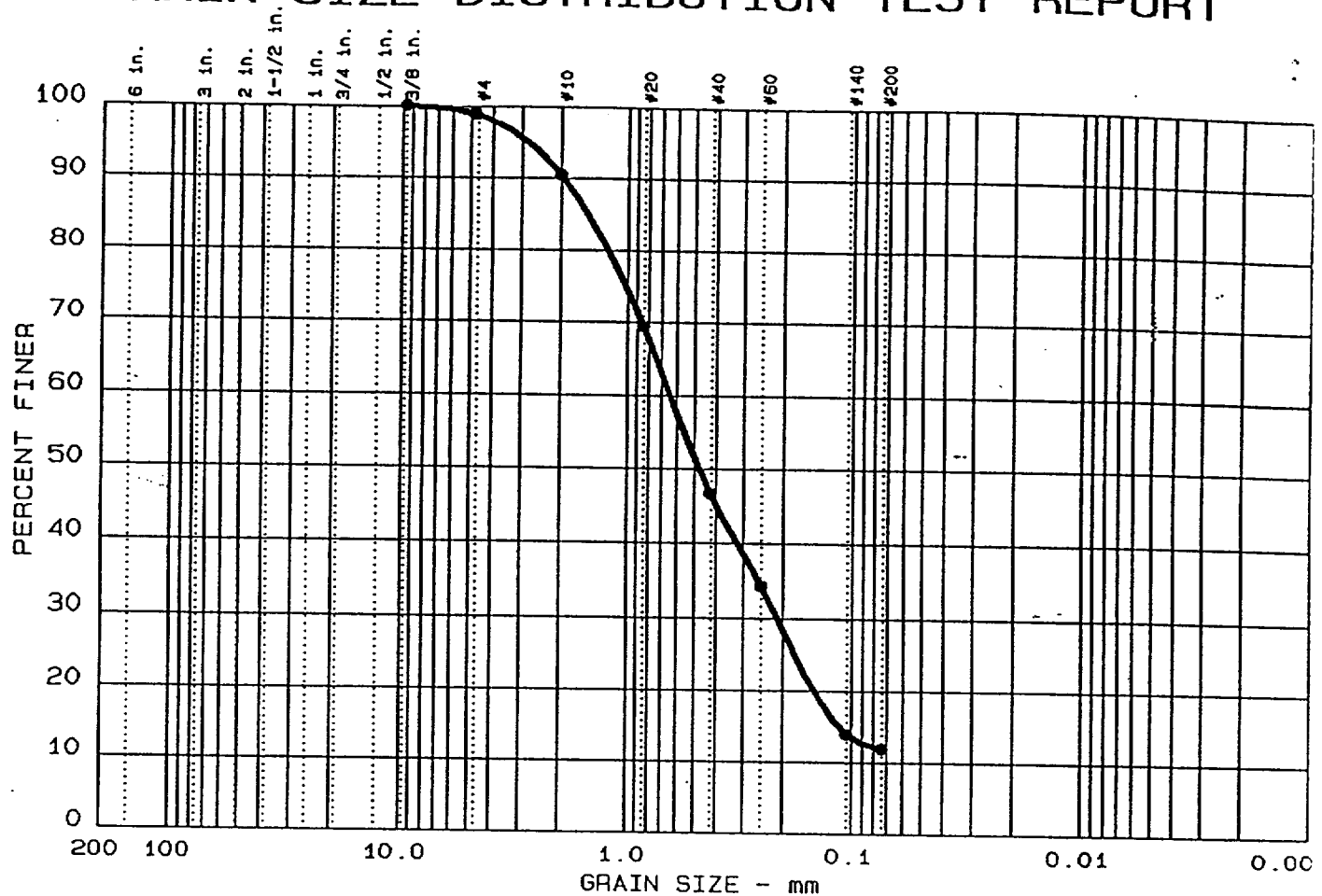
MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Poorly Graded Sand with Silt	SP-SM	A-2-4 (0.4)

Project No.: 50161-7-0108 Task 16 Project: APSF Confirmatory Testing • Location: FB-3 SS-36 @ 65.7-67.2 Ft. Date: March 15, 1998	Remarks: Tested by: SC Reviewed by: <i>[Signature]</i> ASTM D422
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	
Figure No.	

GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST REPORT



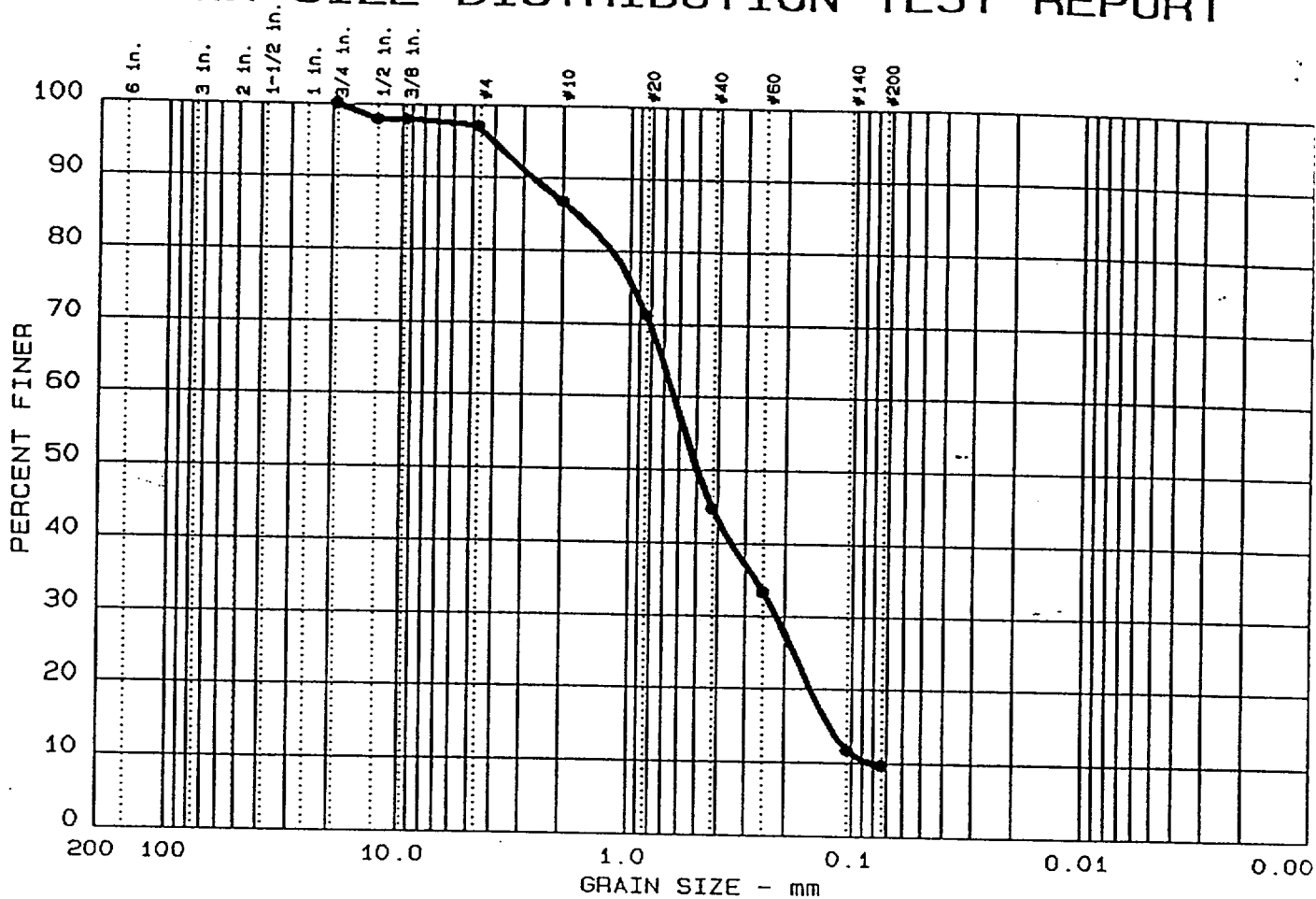
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 14	0.0	1.2	86.9	11.9	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		1.50	0.64	0.47	0.211	0.1132			

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Poorly Graded Sand with Silt	SP-SM	A-1-b

Project No.: 50161-7-0108 Task 16 Project: APSF Confirmatory Testing • Location: FB-3 SS-38 @ 68.7-70.2 Ft. Date: March 15, 1998	Remarks: Tested by: SC Reviewed by: <i>[Signature]</i> ASTM D422
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 15	0.0	3.0	87.3	9.7	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		1.70	0.63	0.49	0.219	0.1257	0.0821	0.93	7.6

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Poorly Graded Sand with Silt	SP-SM	A-1-b

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-39 @ 70.2-71.7 Ft.

Date: March 15, 1998

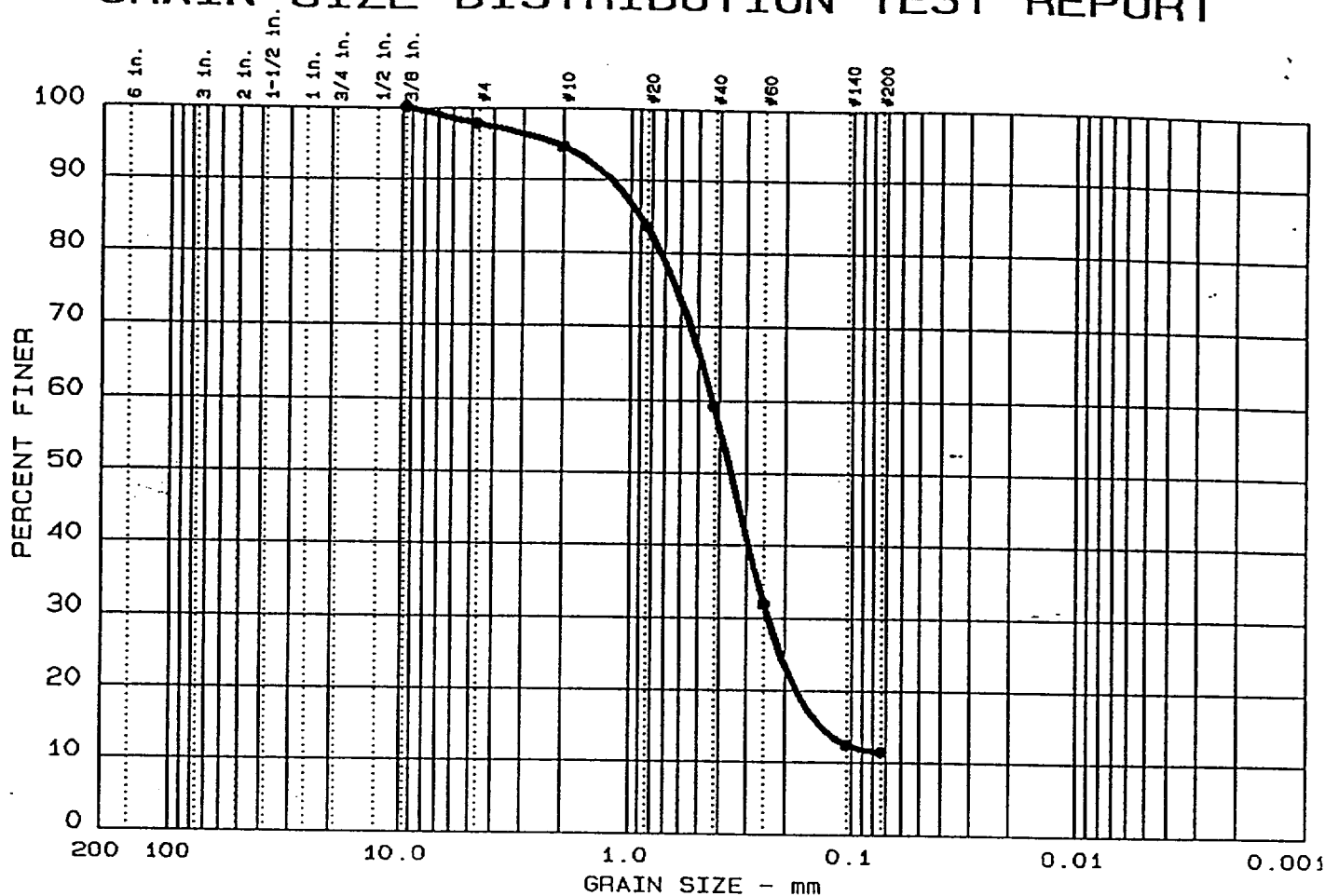
GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

Tested by: SC
 Reviewed by: AD
 ASTM D422

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 16	0.0	2.2	86.3	11.5	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.89	0.43	0.35	0.239	0.1358			

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Poorly Graded Sand with Silt	SP-SM	A-2-4 (0.4)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-40 @ 71.7-73.2 Ft.
 Date: March 15, 1998

Remarks:

Tested by: SC

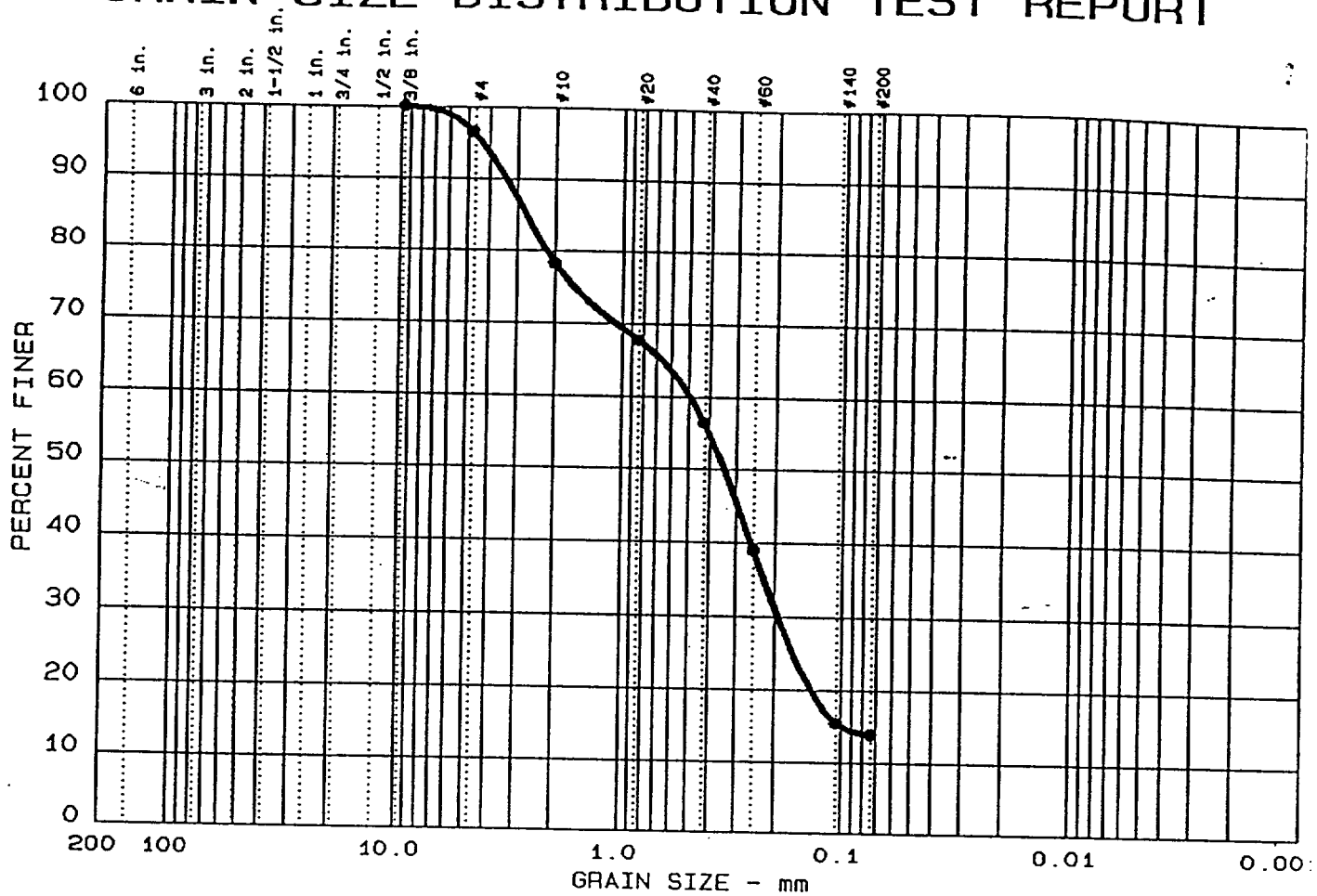
Reviewed by: HS

ASTM D422

GRAIN SIZE DISTRIBUTION TEST REPORT
 LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 17	0.0	3.4	82.7	13.9	

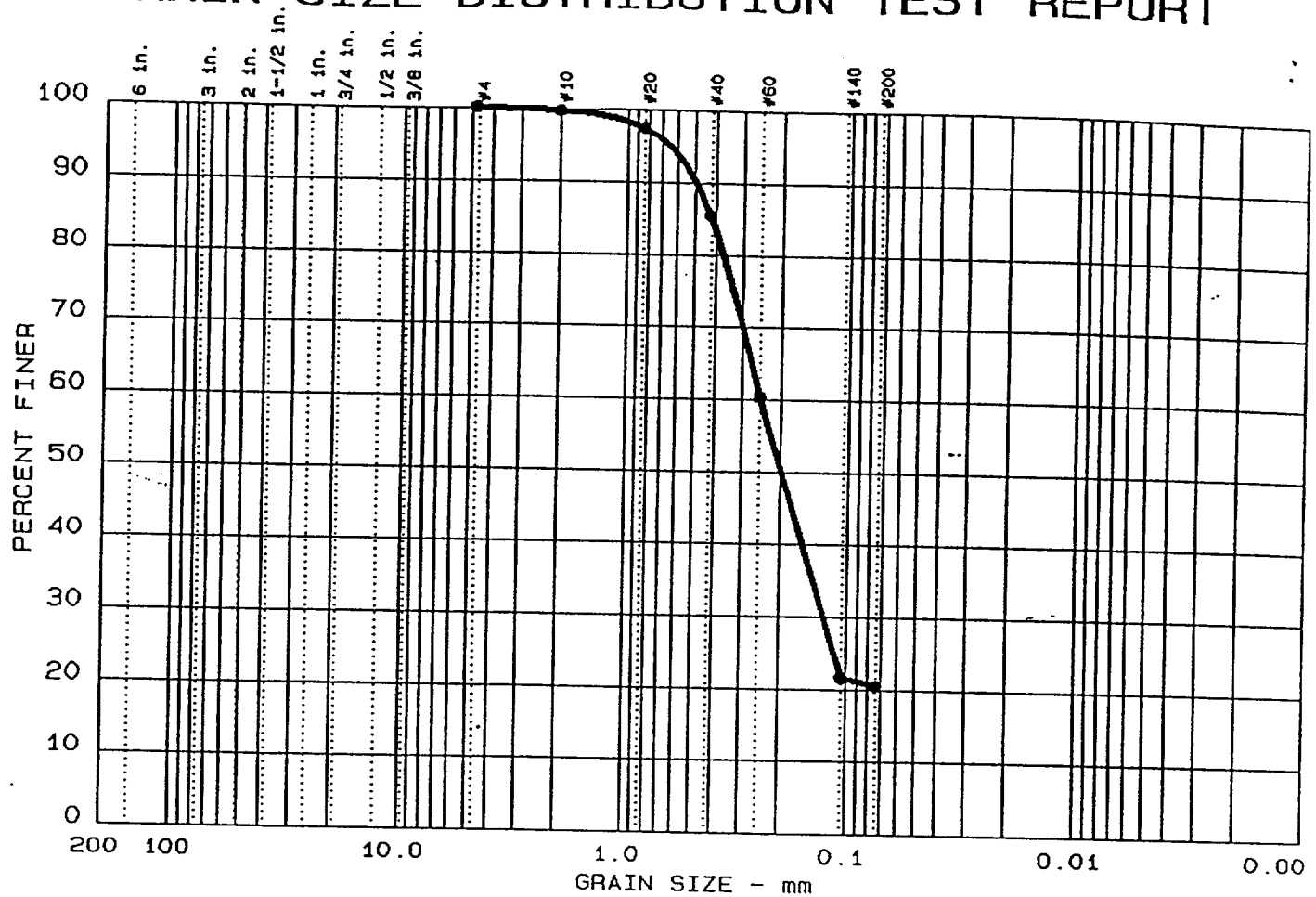
LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• NL	NP	2.69	0.48	0.34	0.193	0.0989			

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Silty Sand	SM	A-2-4 (0.1)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-41 @ 73.2-74.7 Ft.
 Date: March 15, 1998
 GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:
 Tested by: *SC & JTM*
 Reviewed by: *HJ*
 ASTM D 422
 &
 ASTM D 4318
 Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 18	0.0	0.0	79.5	20.5	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.41	0.25	0.20	0.126				

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Silty Sand	SM	A-2-4 (0.0)

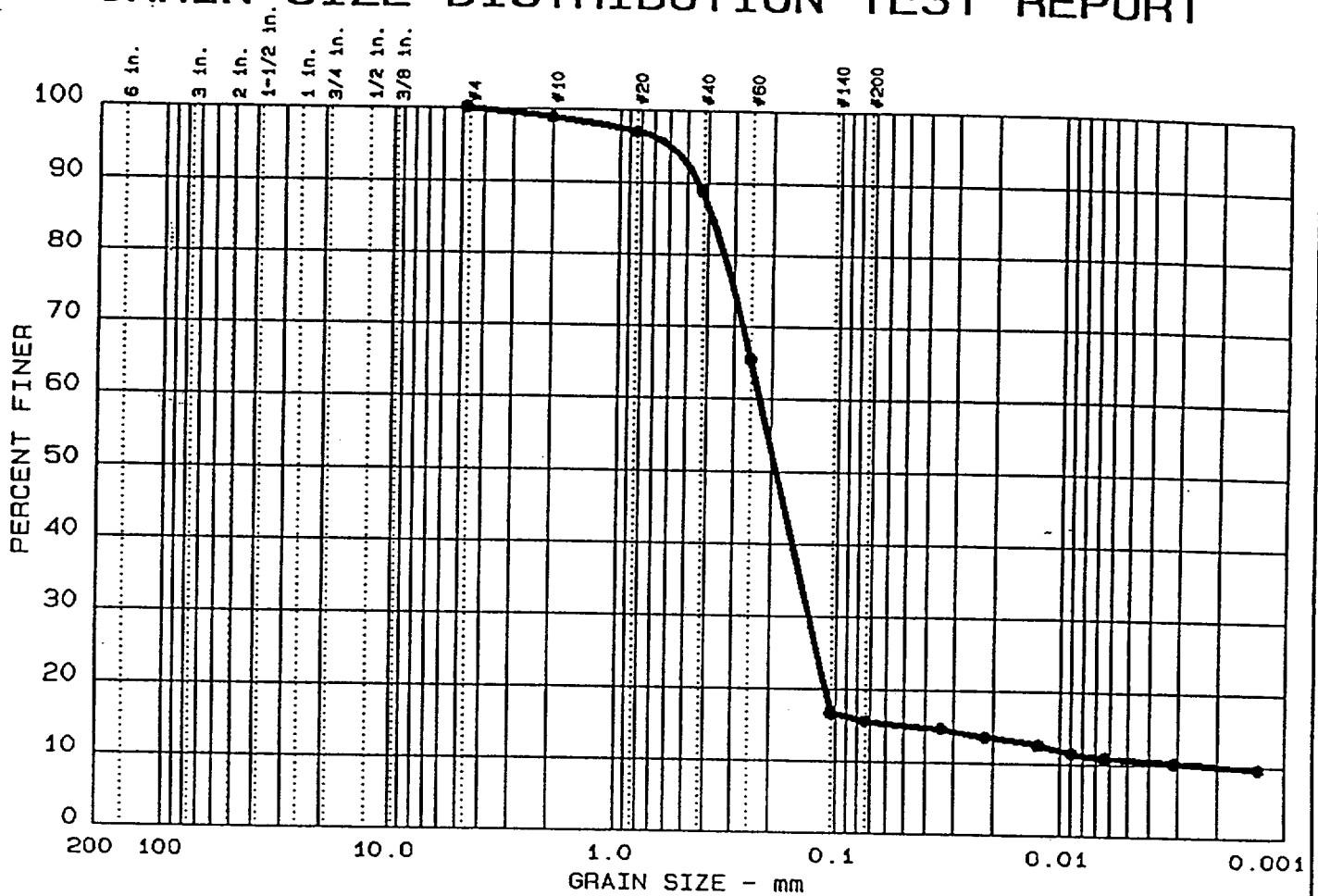
Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-42 @ 74.7-76.2 Ft.
 Date: March 15, 1998

Remarks:
 Tested by: SC
 Reviewed by: HJ
 ASTM D 422

GRAIN SIZE DISTRIBUTION TEST REPORT
 LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 2	0.0	0.0	84.3	5.0	10.7

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.38	0.23	0.19	0.133	0.0466	0.0019	40.13	116.5

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-43 @ 76.2-77.7 Ft.

Date: March 19, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

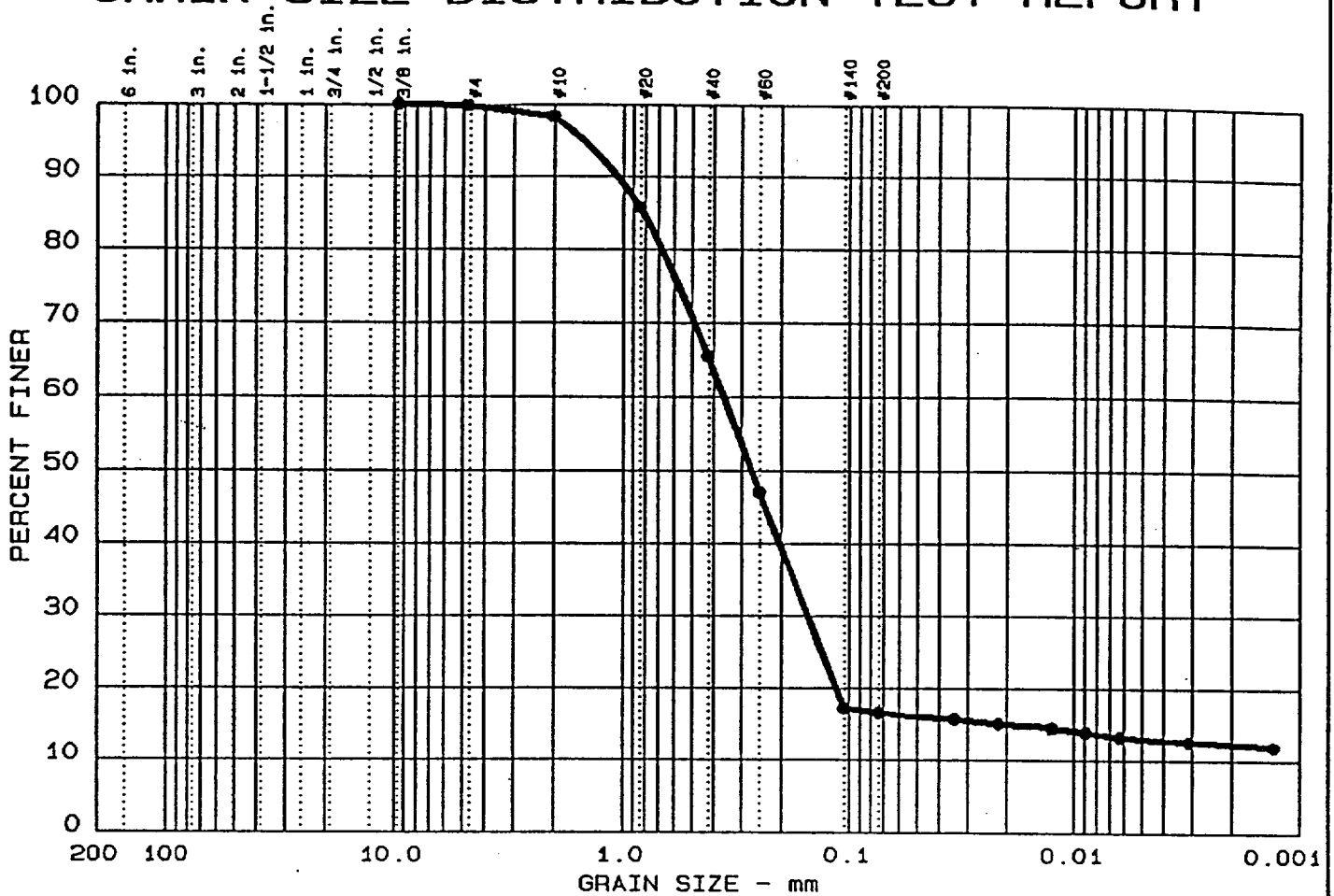
Tested by: *SCD/DM*

Reviewed by: *LB*

ASTM D 422

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
● 3	0.0	0.2	83.3	3.5	13.0

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
● 44	19	0.81	0.36	0.27	0.152	0.0192			

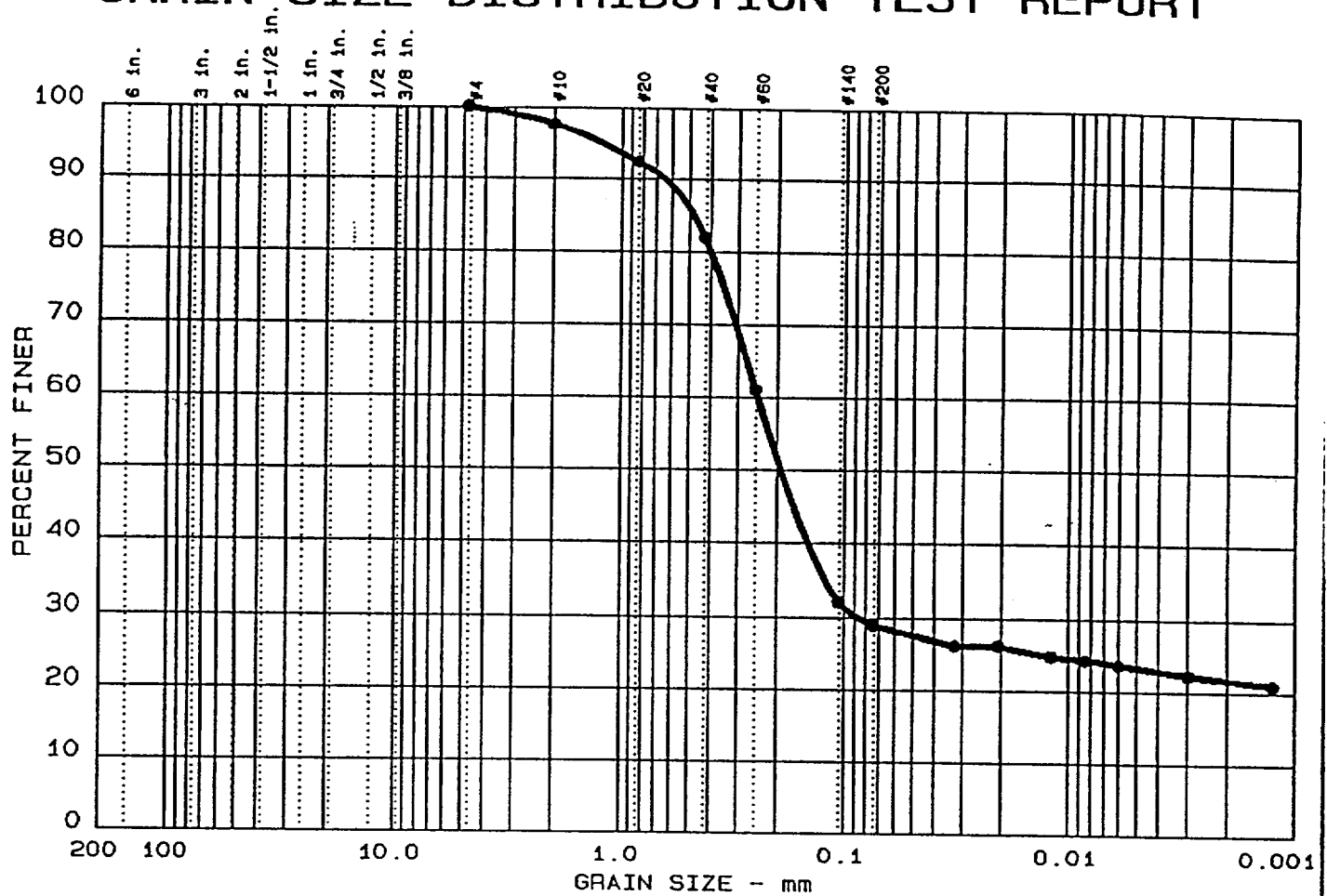
MATERIAL DESCRIPTION	USCS	AASHTO
● Tan Clayey Sand	SC	A-2-7 (0.2)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 ● Location: FB-3 SS-45 @ 79.2-80.7 Ft.
 Date: March 19, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:
 Tested by: *SC & JTM*
 Reviewed by: *vtj*
 ASTM D422
 &
 ASTM D4318
 Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 4	0.0	0.0	71.1	5.5	23.4

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 47	20	0.47	0.24	0.19	0.088				

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Clayey Sand	SC	A-2-7 (1.4)

Project No.: 50161-7-0108 Task 16 Project: APSF Confirmatory Testing • Location: FB-3 SS-46 @ 80.7-82.2 Ft. Date: March 19, 1998	Remarks: Tested by: <i>SCJTM</i> Reviewed by: <i>H</i> ASTM D 422 & ASTM D 4318 Figure No.
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	

Grain size distribution test report graph showing Percent Finer vs Grain Size (mm). The curve starts at 100% finer for 200 mm and drops sharply between 0.6 mm and 0.075 mm, leveling off at approximately 2% finer for 0.075 mm and below.

Grain Size (mm)	Percent Finer (%)
200	100
100	100
60	100
40	100
20	100
10	100
7.5	100
6	100
4.75	100
3.75	100
3.0	100
2.5	100
2.0	100
1.5	100
1.18	100
1.0	100
0.85	100
0.75	100
0.6	100
0.5	100
0.425	100
0.375	100
0.3	100
0.25	100
0.2	100
0.15	100
0.125	100
0.106	100
0.09	100
0.075	22
0.06	15
0.05	12
0.0425	10
0.0375	8
0.03	7
0.025	6
0.02	5
0.015	4
0.0125	4
0.0106	4
0.009	4
0.0075	3
0.006	3
0.005	2
0.00425	2
0.00375	2
0.003	2
0.0025	2
0.002	2
0.0015	2
0.00125	2
0.00106	2
0.0009	2

[illegible]

Project No.: 50161-7-0108 Task 16
Project: APSF Confirmatory Testing
● Location: FB-3 SS47 @ 82.2-83.7 Ft.

Date: March 19, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

Grain size distribution curve showing Percent Finer versus Grain Size (mm). The curve indicates a well-graded material.

Grain Size (mm)	Percent Finer (%)
200	100
100	100
60	100
40	100
20	100
10	100
4.75	100
2.5	100
1.5	100
1.0	98
0.75	65
0.425	28
0.25	12
0.15	8
0.075	6
0.0475	5
0.025	5
0.015	5
0.0075	5

[illegible]

Project No.: 50161-7-0108 Task 16
Project: APSF Confirmatory Testing
● Location: FB-3 SS-48 @ 83.7-85.2 Ft.

Date: March 15, 1998

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Grain size distribution curve for a soil sample. The graph plots Percent Finer (0 to 100) against Grain Size in mm (logarithmic scale from 200 to 0.0075). The curve shows a well-graded soil with a maximum grain size of approximately 4.75 mm and a minimum grain size of approximately 0.075 mm.

Grain Size (mm)	Percent Finer (%)
4.75	100
2.0	98
1.0	95
0.6	85
0.425	65
0.25	20
0.15	10
0.075	8

[illegible]

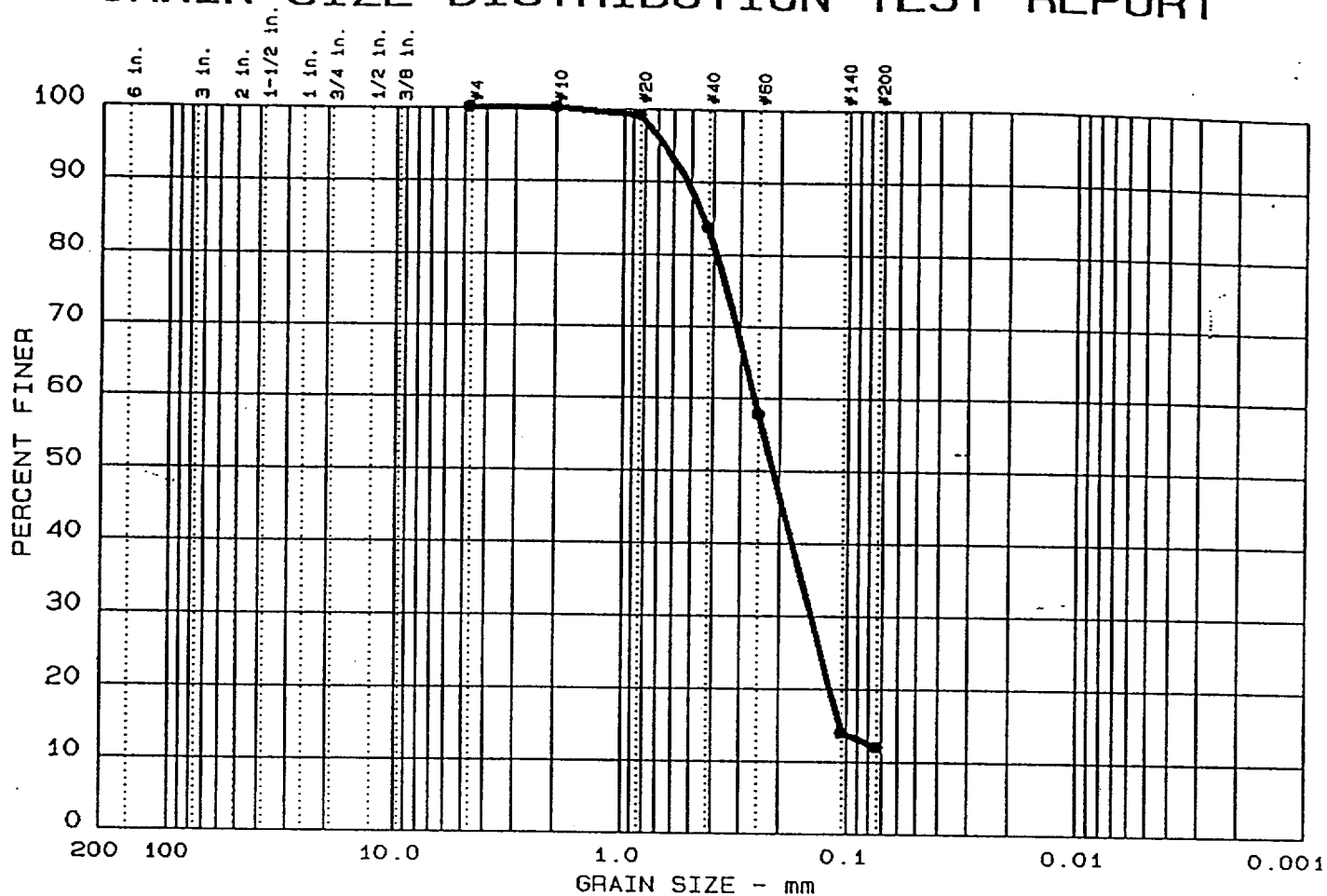
Project No.: 50161-7-0108 Task 16
Project: APSF Confirmatory Testing
● Location: FB-3 SS-49 @ 85.2-86.7 Ft.

Date: March 15, 1998

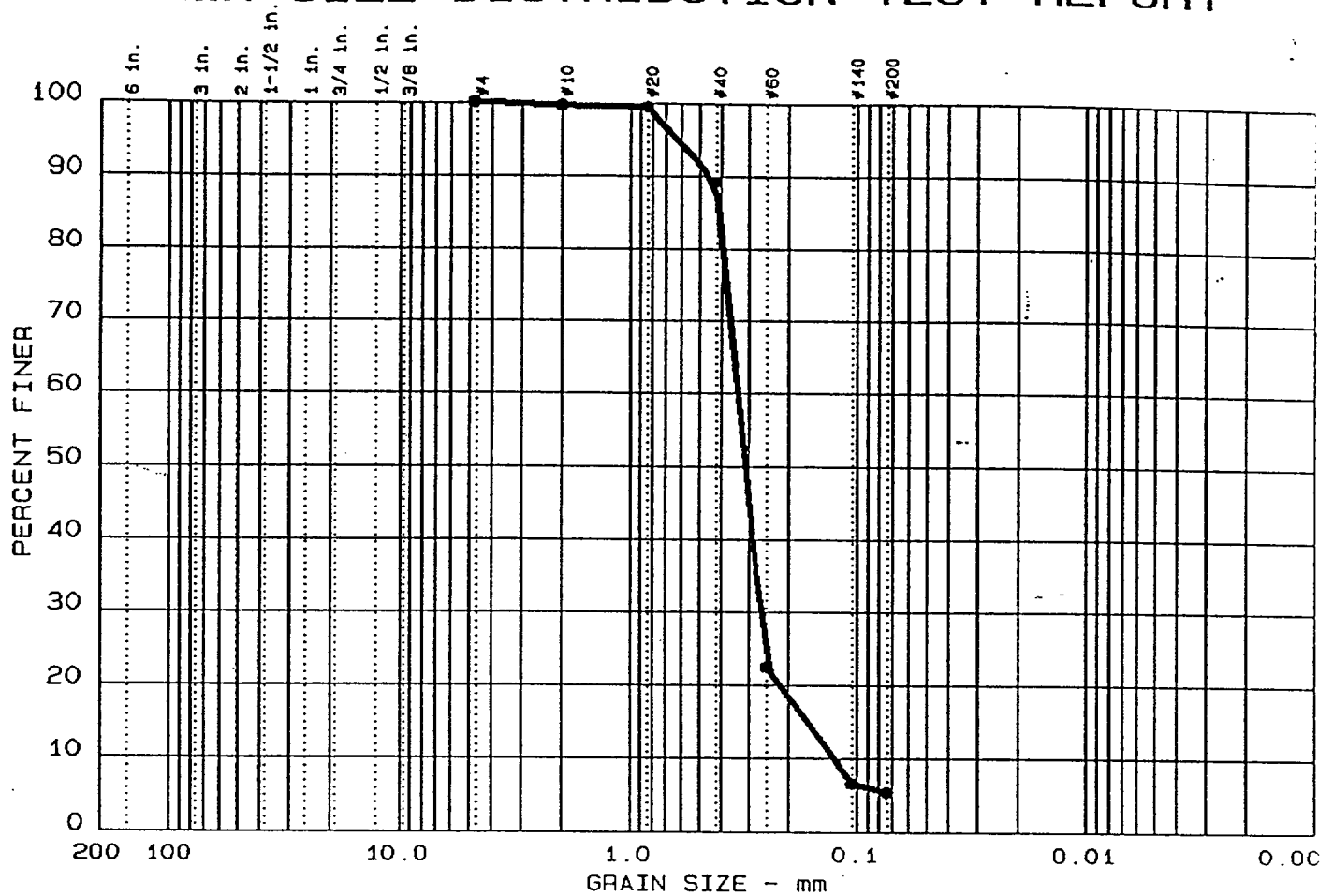
Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

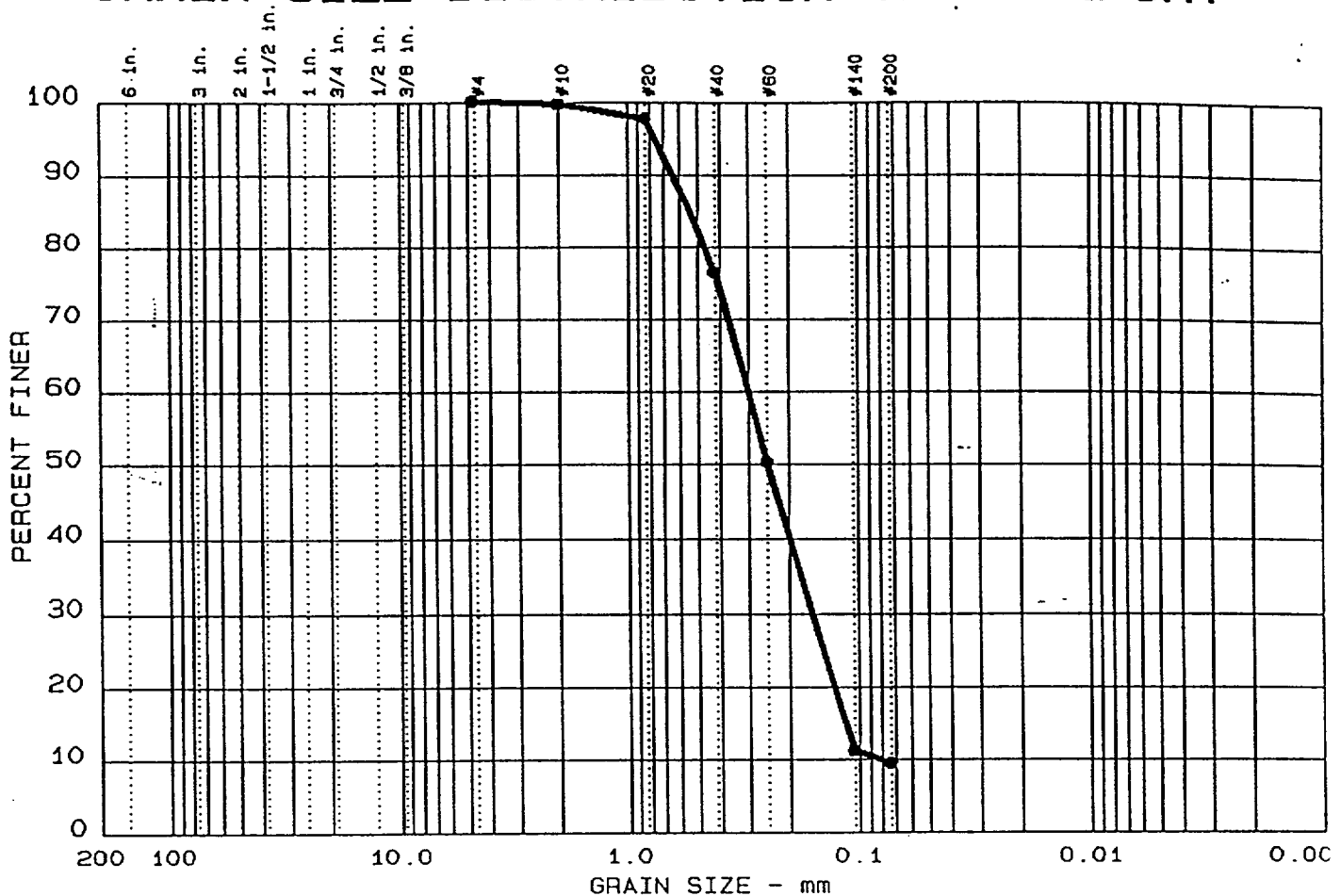
GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
1	0.0	0.0	90.5	9.5	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.54	0.30	0.25	0.159	0.1142	0.0818	1.04	3.7

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Poorly Graded Sand With Silt	SP-SM	A-3

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-52 @ 89.7-91.2 Ft.

Date: March 15, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

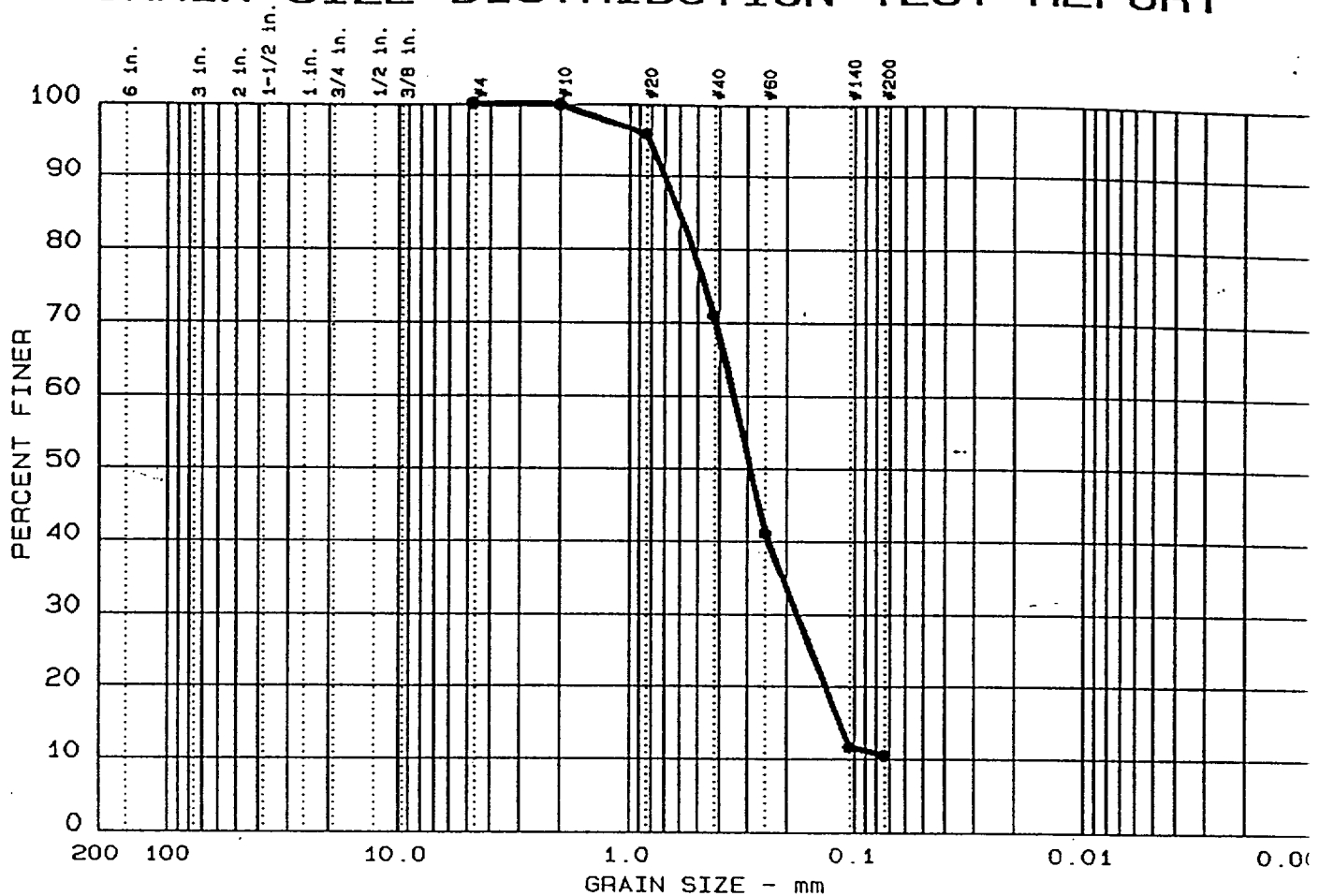
Tested by: SC

Reviewed by: HS

ASTM D 422

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 2	0.0	0.0	89.5	10.5	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.60	0.34	0.29	0.180	0.1157			

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Poorly Graded Sand With Silt	SP-SM	A-3

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-54 @ 92.7-94.2 Ft.

Date: March 15, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

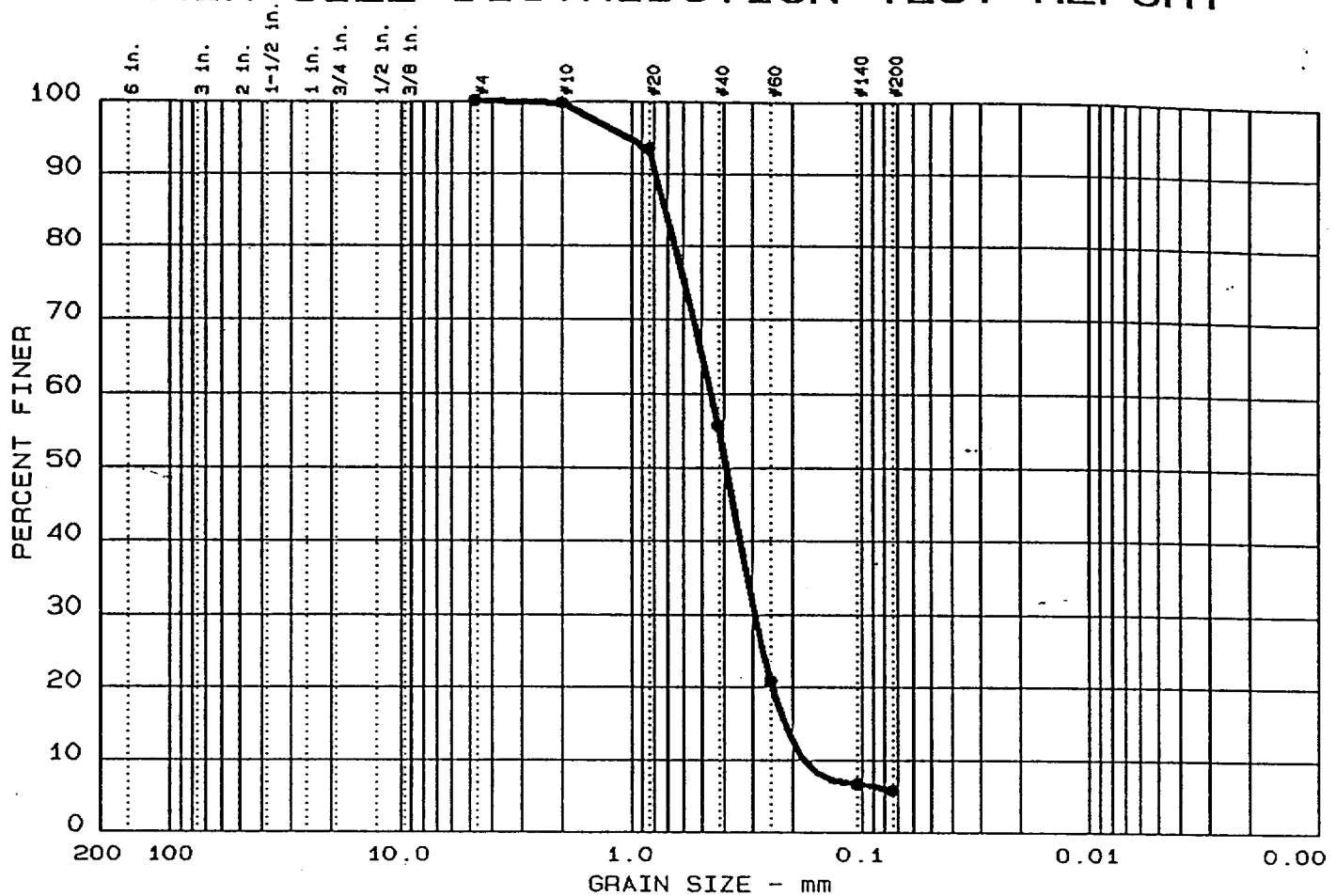
Tested by: *SC*

Reviewed by: *HS*

ASTM D 422

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 3	0.0	0.0	94.2	5.8	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.71	0.45	0.39	0.293	0.2168	0.1762	1.08	2.6

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Poorly Graded Sand With Silt	SP-SM	A-3

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-55 @ 94.2-95.7 Ft.

Date: March 15, 1998

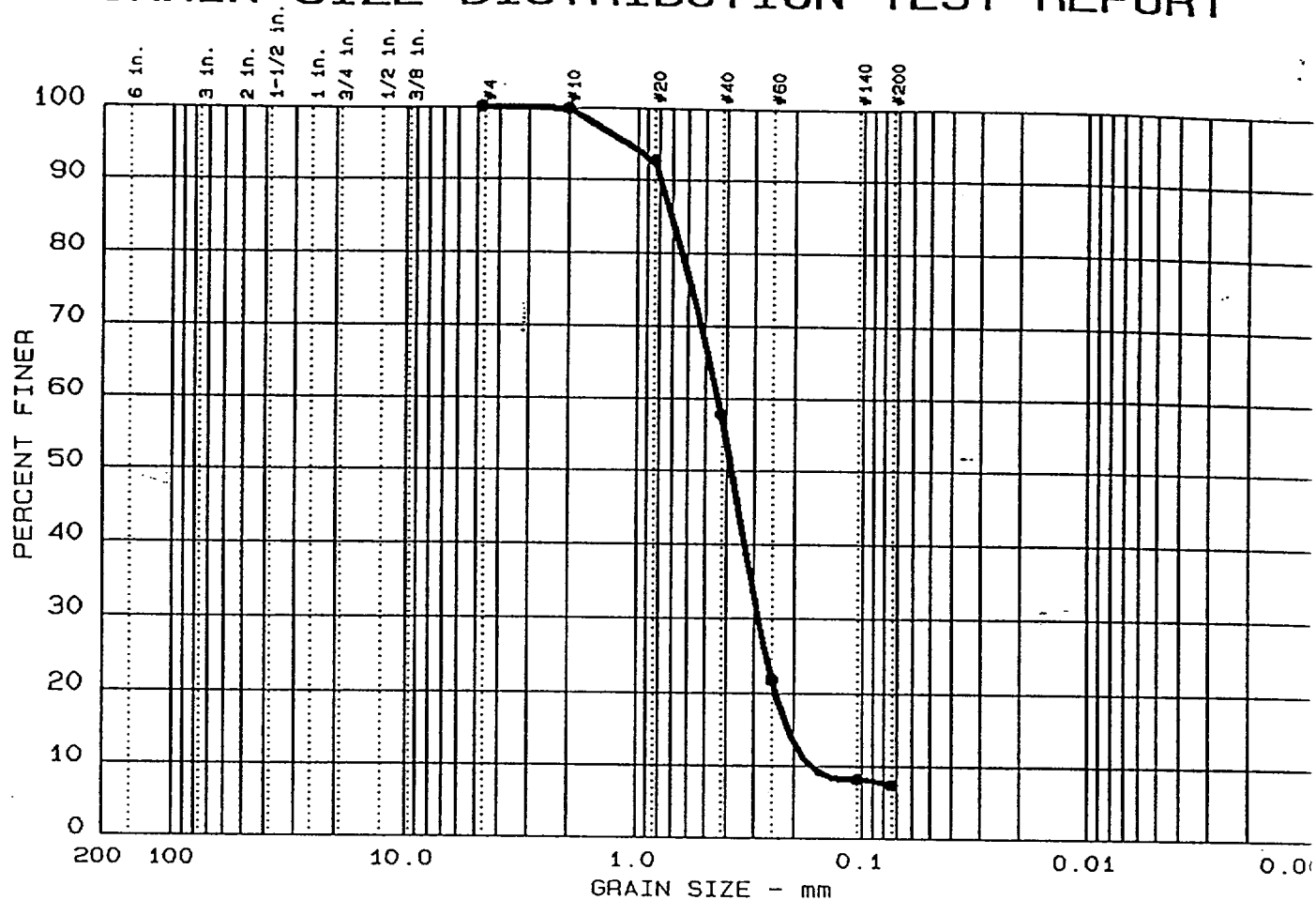
Remarks:

Tested by: SC
 Reviewed by: HB
 ASTM D 422

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 4	0.0	0.0	92.6	7.4	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.70	0.43	0.38	0.286	0.212	0.1685	1.12	2.6

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Poorly Graded Sand With Silt	SP-SM	A-3

Project No.: 50161-7-0108 Task 16 Project: APSF Confirmatory Testing • Location: FB-3 SS-57 @ 97.8-99.3 Ft. Date: March 15, 1998	Remarks: Tested by: SC Reviewed by: H ASTM D 422
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	
Figure No.	

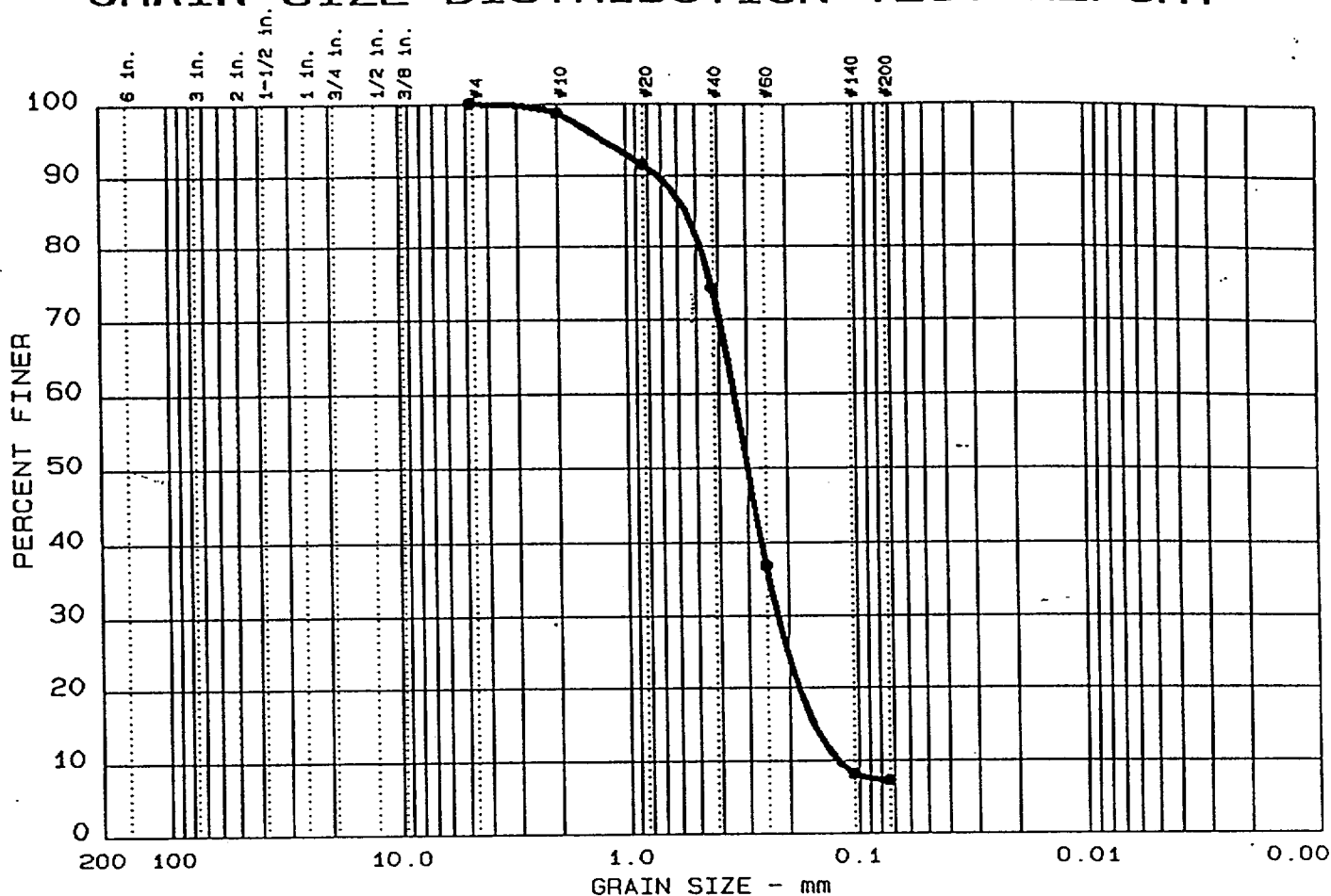
Grain size distribution curve showing Percent Finer versus Grain Size (mm). The curve is plotted on a semi-logarithmic scale. The Y-axis represents Percent Finer (0 to 100). The X-axis represents Grain Size in mm (logarithmic scale from 200 to 0.00). The curve shows a well-graded soil with a maximum grain size of approximately 4.75 mm (No. 4 sieve) and a minimum grain size of approximately 0.075 mm (No. 200 sieve). Key data points are marked on the curve.

Grain Size (mm)	Percent Finer (%)	Sieve / Note
4.75	100	No. 4
2.0	80	No. 10
0.85	47	No. 20
0.425	23	No. 40
0.25	8	No. 60
0.075	7	No. 200

[illegible]

Project No.: 50161-7-0108 Task 16 Project: APSF Confirmatory Testing ● Location: FB-3 SS-58 @ 99.3-100.8 Ft.	Remarks: Tested by: SC Reviewed by: H ASTM D422
Date: March 15, 1998	
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	
	Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 6	0.0	0.0	92.8	7.2	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.55	0.34	0.30	0.224	0.1567	0.1230	1.20	2.8

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan. Brown Poorly Graded Sand With Silt	SP-SM	A-3

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-59 @ 101.3-102.8 Ft.

Date: March 15, 1998

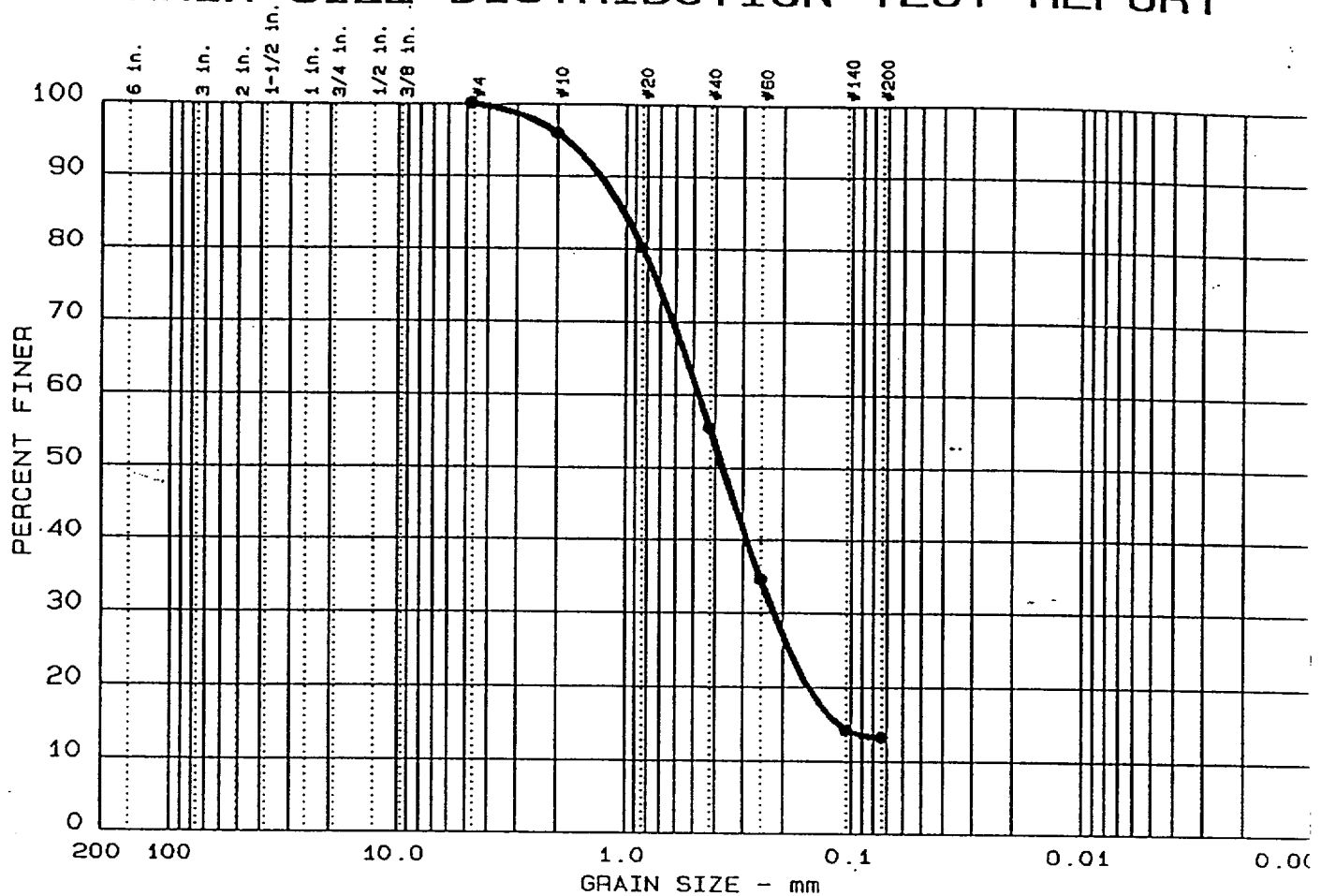
GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

Tested by: SC
 Reviewed by: HB
 ASTM D422

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



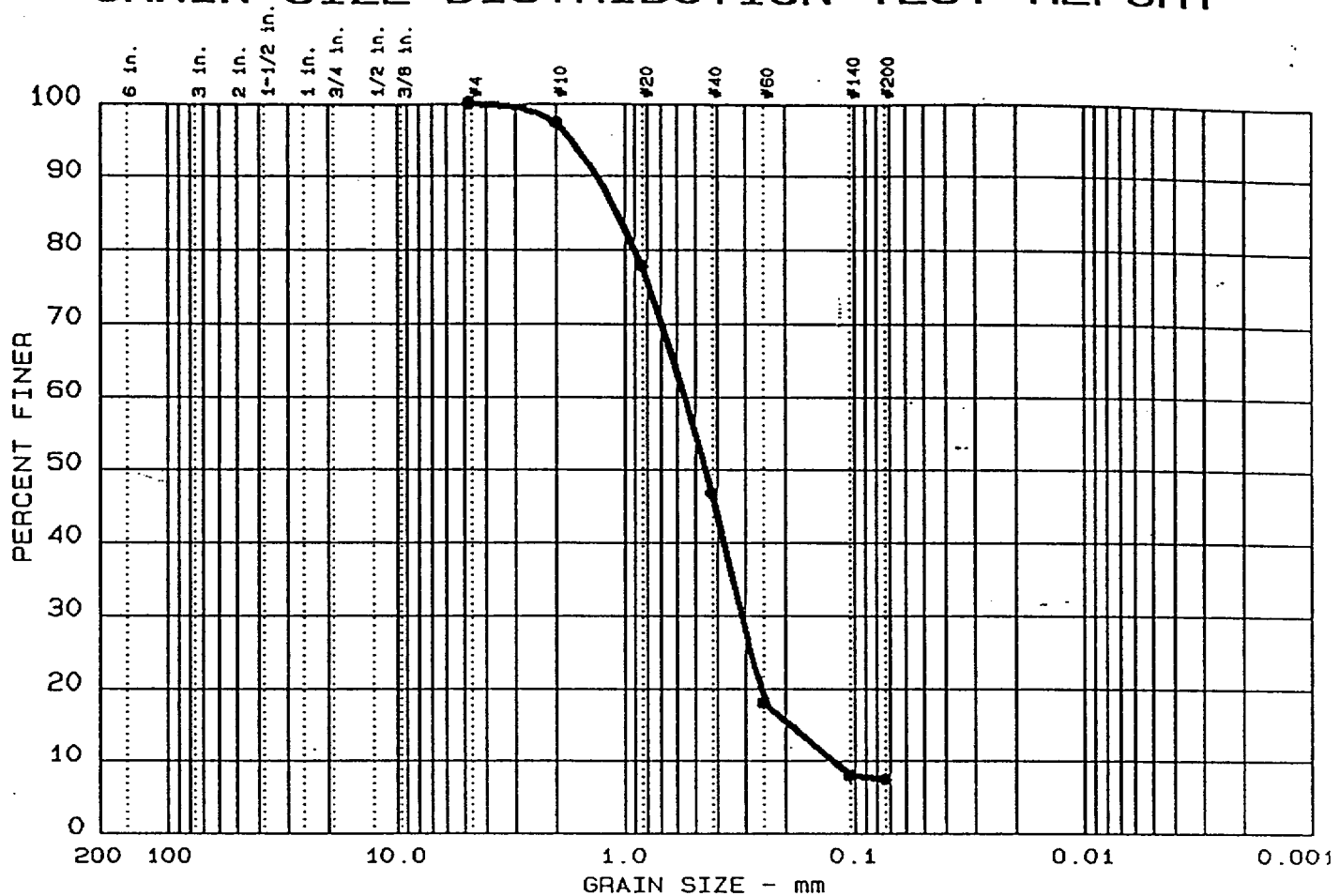
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 7	0.0	0.0	86.7	13.3	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		1.01	0.47	0.37	0.219	0.1125			

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Silty Sand	SM	A-2-4 (0.2)

Project No.: 50161-7-0108 Task 16 Project: APSF Confirmatory Testing • Location: FB-3 SS-60 @ 102.8-104.3 Ft. Date: March 15, 1998	Remarks: Tested by: <i>SC & STM</i> Reviewed by: <i>H</i> ASTM D422 Figure No.
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	

GRAIN SIZE DISTRIBUTION TEST REPORT



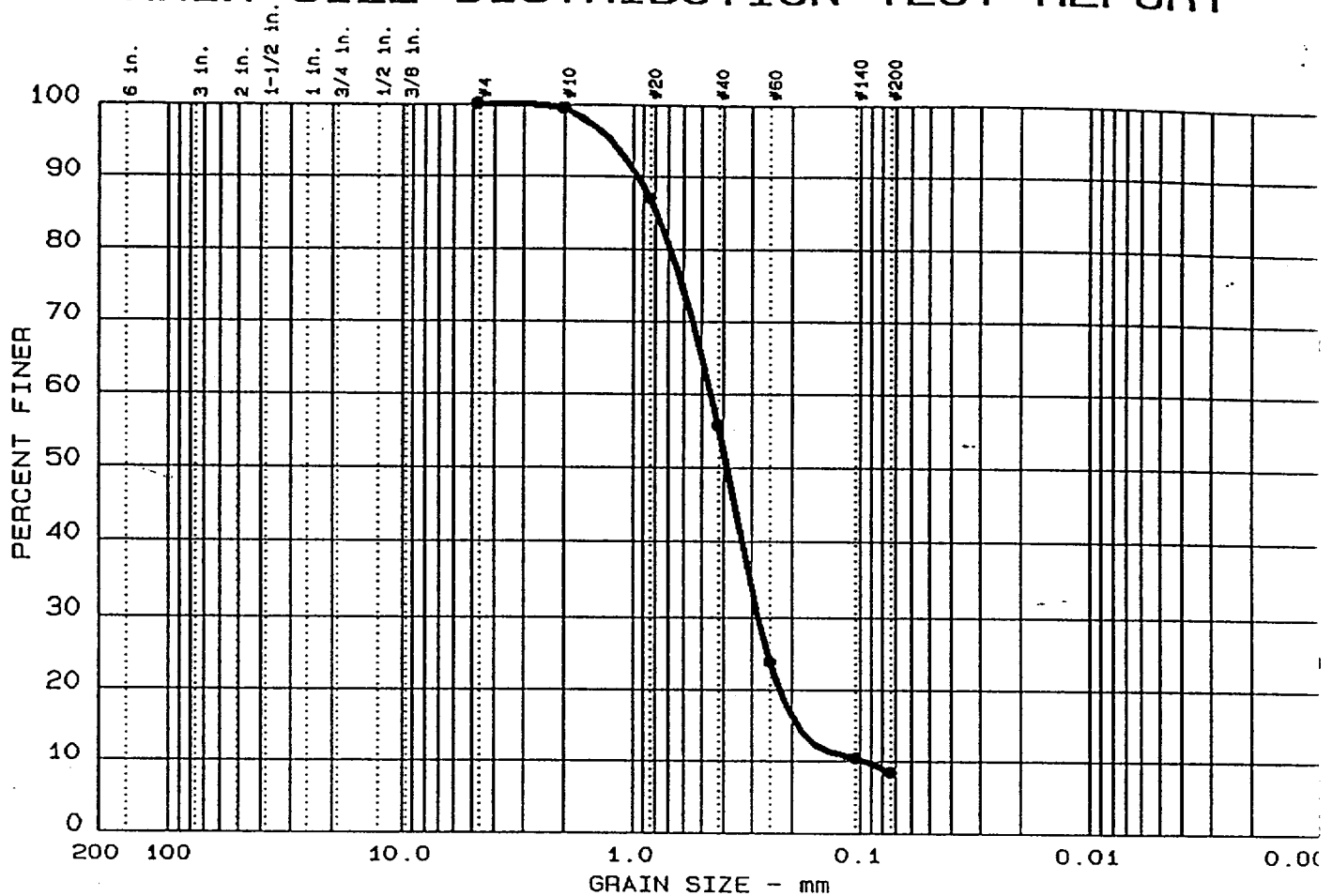
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 8	0.0	0.0	92.5	7.5	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		1.07	0.55	0.45	0.310	0.1912	0.1235	1.42	4.5

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Poorly Graded Sand with Silt	SP-SM	A-1-b

Project No.: 50161-7-0108 Task 16 Project: APSF Confirmatory Testing • Location: FB-3 SS-61 @ 104.3-105.8 Ft. Date: March 15, 1998	Remarks: Tested by: SC Reviewed by: HO ASTM D 422
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



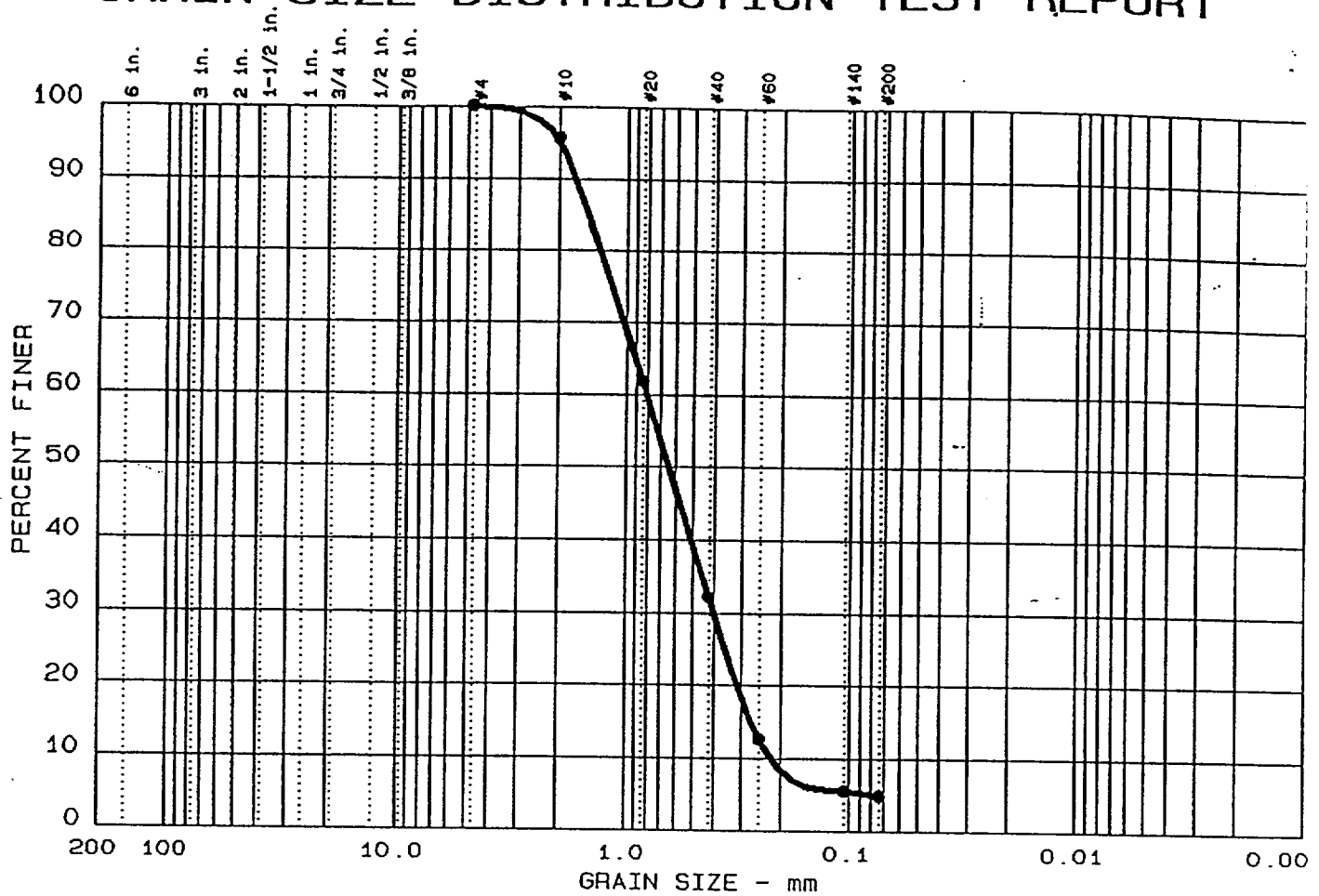
Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
● 9	0.0	0.0	91.5	8.5	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
●		0.79	0.45	0.38	0.281	0.1875	0.0929	1.88	4.8

MATERIAL DESCRIPTION	USCS	AASHTO
● Tan Brown Poorly Graded Sand with Silt	SP-SM	A-3

Project No.: 50161-7-0108 Task 16 Project: APSF Confirmatory Testing ● Location: FB-3 SS-63 @ 107.8-109.3 Ft. Date: March 15, 1998	Remarks: Tested by: <i>SC</i> Reviewed by: <i>HD</i> ASTM D422
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 10	0.0	0.0	95.1	4.9	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		1.48	0.81	0.64	0.399	0.2698	0.2218	0.89	3.6

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Poorly Graded Sand	SP	A-1-b

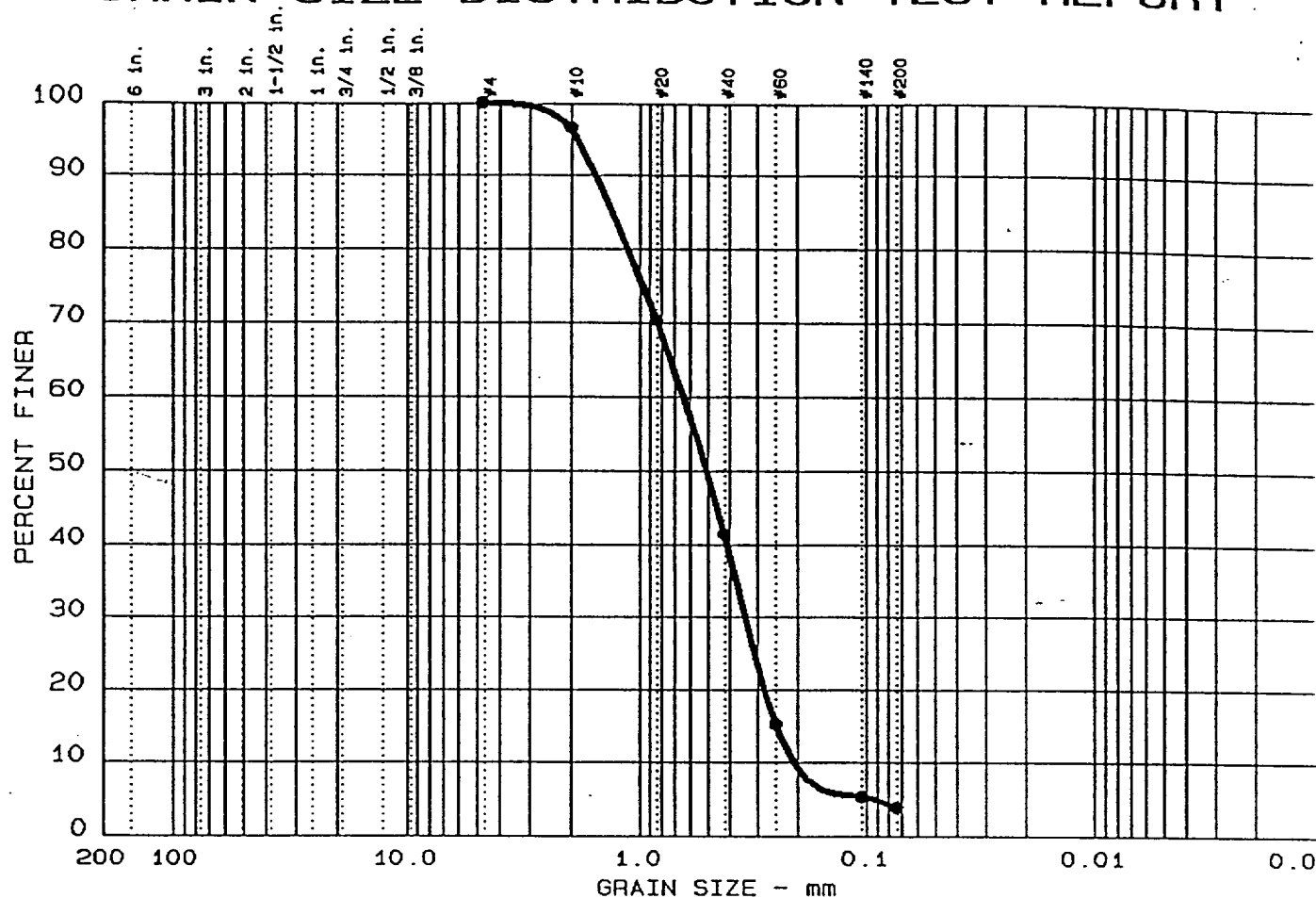
Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-64 @ 109.3-110.8 Ft.
 Date: March 15, 1998

Remarks:
 Tested by: SC
 Reviewed by: HS
 ASTM D 422

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
11	0.0	0.0	96.1	3.9	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		1.32	0.64	0.50	0.340	0.2480	0.2084	0.87	3.1

MATERIAL DESCRIPTION	USCS	AASHTO
Brown Poorly Graded Sand	SP	A-1-b

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 Location: FB-3 SS-65 @ 110.8-112.3 Ft.

Date: March 15, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

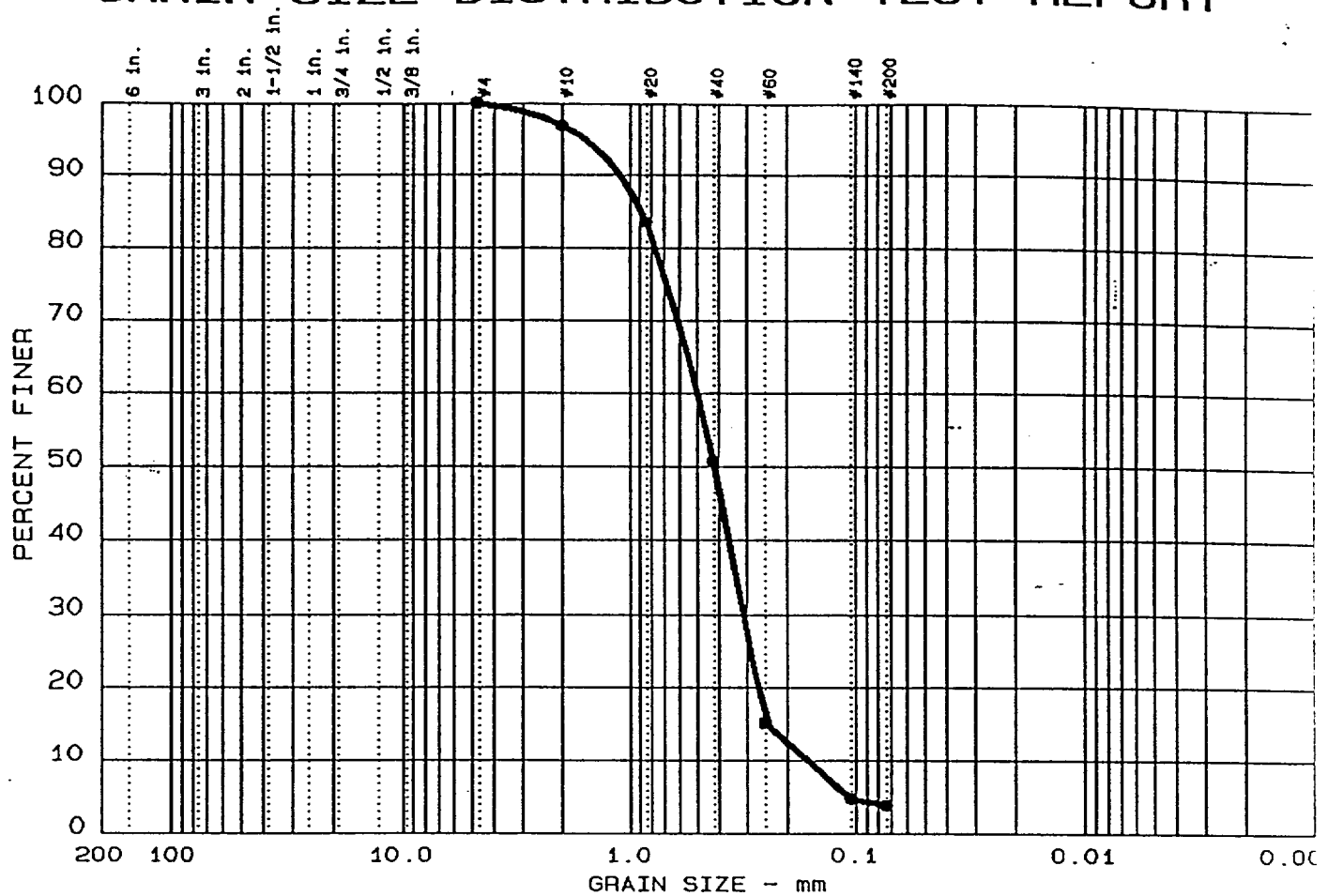
Tested by: SC

Reviewed by: H

ASTM D 422

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 12	0.0	0.0	96.2	3.8	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.88	0.49	0.41	0.310	0.2463	0.1627	1.20	3.0

MATERIAL DESCRIPTION	USCS	AASHTO
• Brown Poorly Graded Sand	SP	A-3

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-66 @ 112.3-113.8 Ft.

Date: March 15, 1998

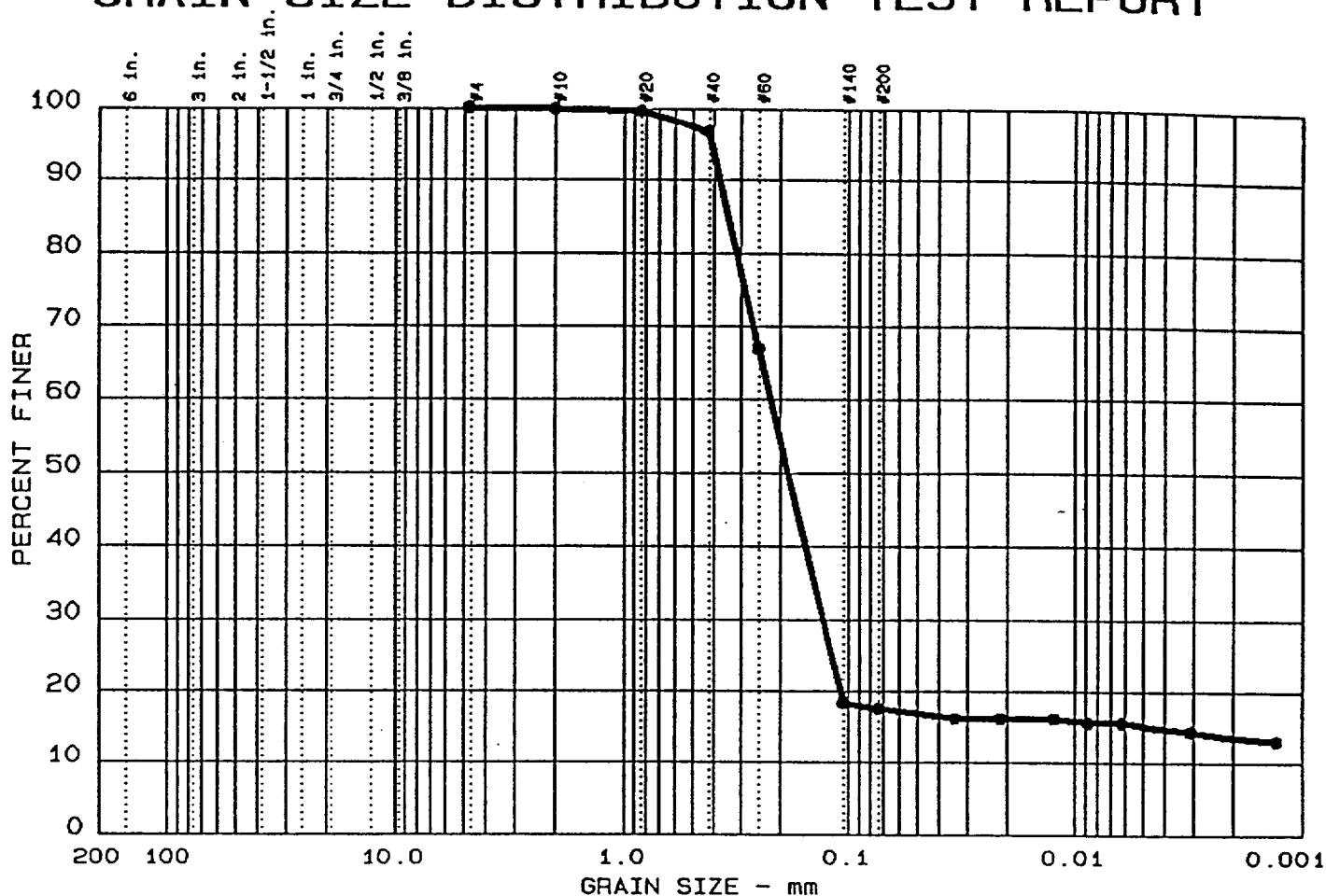
GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

Tested by: SC
 Reviewed by: AD
 ASTM D422

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 6	0.0	0.0	82.5	2.4	15.1

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• NL	NP	0.34	0.22	0.18	0.129	0.0044			

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-68 @ 115.3-116.8 Ft.

Date: March 19, 1998

Remarks:

Tested by: *SC & Jim*

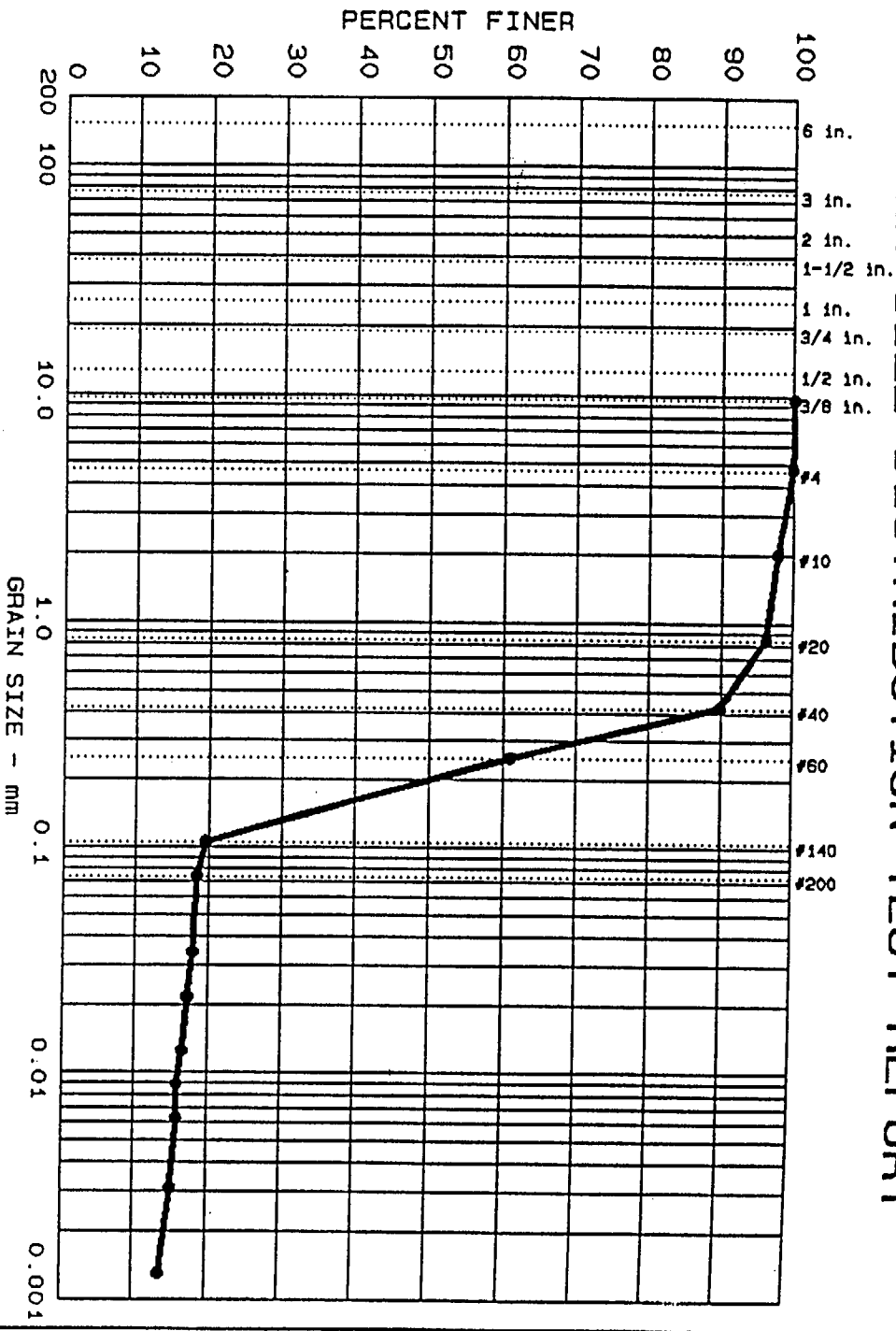
Reviewed by: *LT*

ASTM D422
 &
 ASTM D4318

GRAIN SIZE DISTRIBUTION TEST REPORT
 LAW ENGINEERING, INC.

Figure No

GRAIN SIZE DISTRIBUTION TEST REPORT



Test #	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
7	0.0	0.2	81.4	2.7	15.7

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
33	8	0.38	0.25	0.20	0.131	0.0027			

MATERIAL DESCRIPTION

• Tan Silty Sand

USCS	AASHTO
SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16

Project: APSF Confirmatory Testing

• Location: FB-3 SS-69 @ 116.8-118.3 Ft.

Remarks:

Tested by: *SCJ/STm*

Reviewed by: *H*

ASTM D422

&
ASTM D4318

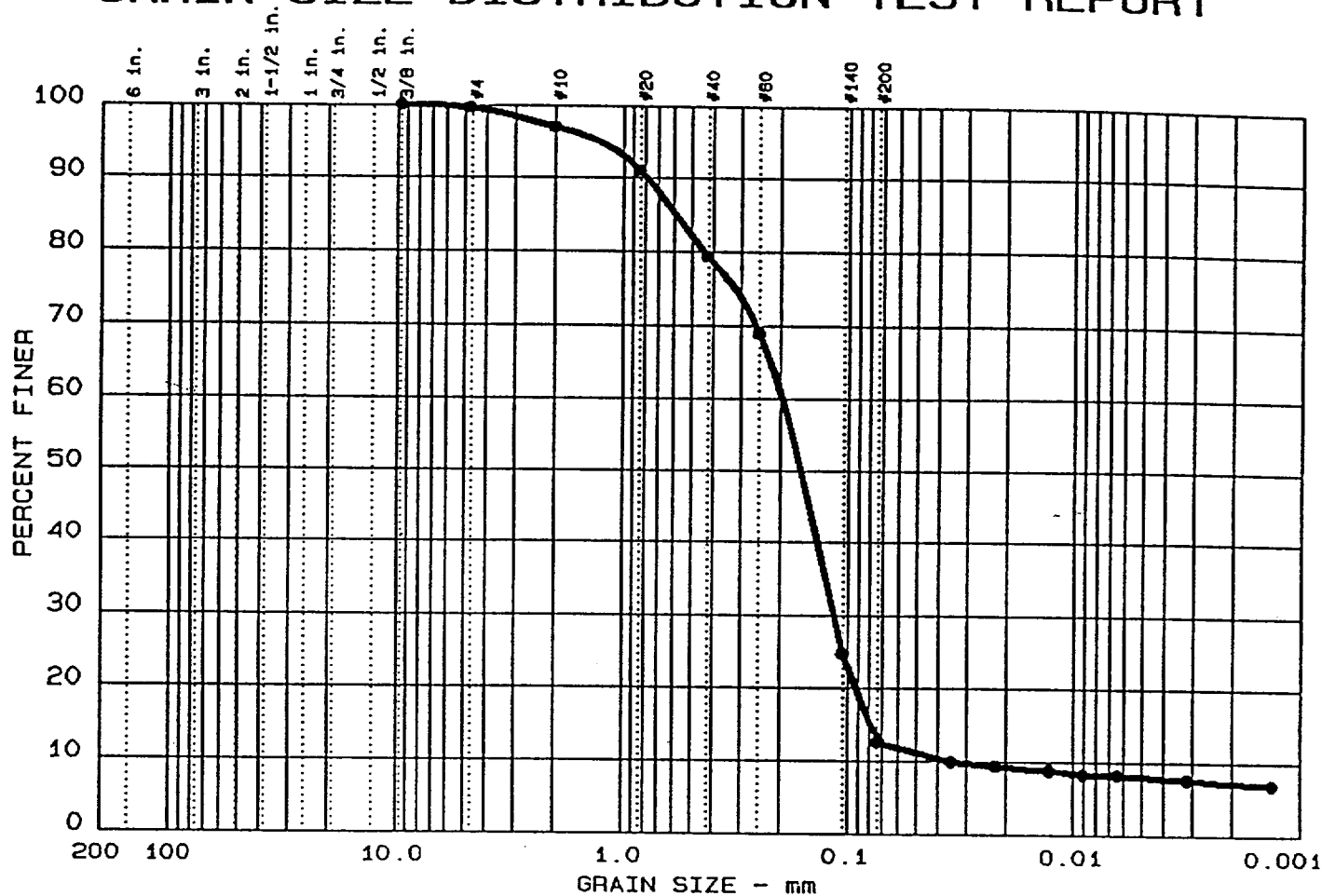
Date: March 19, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT

LAW ENGINEERING, INC.

Figure No

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• B	0.0	0.4	86.9	4.6	8.1

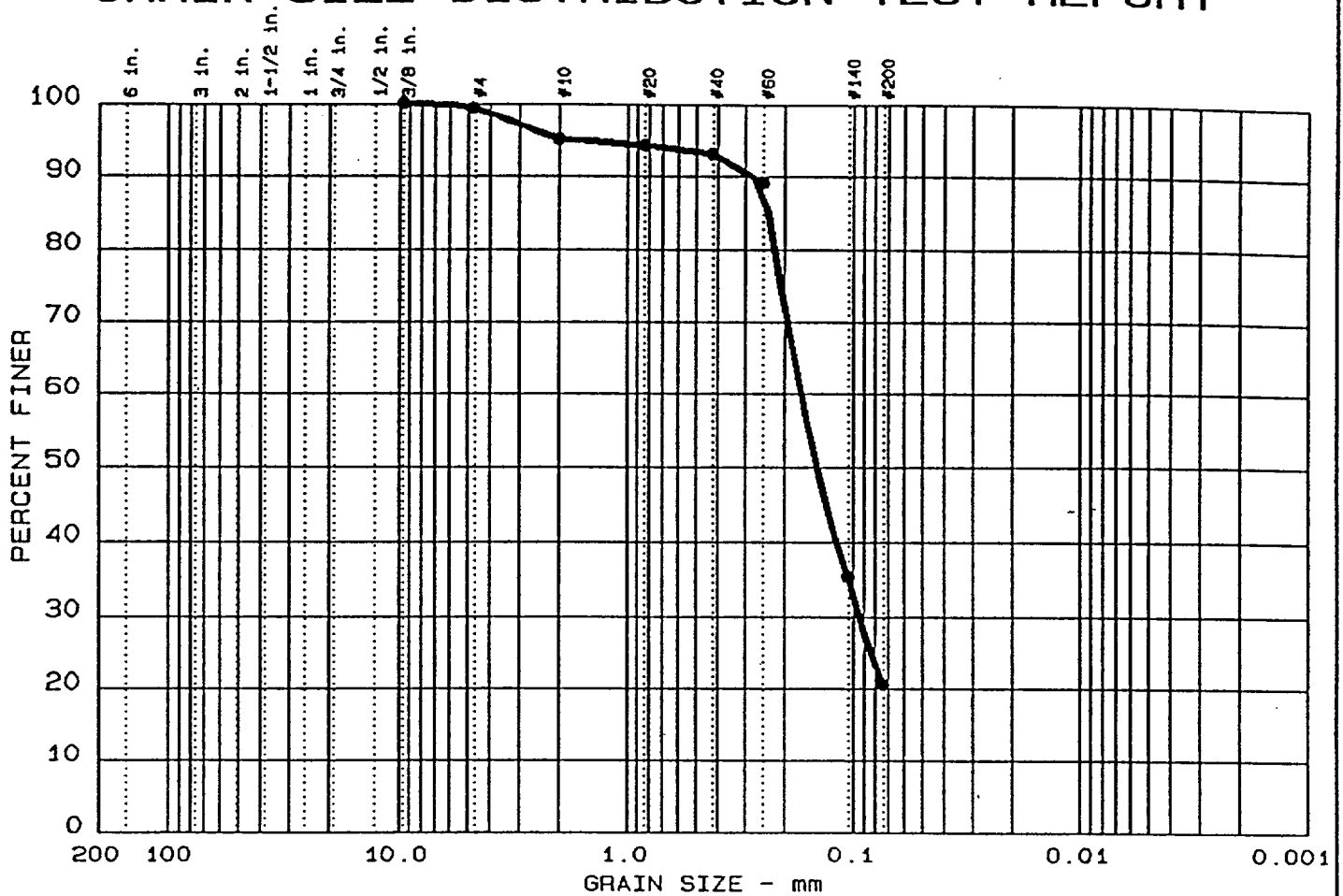
LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• NL	NP	0.58	0.19	0.16	0.115	0.0788	0.0352	1.93	5.5

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Silty Sand	SM	A-2-4 (0.2)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-70 @ 118.3-119.8 Ft.
 Date: March 19, 1998

Remarks:
 Tested by: *SCJ/Tm*
 Reviewed by: *HB*
 ASTM D422
 &
 ASTM D4318
 Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 18	0.0	0.7	78.7	20.6	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.24	0.17	0.14	0.094				

MATERIAL DESCRIPTION	USCS	AASHTO
• Red Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-71 @ 119.8-121.3 FT

Date: March 18, 1998

Remarks:

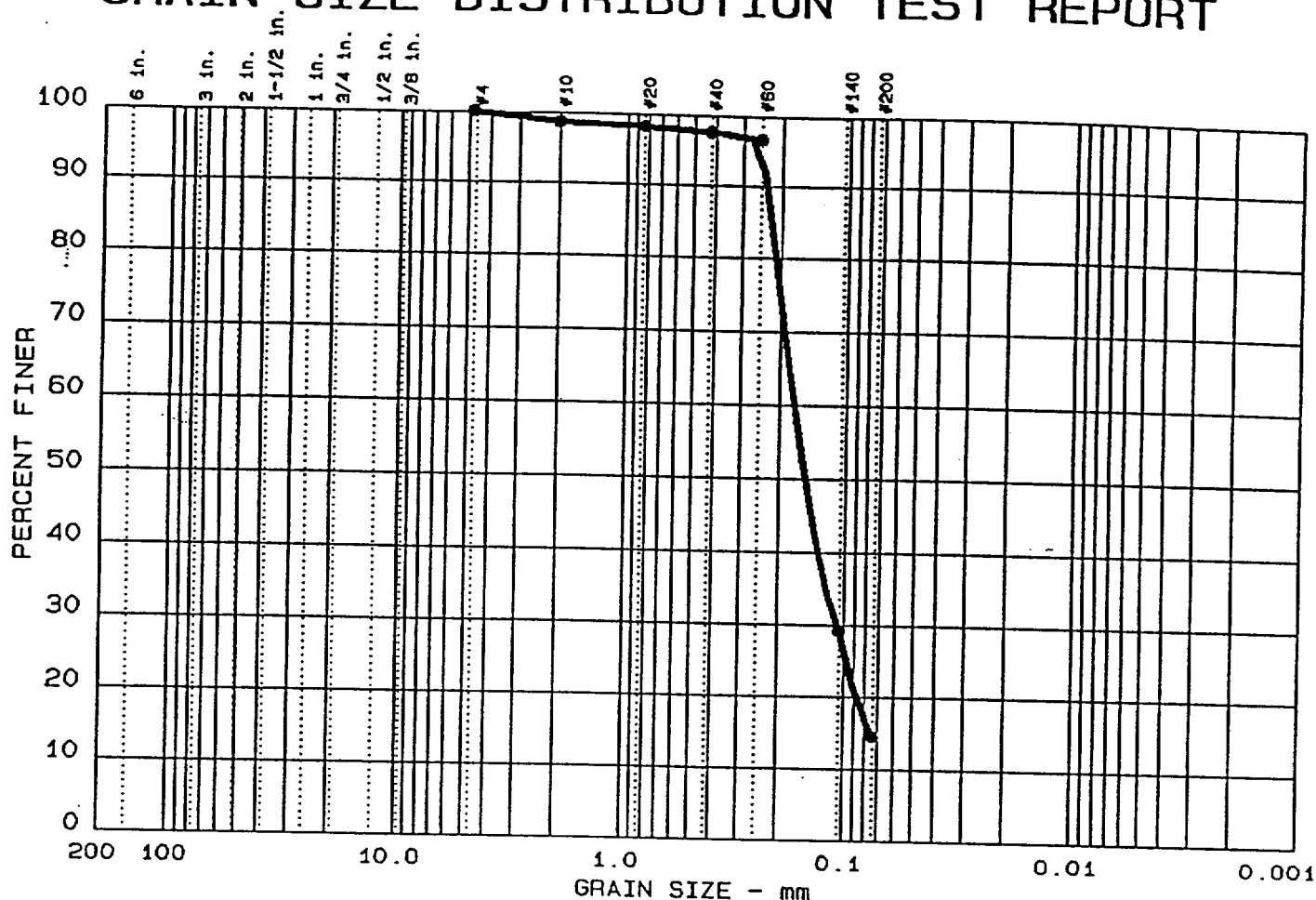
Tested by: SC

Reviewed by: HJ
 ASTM D422

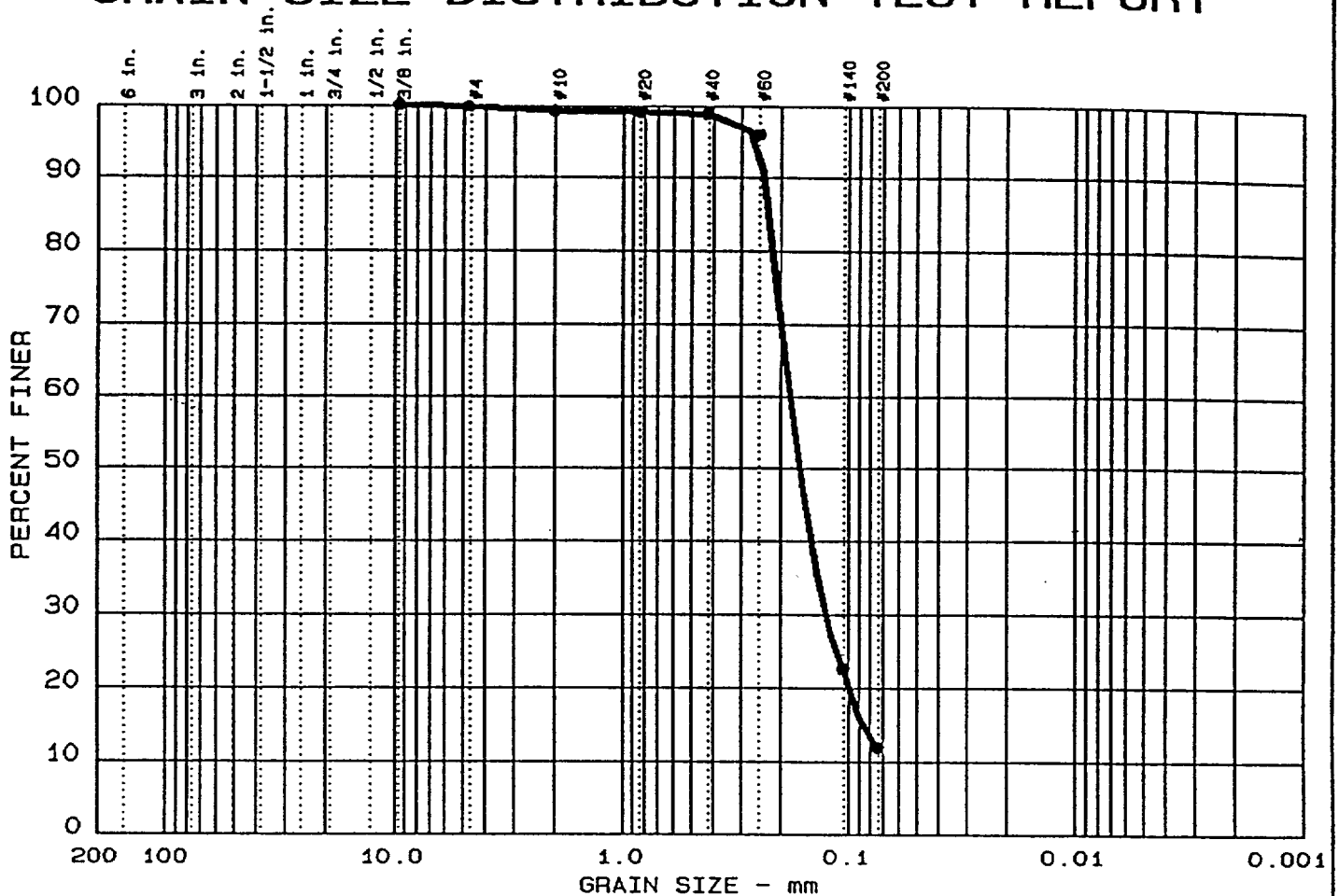
GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 2	0.0	0.2	87.8	12.0	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.23	0.18	0.16	0.126	0.0853			

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Poorly Graded Sand with Silt	SP-SM	A-2-4 (0.3)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-73 @ 122.8-124.3 Ft.

Date: March 18, 1998

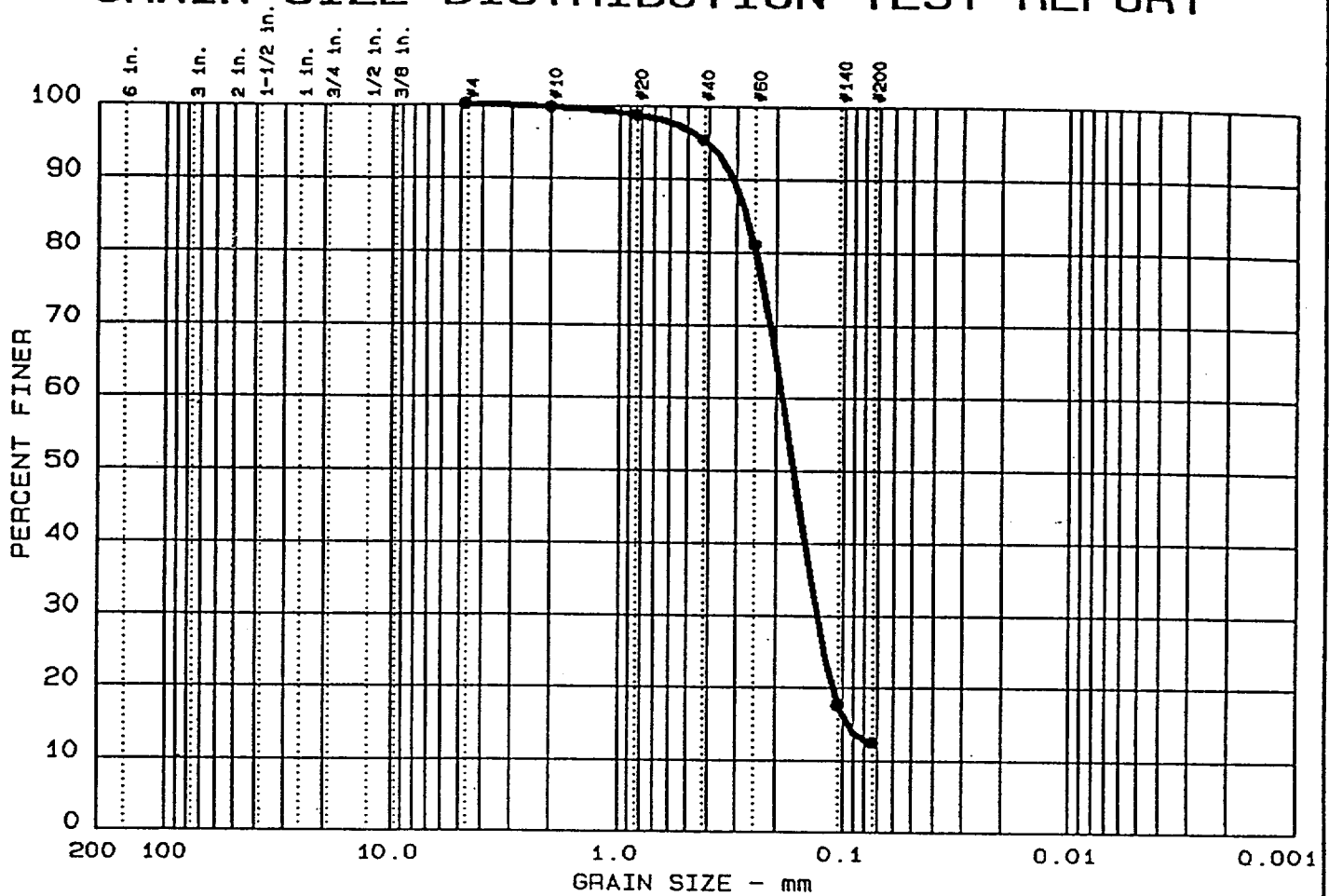
Remarks:

Tested by: SC
 Reviewed by: HJ
 ASTM D422

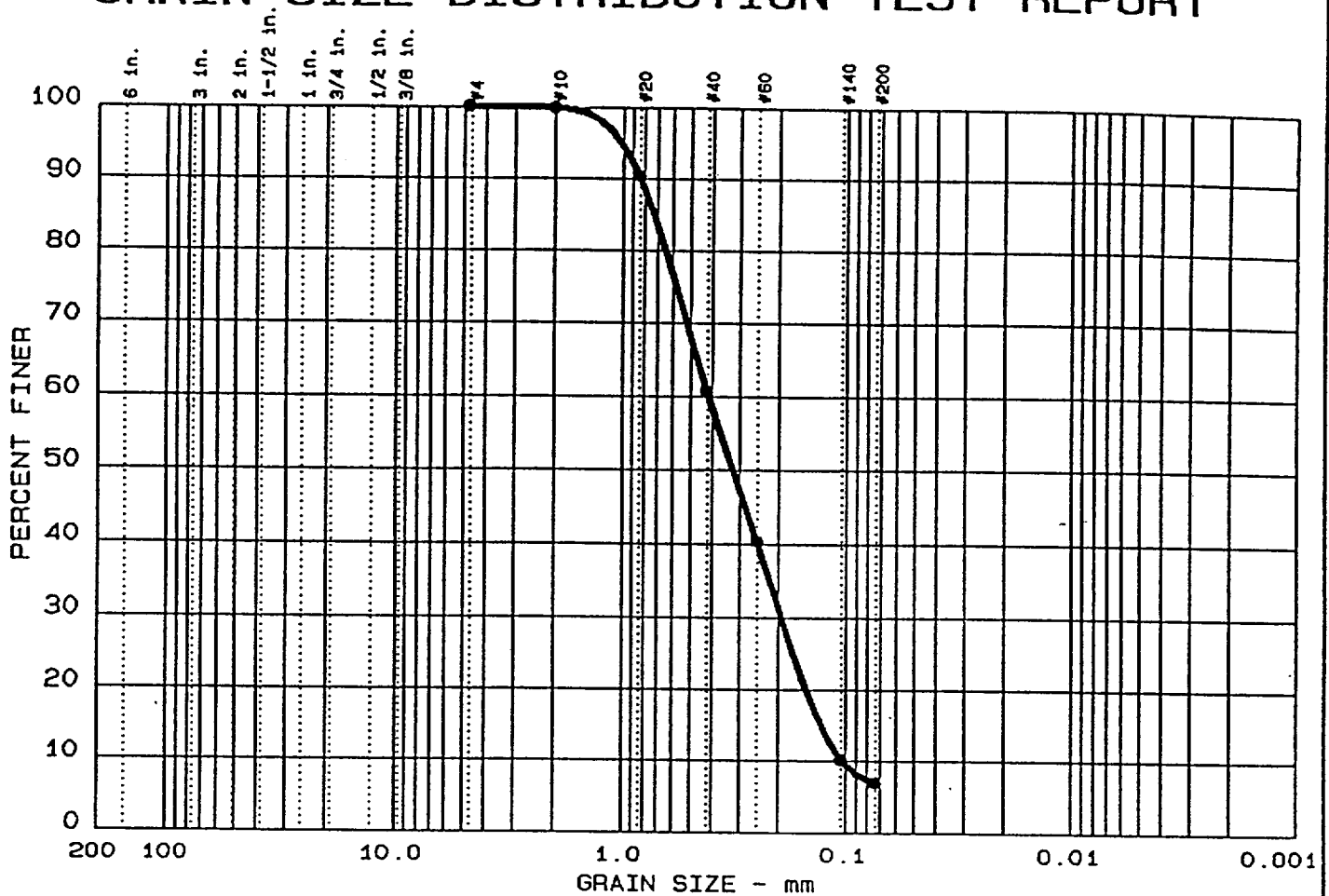
GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 4	0.0	0.0	93.1	6.9	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.72	0.41	0.32	0.194	0.1282	0.1030	0.89	4.0

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Poorly Graded Sand with Silt	SP-SM	A-3

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-76 @ 127.3-128.8 Ft.
 Date: March 18, 1998

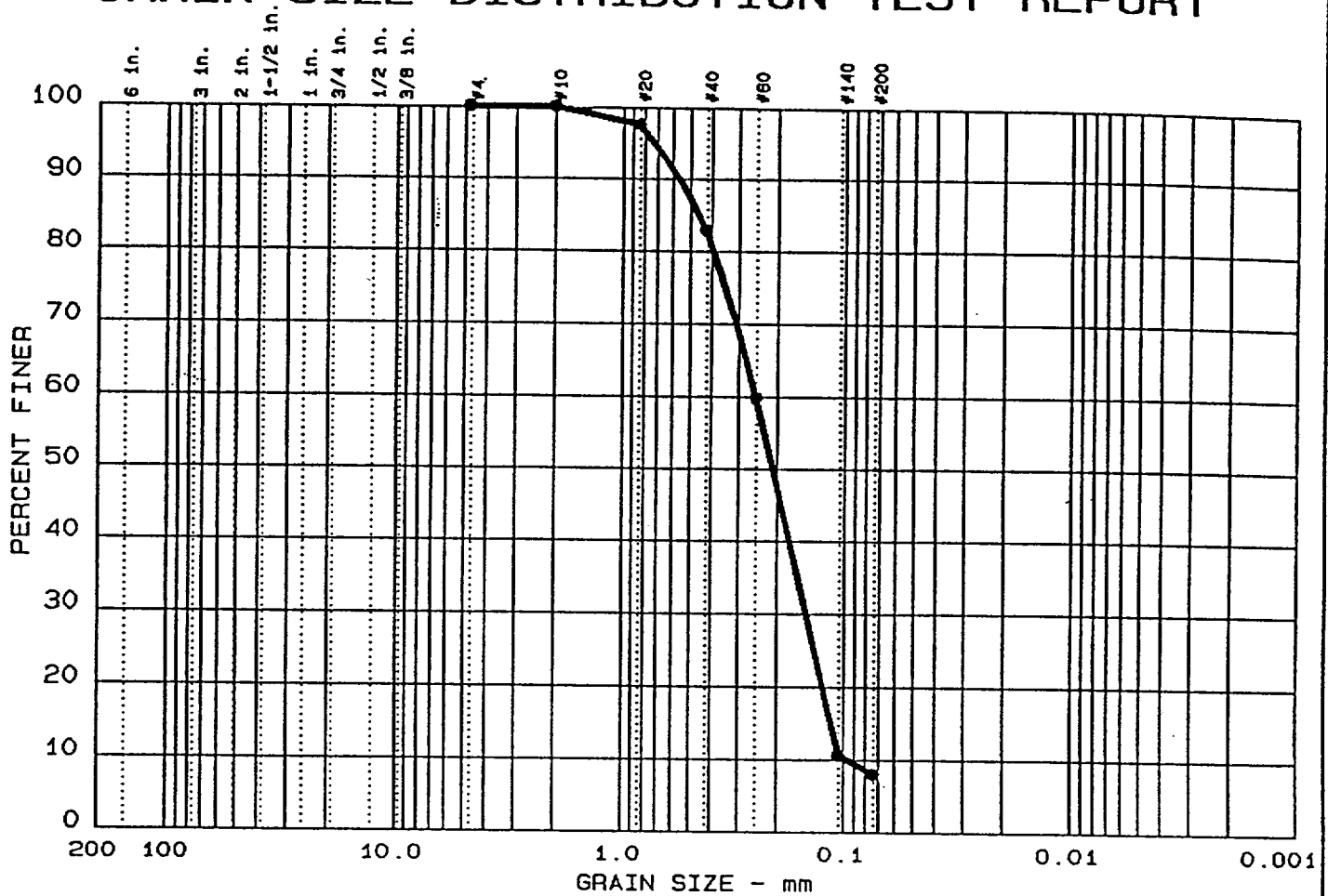
Remarks:

Tested by: SC
 Reviewed by: HJ
 ASTM D422

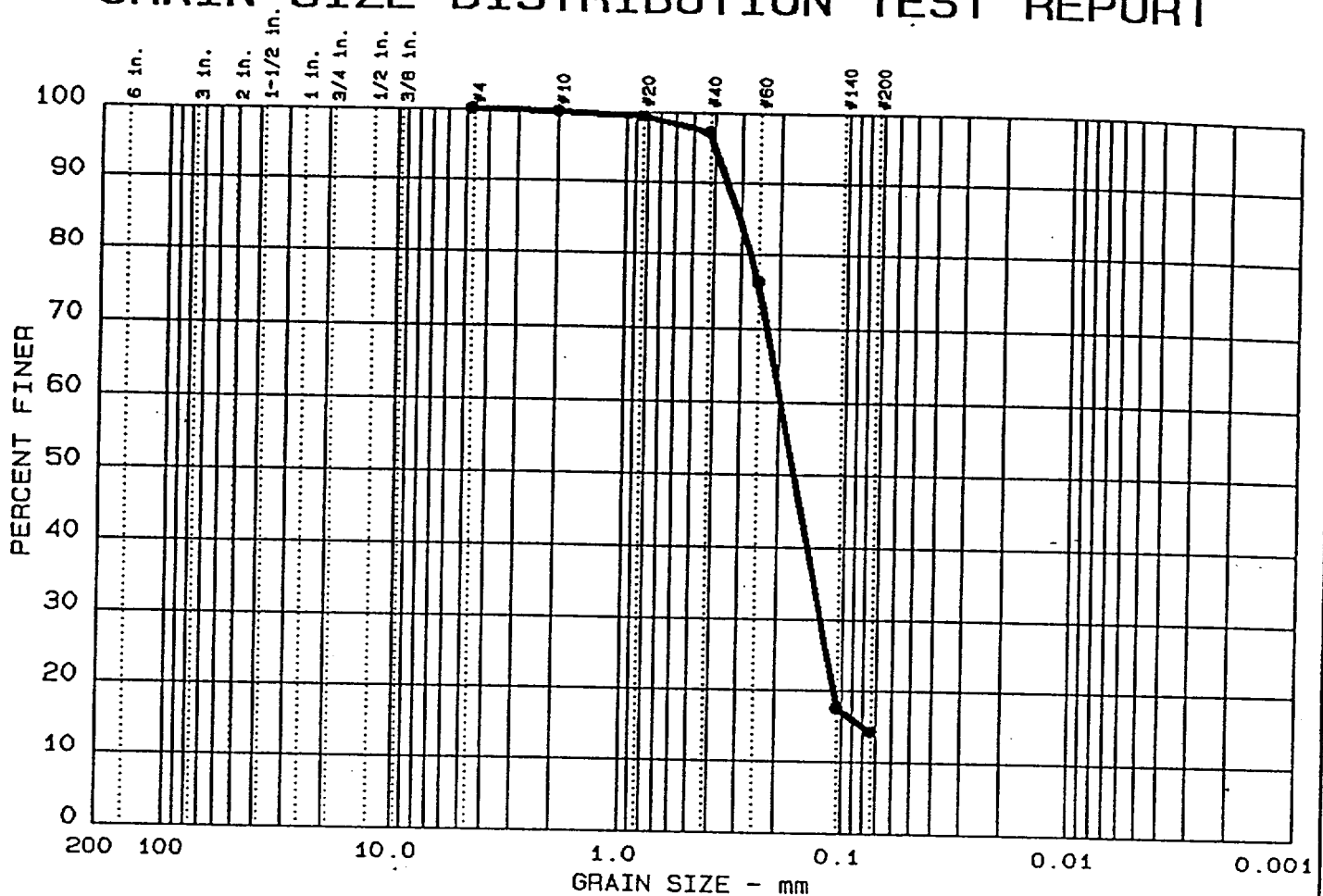
Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 20	0.0	0.0	85.7	14.3	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.30	0.20	0.17	0.126	0.0796			

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan-White Silty Sand	SM	A-2-4 (0.1)

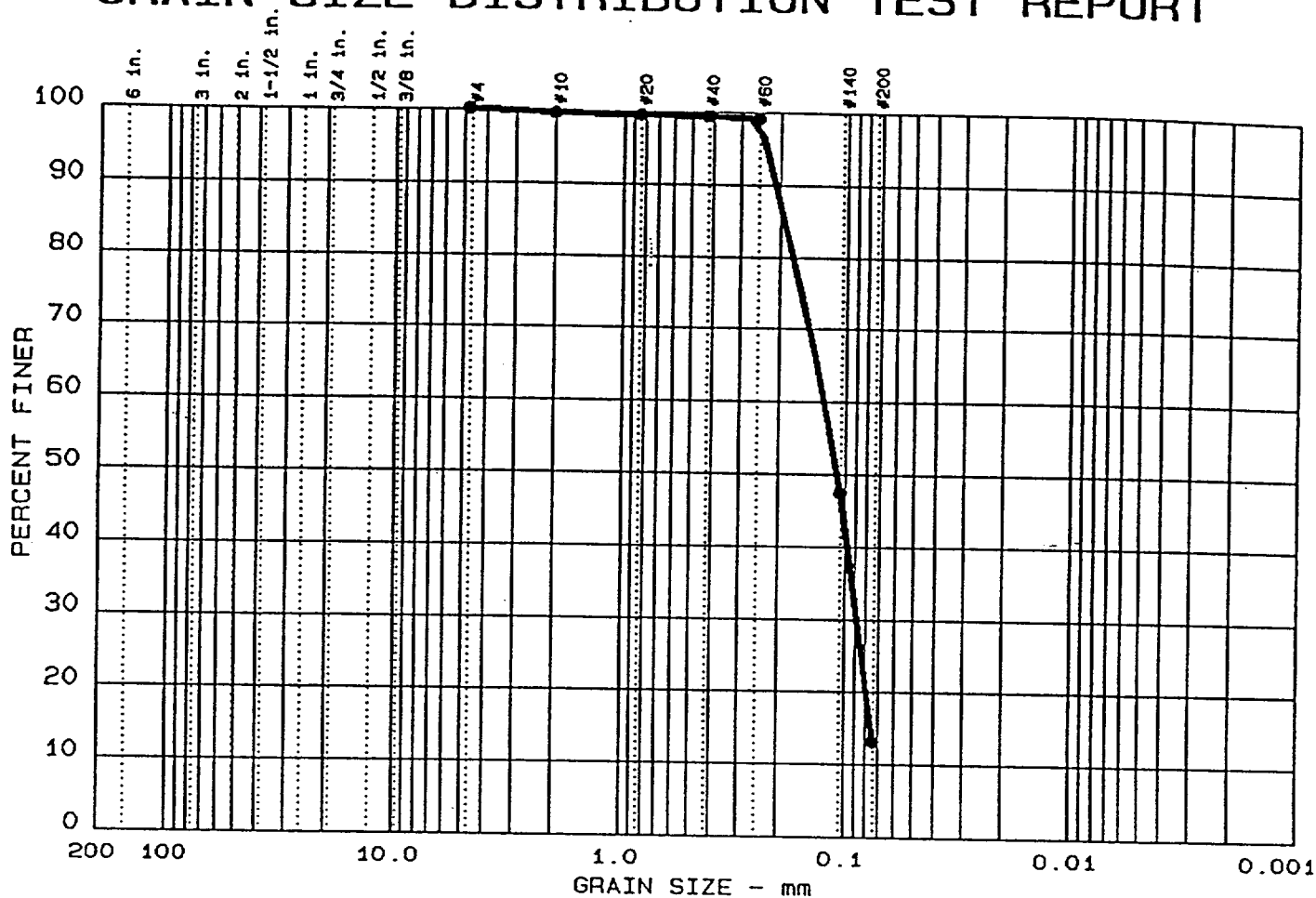
Project No.: 50161-7-1362.01.831
 Project: Tarmac Recycling
 • Location: FB-3 SS-78 @ 130.3-131.8 Ft.
 Date: March 17, 1998

Remarks:
 Tested by: SC
 Reviewed by: HB
 ASTM D422

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 19	0.0	0.0	86.9	13.1	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.19	0.13	0.11	0.087	0.0753			

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Silty Sand	SM	A-2-4 (0.2)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-79 @ 131.8-133.3 Ft.
 Date: March 18, 1998
 GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:
 Tested by: SC
 Reviewed by: HB
 ASTM D 422

Figure No.

Grain size distribution test report graph showing Percent Finer vs Grain Size (mm). The curve starts at 100% finer for 200 mm and decreases to approximately 10% finer at 0.075 mm.

Grain Size (mm)	Percent Finer (%)
200	100
100	100
60	100
40	100
30	100
25	100
20	100
15	100
12.5	100
10	100
7.5	100
6	100
4.75	100
4	100
3.75	100
3.0	100
2.5	100
2.0	100
1.5	100
1.18	100
1.0	100
0.85	100
0.75	100
0.6	100
0.5	100
0.425	100
0.375	100
0.3	100
0.25	100
0.2	100
0.18	100
0.15	100
0.125	100
0.118	100
0.106	100
0.09	100
0.075	100
0.06	100
0.05	100
0.0425	100
0.0375	100
0.03	100
0.025	100
0.02	100
0.018	100
0.015	100
0.0125	100
0.0118	100
0.0106	100
0.009	100
0.0075	100
0.006	100
0.005	100
0.00425	100
0.00375	100
0.003	100
0.0025	100
0.002	100
0.0018	100
0.0015	100
0.00125	100
0.00118	100
0.00106	100
0.0009	100
0.00075	100
0.0006	100
0.0005	100
0.000425	100
0.000375	100
0.0003	100
0.00025	100
0.0002	100
0.00018	100
0.00015	100
0.000125	100
0.000118	100
0.000106	100
0.00009	100
0.000075	100
0.00006	100
0.00005	100
0.0000425	100
0.0000375	100
0.00003	100
0.000025	100
0.00002	100
0.000018	100
0.000015	100
0.0000125	100
0.0000118	100
0.0000106	100
0.000009	100
0.0000075	100
0.000006	100
0.000005	100
0.00000425	100
0.00000375	100
0.000003	100
0.0000025	100
0.000002	100
0.0000018	100
0.0000015	100
0.00000125	100
0.00000118	100
0.00000106	100
0.0000009	100
0.00000075	100
0.0000006	100
0.0000005	100
0.000000425	100
0.000000375	100
0.0000003	100
0.00000025	100
0.0000002	100
0.00000018	100
0.00000015	100
0.000000125	100
0.000000118	100
0.000000106	100
0.00000009	100
0.000000075	100
0.00000006	100
0.00000005	100
0.0000000425	100
0.0000000375	100
0.00000003	100
0.000000025	100
0.00000002	100
0.000000018	100
0.000000015	100
0.0000000125	100
0.0000000118	100
0.0000000106	100
0.000000009	100
0.0000000075	100
0.000000006	100
0.000000005</	

[illegible]

Project No.: 50161-7-0108 Task 16
Project: APSF Confirmatory Testing
◆ Location: FB-3 SS-80 @ 133.3-134.8 Ft.

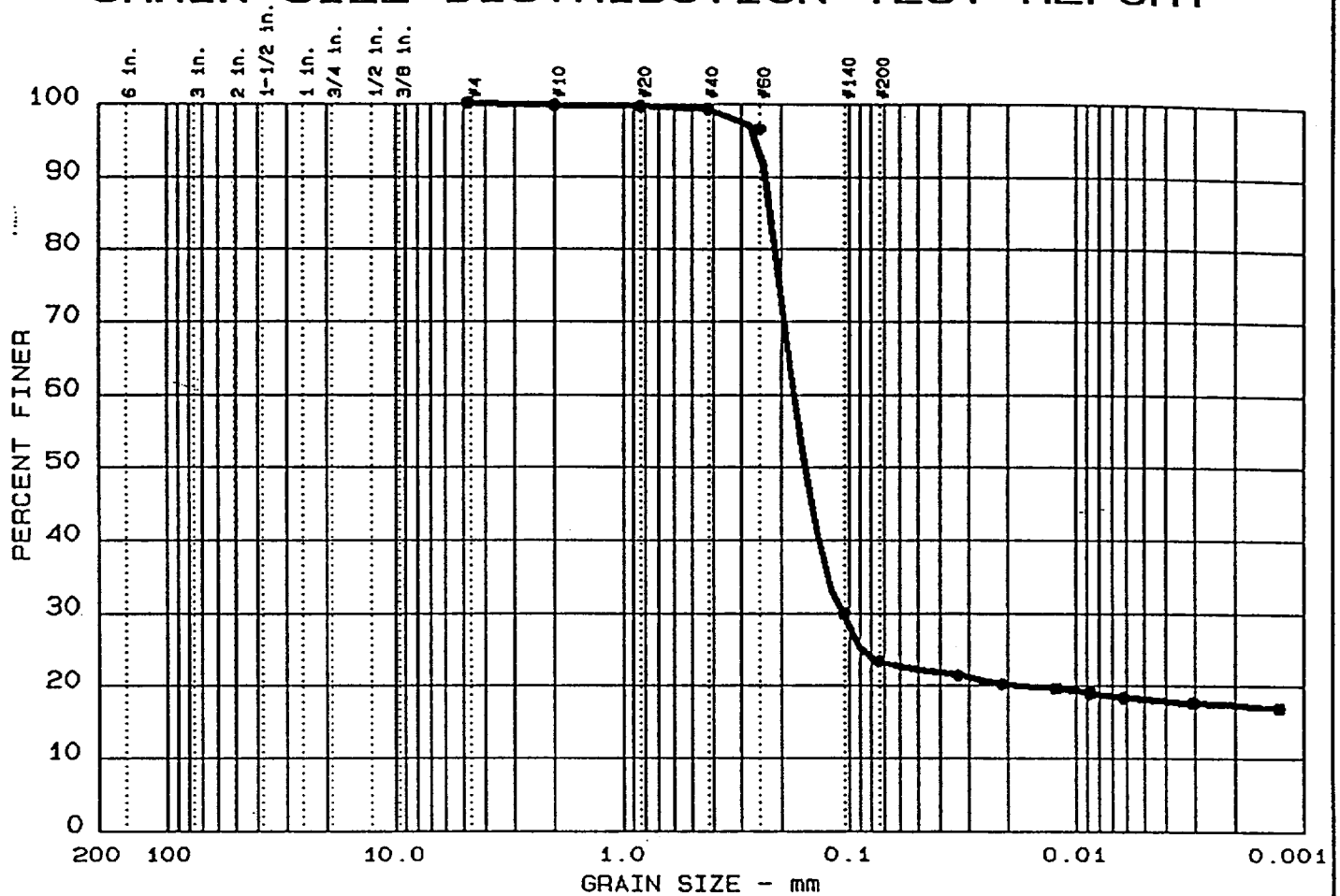
Date: March 18, 1998

Figure No.

[illegible][illegible]

<p>Project No.: 50161-7-0108 Task 16</p> <p>Project: APSF Confirmatory Testing</p> <p>● Location: FB-3 SS-81 @ 134.8-136.3 Ft.</p> <p>Date: March 20, 1998</p>	<p>Remarks:</p> <p>Tested by: SC JTM</p> <p>Reviewed by: HB</p> <p>ASTM D422 & ASTM D4318</p> <p>Figure No.</p>
<p>GRAIN SIZE DISTRIBUTION TEST REPORT</p> <p>LAW ENGINEERING, INC.</p>	

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 10	0.0	0.0	76.6	5.4	18.0

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.22	0.18	0.16	0.105				

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-82 @ 136.3-137.8 Ft.

Date: March 20, 1998

Remarks:

Tested by: *SCATM*

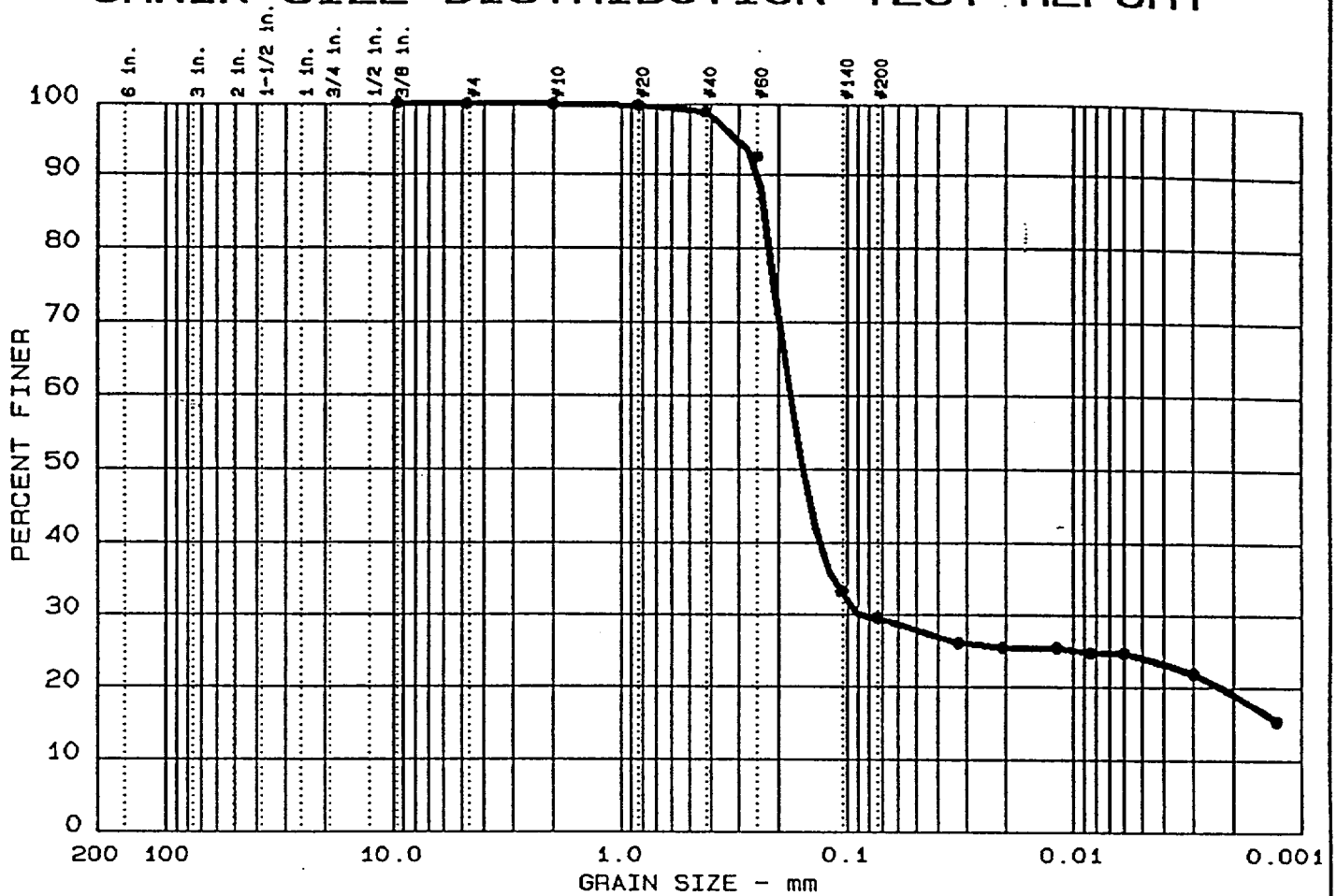
Reviewed by: *H*

ASTM D422

GRAIN SIZE DISTRIBUTION TEST REPORT
 LAW ENGINEERING. INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 11	0.0	0.1	70.4	5.4	24.1

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 49	23	0.23	0.18	0.16	0.090				

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Clayey Sand	SC	A-2-7 (1.8)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-83 @ 138.7-140.2 Ft.

Date: March 20, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

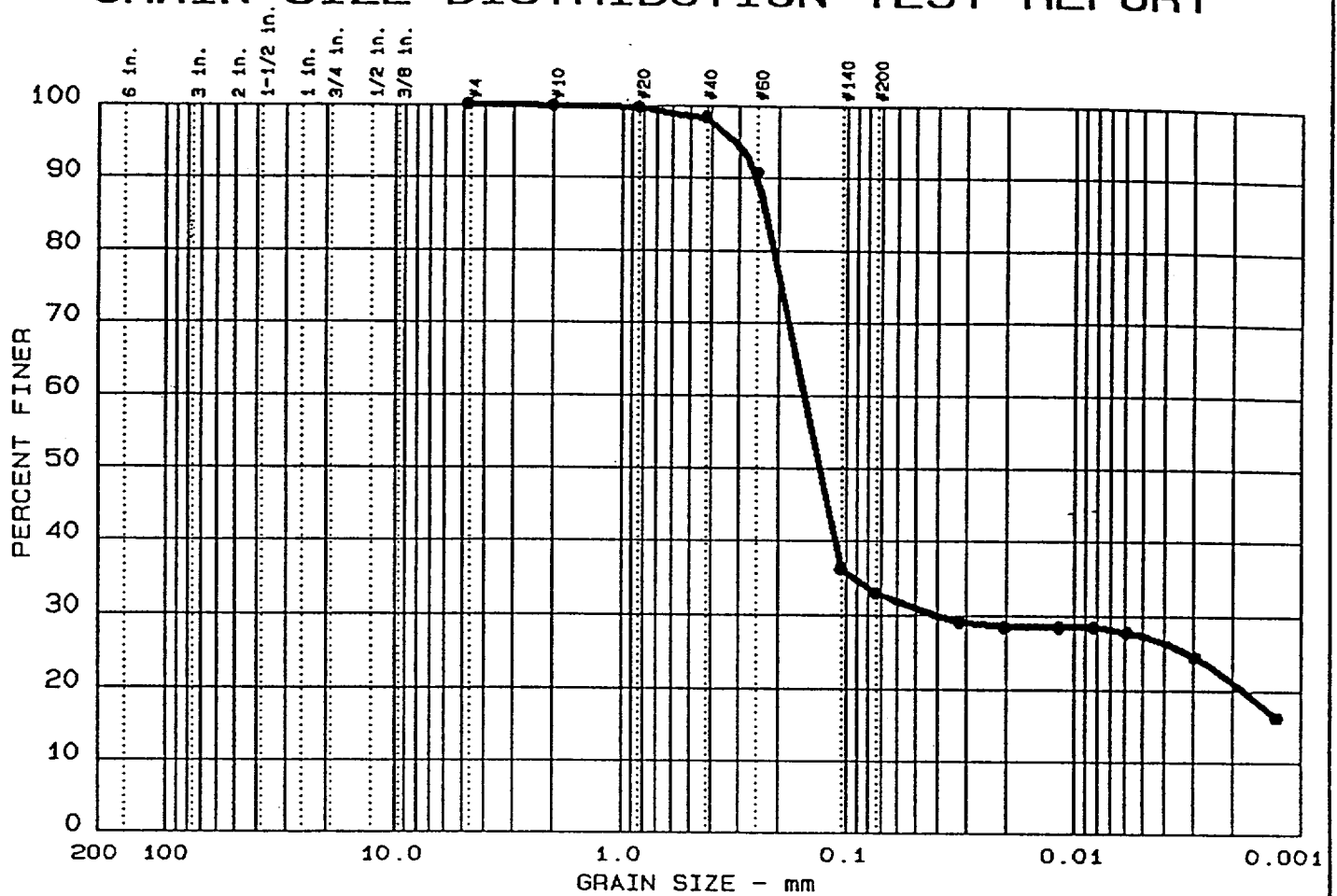
Tested by: *SC & Jm*

Reviewed by: *H*

ASTM D 422
 &
 ASTM D 4318

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 12	0.0	0.0	67.2	5.5	27.3

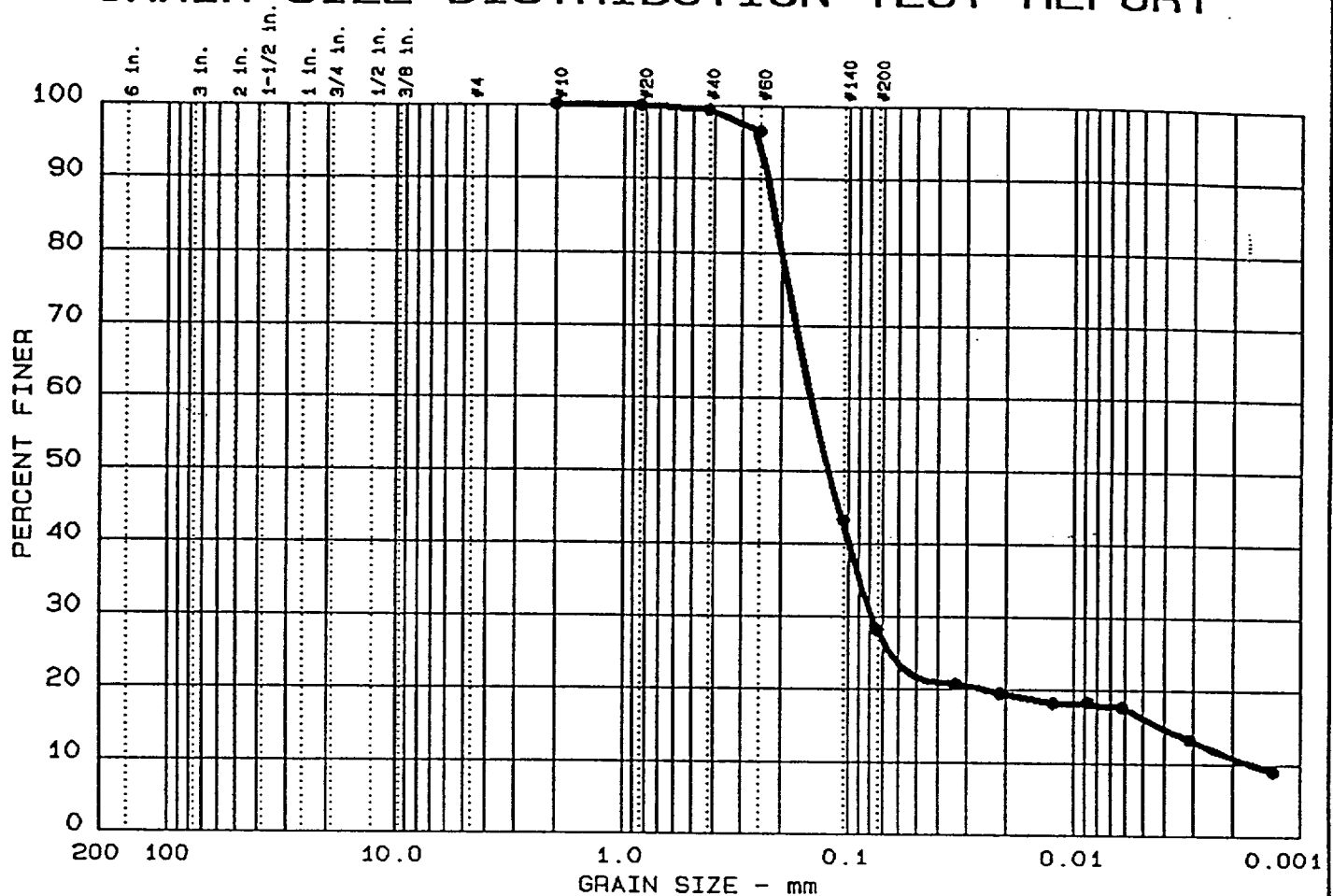
LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.23	0.15	0.13	0.041				

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-84 @ 140.2-141.7 Ft.
 Date: March 20, 1998

Remarks:
 Tested by: *SG & Jm*
 Reviewed by: *HJ*
 ASTM D 422

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
● 13	0.0	0.0	71.9	11.8	16.3

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
●		0.21	0.15	0.12	0.079	0.0041	0.0016	25.41	90.2

MATERIAL DESCRIPTION	USCS	AASHTO
● Tan Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 ● Location: FB-3 SS-85 @ 141.7-143.2 Ft.

Date: March 20, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

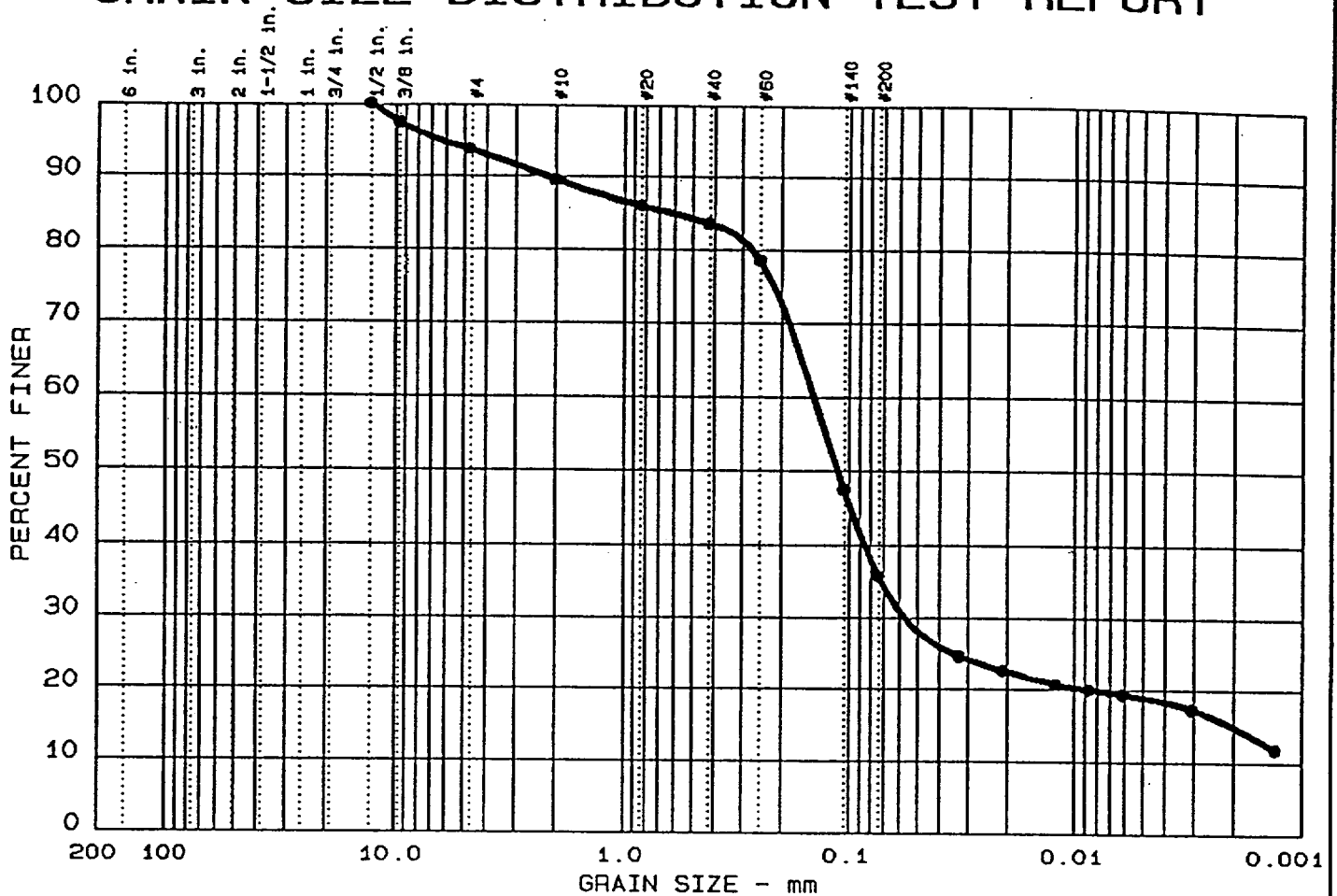
Tested by: *SC + JTM*

Reviewed by: *Hb*

ASTM D 422

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 14	0.0	6.3	58.1	16.7	18.9

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
• 49	26	0.59	0.14	0.11	0.057	0.0020			

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Clayey Sand	SC	A-7-6 (3.6)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-86 @ 143.2-144.7 Ft.

Date: March 20, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

Tested by: *SC-LSTM*

Reviewed by: *H*

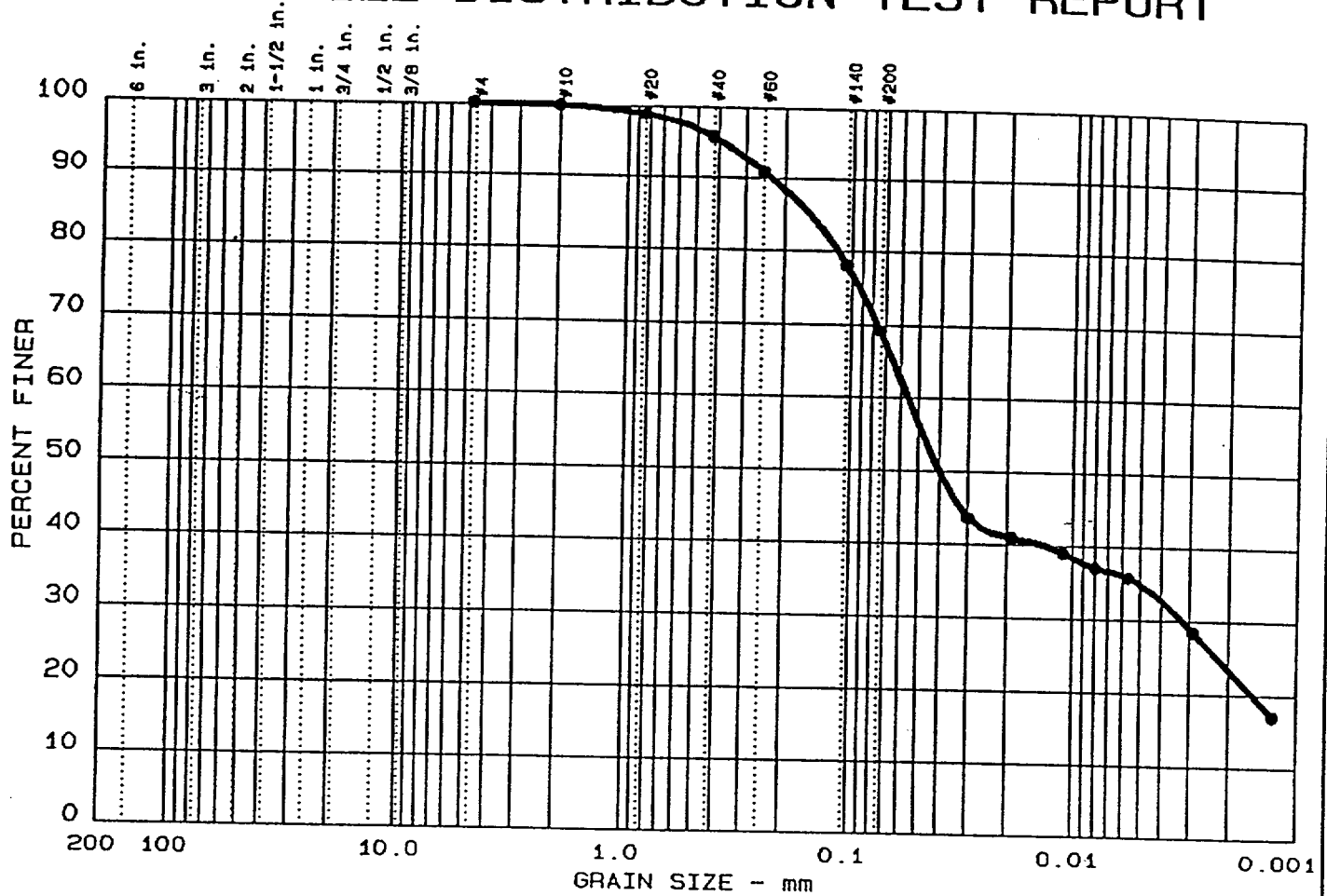
ASTM D422

&

ASTM D 4318

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 15	0.0	0.0	30.8	34.3	34.9

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.15		0.04	0.003				

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Sandy Silt	ML	A-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-3 SS-87 @ 144.7-146.2 Ft.
 Date: March 20, 1998

Remarks:

Tested by: SC JSM

Reviewed by: TD

ASTM D 422

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT
 LAW ENGINEERING, INC.

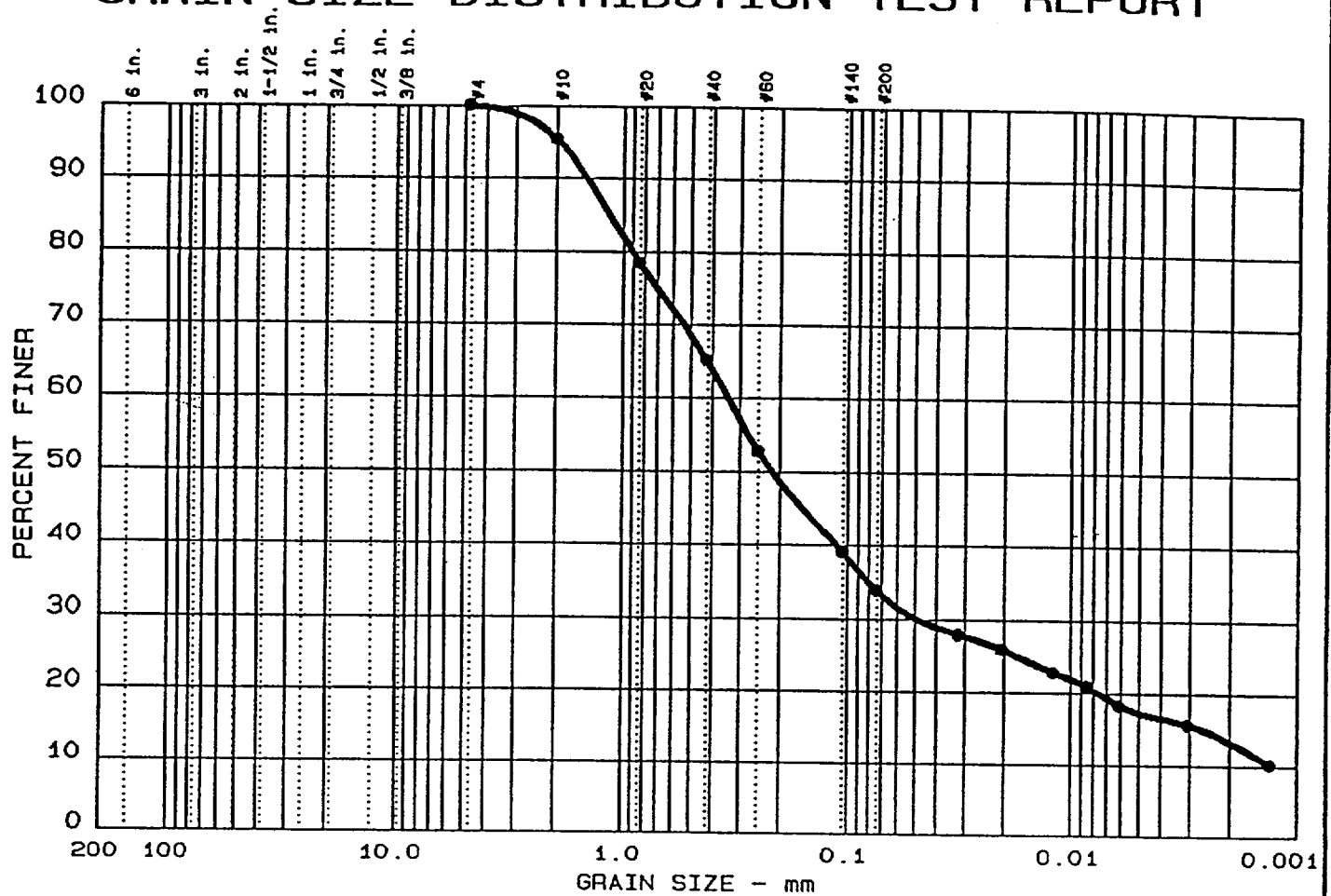
The graph displays the grain size distribution of a sample. The y-axis represents the percentage of material finer than a given grain size, ranging from 0 to 100. The x-axis represents the grain size in millimeters on a logarithmic scale, ranging from 200 mm to 0.001 mm. The curve shows that approximately 95% of the sample is finer than 2 mm, and about 20% is finer than 0.075 mm.

Grain Size (mm)	Percent Finer (%)
200	100
100	100
50	100
25	100
12.5	100
6.3	100
3.15	100
1.6	100
0.85	95
0.425	88
0.25	80
0.15	68
0.075	42
0.0475	35
0.03	32
0.02	31
0.015	28
0.01	27
0.0075	25
0.006	23
0.00475	20

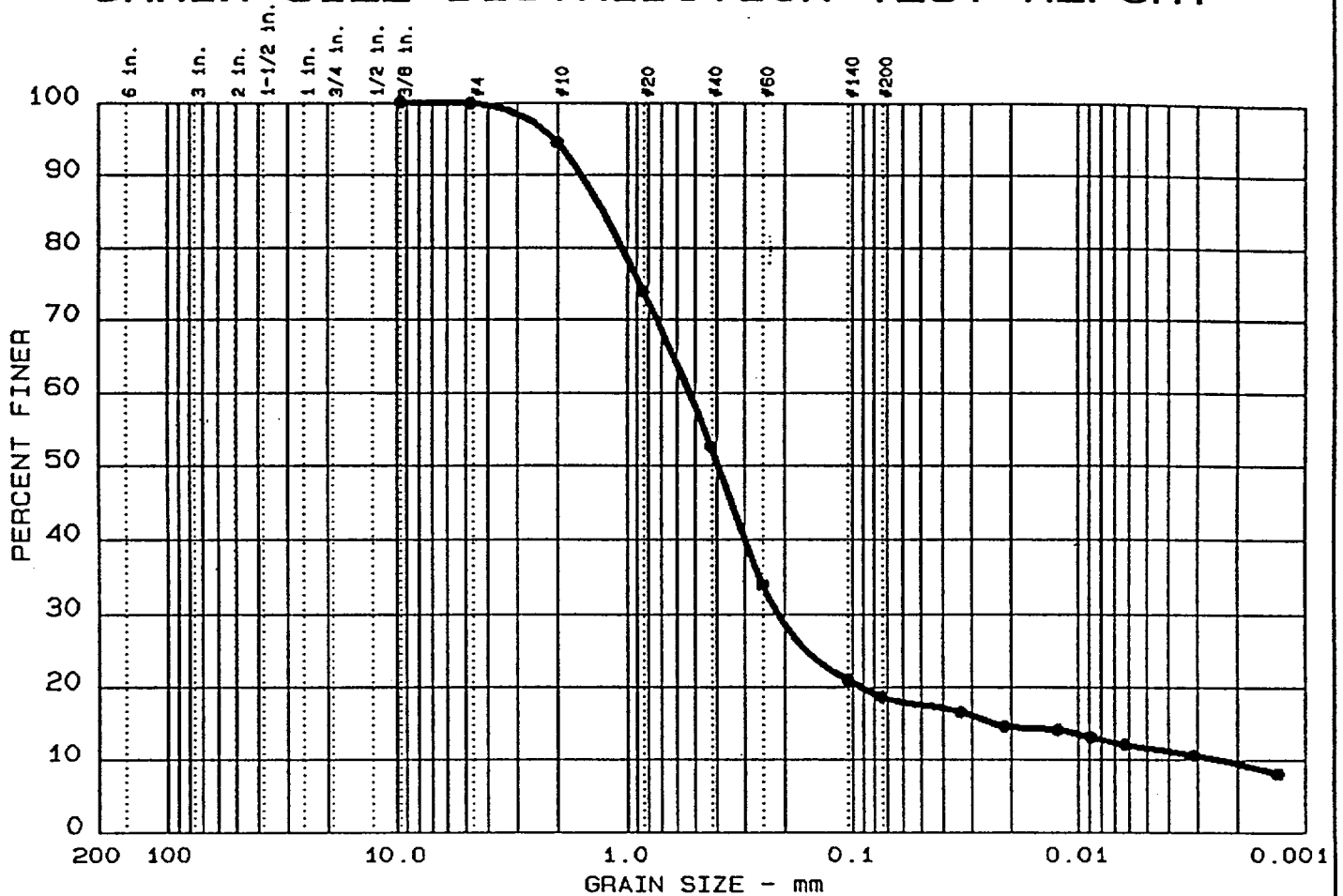
[illegible]

Project No.: 50161-7-0108 Task 16 Project: APSF Confirmatory Testing ● Location: FB-3 SS-90 @ 149.2-150.7 Ft.	Remarks: Tested by: <i>SGJ/STM</i> Reviewed by: <i>H</i> ASTM D422 <i>G</i> ASTM D4318
Date: March 20, 1998	
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 18	0.0	0.1	81.2	7.1	11.6

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		1.26	0.52	0.39	0.213	0.0234	0.0024	35.48	213.8

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16 Project: APSF Confirmatory Testing • Location: FB-3 SS-93 @ 153.7-154.5 Ft. Date: March 20, 1998	Remarks: Tested by: <i>SCJ/STM</i> Reviewed by: <i>LB</i> ASTM D422
GRAIN SIZE DISTRIBUTION TEST REPORT LAW ENGINEERING, INC.	
Figure No.	

Job Number 50161-7-0108 Task 16
Job Name APSF Confirmatory Testing

Tested by: JTM
Reviewed by: HJ

Moisture Content (ASTM D2216)

Boring FB-6

Sample Number	Depth(ft.)	Moisture Content (%)
SS-9	19.5	14.9
SS-13	24.5	27.9
SS-19	35	22.8
SS-48	78.5	24.6
SS-49	80	49.2
SS-51	83	68.2
SS-62	99.5	32.8
SS-63	101	28.6
SS-67	107	23.7
SS-68	108.5	18.6
SS-69	110.	28.3
SS-70	111.5	27.6
SS-71	113	33.1
SS-72	114.5	60.1
SS-73	116	30.2
SS-75	119	18.3
SS-76	120.5	28.6

Job Number 50161-7-0108 Task 16
Job Name APSF Confirmatory Testing

Tested by: JTM
Reviewed by: HJ

Moisture Content (ASTM D2216)

Boring FB-6

Sample Number	Depth(ft.)	Moisture Content (%)
SS-77	122	24.9
SS-78	123.5	23.0
SS-79	125	32.0
SS-80	126.5	22.6
SS-82	129.5	26.1
SS-84	132.5	24.0
SS-89	140	39.3
SS-91	143	32.3
SS-92	144.5	40.4
SS-94	147.5	28.3
SS-98	153.5	32.3
SS-99	155	22.1

Job Number 50161-7-0108 Task 16
Job Name APSF Confirmatory Testing

Specific Gravity and Moisture Content
(ASTM D854) (ASTM D2216)

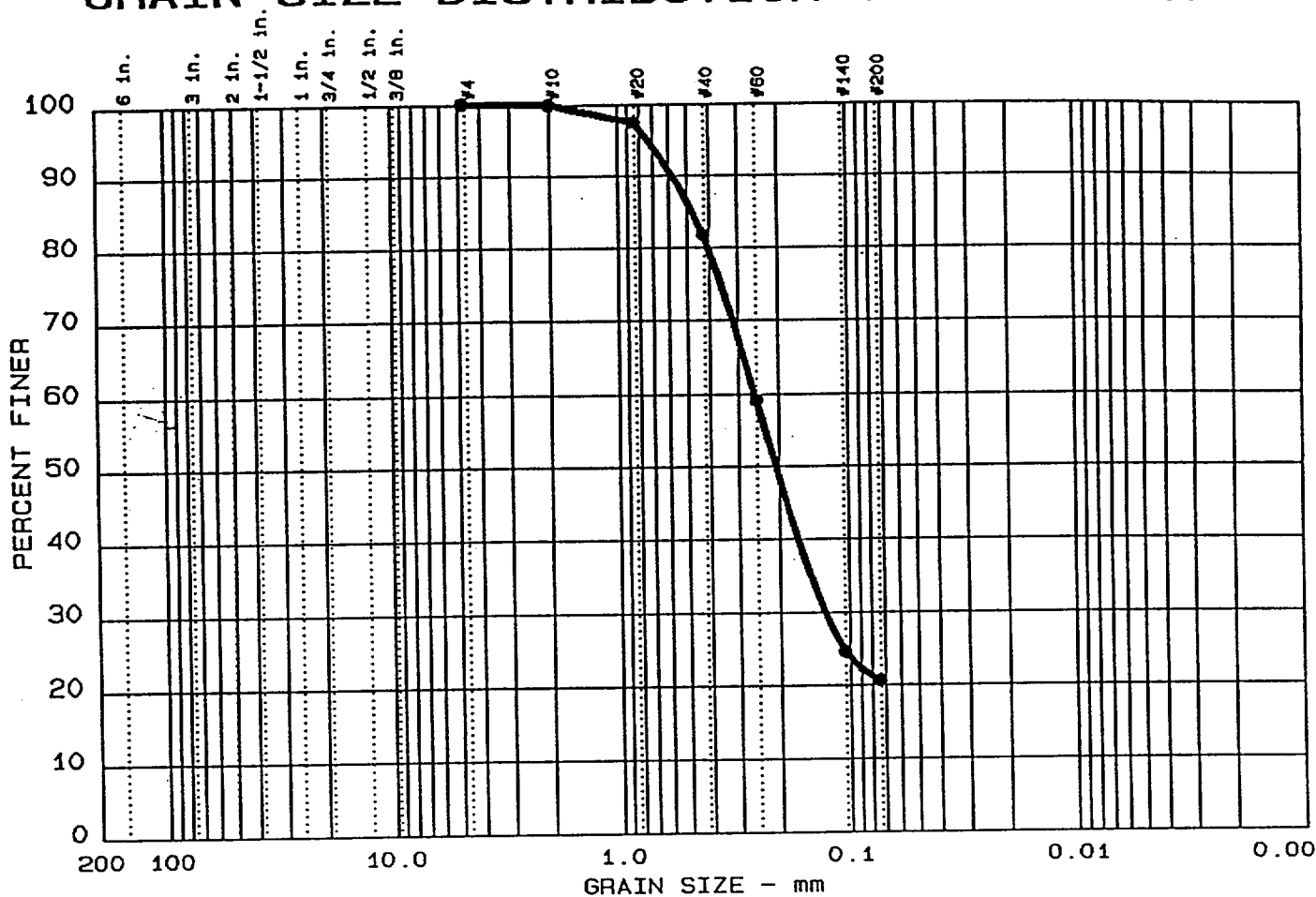
Boring FB-6

Sample Number	Depth (Ft.)	Moisture Content (%)	Specific Gravity
SS-67	107.0	22.3	2.66
SS-68	108.5	17.4	2.63
SS-69	110.0	25.9	2.66
SS-70	111.5	23.9	2.68
SS-75	119.0	18.8	2.67
SS-76	120.5	30.7	2.71
SS-77	122.0	25.9	2.64
SS-78	123.5	22.5	2.66
SS-79	125.0	32.5	2.68
SS-80	126.5	21.9	2.65
SS-82	129.5	26.4	2.66
SS-84	132.5	23.9	2.64

Tested by: SC

Reviewed by: HJ

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
1	0.0	0.0	79.4	20.6	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		0.47	0.25	0.21	0.129				

MATERIAL DESCRIPTION	USCS	AASHTO
Tan Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 Location: FB-6 SS-1 @ 8-9.5 Ft.

Date: March 24, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
 LAW ENGINEERING, INC.

Remarks:

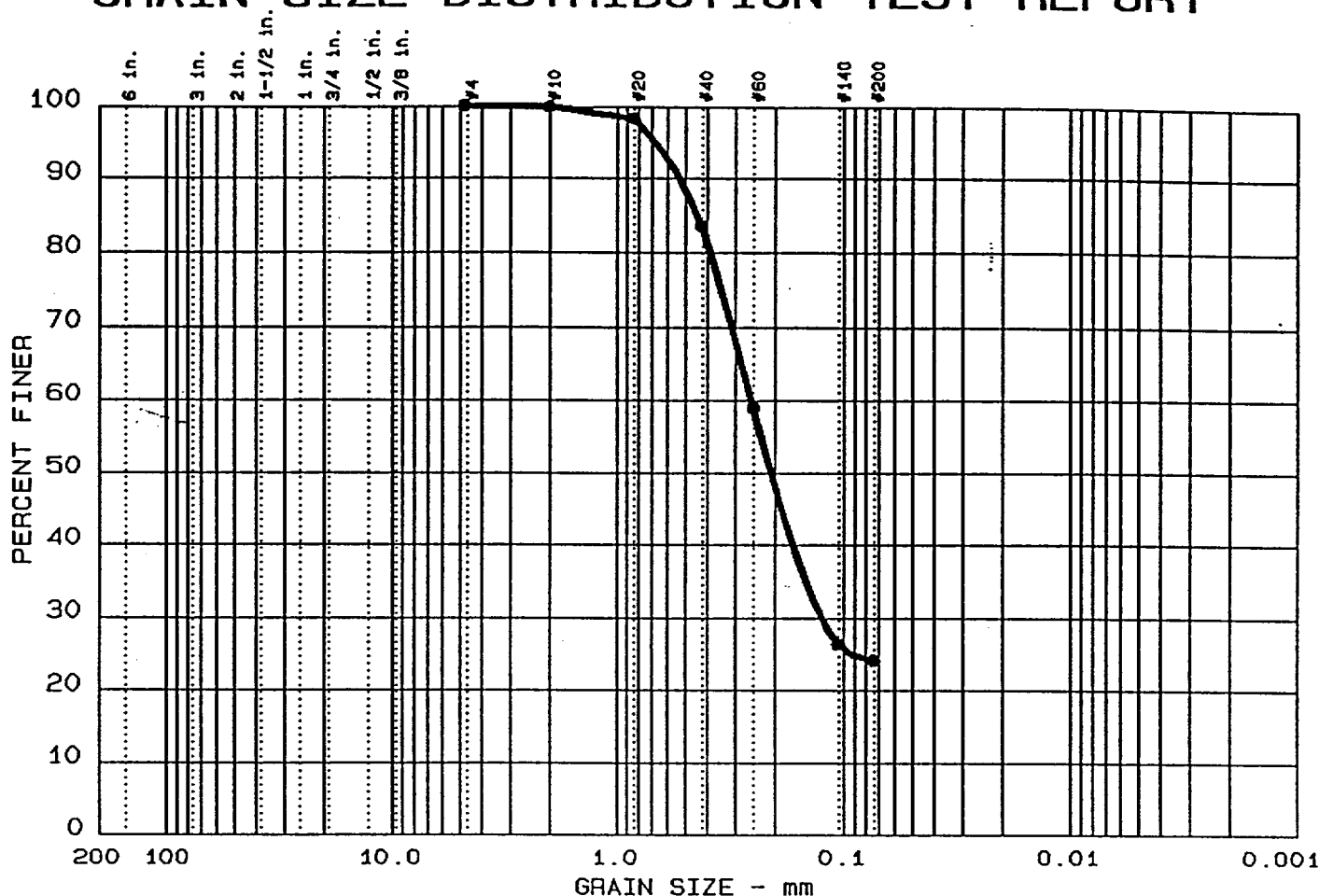
Tested by: SC/STM

Reviewed by: HS

ASTM D422

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 2	0.0	0.0	75.9	24.1	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.44	0.25	0.21	0.124				

MATERIAL DESCRIPTION	USCS	AASHTO
• Red Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-6 SS-2 @ 9.5-10 Ft.

Date: March 24, 1998

Remarks:

Tested by: *SC + Jm*

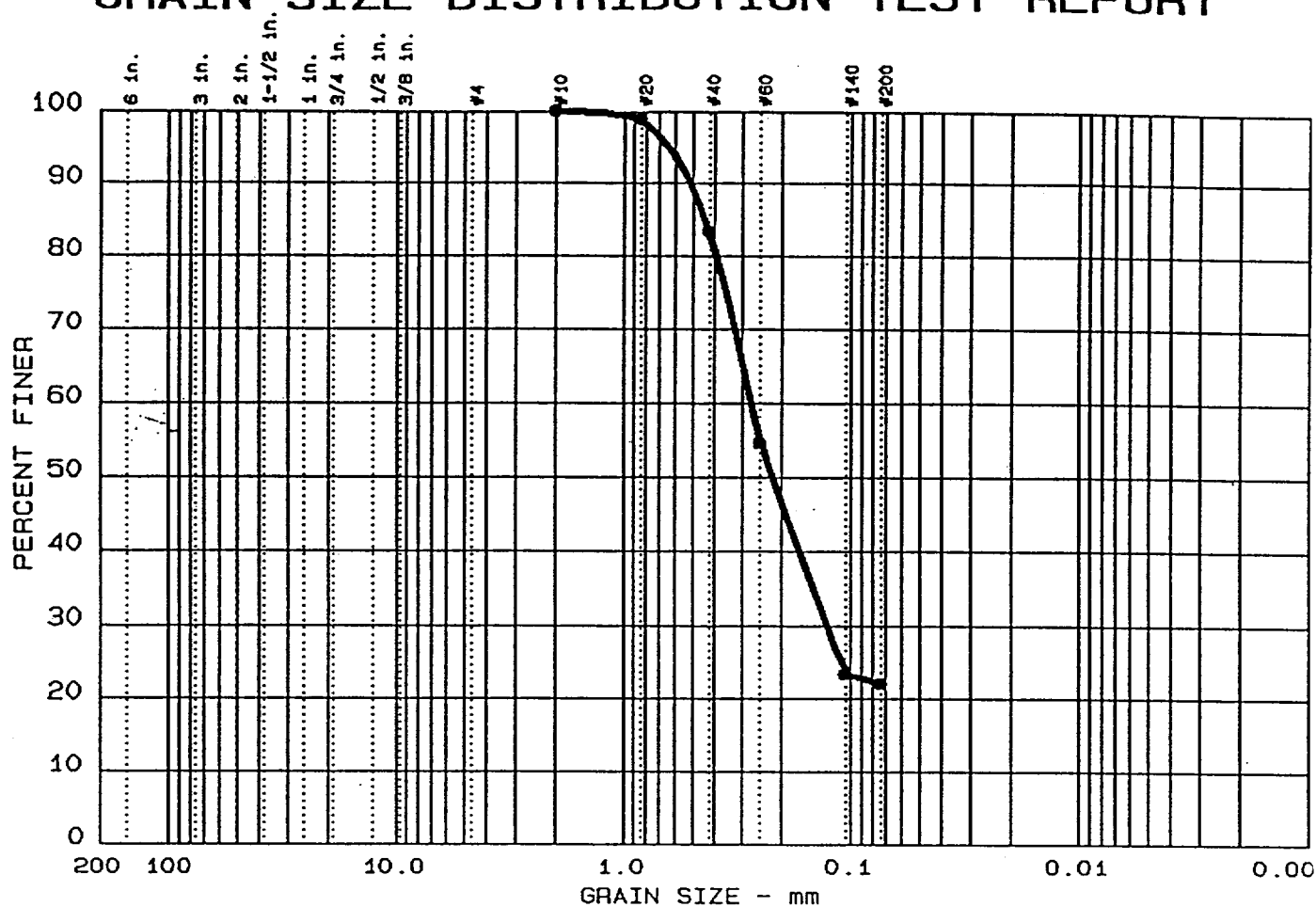
Reviewed by: *H*

ASTM D422

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 3	0.0	0.0	77.9	22.1	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.44	0.27	0.22	0.126				

MATERIAL DESCRIPTION	USCS	AASHTO
• Red Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-6 SS-3 @ 11-12.5 Ft.

Date: March 24, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

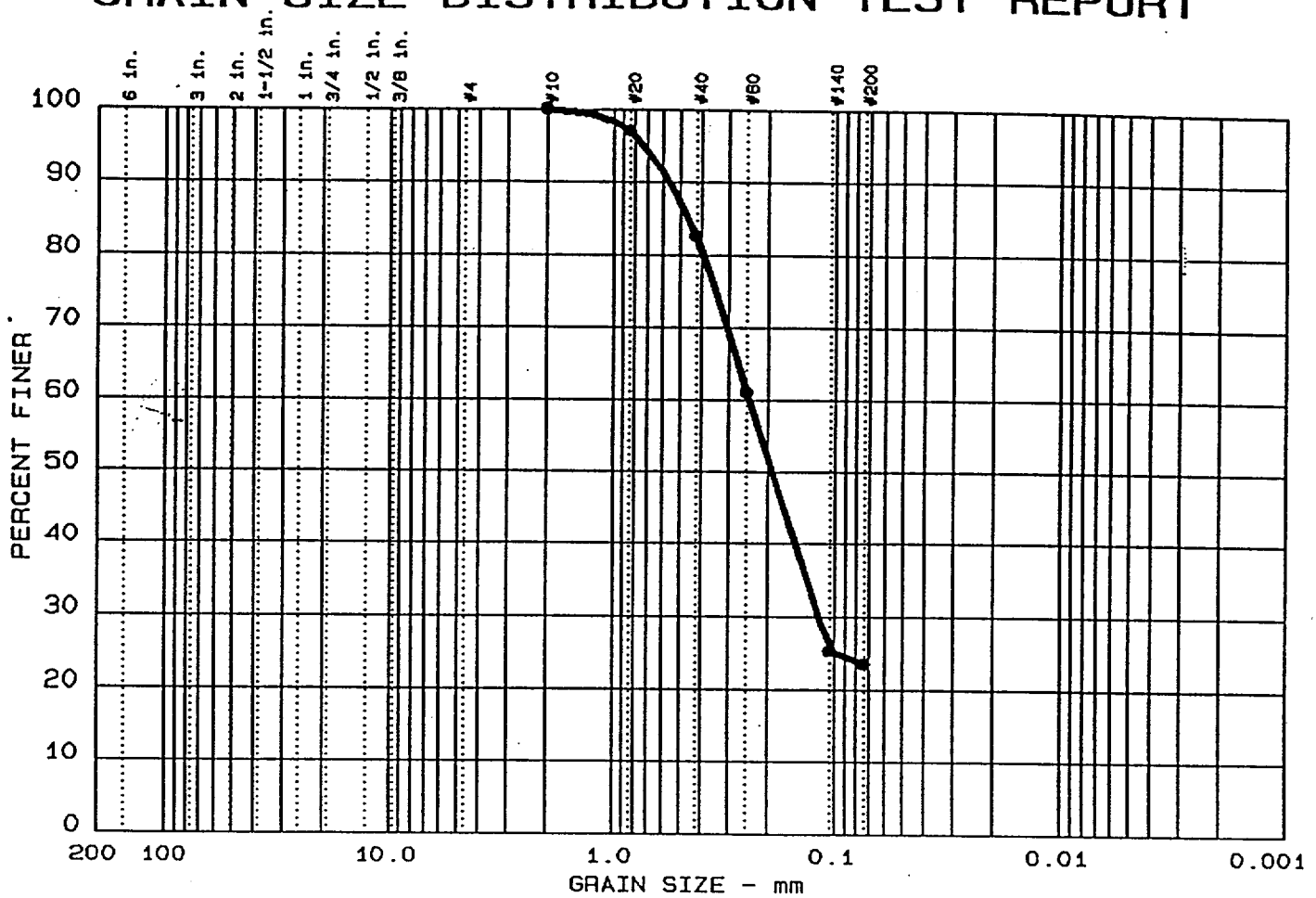
Tested by: *SC+JTM*

Reviewed by: *HB*

ASTM D 422

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 4	0.0	0.0	76.5	23.5	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.45	0.24	0.19	0.117				

MATERIAL DESCRIPTION	USCS	AASHTO
• Red Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-6 SS-4 @ 12.5-14 Ft.

Date: March 24, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

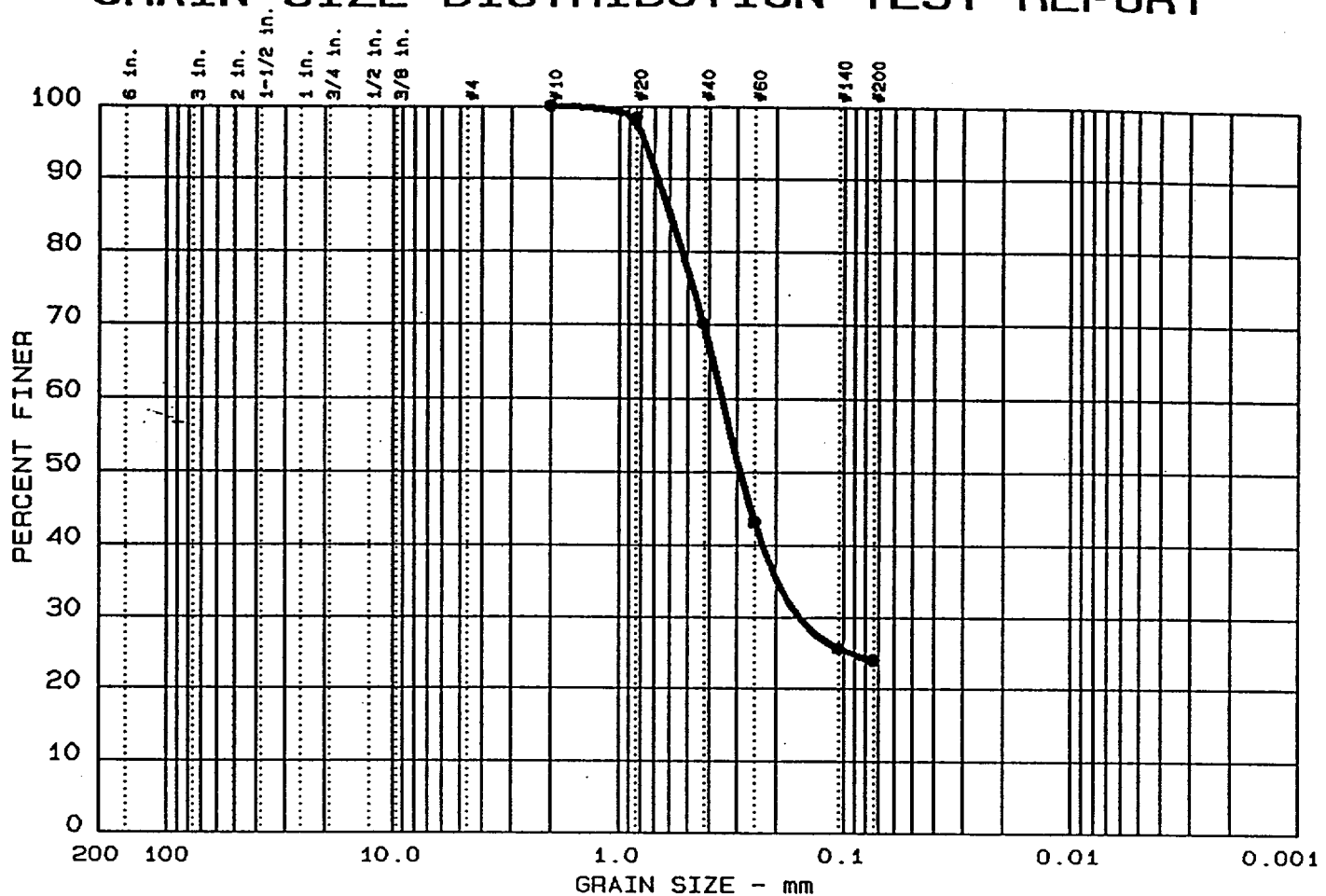
Tested by: SC & JTM

Reviewed by: HS

ASTM D422

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 5	0.0	0.0	76.1	23.9	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.59	0.35	0.29	0.157				

MATERIAL DESCRIPTION	USCS	AASHTO
• Red Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-6 SS-5 @ 14-15.5 Ft.

Date: March 24, 1998

Remarks:

Tested by: *SC + JTM*

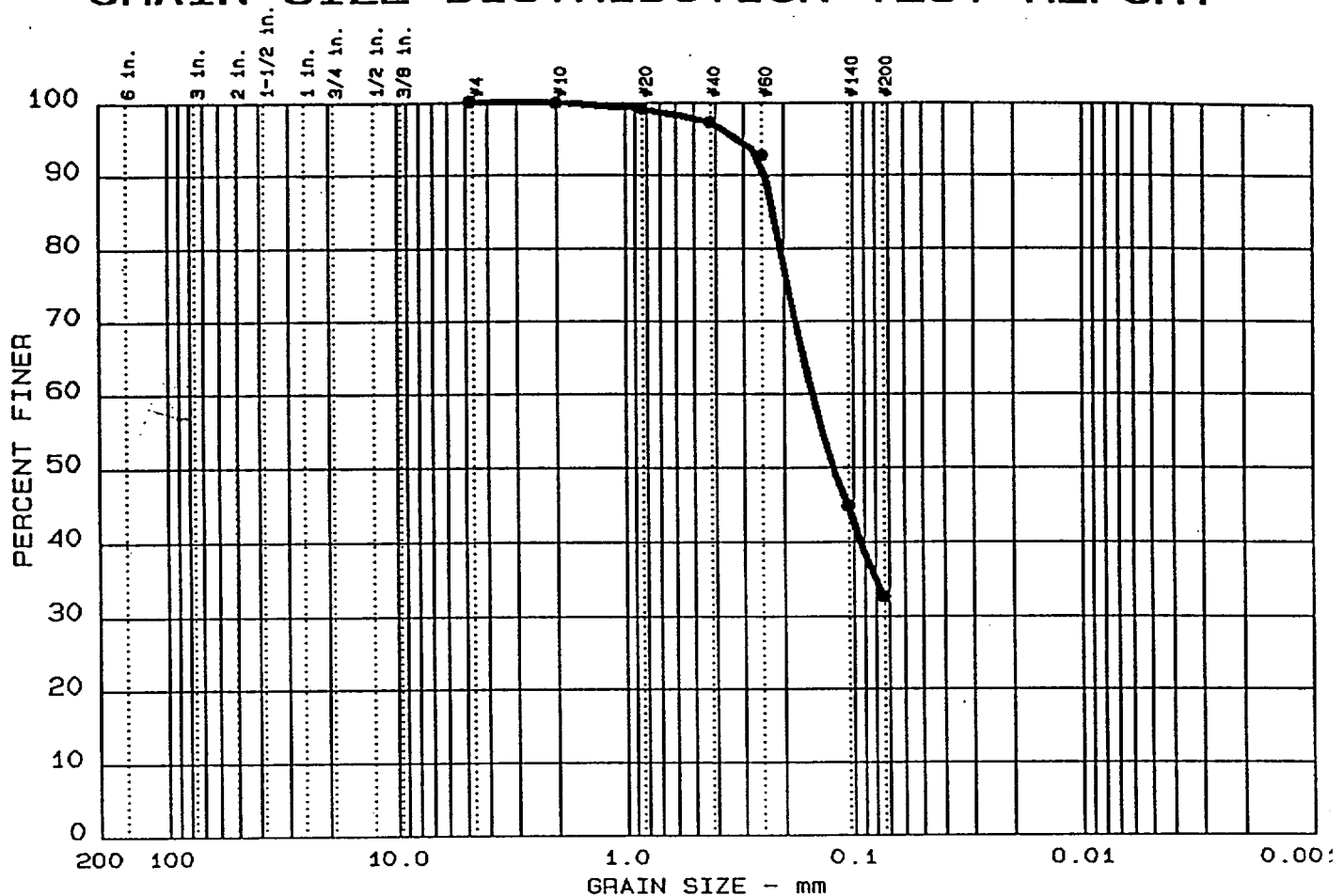
Reviewed by: *HB*

ASTM D422

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Figure No.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
• 6	0.0	0.0	67.4	32.6	

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
•		0.22	0.15	0.12					

MATERIAL DESCRIPTION	USCS	AASHTO
• Tan Brown Silty Sand	SM	A-2-4 (0.0)

Project No.: 50161-7-0108 Task 16
 Project: APSF Confirmatory Testing
 • Location: FB-6 SS-6 @ 15.5-17 Ft

Date: March 24, 1998

GRAIN SIZE DISTRIBUTION TEST REPORT
LAW ENGINEERING, INC.

Remarks:

Tested by: *SC & JTM*

Reviewed by: *HB*

ASTM D422

Figure No.

Grain size distribution plot showing Percent Finer versus Grain Size (mm). The curve indicates that approximately 100% of the material is finer than 0.075 mm (#20), and approximately 65% is finer than 0.075 mm (#250).

Grain Size (mm)	Percent Finer (%)
200	100
100	100
60	100
40	100
30	100
25	100
20	100
15	100
10	100
7.5	100
6	100
4.75	100
3.75	100
3.0	100
2.5	100
2.0	100
1.5	100
1.18	100
0.85	100
0.75	100
0.6	100
0.425	100
0.3	100
0.25	100
0.2	100
0.15	100
0.125	100
0.106	100
0.09	100
0.075	100
0.06	100
0.05	100
0.0425	100
0.0375	100
0.03	100
0.025	100
0.02	100
0.015	100
0.0125	100
0.0106	100
0.009	100
0.0075	100
0.006	100
0.005	100
0.00425	100
0.00375	100
0.003	100
0.0025	100
0.002	100
0.0015	100
0.00125	100
0.00106	100
0.0009	100
0.00075	100
0.0006	100
0.0005	100
0.000425	100
0.000375	100
0.0003	100
0.00025	100
0.0002	100
0.00015	100
0.000125	100
0.000106	100
0.00009	100
0.000075	100
0.00006	100
0.00005	100
0.0000425	100
0.0000375	100
0.00003	100
0.000025	100
0.00002	100
0.000015	100
0.0000125	100
0.0000106	100
0.000009	100
0.0000075	100
0.000006	100
0.000005	100
0.00000425	100
0.00000375	100
0.000003	100
0.0000025	100
0.000002	100
0.0000015	100
0.00000125	100
0.00000106	100
0.0000009	100
0.00000075	100
0.0000006	100
0.0000005	100
0.000000425	100
0.000000375	100
0.0000003	100
0.00000025	100
0.0000002	100
0.00000015	100
0.000000125	100
0.000000106	100
0.00000009	100
0.000000075	100
0.00000006	100
0.00000005	100
0.0000000425	100
0.0000000375	100
0.00000003	100
0.000000025	100
0.00000002	100
0.000000015	100
0.0000000125	100
0.0000000106	100
0.000000009	100
0.0000000075	100
0.000000006	100
0.000000005	100
0.00000000425	100
0.00000000375	100
0.000000003	100
0.0000000025	100
0.000000002	100
0.0000000015	100
0.00000000125	100
0.00000000106	100
0.0000000009	100
0.00000000075	100
0.0000000006	100
0.0000000005	100
0.000000000425	100
0.000000000375	100
0.0000000003	100
0.0000	

Figure No.