FIELD BORING LOG

Project Name: TRINITY RIVER - WALLISVILLE, TEXAS		Project No. 93-312G
Location: TRINITY RIVER		Client: ARMY CORP. OF ENG.
Boring No.: 93-282	Date Started: 3-6-94	El. of River: +3.12
Water Depth: 16.9'	Date Completed: 3-6-94	Easting: 3,353,688.91
Time Started: 10:00 AM	Northing: 744,053.40	Driller: PAT STEPHENS
Time Completed: 2:00 P.M.	Logger: D. CANADA	Depth to caving:
Rig: MOBIL B-61	Weather: CLOUDY & WINDY	

DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLES	SOIL DESCRIPTION	SOIL CLASSIFICATION	BLOWS/6"	BLOWS/6"	BLOWS/6"	TORVANE (tsf)	HAND PENETROMETER (tsf)
0	S1	L		DK. GR. SA. W/SHELL	SP					
	S2	L		stiff DK. GR LT. TA. SA. CL. W/SHELL	~~SP~~ CL					1.25
5 (S)	S3	S		~~MED.~~ STIFF DK. GR. LT. TA. ~~SA.~~ CL	~~SM~~ CL				.52	2.0
(S)	S4	S		~~MED.~~ STIFF LT. GR. LT. TA. SA. CL. W/CAL	~~SM~~ CL				.53	2.0
	S5	S		~~MED.~~ V STIFF LT. GR. LT. TA. SA. CL. W/CAL	~~SM~~ CL				.55	2.75
10	S6	S		~~VERY SOFT~~ med stiff LT. GR. LT. TA. SA. CL.	~~SP~~ CL				.14	.75
15										
	S7	P	X	medium dense ~~LOOSE~~ LT. GR. SA	SP	2	5	9		
20										
25	S8	P	X	MED. DENSE LT. GR. SA.	SP	4	6	8		
30										

(S) - SHORT SAMPLE

HVJ ASSOCIATES, INC.

FIELD BORING LOG

Boring No.: 93 - 282

DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLES	SOIL DESCRIPTION	SOIL CLASSIFICATION	BLOWS/6"	BLOWS/6"	BLOWS/6"	TORVANE	HAND PENETROMETER
30										
	S9	P	X	LOOSE LT.GR. LT TA. SA	SP	1	4	5		
35										
	S10	P	X	MED. DENSE LT GR. LT TA SA w/ Rocks	SP	8	10	9		
40										
45	S11	P	X	v/stiff ~~MED. DENSE~~ TA. LT. GR ~~SIL~~. CL w/ Fer	CH ~~SC~~	10	11	18		
*	S12	S		v/ ~~MED.~~ STIFF TA LT GR ~~SIL~~. CL w/FER	~~SC~~ CH				.54	2.5
50 *	S13	S		v/ ~~MED~~ STIFF TA. LT. GR ~~SIL~~. CL w/ CAL FER	~~SC~~ CH				.57	2.75
*	S14	S		v/ stiff ~~SOFT~~ TA. LT. GR ~~SIL~~. CL	~~SC~~ CH				.35	2.5
*	S15	J		stiff ~~VERY SOFT~~ TA. LT. GR. ~~SIL~~. CL. W/FER	~~SC~~ CH				.15	1.5
55										
60	S16	P	X	VERY DENSE TA. LT GR SIL. SA	SM	15	25	20		
65										
	S17	P	X	VERY DENSE TA. LT. GR SIL. SA	SM	20	25	28		
70										

NOTE:
'*' SHORT SAMPLES

FIELD BORING LOG

Boring No.: 93-282

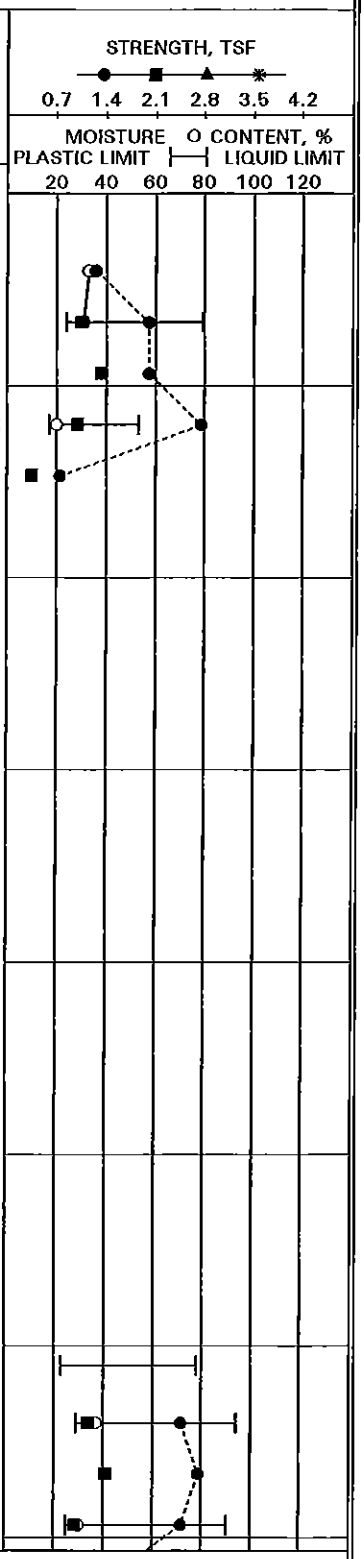
DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLES	SOIL DESCRIPTION	SOIL CLASSIFICATION	BLOWS/6"	BLOWS/6"	BLOWS/6"	TORVANE	HAND PENETROMETER
70										
75	S18	P	X	VERY DENSE TA. LT. GR SIL. SA	SM	17	22	25		
80										
85										
90										
95										
100										
105										
110										

LOG OF SOIL BORING

Project Name: Trinity River Soil Borings
Project No. 93-312G
ring No.: 93-282
ıd Line Elevation: -13.78 feet (NGVD)
Completion Depth: 75.5 feet
Water Depth: 16.9 feet

Weather: Cloudy and windy
Date: March 6, 1994
Technician: David Canada
Driller: Pat Stevens
Drilling Rig: Mobil B-61

ELEV. DEPTH, FEET	SOIL DESCRIPTION	BLOWS PER FOOT	% PASSING NO. 4 SIEVE	% PASSING NO. 10 SIEVE	% PASSING NO. 40 SIEVE	% PASSING NO. 100 SIEVE	% PASSING NO. 200 SIEVE	DRY DENSITY PCF
0	Dark gray SILTY SAND w/ shell and clay		90	88	84	61	38	
-15	Stiff dark gray SANDY CLAY w/ silt and shell		96	92	90	76	53	
-5	Stiff dark gray and tan CLAY w/ sand, ferrous nodules, and sand partings		100	100	100	97	88	91
-20								
-10	Very stiff gray and tan SANDY CLAY w/ silt, silty clay seams, ferrous and calcareous nodules		99	97	94	90	63	108
-25								
-15								
-30								
-20	Medium dense tan SAND	14	100	100	91	11	4	
-35								
-25		14	100	99	79	3	1	
-40								
-30								
-45	loose 31'-32.5'	9	100	99	65	5	3	
-35								
-50								
-40	w/ gravel below 38'	19	93	84	50	5	3	
-55								
-45	Very stiff reddish brown and brown CLAY w/ silt, ferrous nodules, and slickensides w/ calcareous nodules below 47'	29	100	100	99	98	98	
-60			100	100	99	99	98	81
-50								
			100	100	100	99	91	93



● = Direct Hand Penetrometer ■ = Torvane ▲ = Unconfined Compression ✱ = Shear Stress

Plate 14A

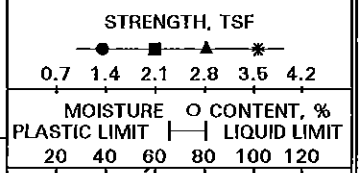
HVJ ASSOCIATES, INC.

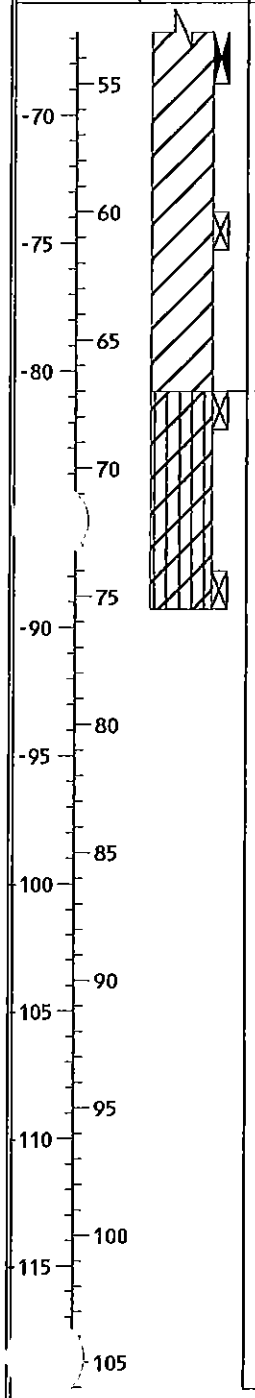
LOG OF SOIL BORING

Project Name: Trinity River Soil Borings
Project No. 93-312G
ring No.: 93-282
d Line Elevation: -13.78 feet (NGVD)
Completion Depth: 75.5 feet
Water Depth: 16.9 feet

Weather: Cloudy and windy
Date: March 6, 1994
Technician: David Canada
Driller: Pat Stevens
Drilling Rig: Mobil B-61

ELEV. DEPTH, FEET	SOIL AND SAMPLER SYMBOLS	SOIL DESCRIPTION	BLOWS PER FOOT	% PASSING NO. 4 SIEVE	% PASSING NO. 10 SIEVE	% PASSING NO. 40 SIEVE	% PASSING NO. 100 SIEVE	% PASSING NO. 200 SIEVE	DRY DENSITY PCF
		w/ sand pockets below 53'		100	99	99	98	97	
		hard, tan and gray below 60'	45	100	100	100	99	85	
		Hard tan and gray SILTY CLAY w/ sand partings	53	100	100	100	99	84	
			47	100	100	99	98	78	





● = Direct Hand Penetrometer ■ = Torvane ▲ = Unconfined Compression ✱ = Shear Stress

Plate 14B

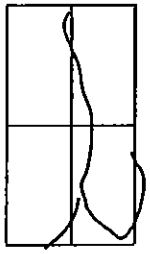
HVJ ASSOCIATES, INC.

UNCONFINED COMPRESSION TEST REPORT

Project: Trinity River - Wallisville, Texas
Project No. 93-312G
Boring No. 93-282
Sample No. S3
Depth: 4-6
El. -17.78
Date: 4/15/94
Type of specimen: undisturbed
Classification: Dark gray and tan silty clay

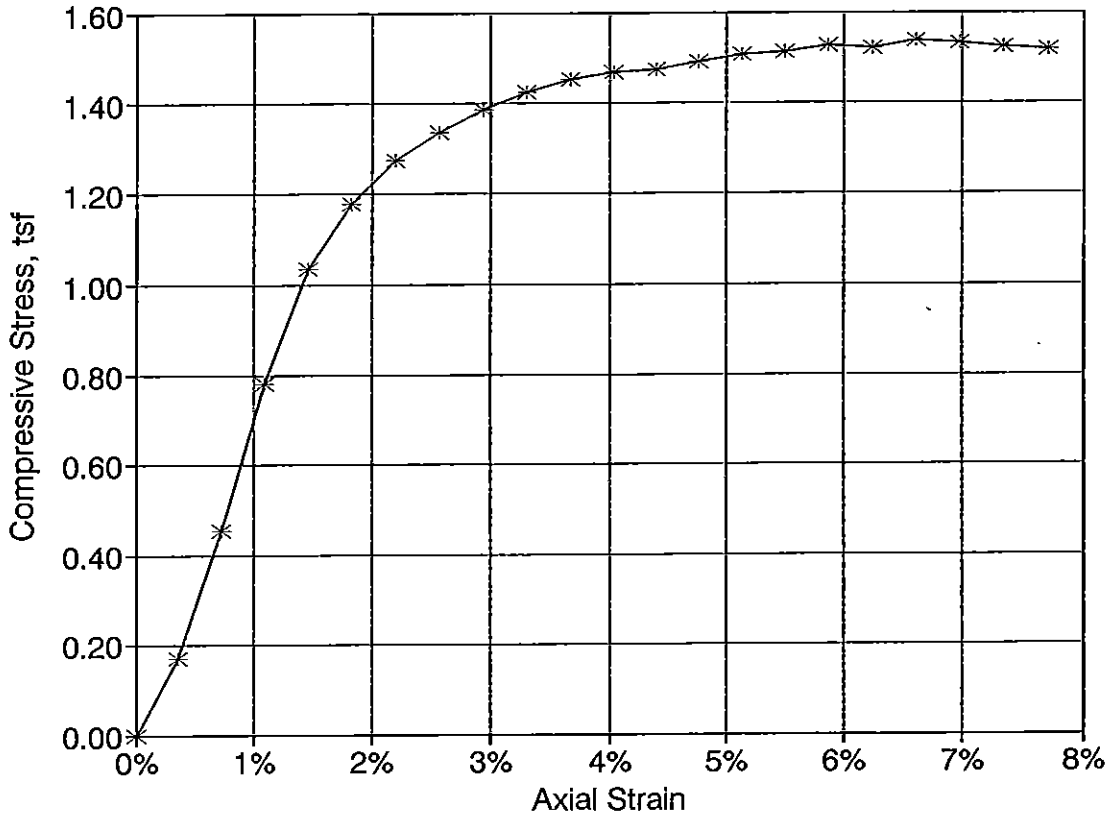
Initial water content	31.1
Dry density, pcf	91.2
Uncon. comp. strength, tsf	1.537
Undrained shear strength, tsf	0.769
Intitial specimen diameter, in	2.832
Initial specimen height, in	5.447
Liquid limit	79
Plastic limit	23
Plasticity index	56

Failure Sketch



☐ Controlled stress

☑ Controlled stain

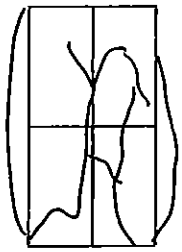


UNCONFINED COMPRESSION TEST REPORT

Project: Trinity River - Wallisville, Texas
Project No. 93-312G
Boring No. 93-282
Sample No. S5
Depth: 8-10
El. -21.78
Date: 4/15/94
Type of specimen: undisturbed
Classification: Gray and tan sandy clay

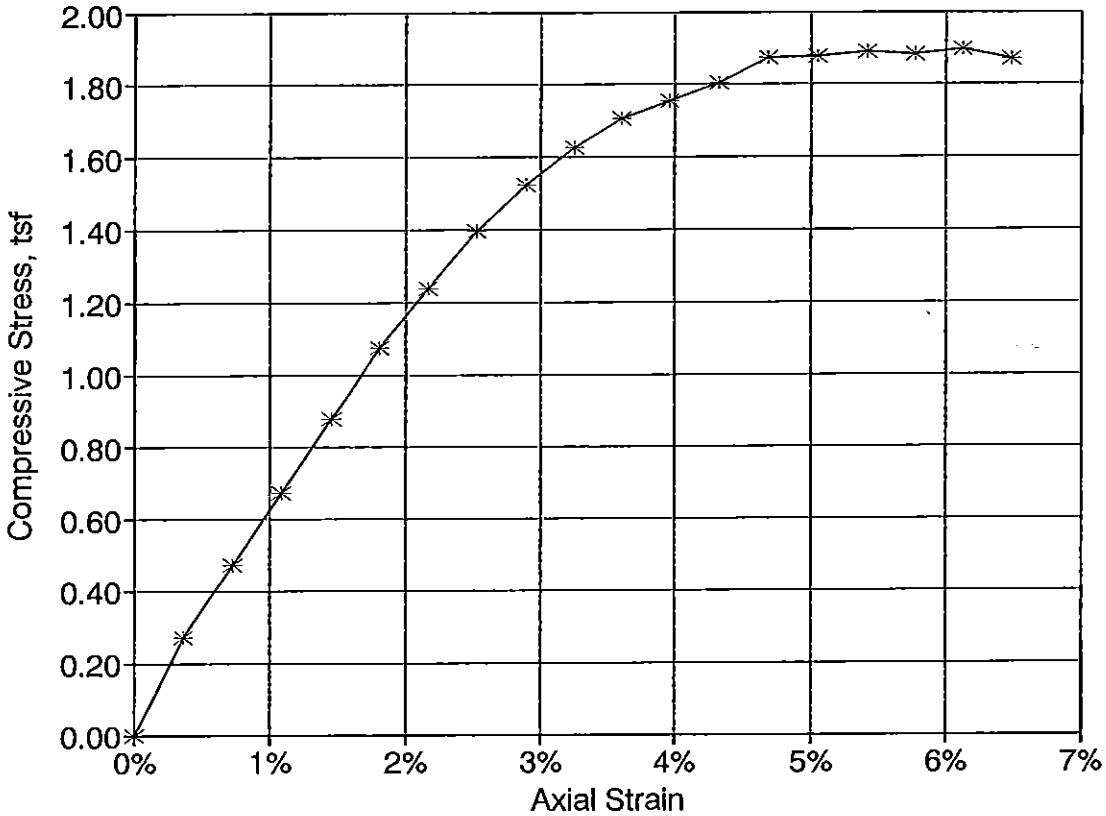
Initial water content	19.6
Dry density, pcf	107.8
Uncon. comp. strength, tsf	1.898
Undrained shear strength, tsf	0.949
Intitial specimen diameter, in	2.849
Initial specimen height, in	5.544
Liquid limit	53
Plastic limit	17
Plasticity index	36

Failure Sketch



☐ Controlled stress

☑ Controlled stain

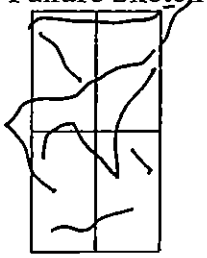


UNCONFINED COMPRESSION TEST REPORT

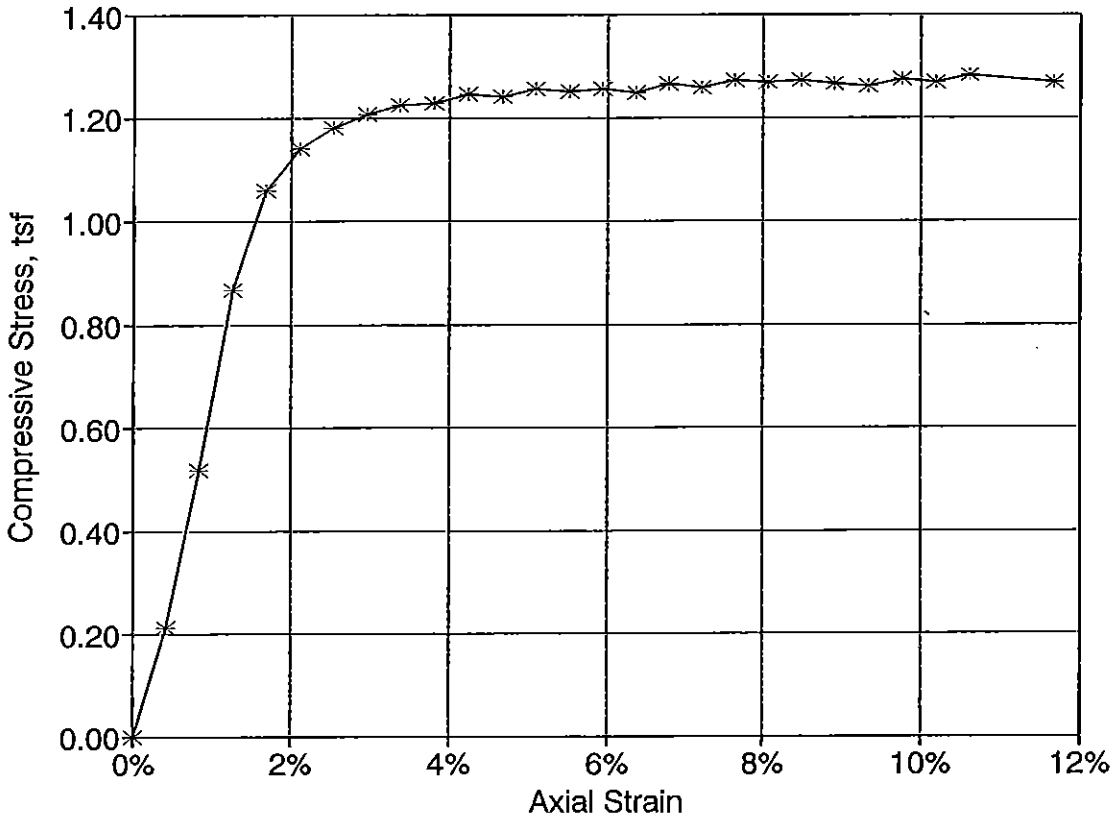
Project: Trinity River - Wallisville, Texas — Project No. 93-312G
Boring No. 93-282 — Sample No. S12 — Depth: 47-49
El. -60.78 — Date: 4/15/94
Type of specimen: undisturbed — Classification: Reddish brown and gray clay

Initial water content	36.8
Dry density, pcf	80.9
Uncon. comp. strength, tsf	1.282
Undrained shear strength, tsf	0.641
Intitial specimen diameter, in	2.871
Initial specimen height, in	4.707
Liquid limit	94
Plastic limit	29
Plasticity index	65

Failure Sketch



☐ Controlled stress ☑ Controlled stain

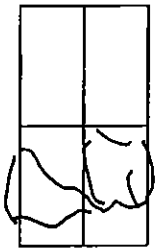


UNCONFINED COMPRESSION TEST REPORT

Project: Trinity River - Wallisville, Texas
Project No. 93-312G
Boring No. 93-282
Sample No. S14
Depth: 51-53
El. -64.78
Date: 4/15/94
Type of specimen: undisturbed
Classification: Reddish brown and gray clay

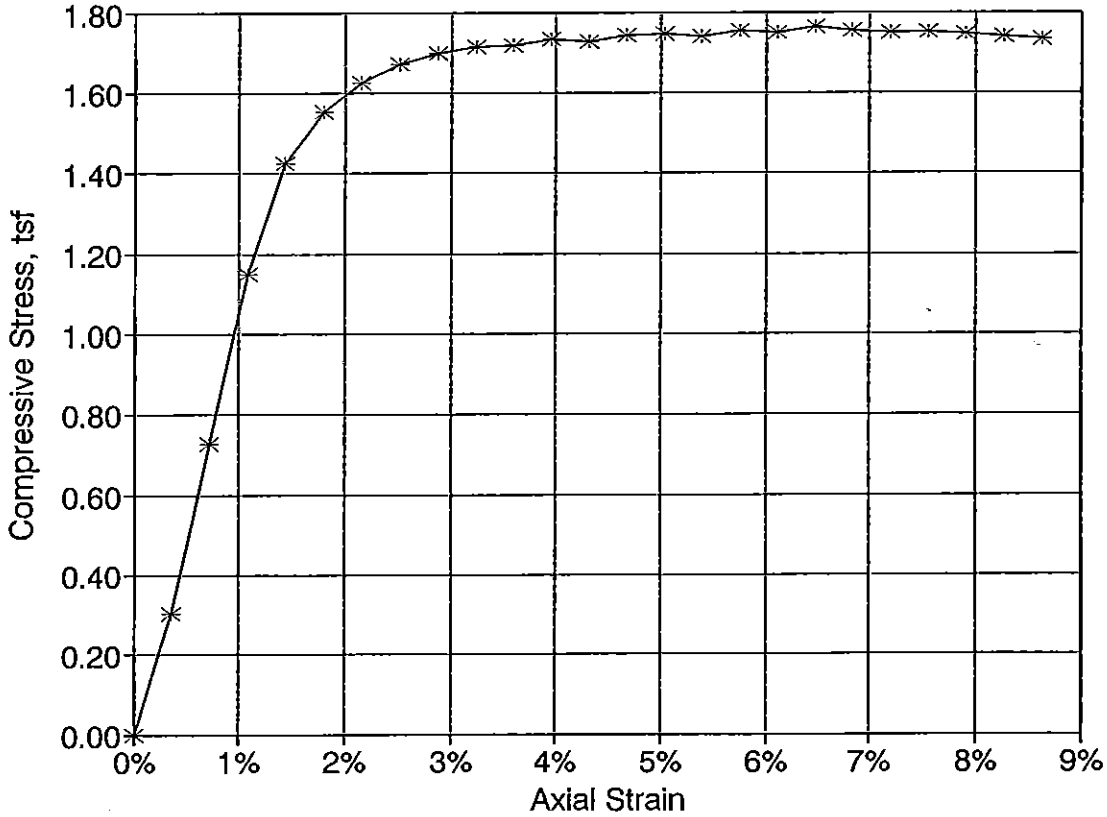
Initial water content	30.3
Dry density, pcf	92.8
Uncon. comp. strength, tsf	1.763
Undrained shear strength, tsf	0.881
Intitial specimen diameter, in	2.85
Initial specimen height, in	5.561
Liquid limit	90
Plastic limit	25
Plasticity index	65

Failure Sketch

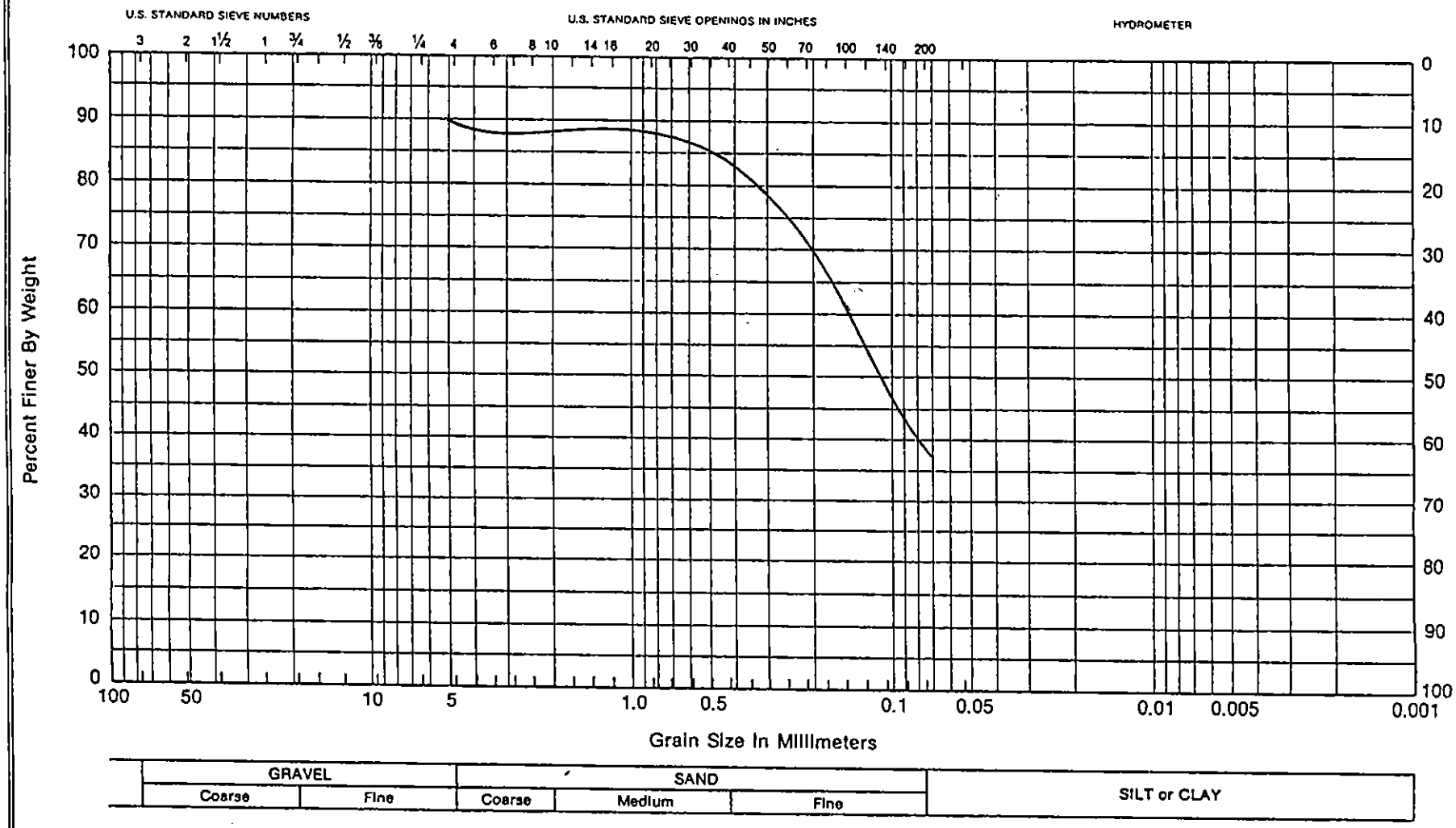


☐ Controlled stress

☑ Controlled stain

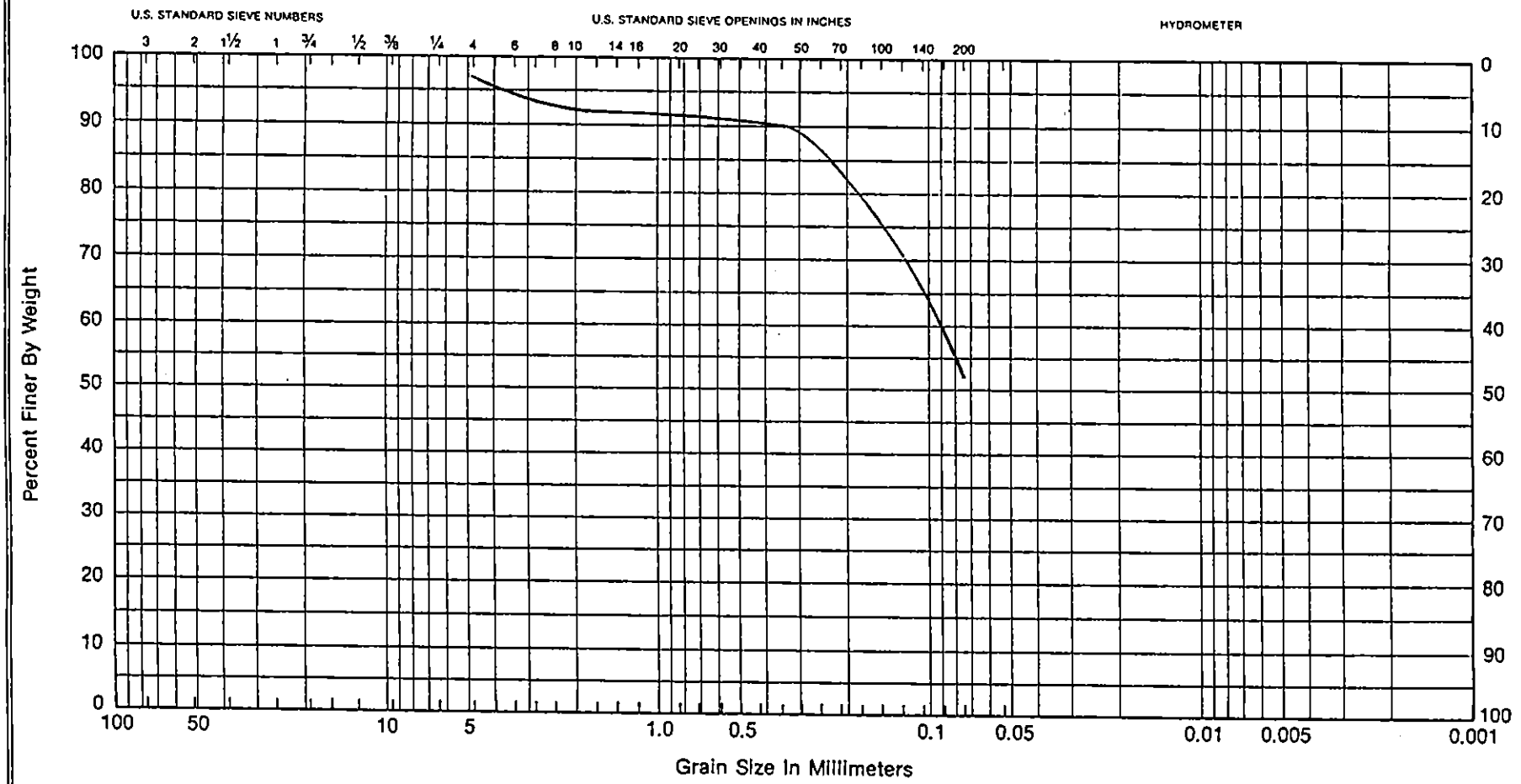


GRAIN SIZE CURVES



DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-282, S1, 0' - 2'
HVJ 93-312G
DARK GRAY SILTY SAND
WITH SHELL AND CLAY

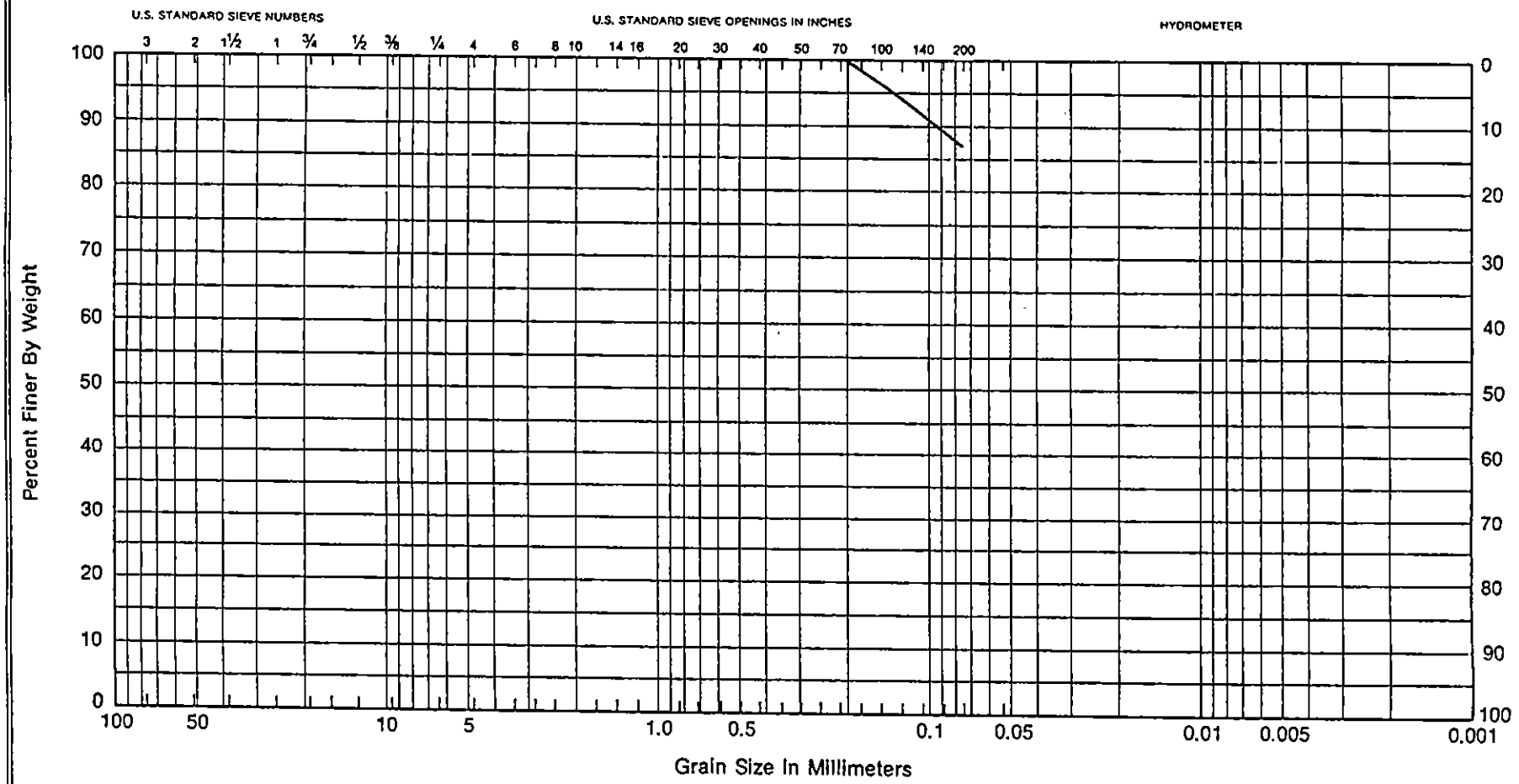
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

DACW 94-64-R-0011
WALLISVILLE RESERVOIR
93-282, S2, 2' - 4'
HVJ 93-312G
DARK GRAY SANDY CLAY
WITH SILT AND SHELL

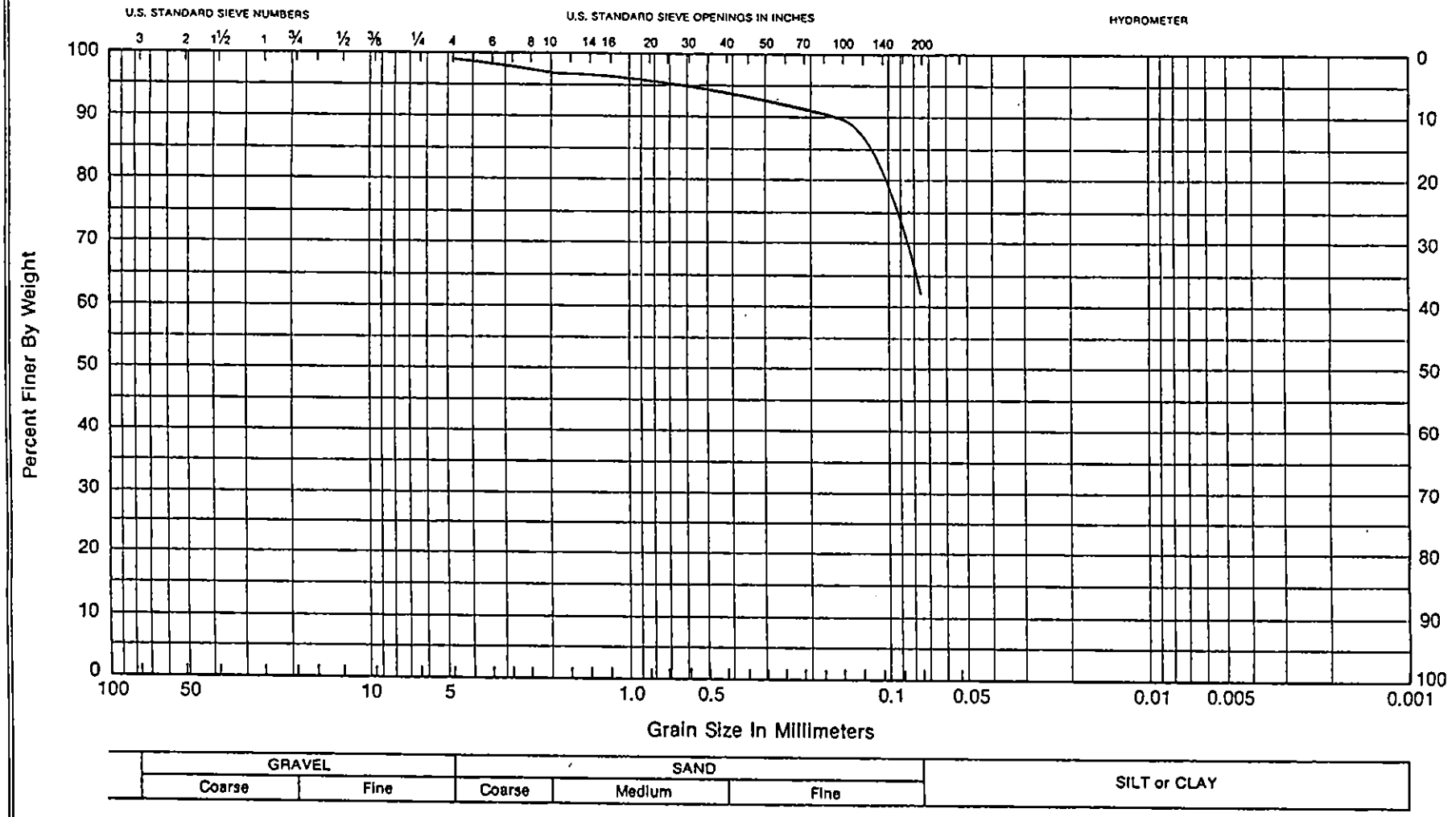
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

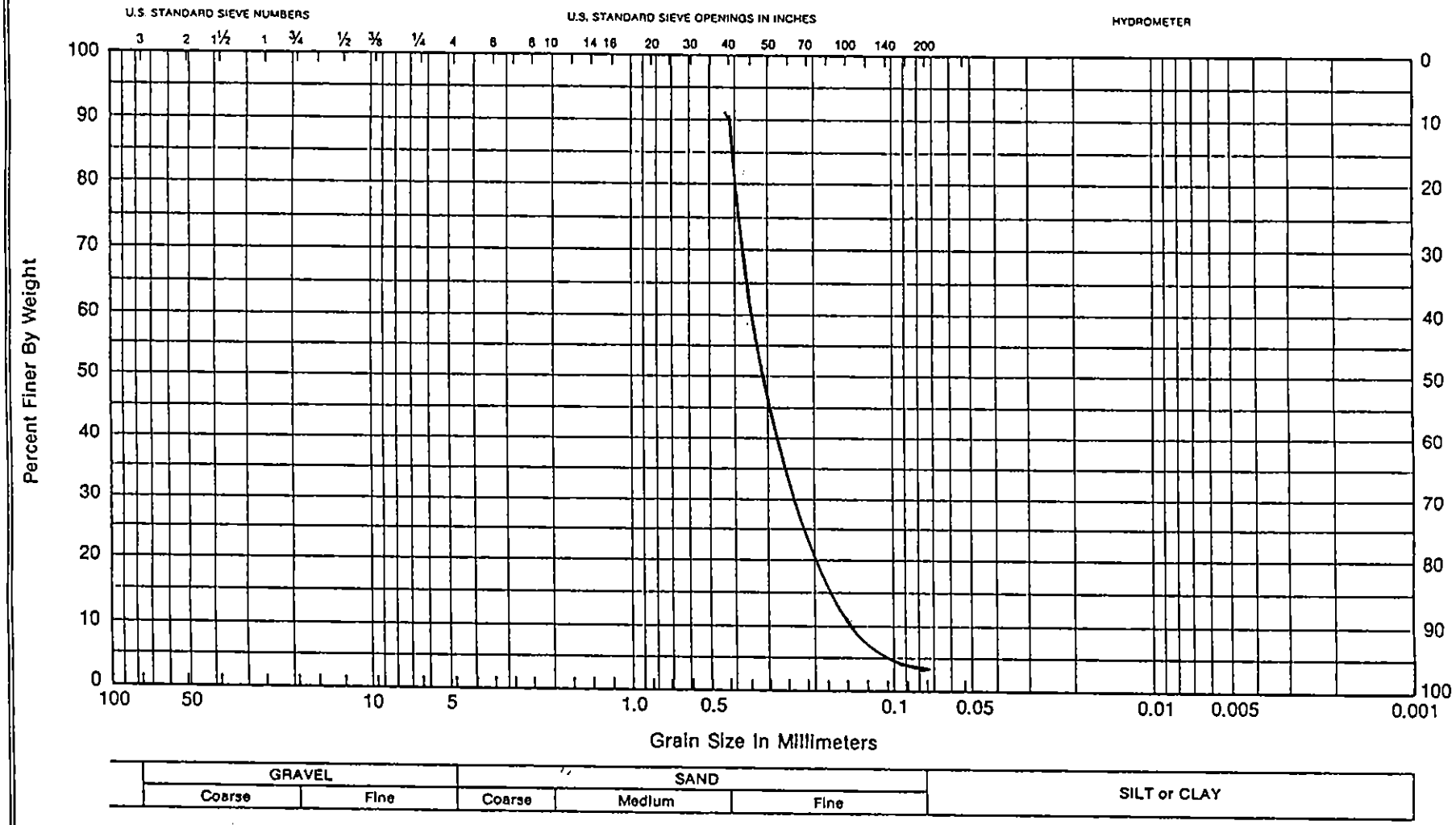
DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-282, S3, 4' - 6'
HVJ 93-312G
DARK GRAY AND TAN CLAY WITH
SAND, SILT, SAND PARTINGS
AND FERROUS NODULES

GRAIN SIZE CURVES



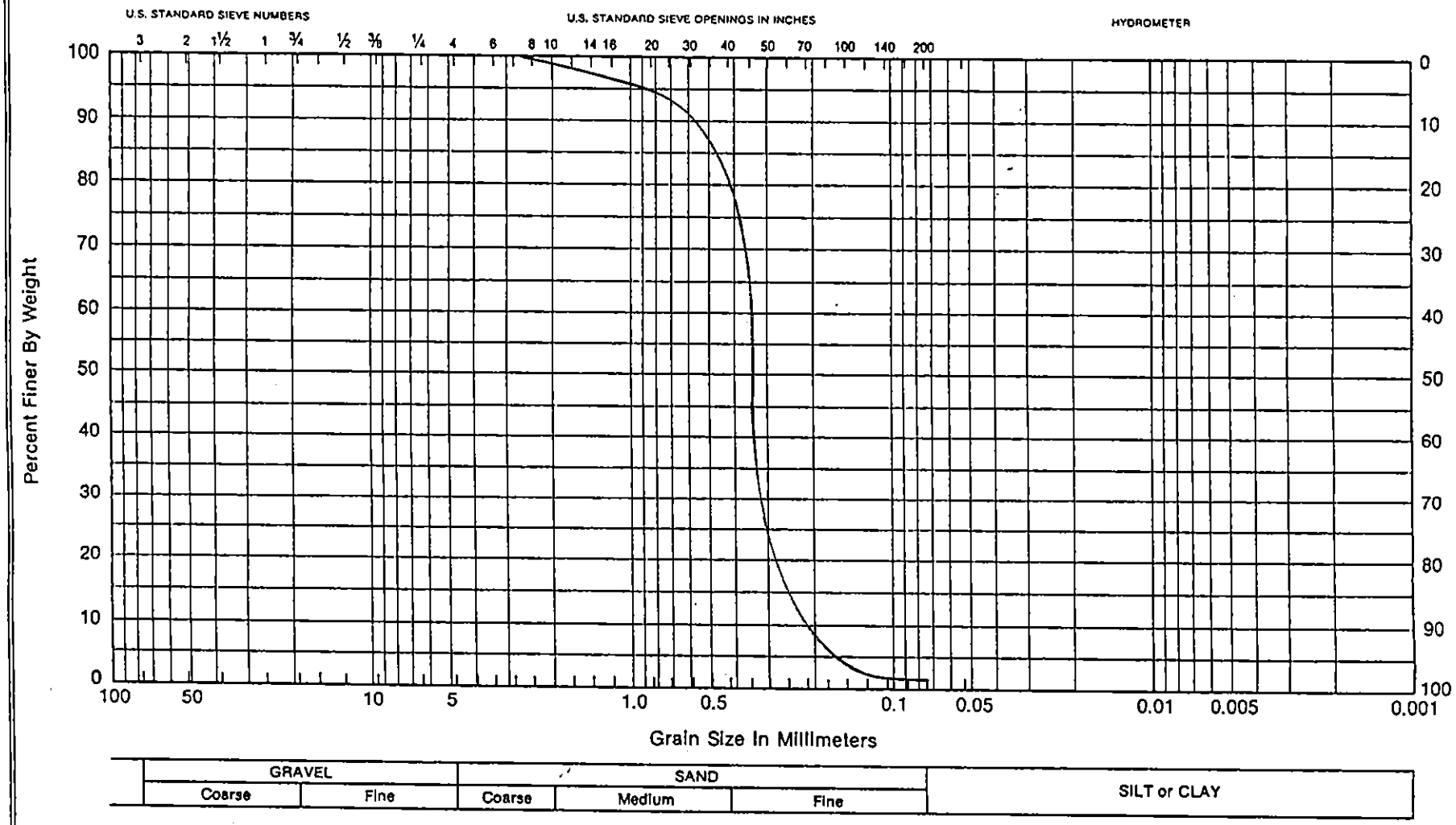
DACW 94-64-R-0011
WALLISVILLE RESERVOIR
93-282, S5, 8'- 10'
HVJ 93-312G
GRAY AND TAN SANDY CLAY WITH SILTY CLAY SEAMS, SILT, CALCAREOUS NODULES AND FERROUS NODULES

GRAIN SIZE CURVES



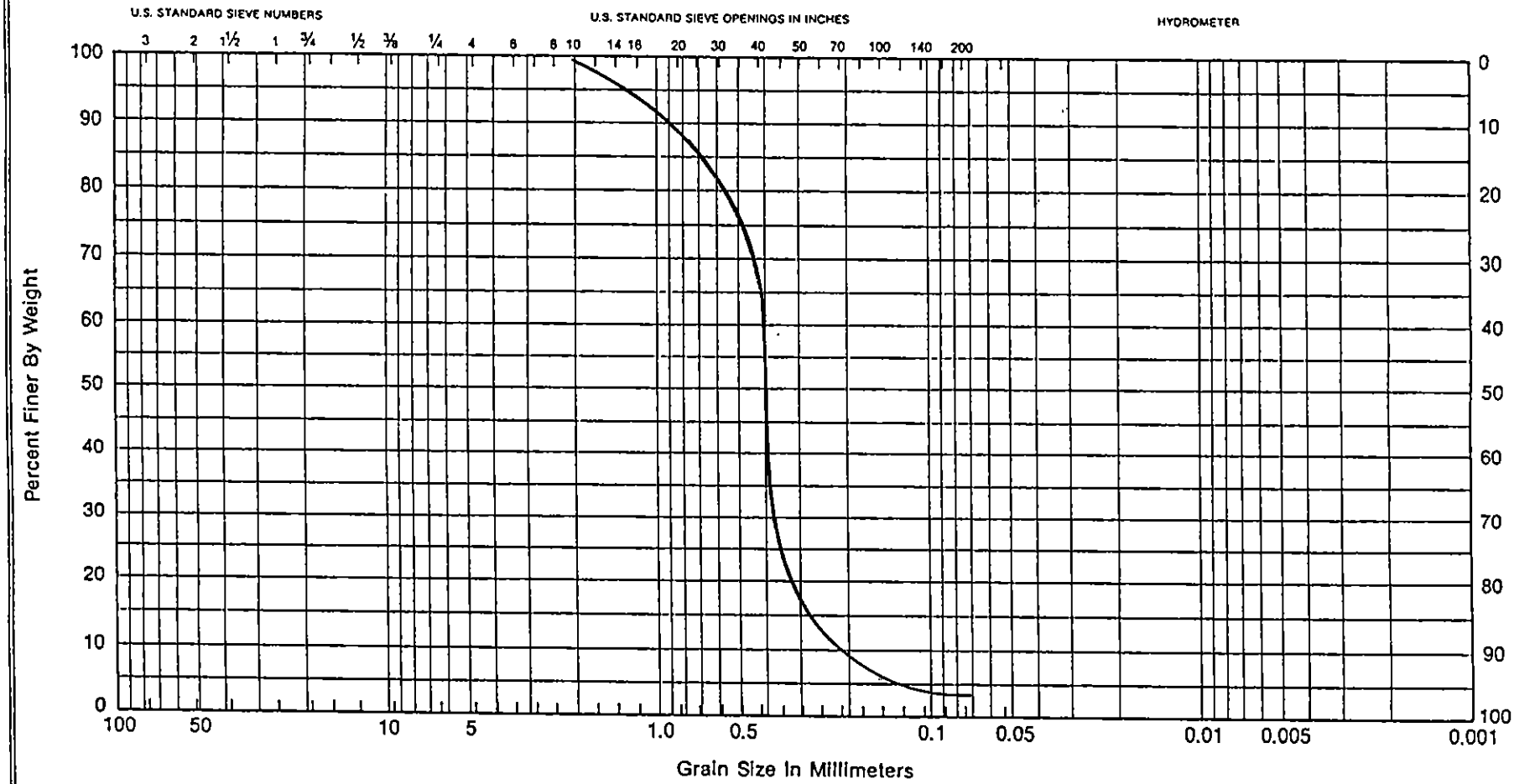
DACW 94-64-R-0011
WALLISVILLE RESERVOIR
93-282, S7, 17' - 18.5'
HVJ 93-312G
TAN COARSE SAND

GRAIN SIZE CURVES



DACW 94-64-R-0011
WALLISVILLE RESERVOIR
93-282, S8, 24' - 25.5'
HVJ 93-312G
TAN COARSE SAND

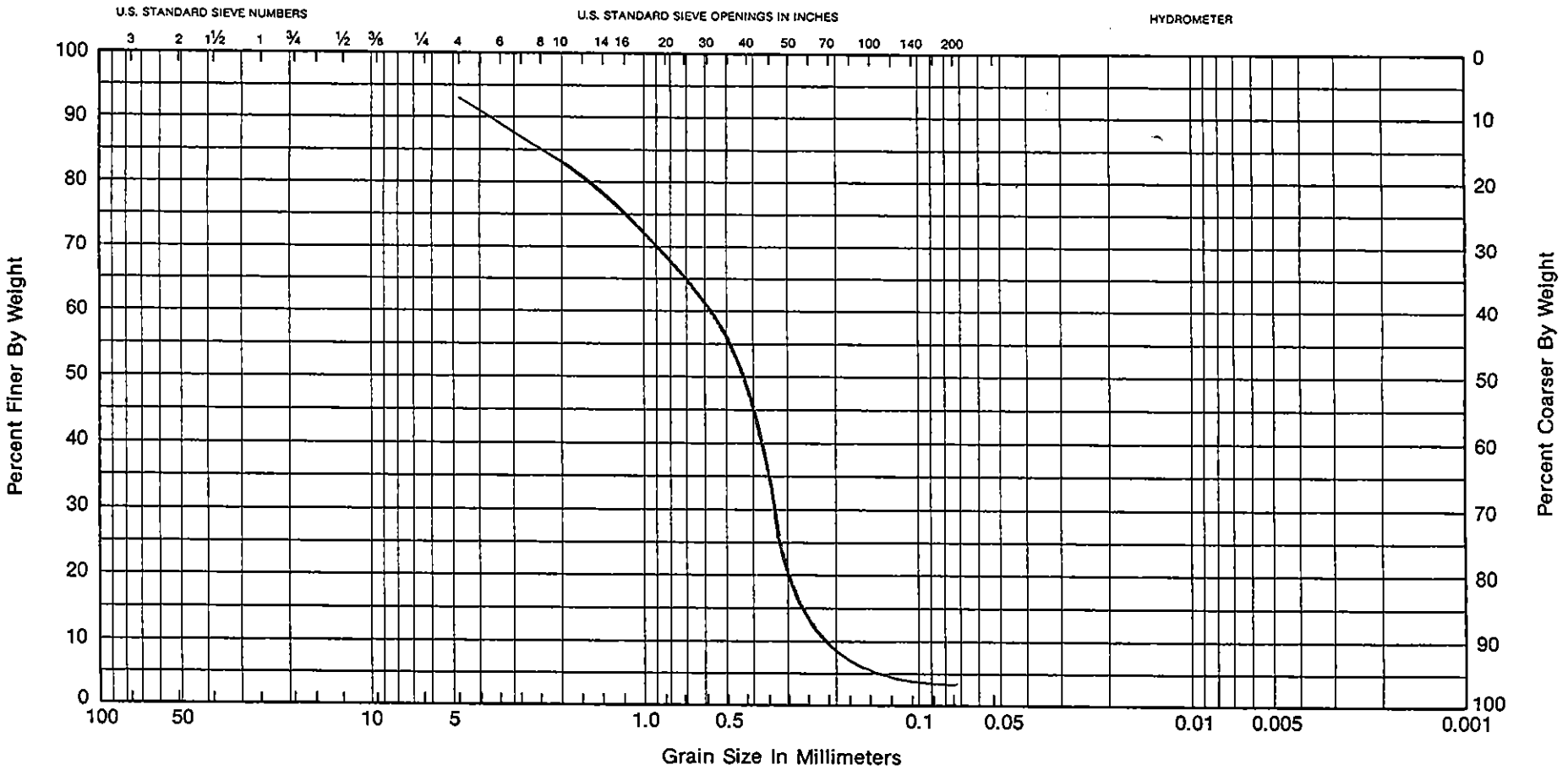
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

DACW 94-64-R-0011
WALLISVILLE RESERVOIR
93-282, S9, 31' - 32.5'
HVJ 93-312G
TAN COARSE SAND

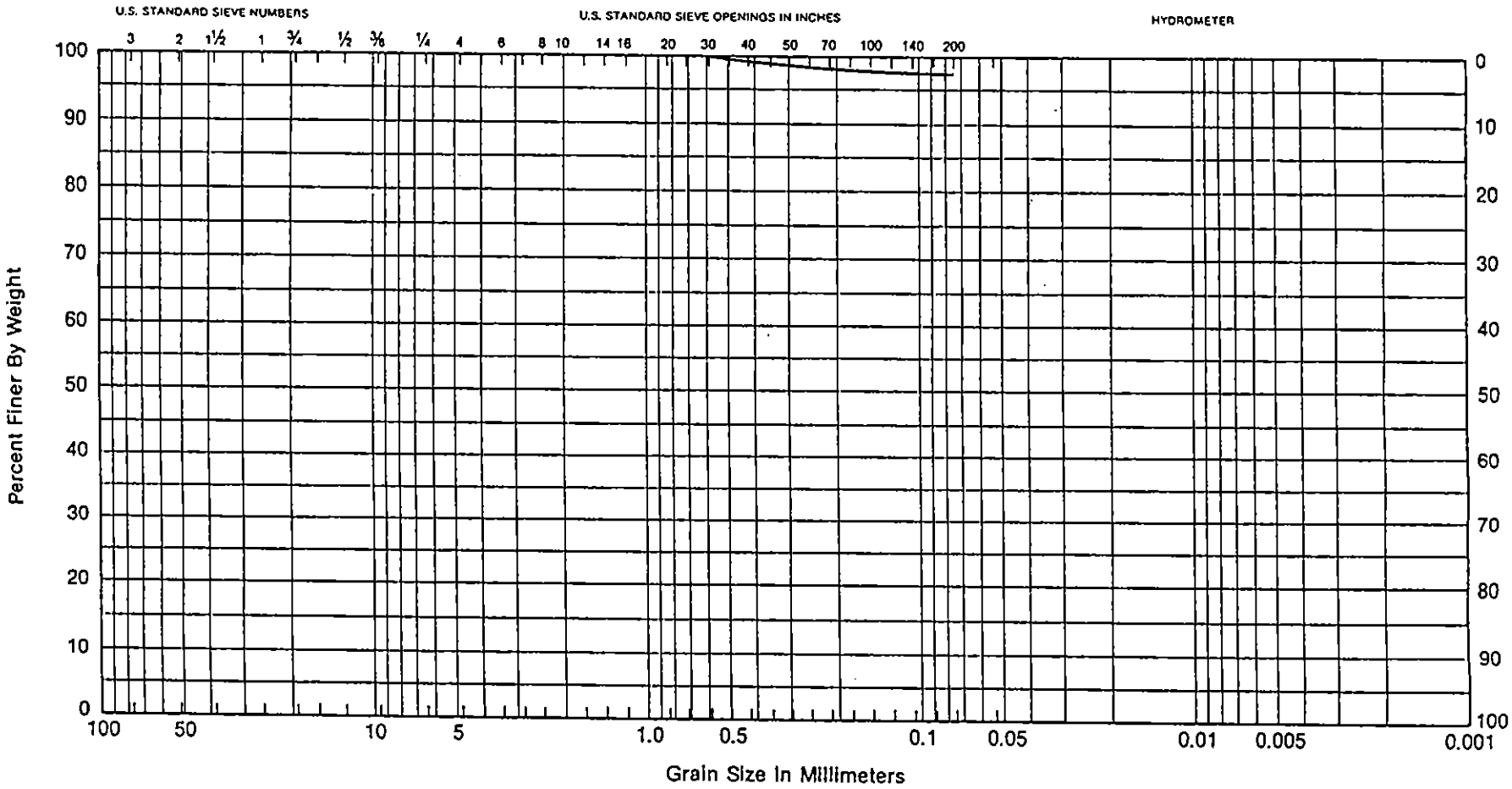
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

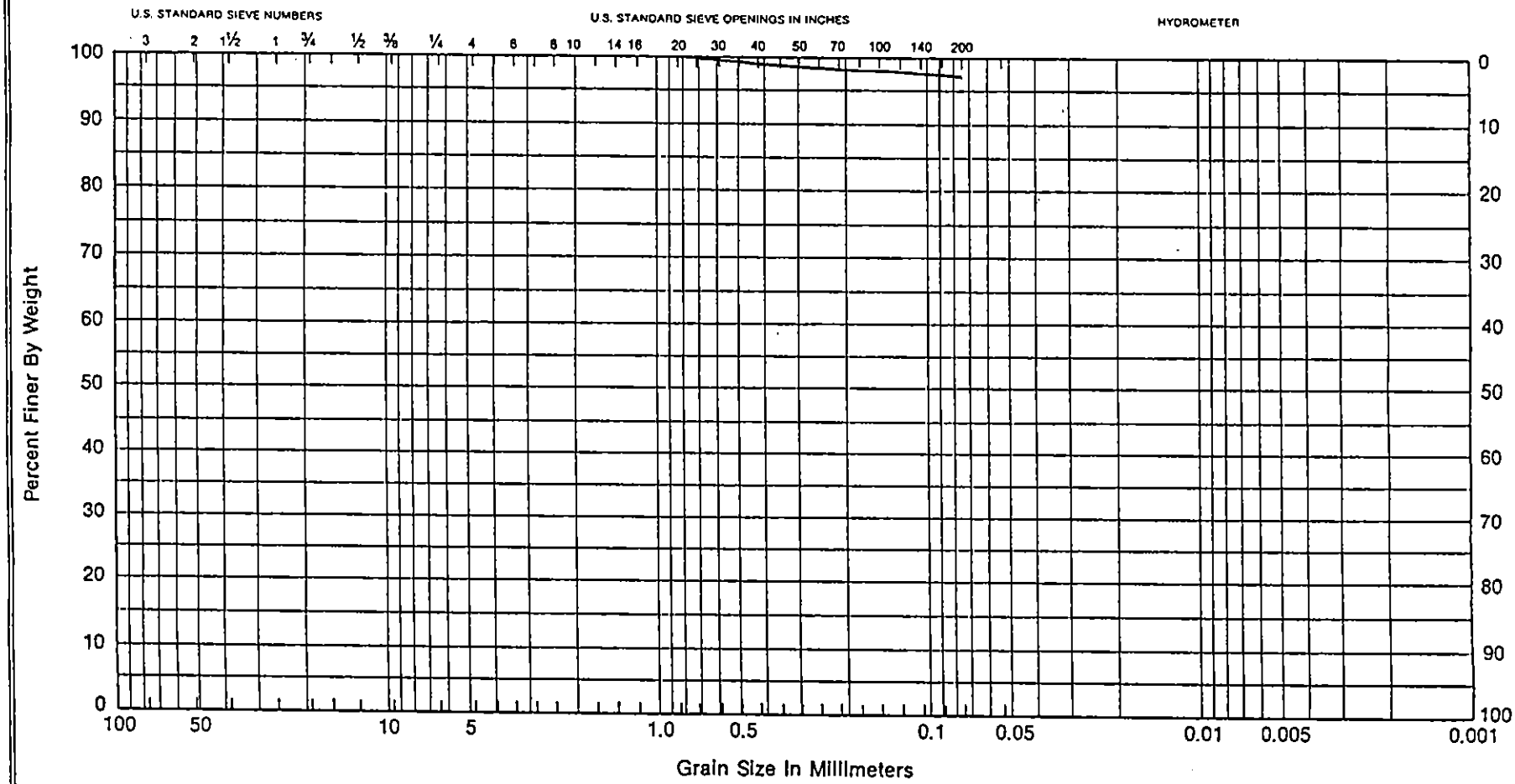
DACW 94-64-R-0011
WALLISVILLE RESERVOIR
93-282, S10, 38' - 39.5'
HVJ 93-312G
TAN AND GRAY COARSE SAND
WITH SILT AND GRAVEL

GRAIN SIZE CURVES



DACW 94-64-R-0011
WALLISVILLE RESERVOIR
93-282, S11, 45' - 46.5'
HVJ 93-312G
REDDISH BROWN AND GRAY CLAY

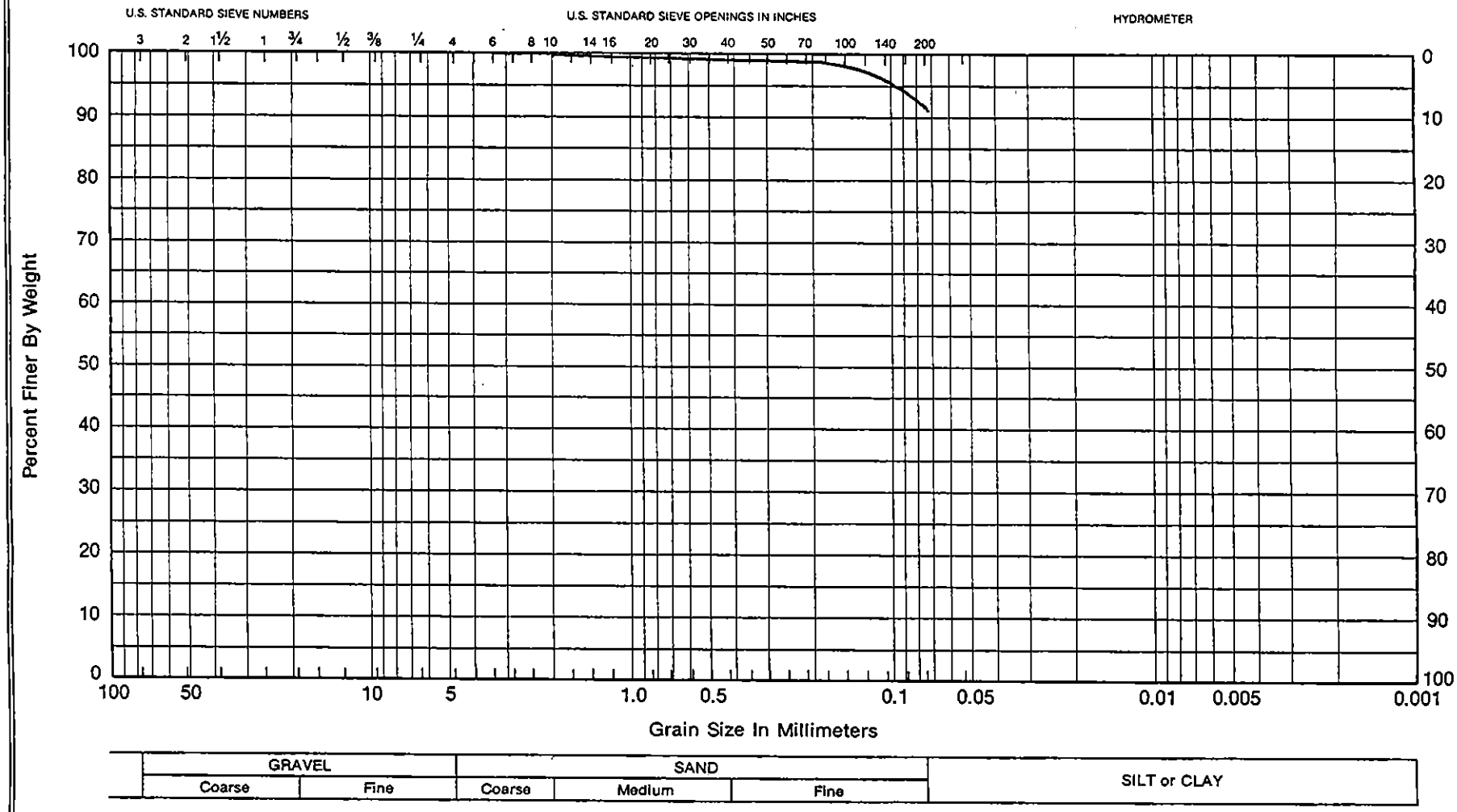
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

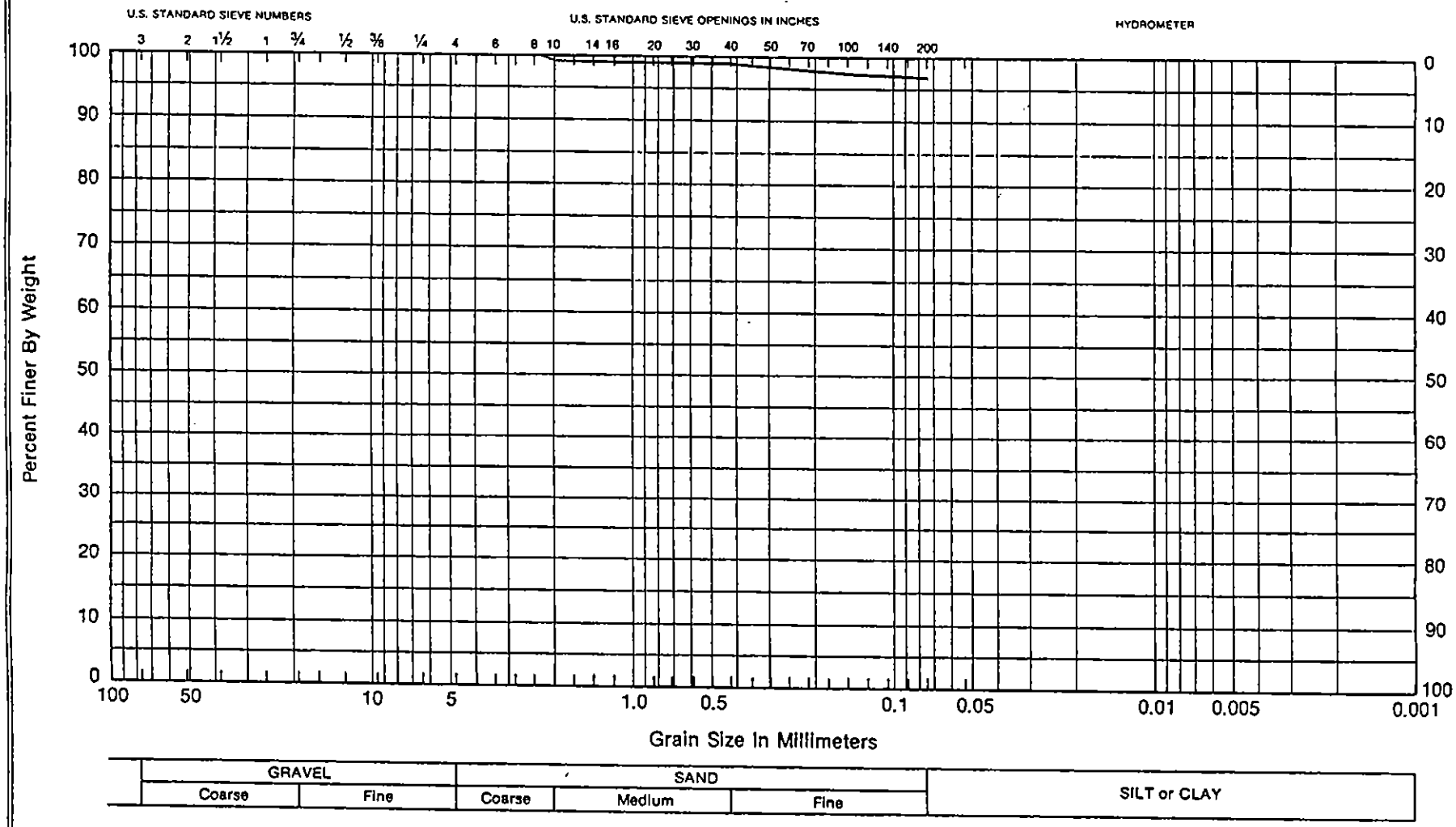
DACW 94-64-R-0011
WALLISVILLE RESERVOIR
93-282, S12, 47' - 49'
HVJ 93-312G
REDDISH BROWN AND GRAY CLAY WITH
SILT, CALCAREOUS NODULES AND FERROUS NODULES

GRAIN SIZE CURVES



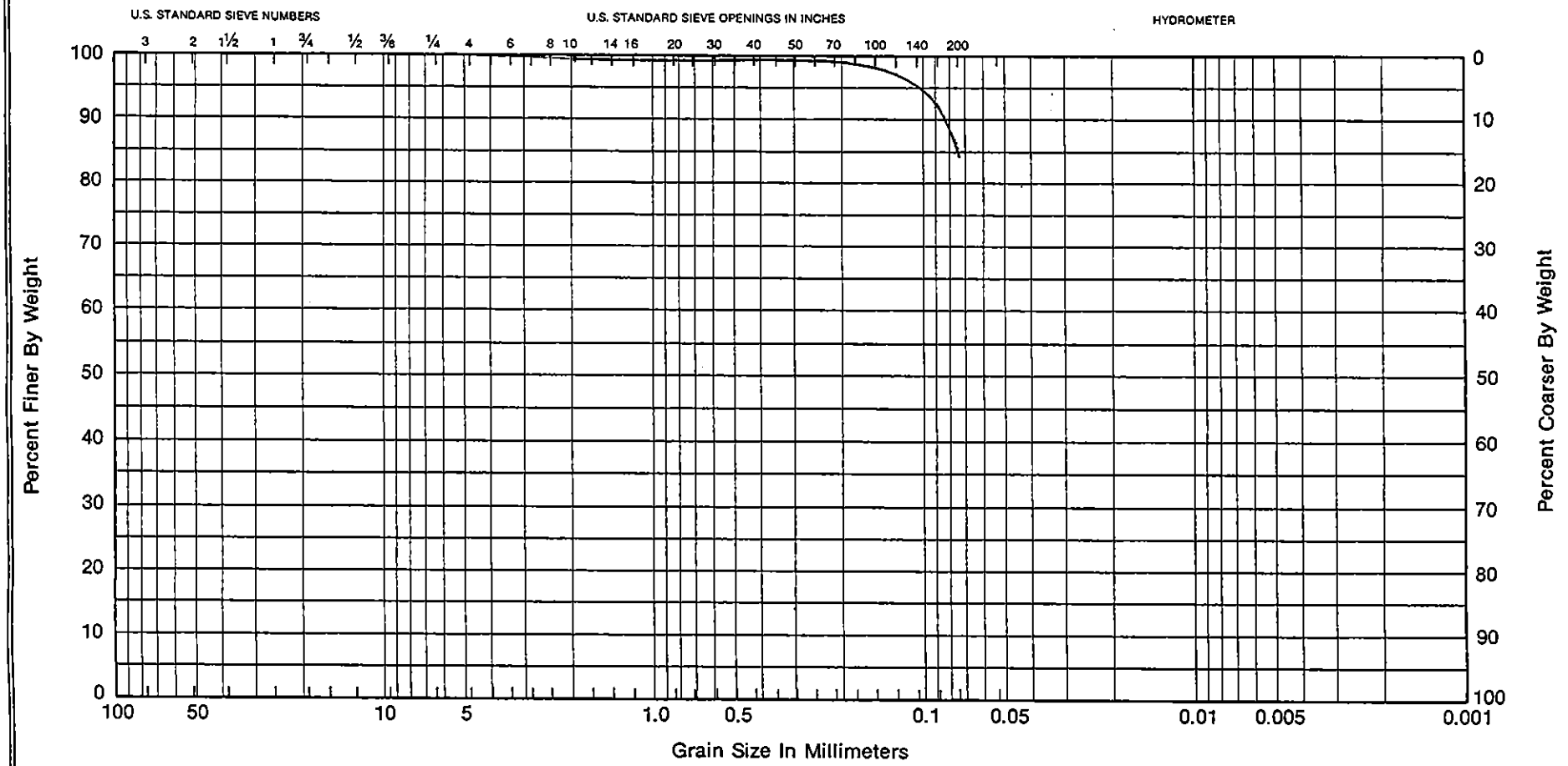
DACW 94-64-R-0011
WALLISVILLE RESERVOIR
93-282, S14, 51' - 53'
HVJ 93-312G
REDDISH BROWN AND GRAY CLAY WITH FERROUS NODULES, SILT, AND CALCAREOUS NODULES

GRAIN SIZE CURVES



DACW 94-64-R-0011
WALLISVILLE RESERVOIR
93-282, S15, 53'- 55'
HVJ 93-312G
REDDISH BROWN AND GRAY CLAY WITH
SILT, SAND POCKETS AND FERROUS NODULES

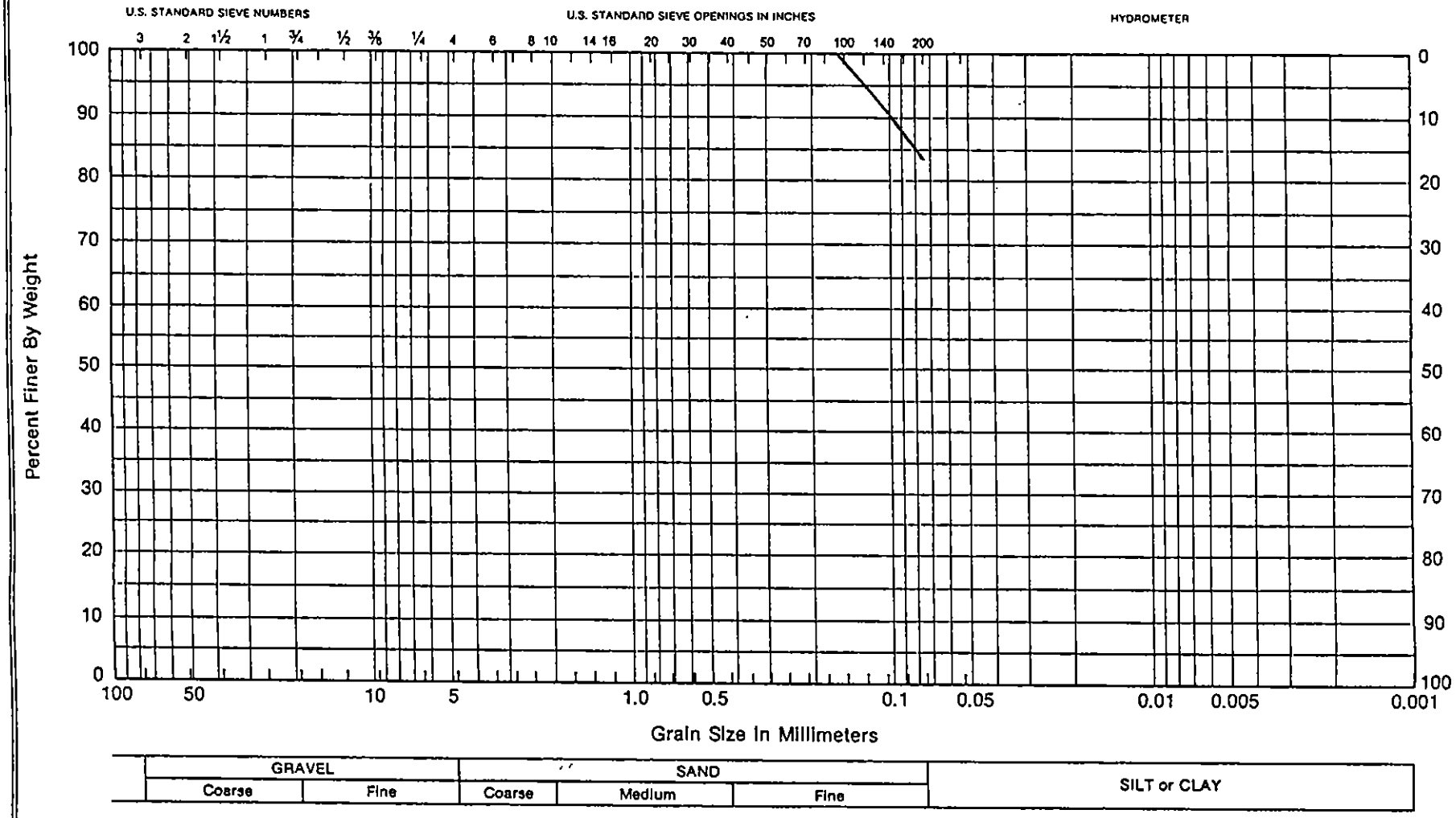
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-282, S16, 60' - 61.5'
HVJ 93-312G
TAN AND GRAY CLAY WITH SILT,
SAND PARTINGS AND FERROUS NODULES

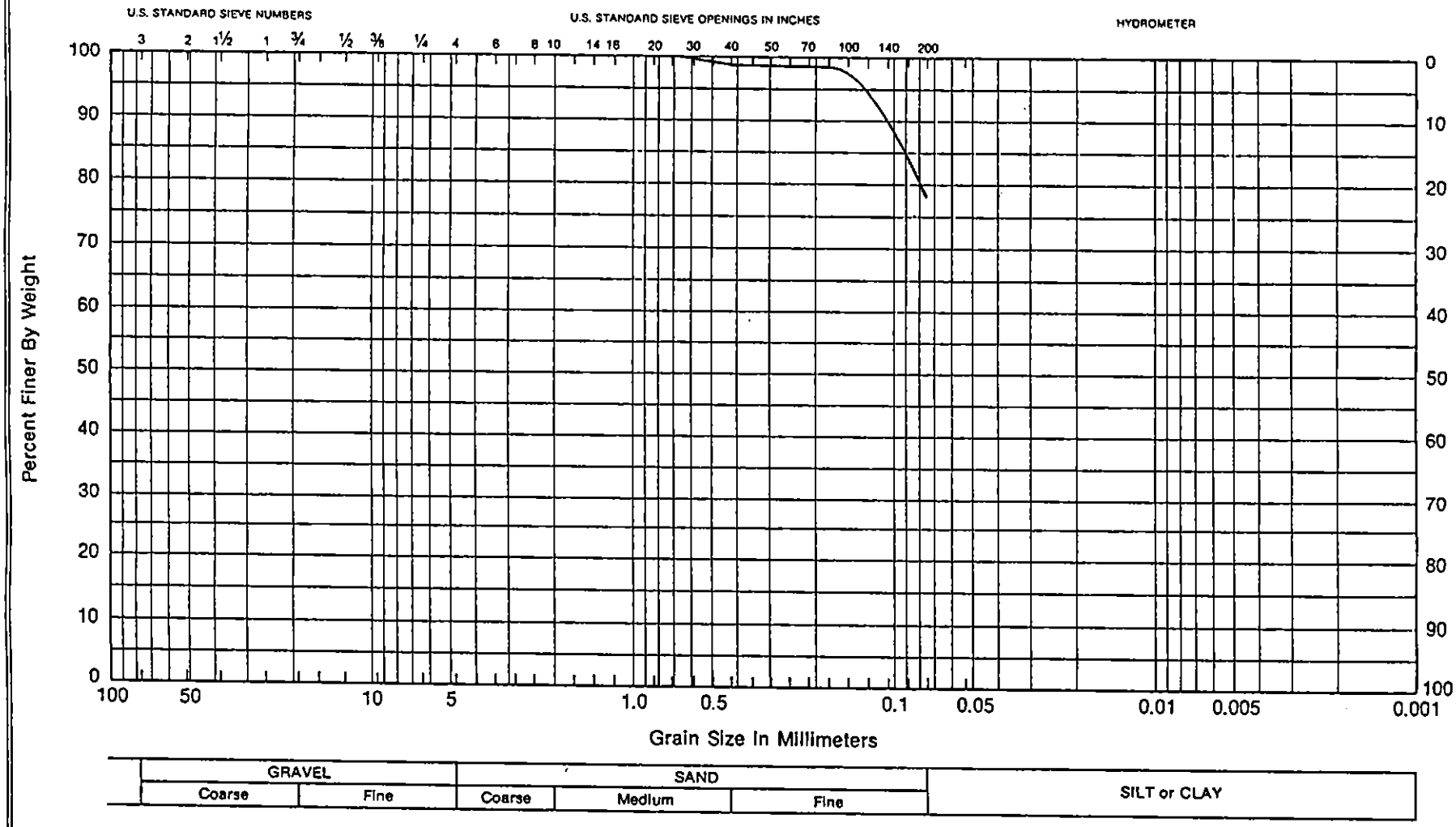
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-282, S17, 67' - 68.5'
HVJ 93-312G
TAN AND GRAY SILTY CLAY WITH
SAND AND SAND PARTINGS

GRAIN SIZE CURVES



DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-282, S18, 74' - 75.5'
HVJ 93-312G
TAN AND GRAY SILTY CLAY WITH
SAND AND SAND PARTINGS