FIELD BORING LOG

Project Name: TRINITY RIVER - WALLISVILLE, TEXAS		Project No. 93-312 G
Location: TRINITY RIVER		Client: ARMY CORP. OF ENGI
Boring No.: 93-274	Date Started: 3-2-94	El. of River: + 2.447
Water Depth: 10-35'	Date Completed: 3-3-94	Easting: 3,353,610.~~00~~ 74
Time Started: 13:00	Northing: 744,321.06	Driller: PAT STEPHENS
Time Completed: 1555	Logger: D. CANADA	Depth to caving:
Rig: MOBIL B-61	Weather: CHOPPY - WATER 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/ ~~SIL.~~ Cl PKTS	SP				~~.5~~	~~.5~~
				NO RECOVERY (CAVED IN)						
5	S2	P	X	DENSE GR. TA. SA.	SP	10	23	16		
10	S3	P	X	MED DENSE GR SA	SP	3	8	14		
15	S4	P	X	LOOSE GR SA W/ SIL SA	SP	3	4	4		
	S5	L		medium stiff GR TAN ~~SL~~ SA Cl	CL ~~SC~~				.7	1.5
	S6	J		medium stiff GR. TA: ~~SL. SA~~ SA Cl	Cl ~~SC~~					1.0 ~~2.5~~
20	S7	P	X	VERY LOOSE GR. TA. SA.	SP	2/18"				
25	S8	P	X	MEDIUM DENSE GR. TA. SA	SP	10	10	20		
30	S9	P	X	MEDIUM DENSE GR. SA.	SP	2	7	21		

FIELD BORING LOG

Boring No.: 93-274

DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLES	SOIL DESCRIPTION	SOIL CLASSIFICATION	BLOWS/6"	BLOWS/6"	BLOWS/6"	TORVANE CTSP	HAND PENETROMETER CTSP
30	S9	P	X	MEDIUM DENSE GR. SA. →	SP	2	7	21		
				LOOSE GR. TA SA. →	SP	7	4	3		
35	S10	P	X							
				Medium Stiff Cl	CH					
40	S11	P	X	~~LOOSE~~ TA. GR ~~SIL. CL~~	~~CL~~	7	6	9		
	S12	S		V/STIFF TA. GR ~~SIL~~ CL	CH ~~CL~~				~~.9~~	2.75
	S13	S		V ~~MED.~~ STIFF TA. LT. GR ~~SIL.~~ CL. w/SI w/CAL.	CH				~~.6~~	2.75
(S) 45	S14	S		Stiff ~~SOFT~~ TA. LT. GR. SIL. CL. w/FER	CL				.3	2.0
	S15	S		~~MED.~~ STIFF TA. LT. GR. SIL. CL. ~~SA~~ →	CL				.57	2.5
(S B) 50	S16	S		V/ ~~MED.~~ STIFF TA. GR. SIL. CL. ~~SA~~ →	CL				.65	2.25
	S17	P	X	Hard ~~VERY DENSE~~ TA. GR. SA. CL. w/CAL	CL	20	35	47		
	S18	S		V/ ~~MED.~~ STIFF TA. GR. SA. CL. w/FER.	CL				.6	3.25
(S) 55	S19	S		medium stiff ~~SOFT~~ TA. GR. SA. CL →	CL ~~SM~~				.15	1.00
	S20	S		LT. GR. SA →	SP					
	S21	P	X	LT. GR. SA. →	SP	7 - 50/4				
60				V/dense						
	S22	P	X	VERY DENSE LT. GR. SA. →	SP	25	44	45		
65	S23	P	X	Hard ~~DENSE~~ TA. LT. GR SA. CL	CL ~~SC~~	6	24	24		
AMAGE CHELSY TUBE	S24	J		V/stiff SiY TA. LT. GR. ~~SA~~ CL →	CL ~~SC~~				.2	2.25
70	S25	P	X	VERY DENSE TA. LT. GR. SA. →	SC	31	35	40		

(S) - SHORT SAMPLE

(B) - BROKEN SAMPLE

FIELD BORING LOG

Boring No.: 93-274

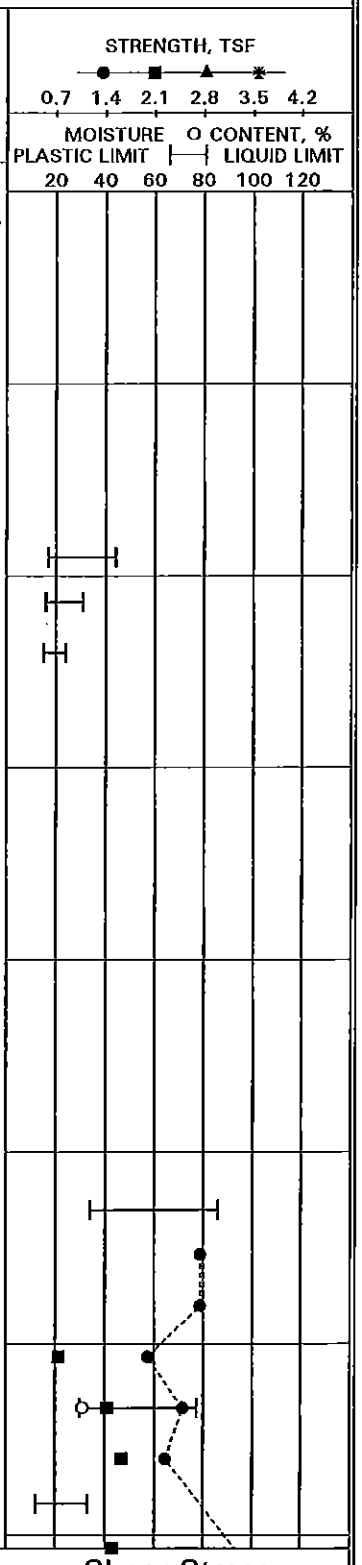
DEPTH	SAMPLE NO.	SAMPLE TYPE	SAMPLES	SOIL DESCRIPTION	SOIL CLASSIFICATION	BLOWS/6"	BLOWS/6"	BLOWS/6"	TORVANE	HAND PENETROMETER
70										
	S26	P	X	DENSE TA. LT. GR. CL. SA	SC	21	19	25		
75										
80										
85										
90										
95										
100										
105										
110										

LOG OF SOIL BORING

Project Name: Trinity River Soil Borings
Project No. 93-312G
ring No.: 93-274
ud Line Elevation: -7.9 feet (NGVD)
Completion Depth: 75 feet
Water Depth: 10.35 feet

Weather: Choppy water, windy
Date: March 2, 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
0		Gray and tan SAND w/ shell		100	100	91	7	4	113
-10		no recovery 2'-3.5'							
-5		dense w/ calcareous nodules 3.5'-5'	39	100	100	97	6	3	
-15		medium dense, gray w/ gravel below 8.5'	22	100	99	80	8	4	
-10									
-20		Loose dark gray CLAYEY SAND	8	100	97	89	52	33	
-15		w/ sand pockets below 15'		100	100	99	59	36	113
-25		gray and tan below 17'		100	100	99	71	42	
-20		Very loose tan and gray SAND	2/ 18"	100	100	96	26	8	
-30									
-25		medium dense w/ gravel below 24'	30	98	96	72	11	4	
-35									
-30		tan below 29'	28	100	100	54	1	0	
-40									
-35		loose below 34'	7	100	99	79	4	1	
-45									
-40		Stiff to very stiff brown and gray CLAY w/ slickensides	15	100	100	97	96	96	
-50		w/ ferrous nodules to 40.5'							
-45									
-55		w/ calcareous nodules, sand partings, and silt stones 46.5'-48.5'		100	100	99	98	97	92
-50									
		Hard gray and tan SANDY CLAY w/ silt, sand partings, and gravel	82	100	97	83	72	59	



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

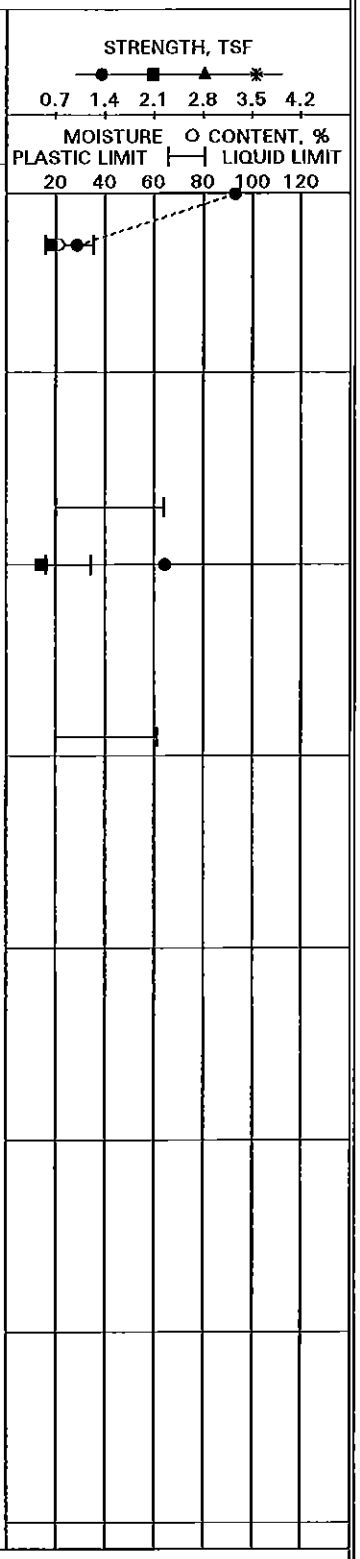
Plate 6A

LOG OF SOIL BORING

Project Name: Trinity River Soil Borings
Project No. 93-312G
ring No.: 93-274
ud Line Elevation: -7.9 feet (NGVD)
Completion Depth: 75 feet
Water Depth: 10.35 feet

Weather: Choppy water, windy
Date: March 2, 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
55		medium stiff w/ ferrous nodules and sand pockets below 54'		100	100	99	98	70	106
-65		Gray SILTY SAND		100	100	100	99	37	
60		very dense below 58' w/ gravel 58'-59.5'	50/4"	99	99	99	97	29	
-70			89	100	100	100	91	39	
65		Hard brown and gray CLAY w/ silt, silt partings, calcareous and ferrous nodules	48	100	100	99	99	98	
-75		Very stiff tan and gray SILTY CLAY		100	100	99	98	87	
70		Hard tan and gray SANDY CLAY w/ silt	75	100	100	99	98	69	
75		Hard brown and gray CLAY w/ silt, slickensides, and ferrous nodules	44	100	100	98	96	91	
-85									
80									
-90									
85									
-95									
90									
100									
95									
105									
100									
110									
105									



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

Plate 6B

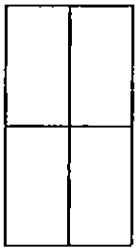
HVJ ASSOCIATES, INC.

UNCONFINED COMPRESSION TEST REPORT

Project: Trinity River - Wallisville, Texas
Project No. 93-312G
Boring No. 93-274
Sample No. S15
Depth: 46.5-48.5
El. -54.40
Date: 4/15/94
Type of specimen: undisturbed
Classification: Brown and gray clay

Initial water content	31.2
Dry density, pcf	91.8
Uncon. comp. strength, tsf	
Undrained shear strength, tsf	
Intitial specimen diameter, in	2.851
Initial specimen height, in	1.079
Liquid limit	77
Plastic limit	30
Plasticity index	47

Failure Sketch



☐ Controlled stress

☐ Controlled stain

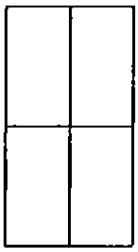
Sample could not be tested.

UNCONFINED COMPRESSION TEST REPORT

Project: Trinity River - Wallisville, Texas
Project No. 93-312G
Boring No. 93-274
Sample No. S19
Depth: 54-56
El. -61.90
Date: 4/15/94
Type of specimen: undisturbed
Classification: Gray and tan sandy clay

Initial water content	21.0
Dry density, pcf	105.8
Uncon. comp. strength, tsf	
Undrained shear strength, tsf	
Intitial specimen diameter, in	2.841
Initial specimen height, in	3.357
Liquid limit	35
Plastic limit	16
Plasticity index	19

Failure Sketch

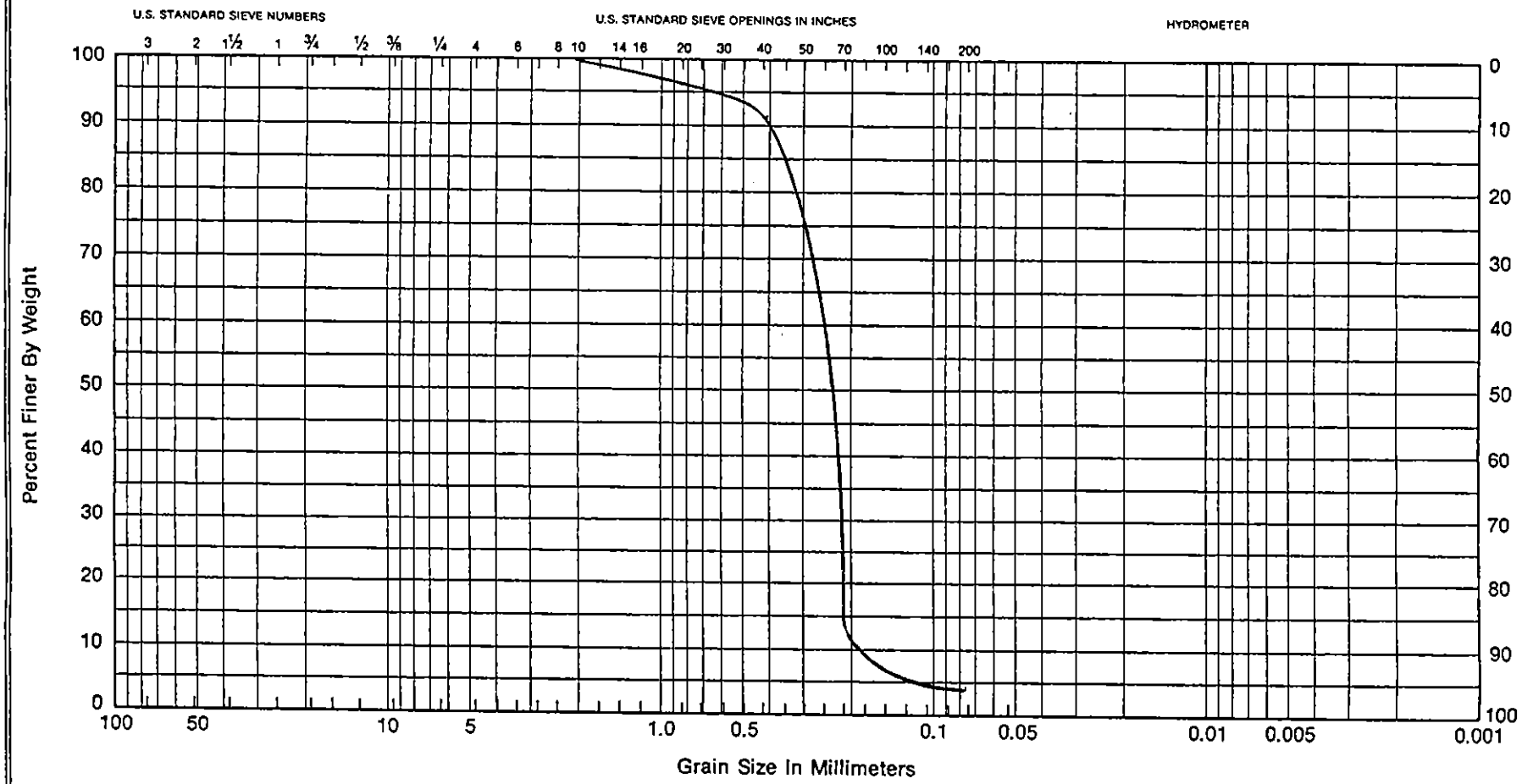


☐ Controlled stress

☐ Controlled stain

Sample could not be tested.

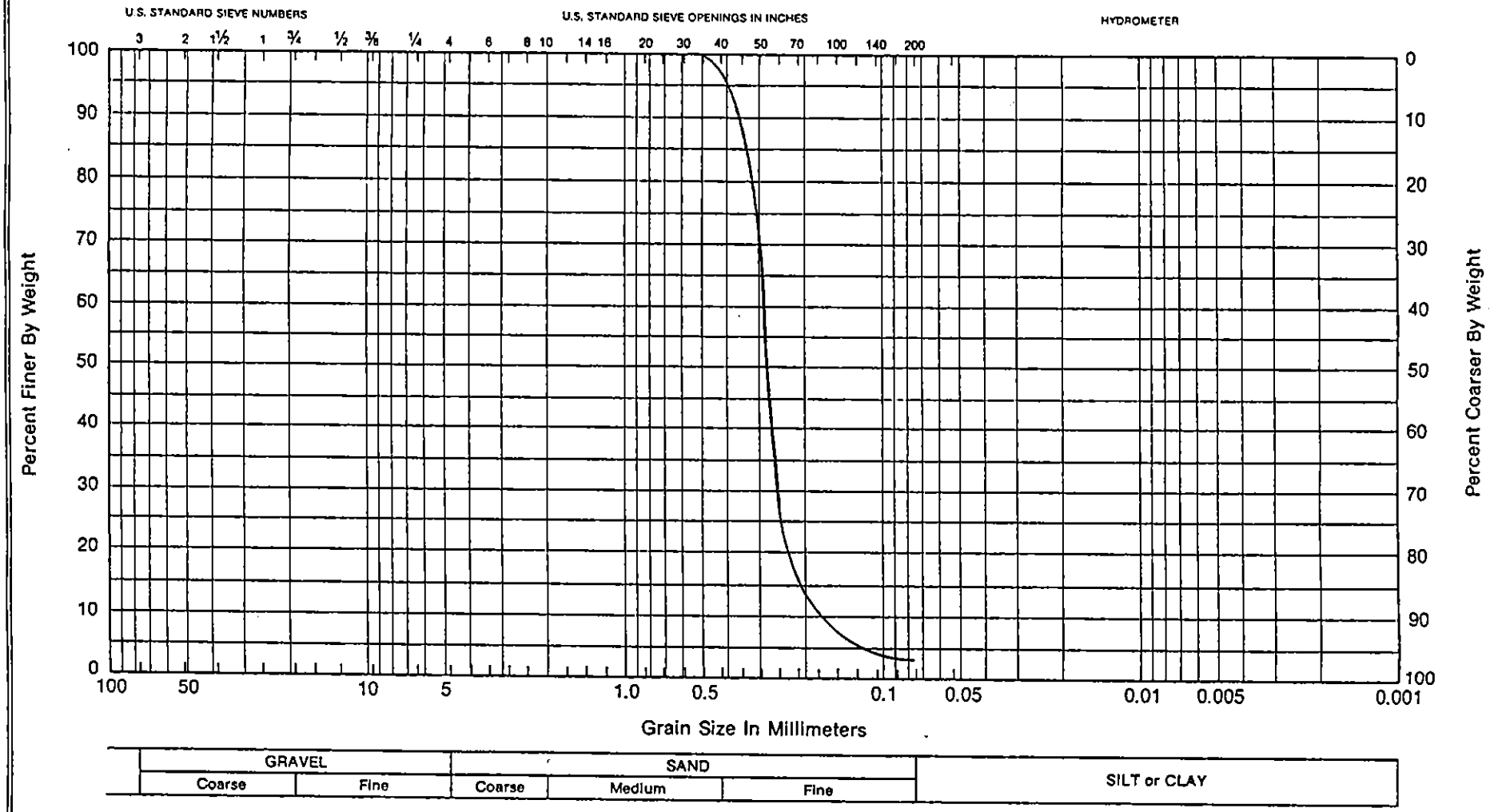
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

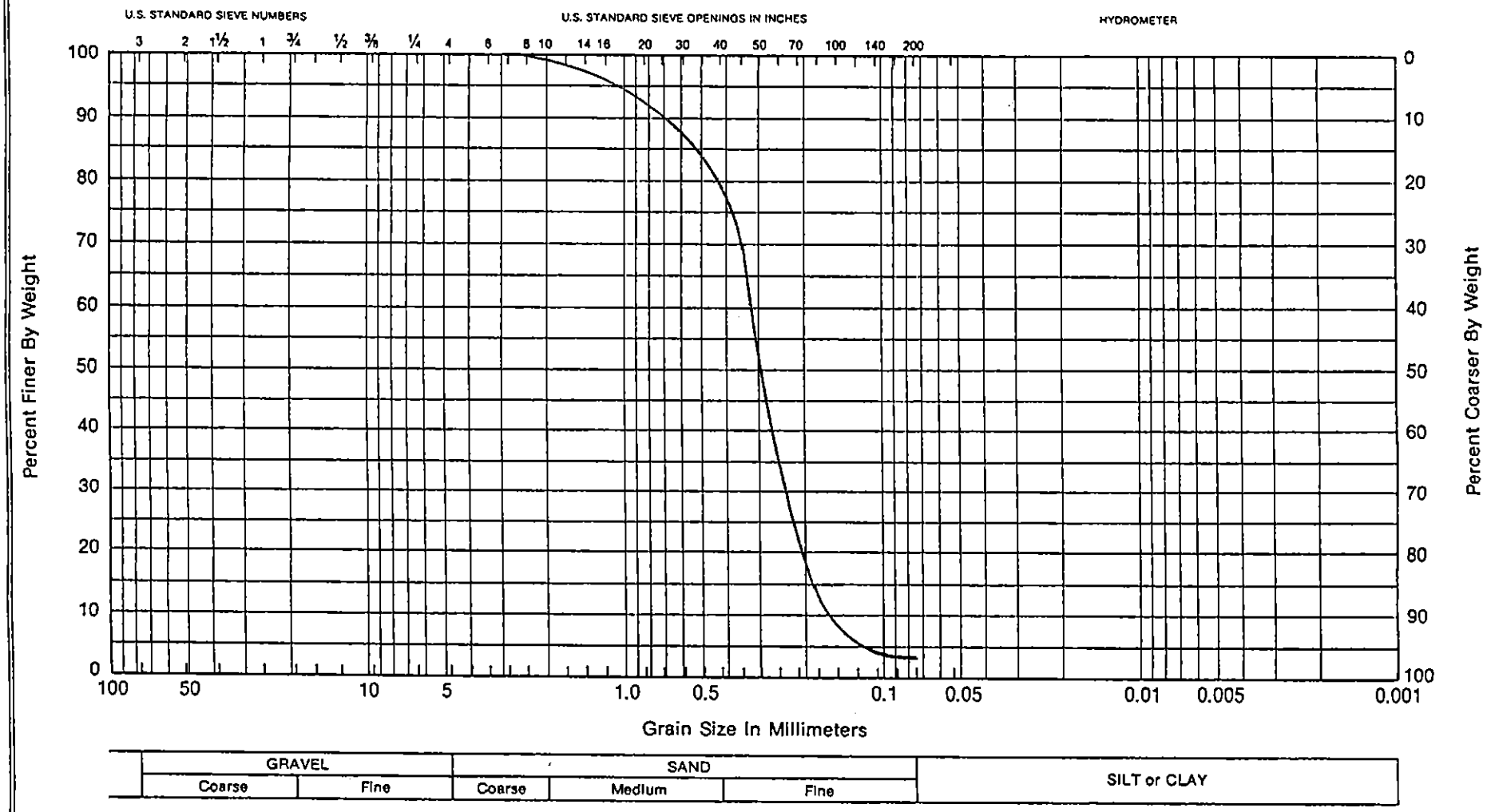
DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S1, 0' - 2'
HVJ 93-312G
GRAY AND TAN SAND WITH
CLAY SEAMS AND SHELL

GRAIN SIZE CURVES



DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S2, 3.5' - 5'
HVJ 93-312G
TAN AND GRAY SAND WITH CLAY
CLUMPS AND CALCAREOUS NODULES

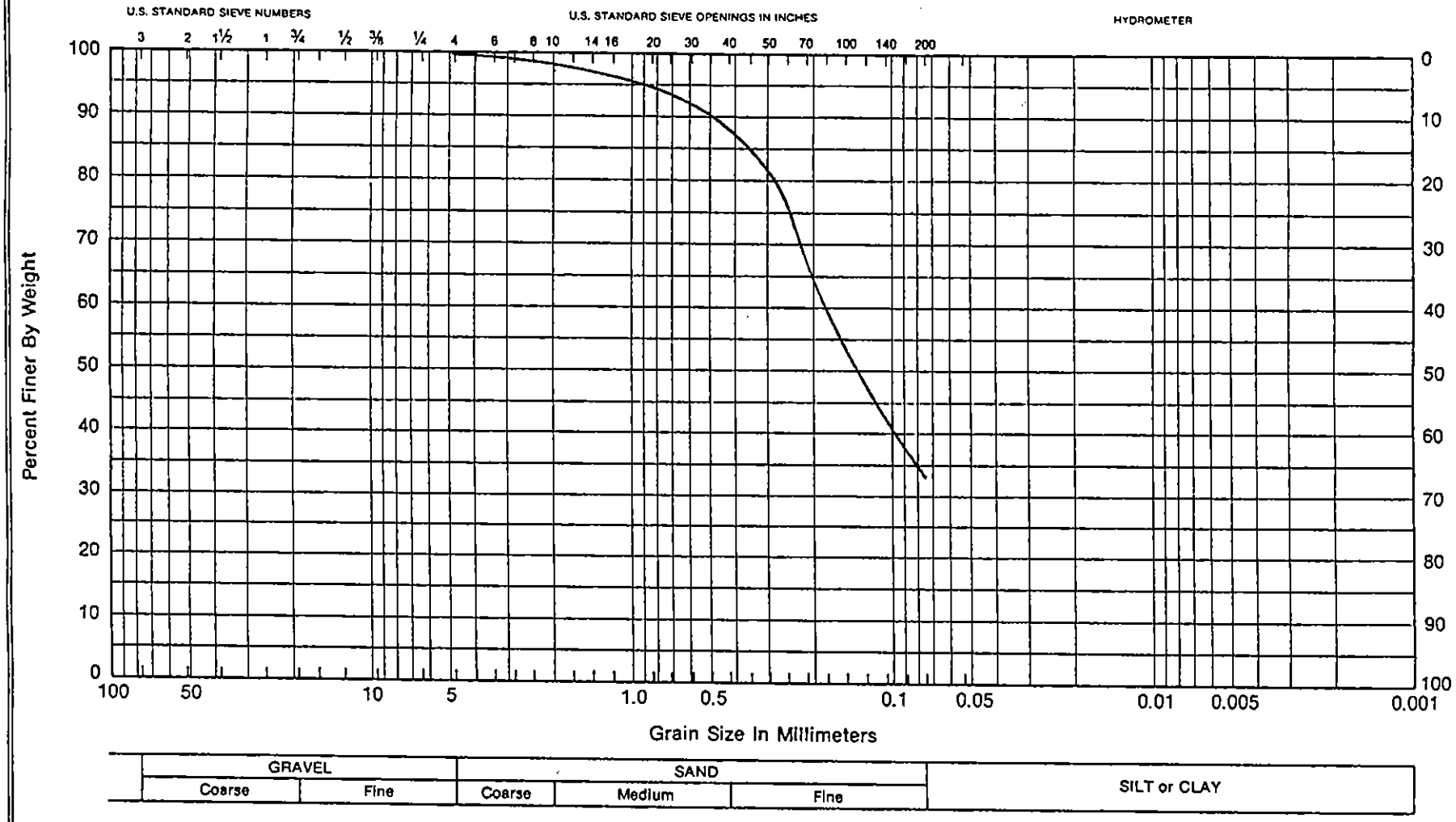
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

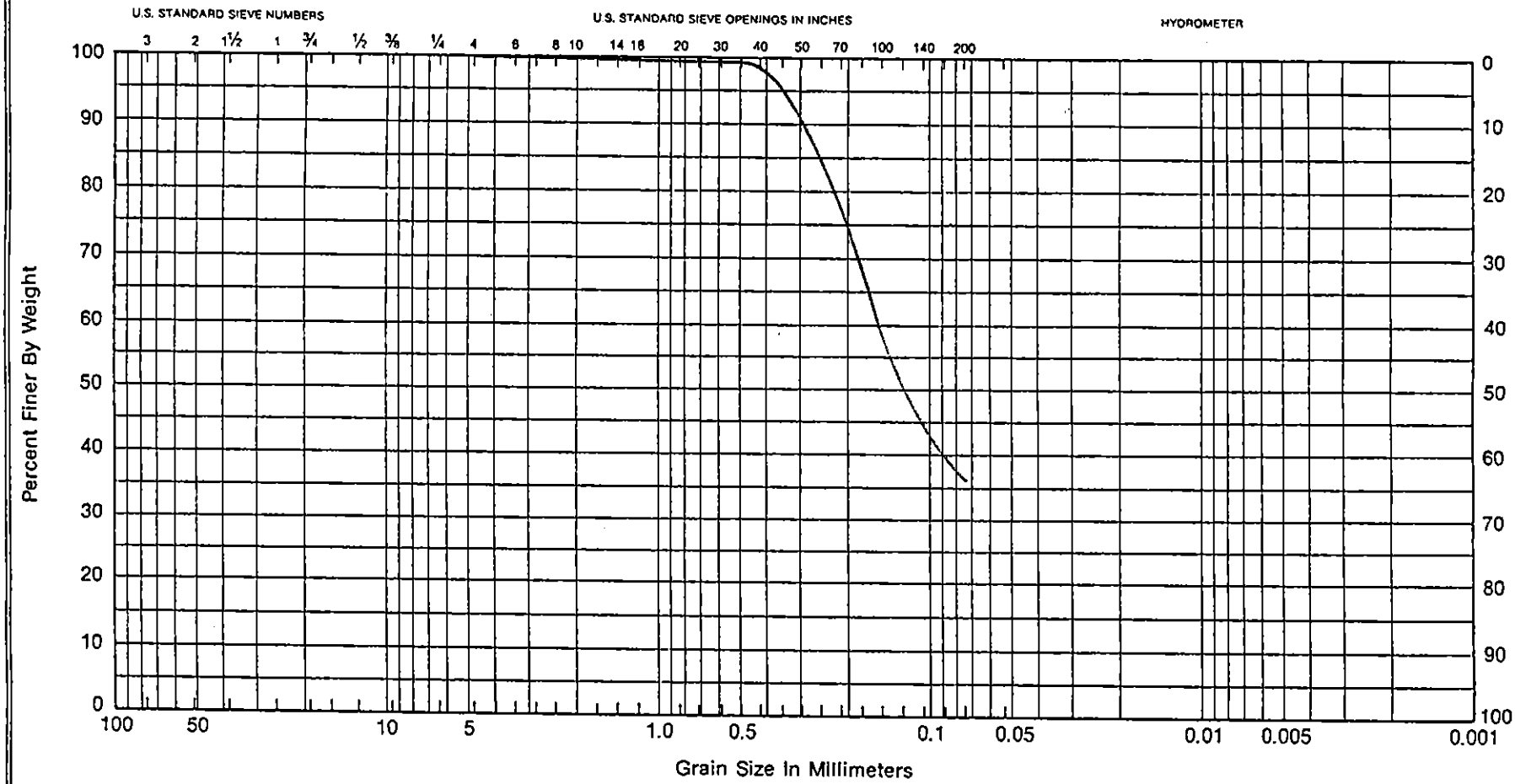
DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S3, 8.5' - 10'
HVJ 93-312G
GRAY COARSE SAND WITH SANDY
CLAY CLUMPS, SHELL AND GRAVEL

GRAIN SIZE CURVES



DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S4, 13.5' - 15'
HVJ 93-312G
DARK GRAY CLAYEY SAND WITH SILT

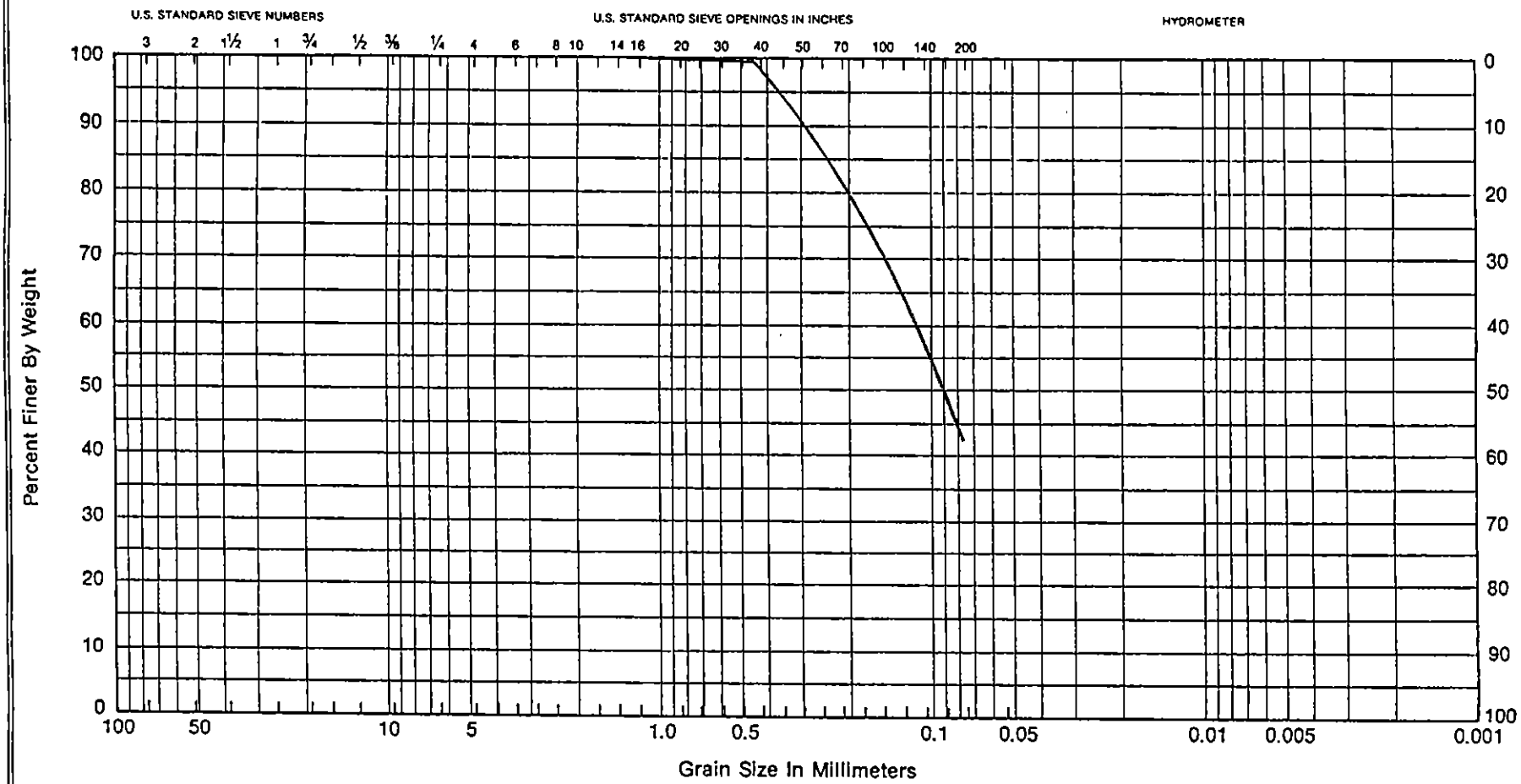
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S5, 15' - 17'
HVJ 93-312G
GRAY CLAYEY SAND WITH SILT

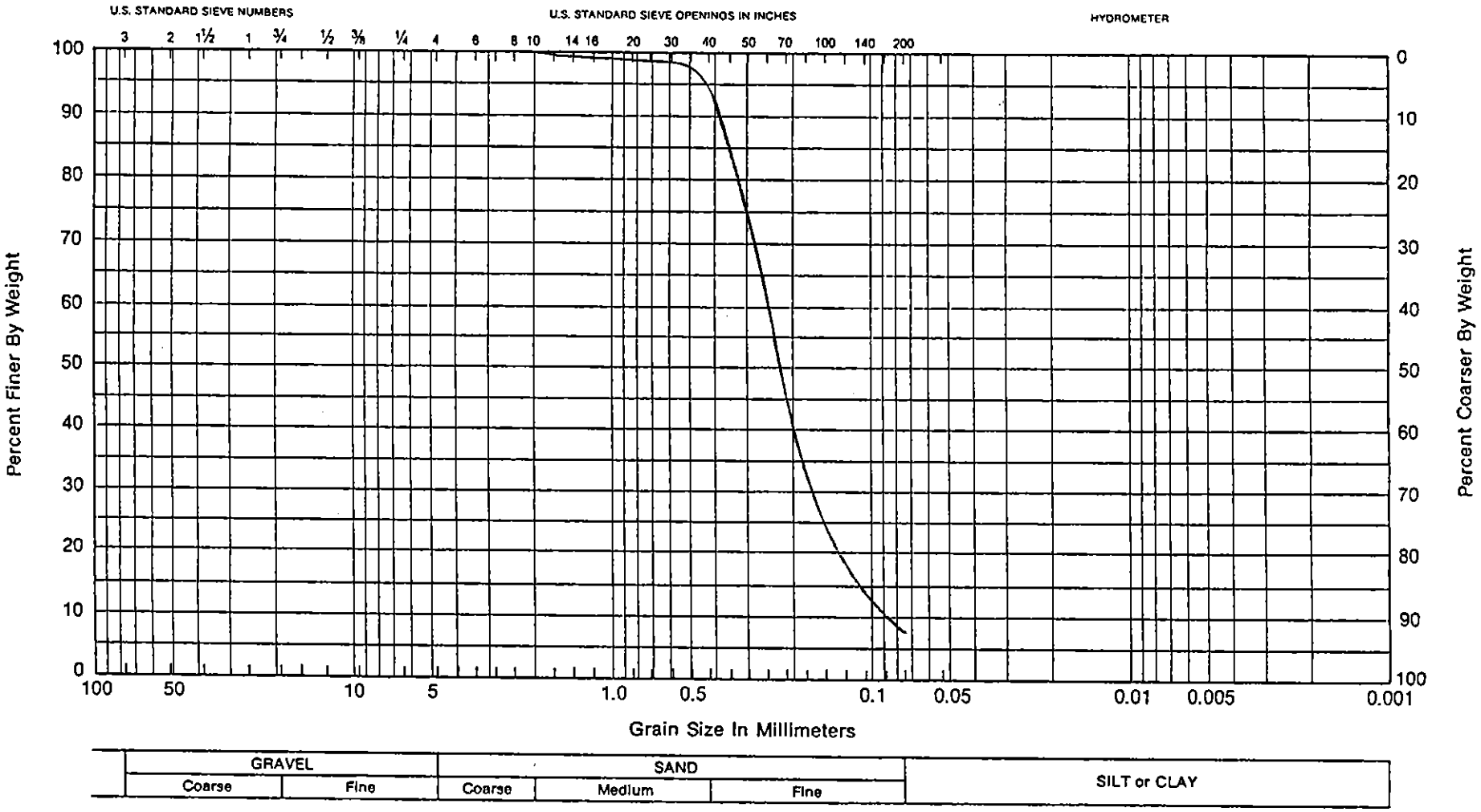
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

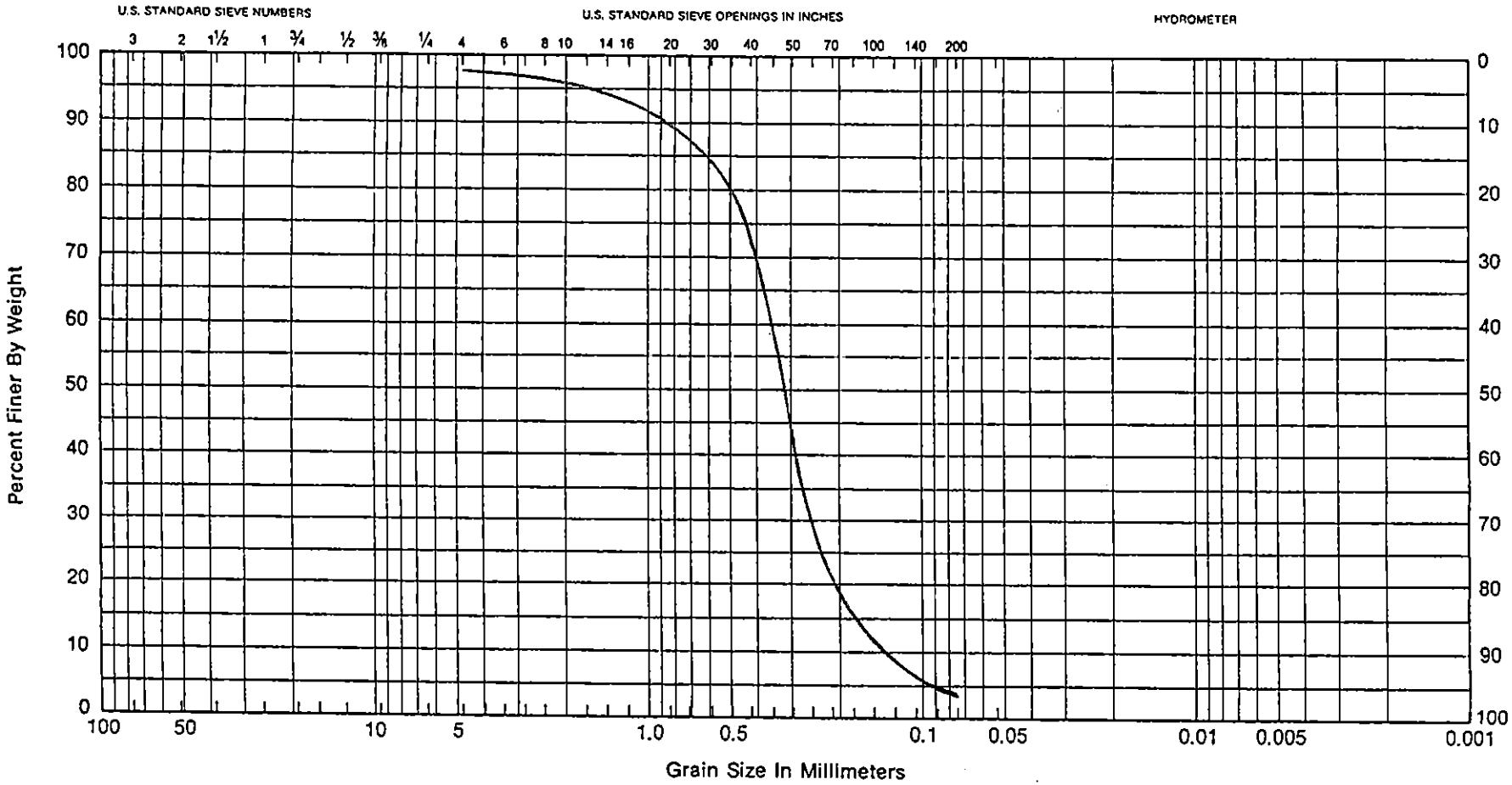
DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S6, 17' - 19'
HVJ 93-312G
GRAY AND TAN CLAYEY SAND WITH SILT

GRAIN SIZE CURVES



DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S7, 19' - 20.5'
HVJ 93-312G
TAN AND GRAY SAND WITH SILT
AND SANDY CLAY CLUMPS

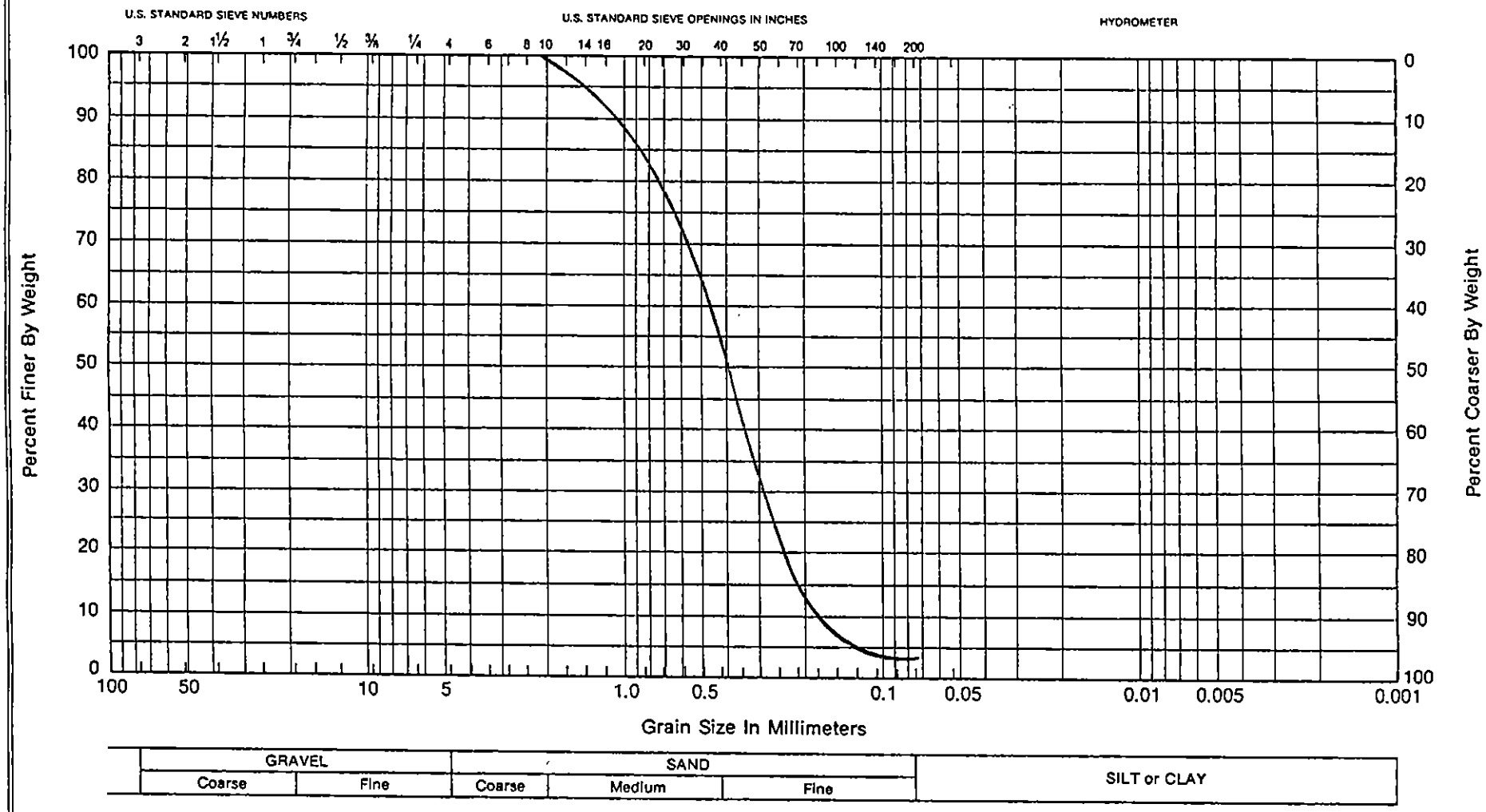
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

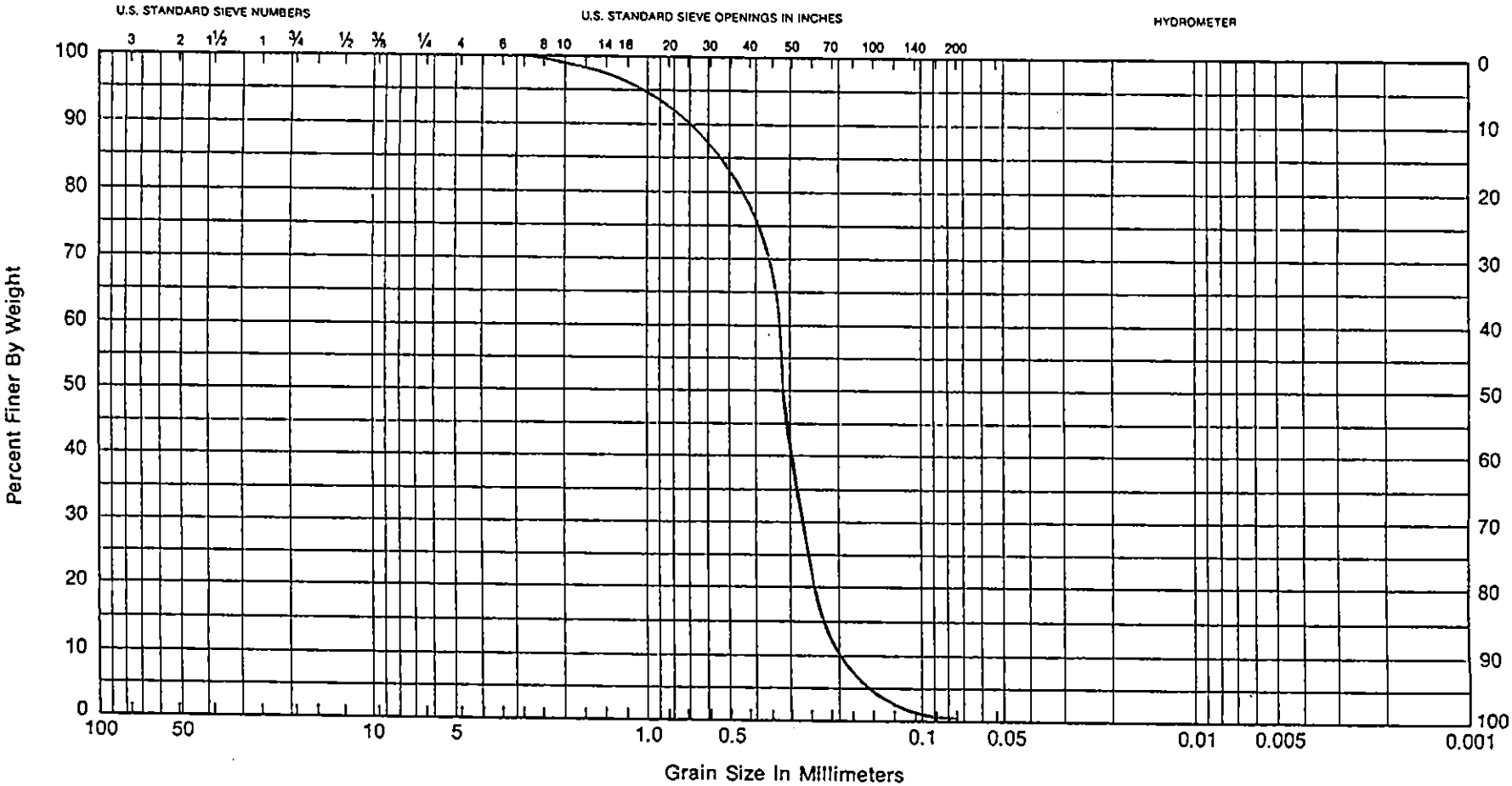
DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S8, 24' - 25.5'
HVJ 93-312G
TAN AND GRAY SAND WITH
SILT, GRAVEL AND
SANDY CLAY CLUMPS

GRAIN SIZE CURVES



DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S9, 29' - 30.5'
HVJ 93-312G
TAN COARSE SAND WITH GRAVEL

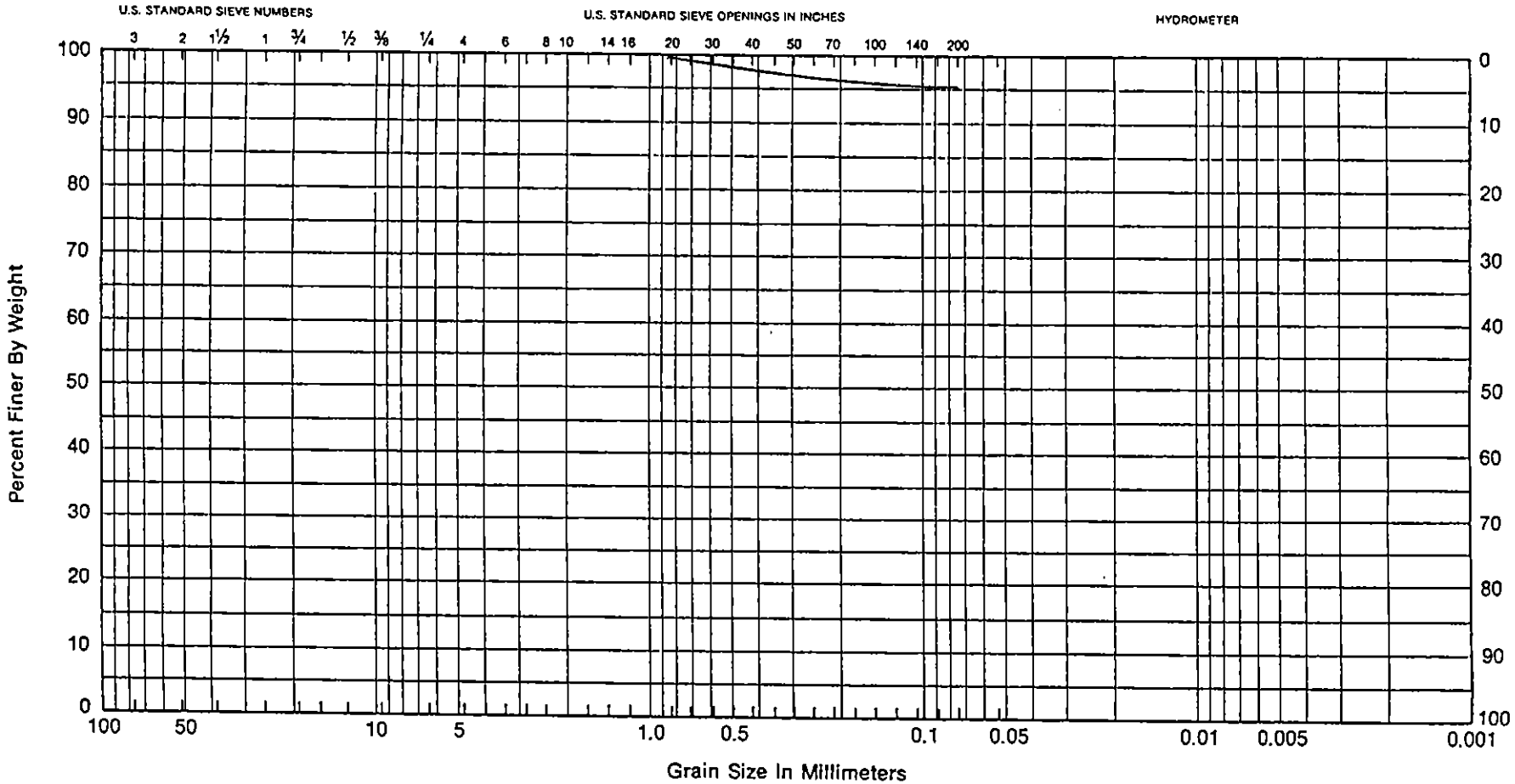
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S10, 34' - 35.5'
HVJ 93-312G
TAN COARSE SAND WITH GRAVEL

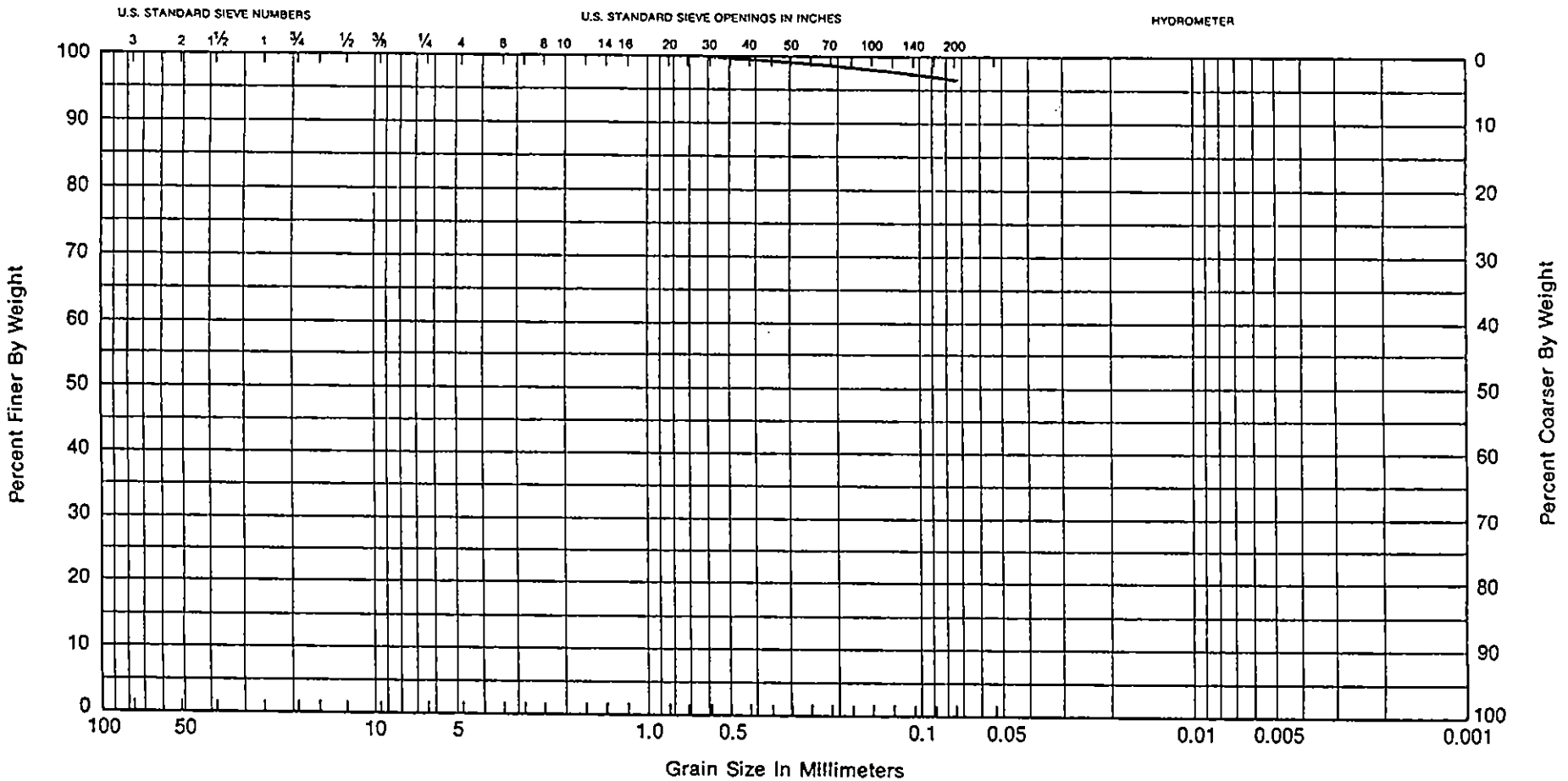
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S11, 39' - 40.5'
HVJ 93-312G
BROWN AND GRAY CLAY
WITH FERROUS NODULES

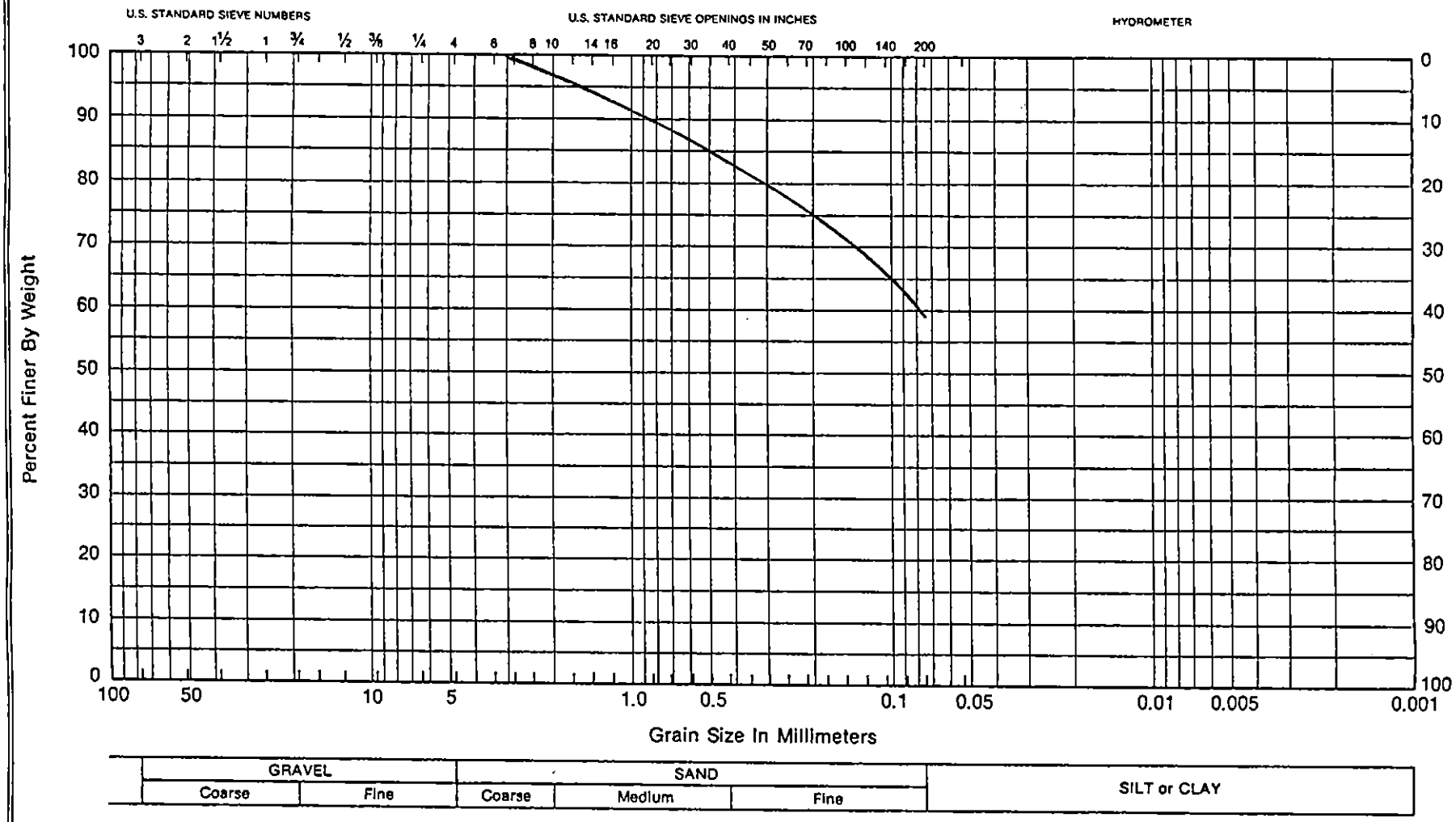
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

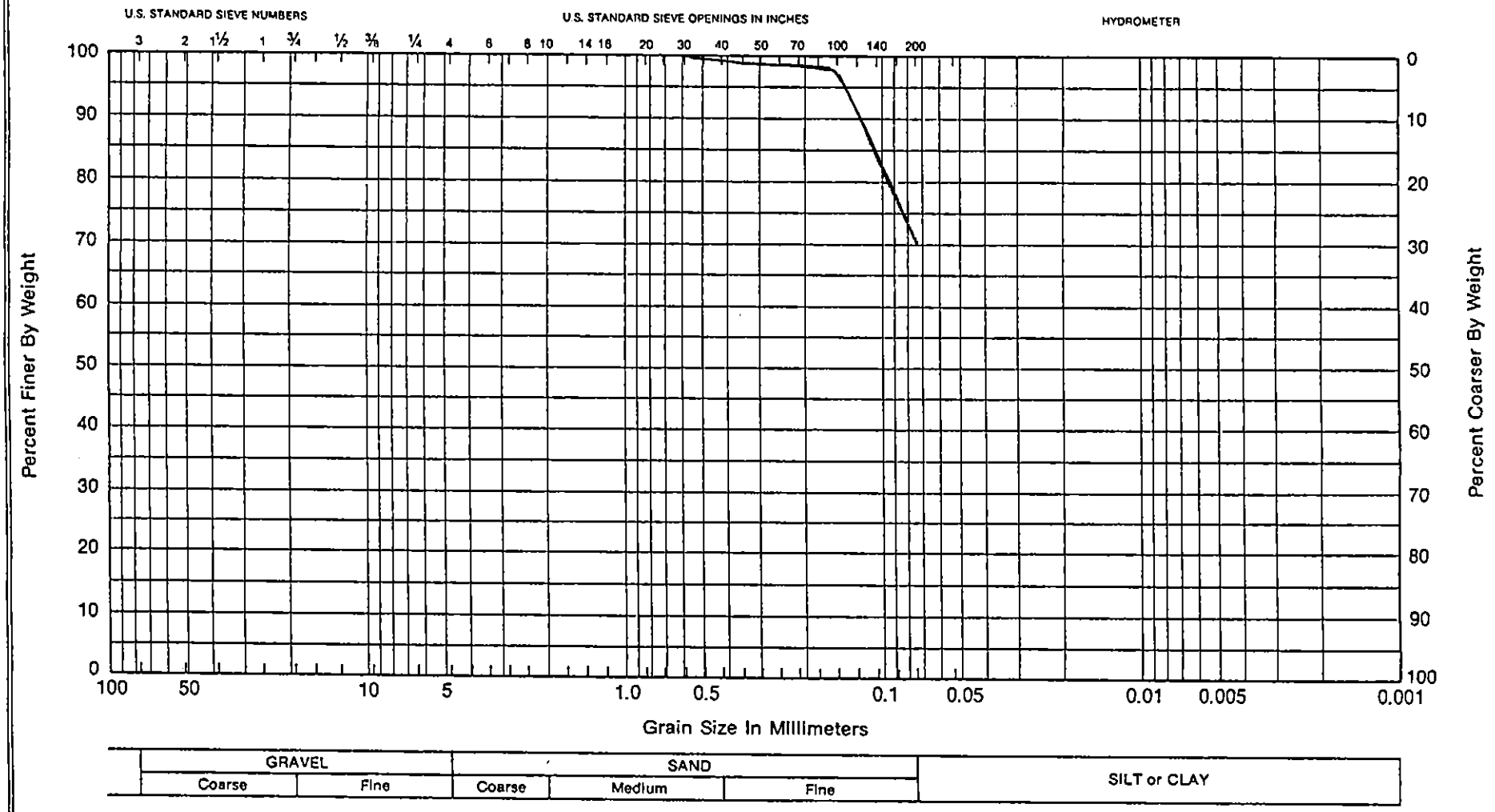
DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S15, 46.5' - 48.5'
HVJ 93-312G
BROWN AND GRAY CLAY WITH SILTY STONE, CALCAREOUS NODULES, AND SAND PARTINGS

GRAIN SIZE CURVES



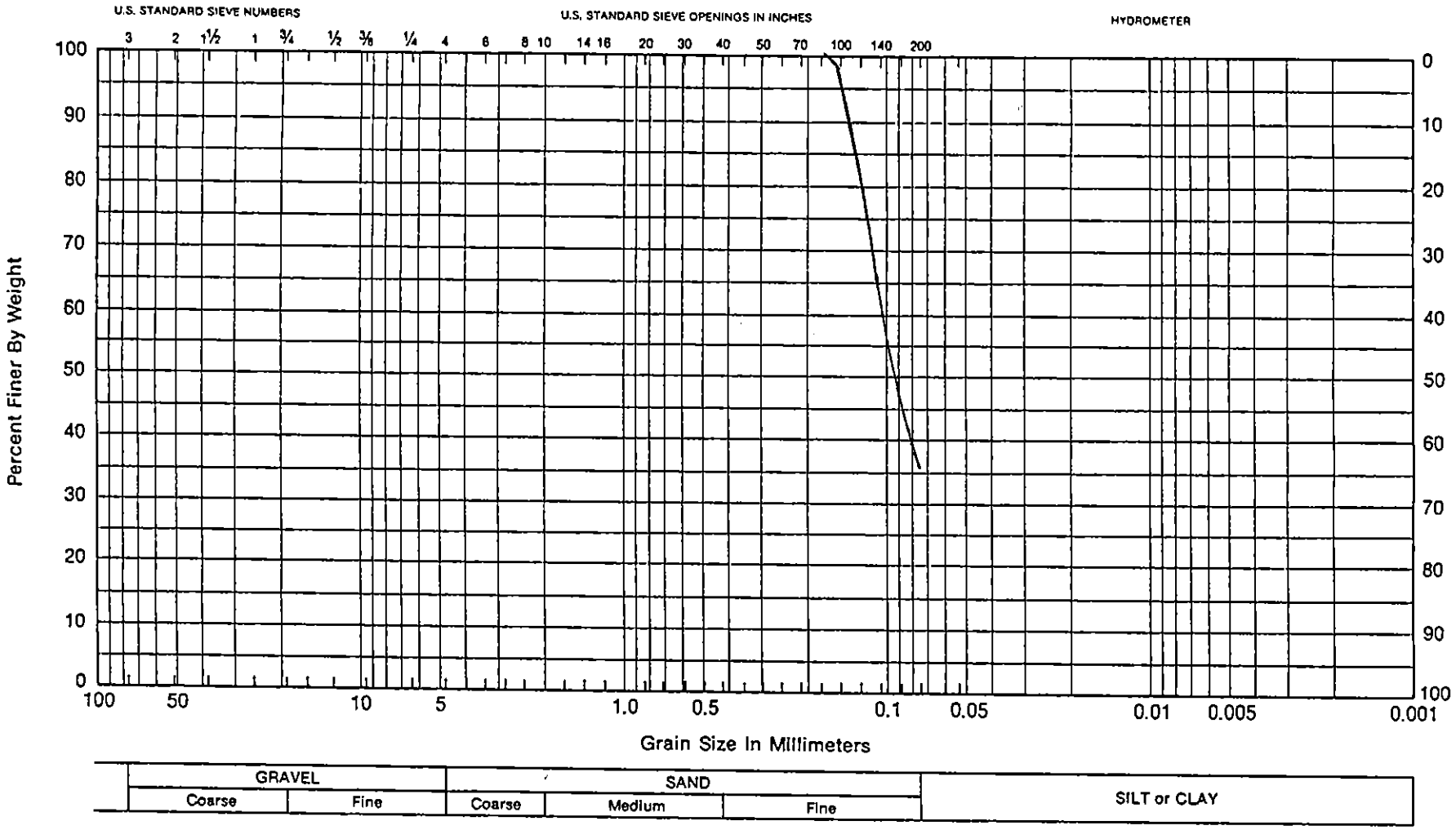
DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S17, 50.5' - 52'
HVJ 93-312G
GRAY AND TAN SANDY CLAY WITH
GRAVEL, SAND PARTINGS AND SILT

GRAIN SIZE CURVES



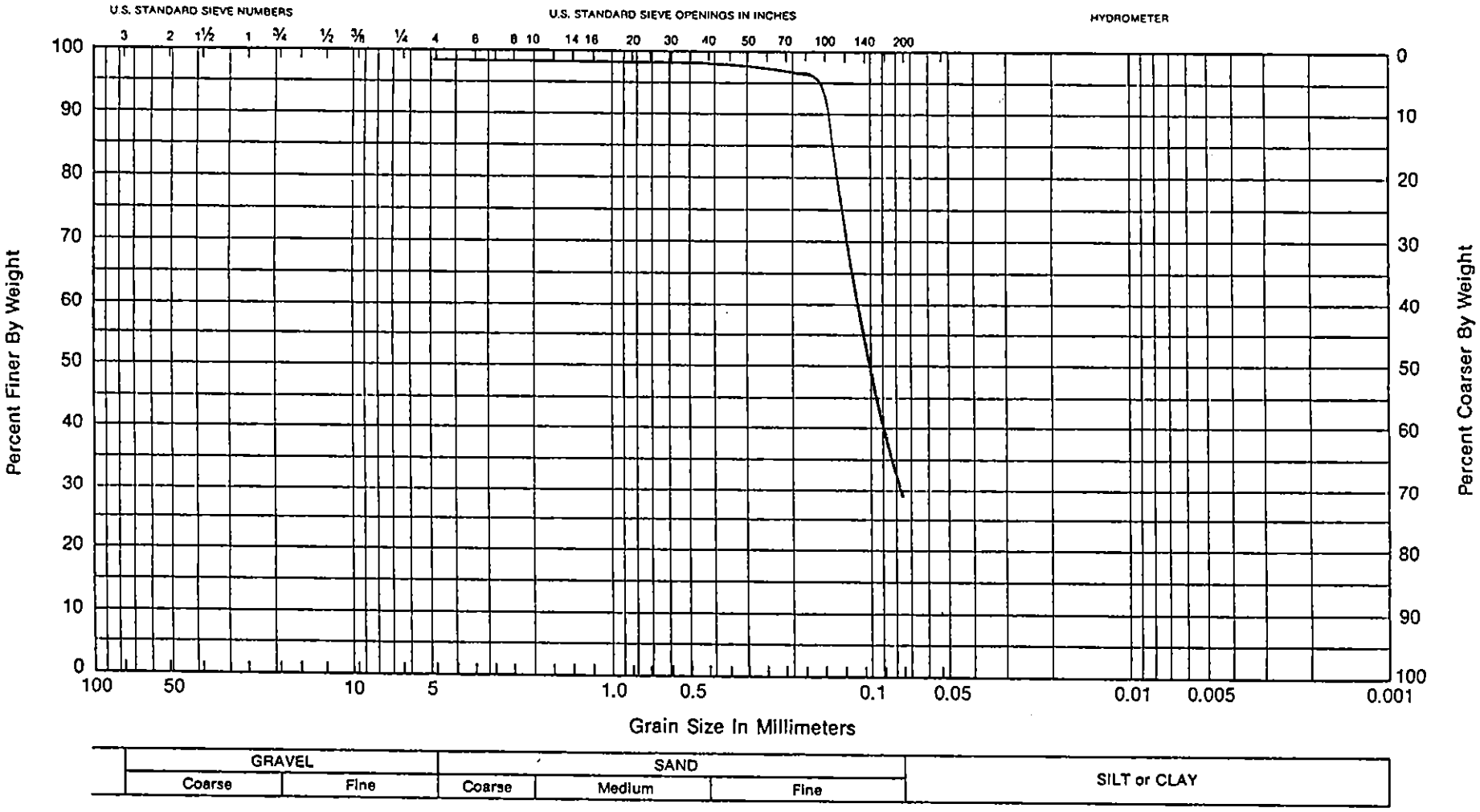
DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S19, 54' - 56'
HVJ 93-312G
GRAY AND TAN SANDY CLAY WITH
SILT, SAND PARTINGS, SAND POCKETS,
GRAVEL AND FERROUS NODULES

GRAIN SIZE CURVES



DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S20, 56' - 58'
HVJ 93-312G
GRAY FINE SILTY SAND

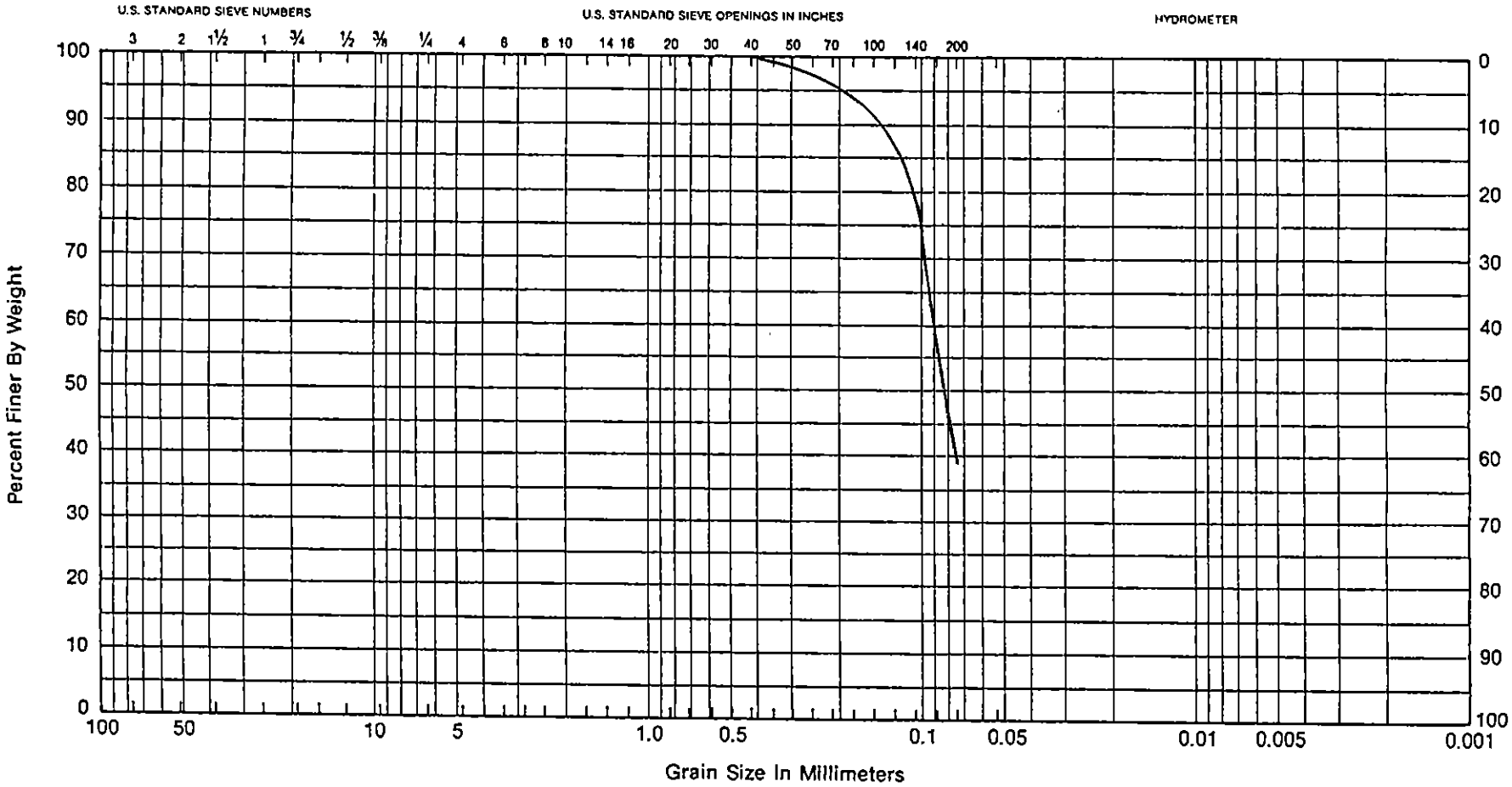
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S21, 58' - 59.5'
HVJ 93-312G
GRAY SILTY SAND WITH GRAVEL

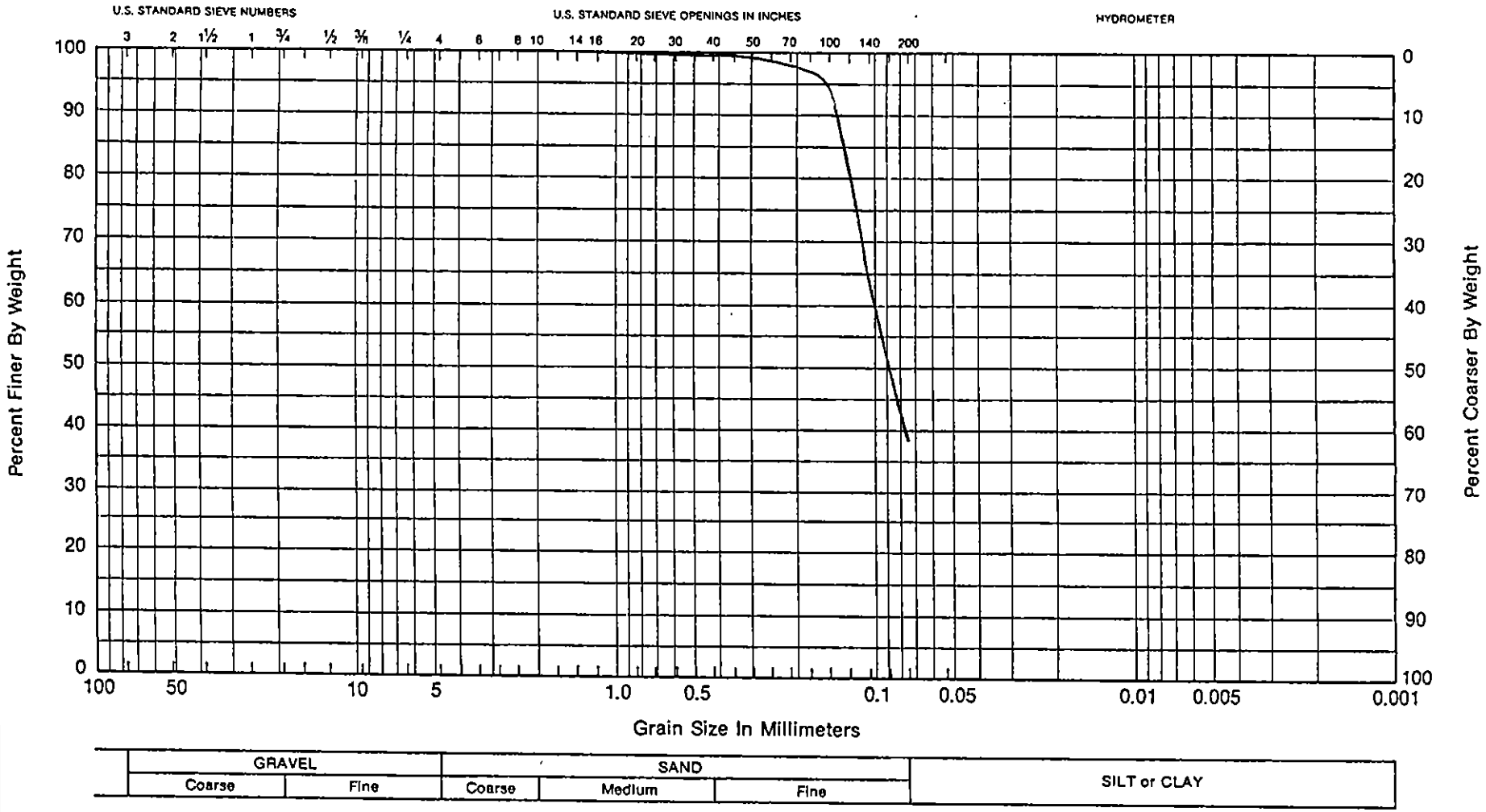
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S22, 63' - 64.5'
HVJ 93-312G
GRAY SILTY SAND WITH
SANDY CLAY SEAMS

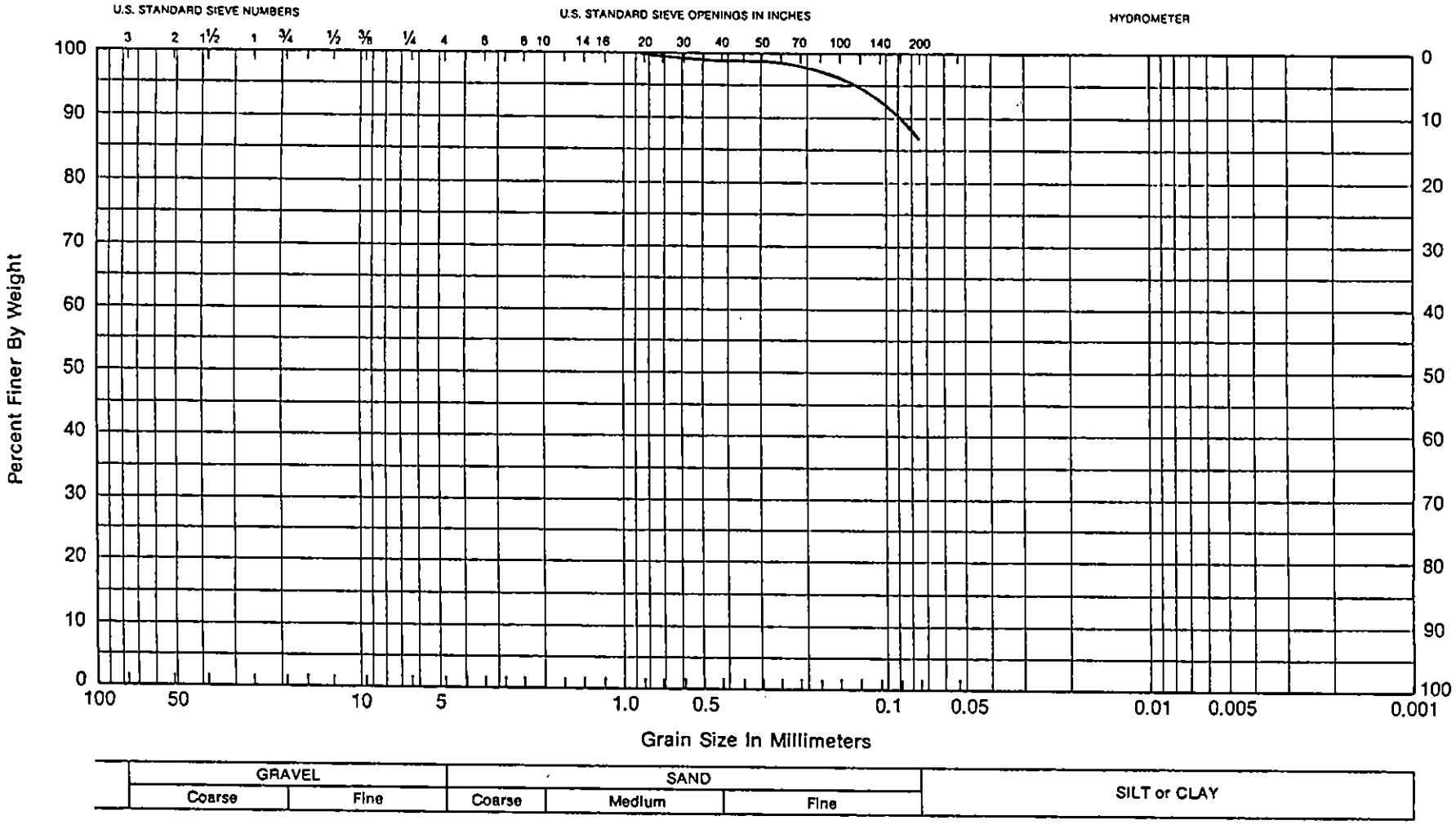
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

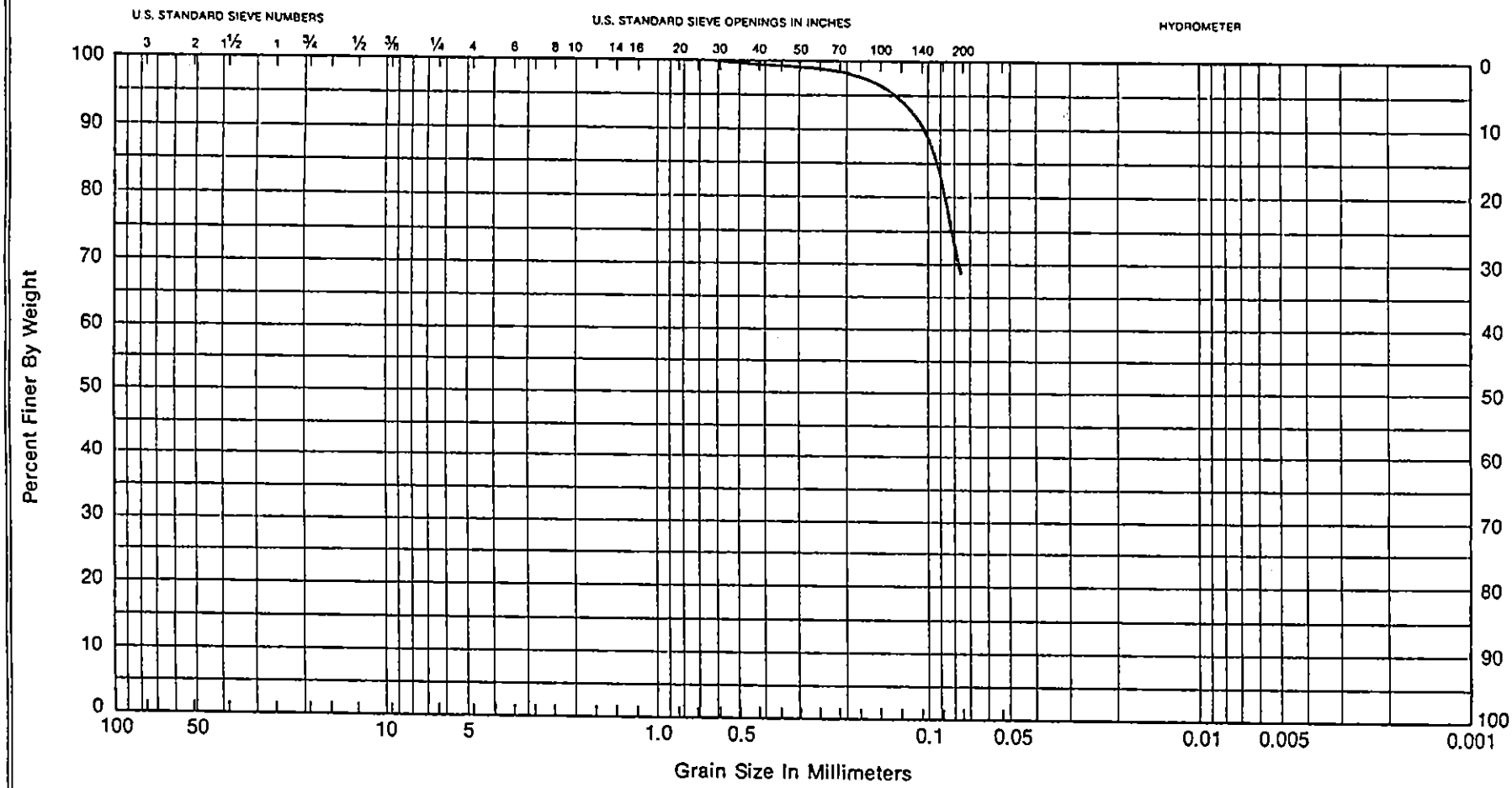
DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S23, 64.5' - 66'
HVJ 93-312G
BROWN AND GRAY CLAY WITH SILT, SILTY CLAY SEAMS, SILT POCKETS, FERROUS NODULES AND CALCAREOUS NODULES

GRAIN SIZE CURVES



DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S24, 66.5' - 68.5'
HVJ 93-312G
TAN AND GRAY SILTY CLAY WITH SAND

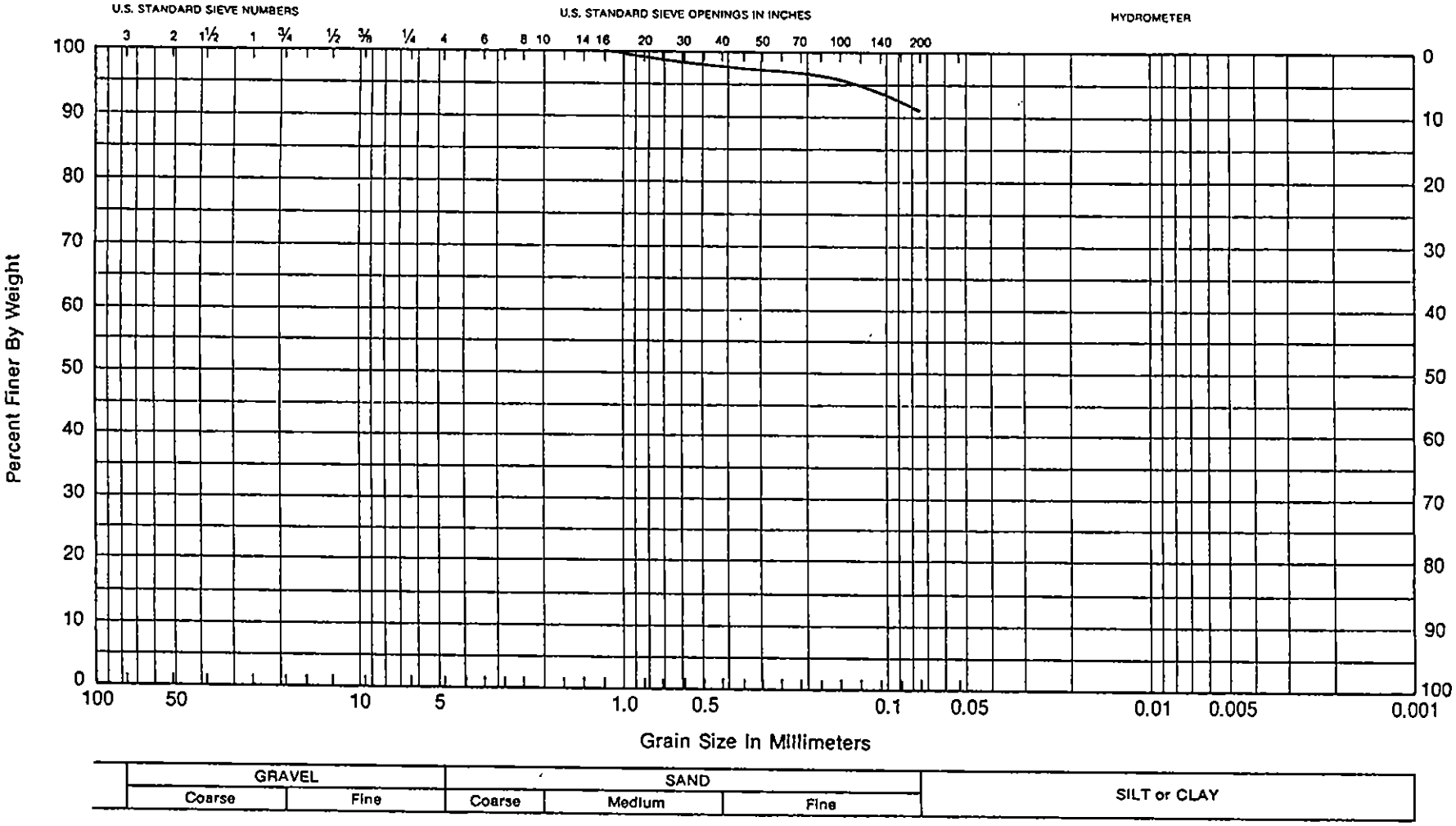
GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S25, 68.5' - 70'
HVJ 93-312G
TAN AND GRAY SANDY CLAY WITH SILT

GRAIN SIZE CURVES



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

DACW 64-94-R-0011
WALLISVILLE RESERVOIR
93-274, S26, 73.5' - 75'
HVJ 93-312G
BROWN AND GRAY CLAY WITH
SILT, SILTY CLAY SEAMS,
AND FERROUS NODULES