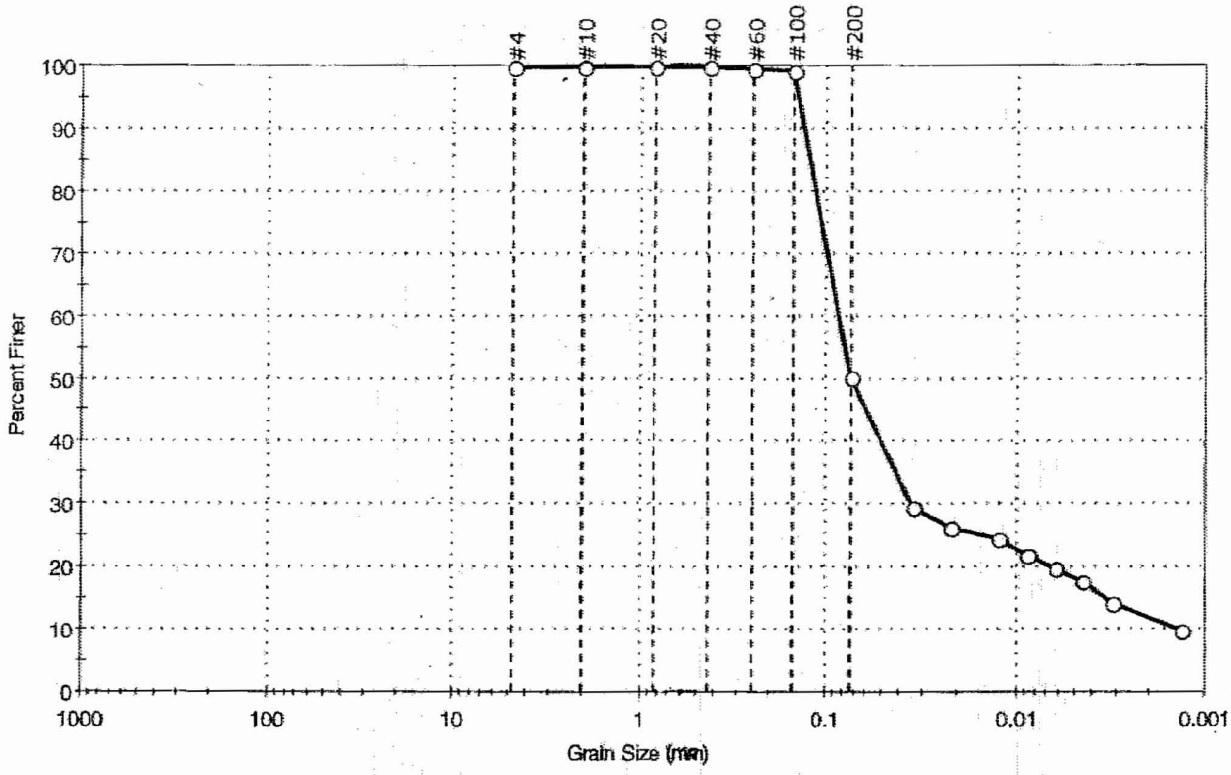
GeoTesting express
a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.		
Project:	Subsurface Investigation Calvert Cliffs Nuclear PP		
Location:	Calvert County, MD	Project No:	GTX-6880
Boring ID: B-420	Sample Type: tube	Tested By:	sam
Sample ID: S-29	Test Date: 10/27/06	Checked By:	mcm
Depth : 128.5-130.3 ft	Test Id: 98593		
Test Comment: ---			
Sample Description:	Moist, very dark grayish brown sandy organic clay		
Sample Comment: ---			

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



% Cobble	% Gravel	% Sand	% Silt & Clay Size
--	0.3	49.6	50.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.84	100		
#40	0.42	100		
#60	0.25	99		
#100	0.15	99		
#200	0.074	50		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0339	29		
---	0.0217	26		
---	0.0124	24		
---	0.0088	22		
---	0.0063	20		
---	0.0045	18		
---	0.0032	14		
---	0.0013	10		

Coefficients

D_{85} = 0.1219 mm D_{30} = 0.0347 mm
D_{60} = 0.0853 mm D_{15} = 0.0035 mm
D_{50} = 0.0738 mm D_{10} = 0.0014 mm
C_u = N/A C_c = N/A

Classification

ASTM Sandy organic silt (OH)

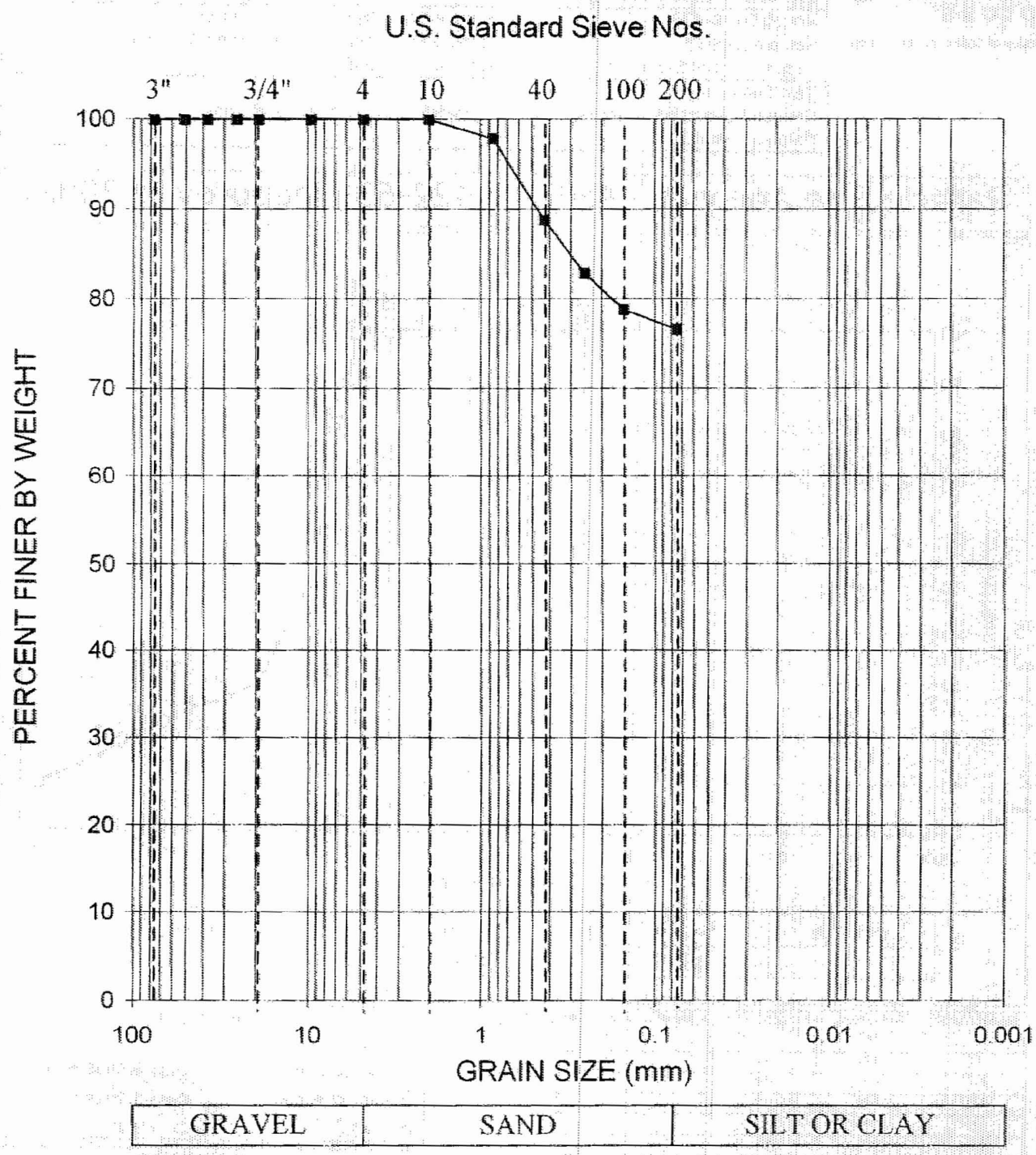
AASHTO Clayey Soils (A-7-5 (12))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

printed 11/7/2006 5:07:47 PM



GRADATION CURVE

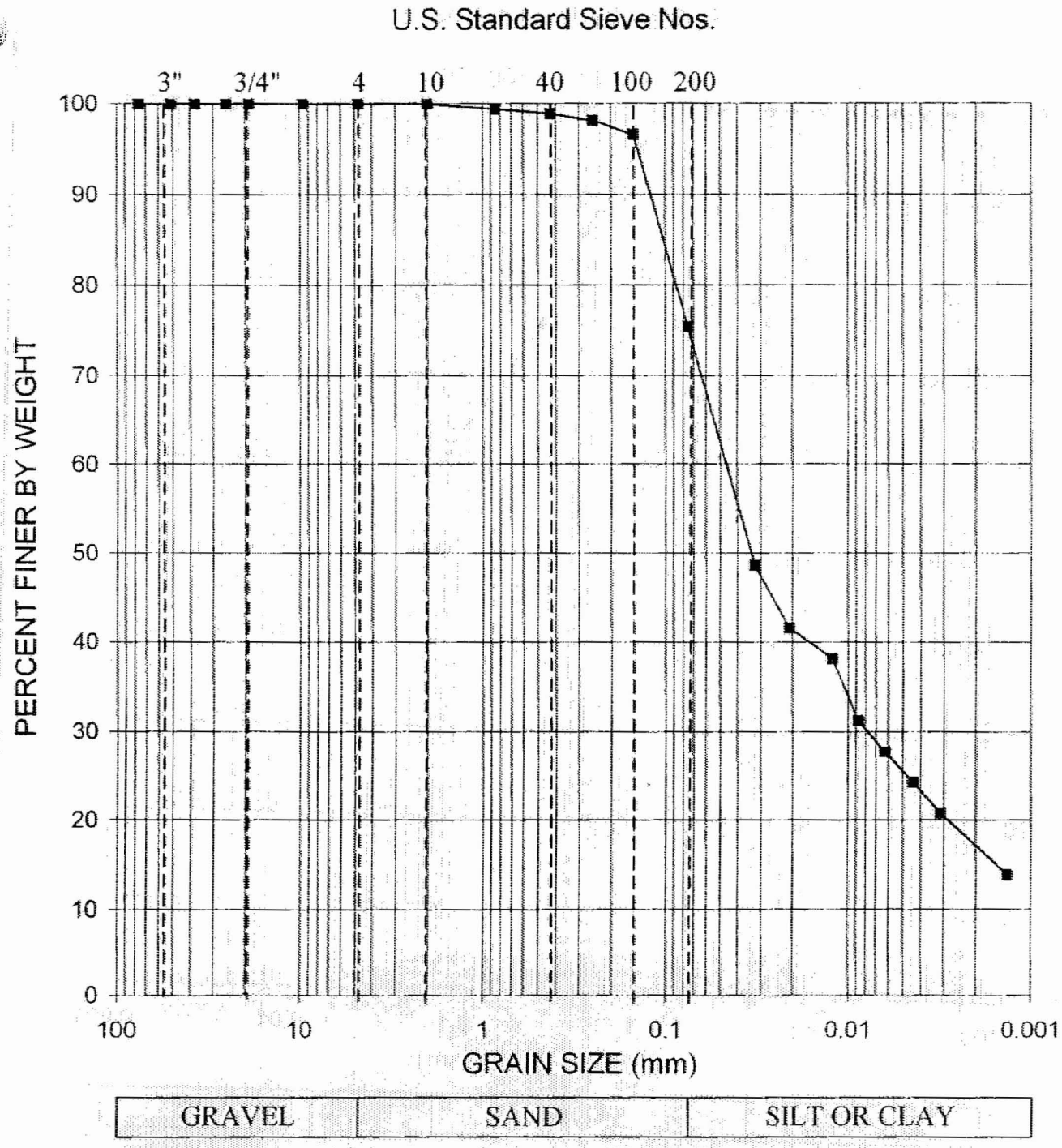
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland	Contract No.:	06120048.00	Date:	9/13/2006

Boring No.	Depth (ft)	Sample Description	Class.	LL	PI
B-420	133.5	ELASTIC SILT, with sand, dark green	MH	147	72

Schnabel

Schnabel Engineering



GRADATION CURVE

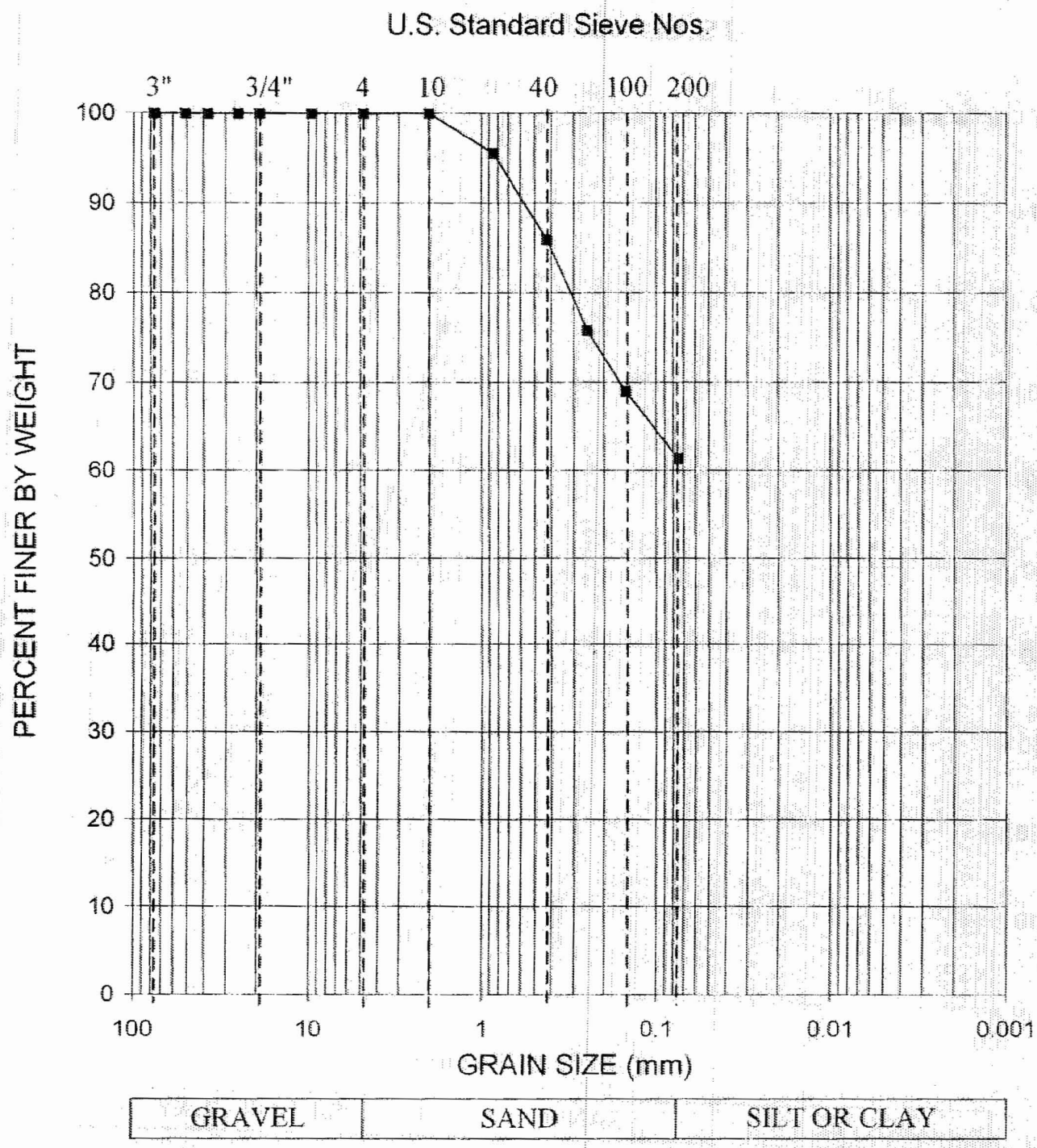
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland	Contract No.:	06120048.00	Date:	9/19/2006

Boring No.	Depth (ft)	Sample Description	Class.	LL	PI
B-420	143.5	ELASTIC SILT, with sand, dark green	MH	107	51

Schnabel

Schnabel Engineering



GRADATION CURVE

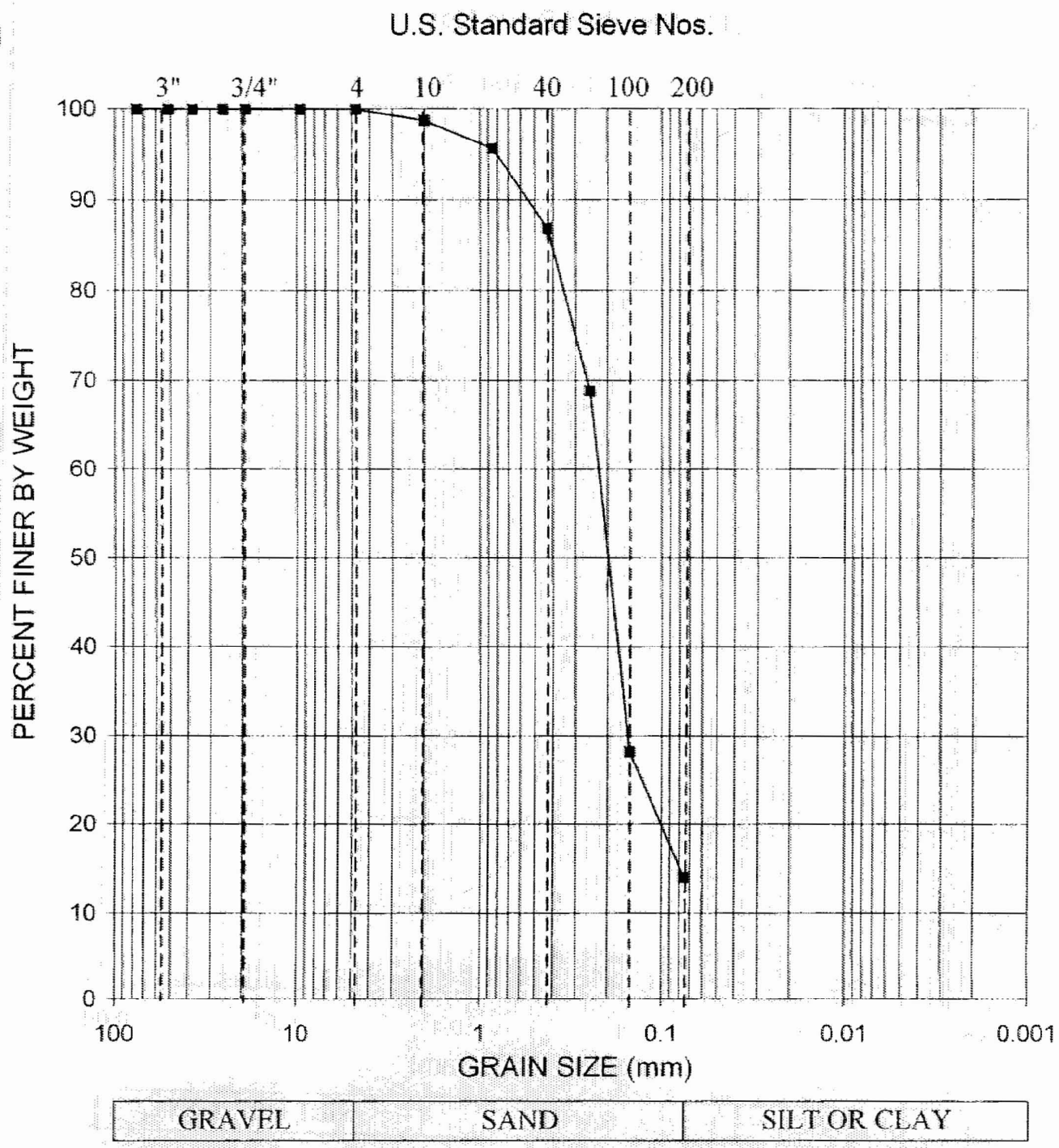
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland	Contract No.:	06120048.00	Date:	9/13/2006

Boring No.	Depth (ft)	Sample Description	Class.	LL	PI
B-420	148.5	Sandy ELASTIC SILT, dark green	MH	127	27

Schnabel

Schnabel Engineering



GRADATION CURVE

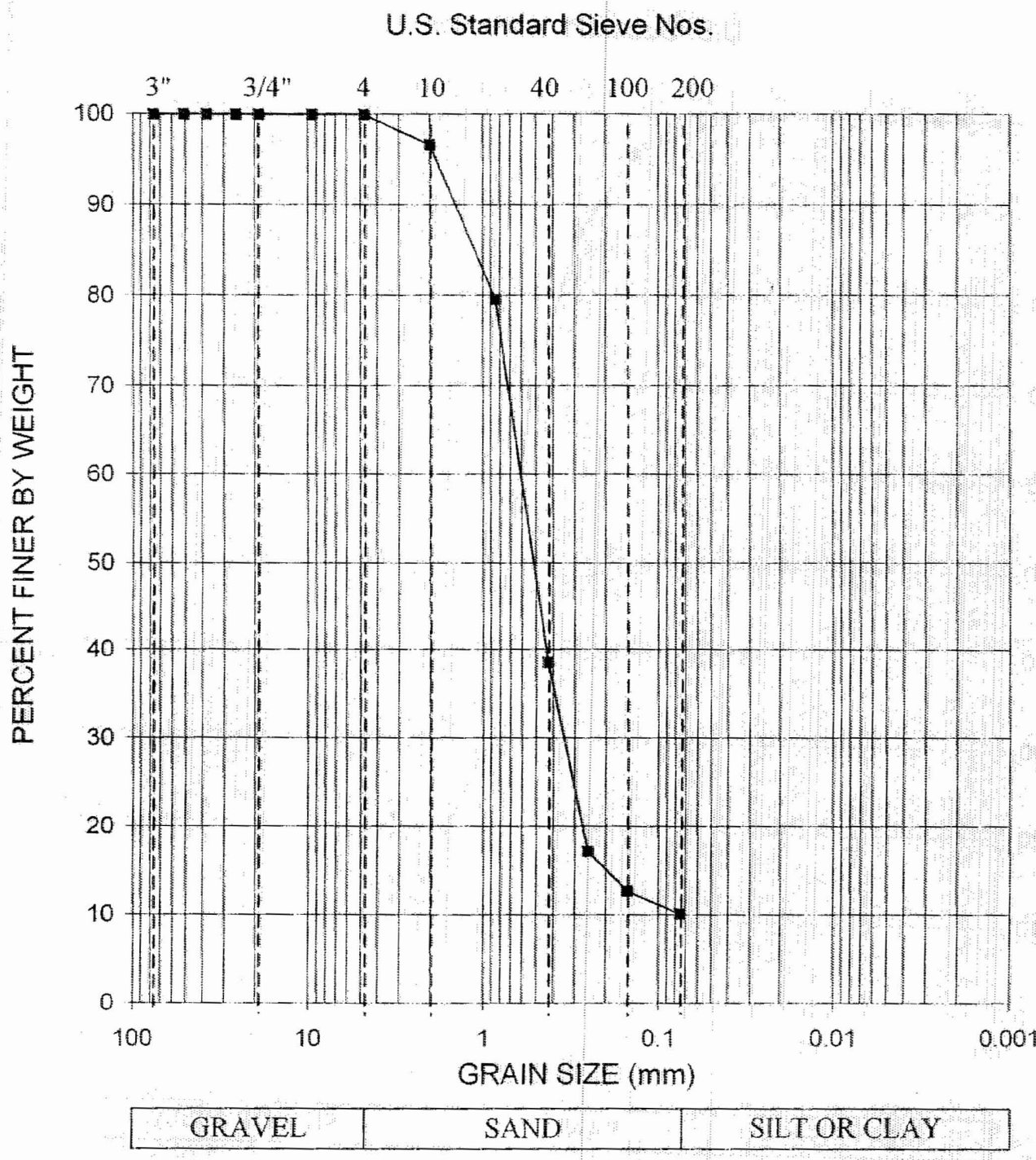
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland	Contract No.:	06120048.00	Date:	9/14/2006

Boring No.	Depth (ft)	Sample Description	Class.	LL	PI
B-421	7.5	Silty SAND, light brown	SM		

Schnabel

Schnabel Engineering



GRADATION CURVE

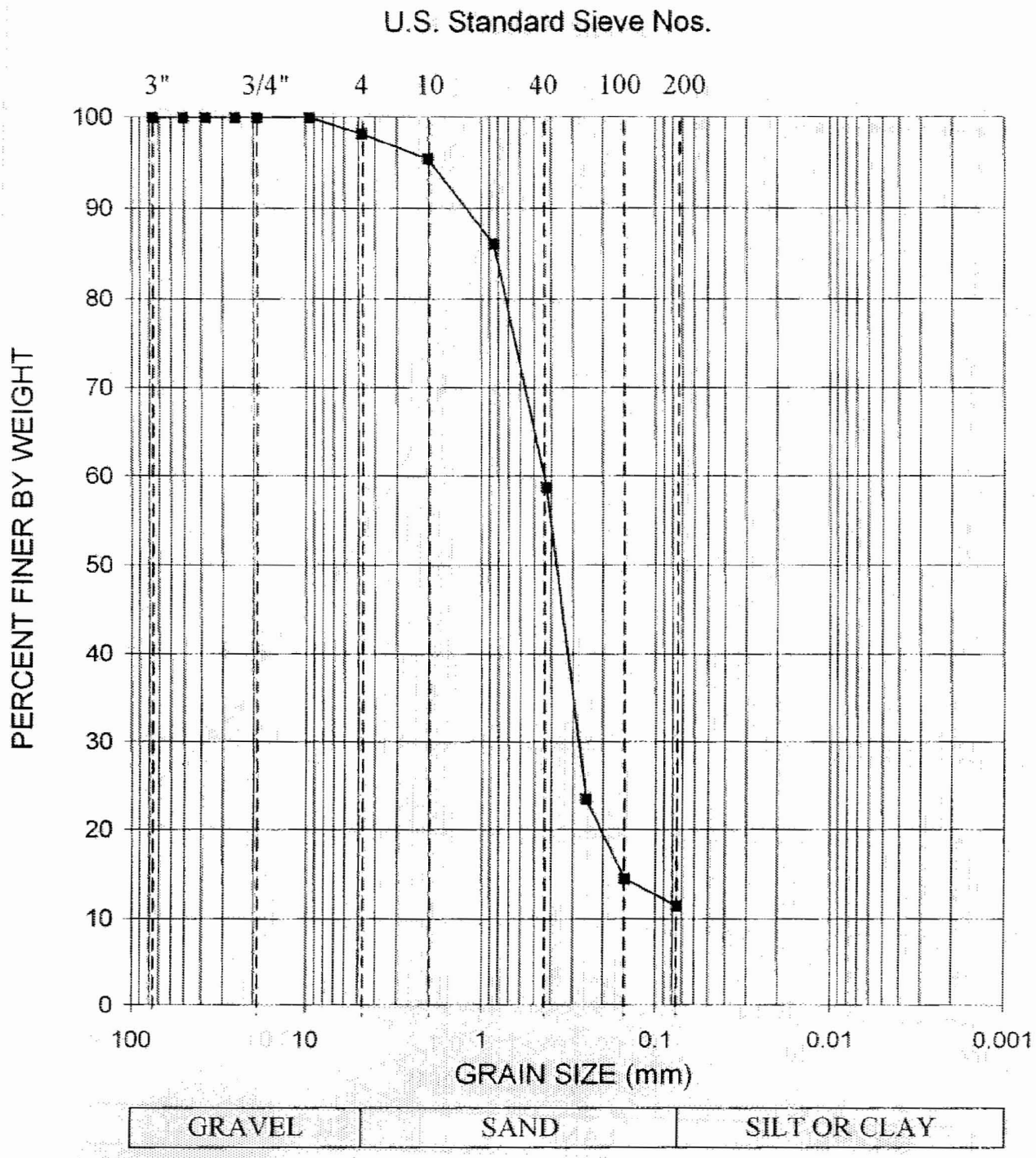
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland	Contract No.	06120048.00	Date:	9/14/2006

Boring No.	Depth (ft)	Sample Description	Class.	LL	PI
B-421	18.5	Well Graded SAND, with silt, light brown	SW-SM		

Schnabel

Schnabel Engineering



GRADATION CURVE

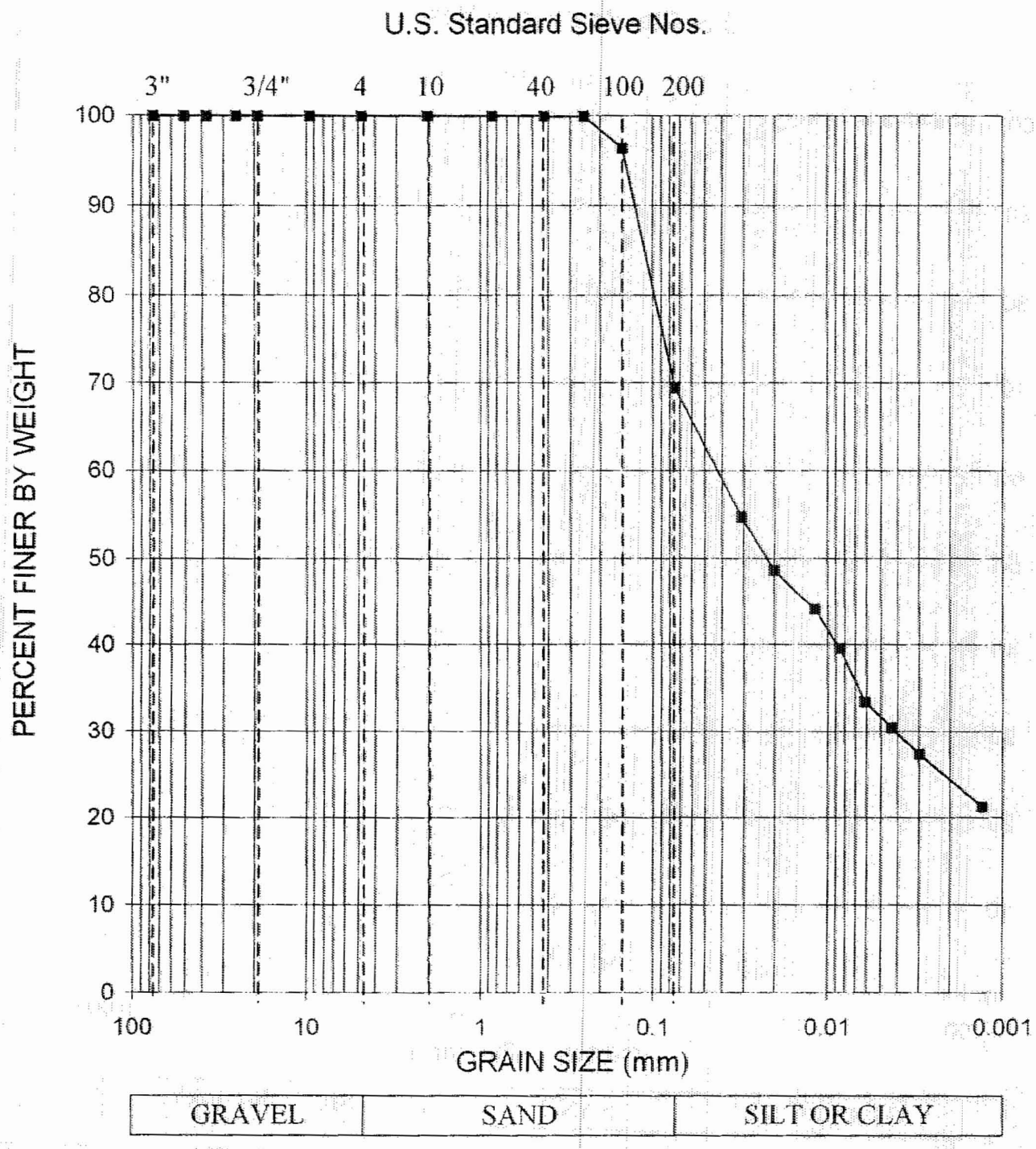
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland	Contract No.:	06120048.00	Date:	9/14/2006

Boring No.	Depth (ft)	Sample Description	Class.	LL	PI
B-421	28.5	Poorly graded SAND, with silt, trace gravel, light brown	SP-SM		

Schnabel

Schnabel Engineering



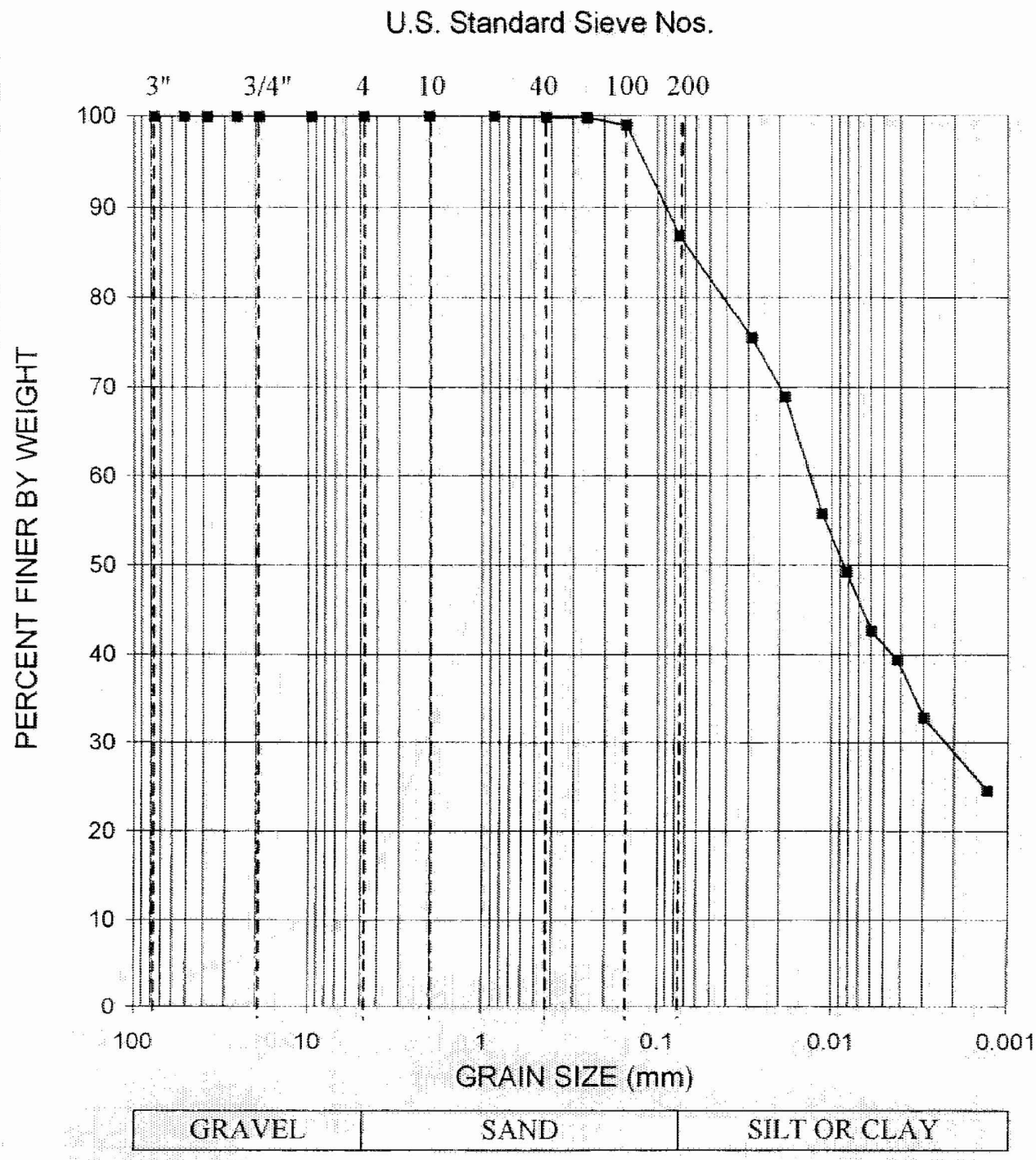
GRADATION CURVE

ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/20/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI	
B-421	48.5	Sandy FAT CLAY, gray	CH	50	32	

Schnabel

Schnabel Engineering



GRADATION CURVE

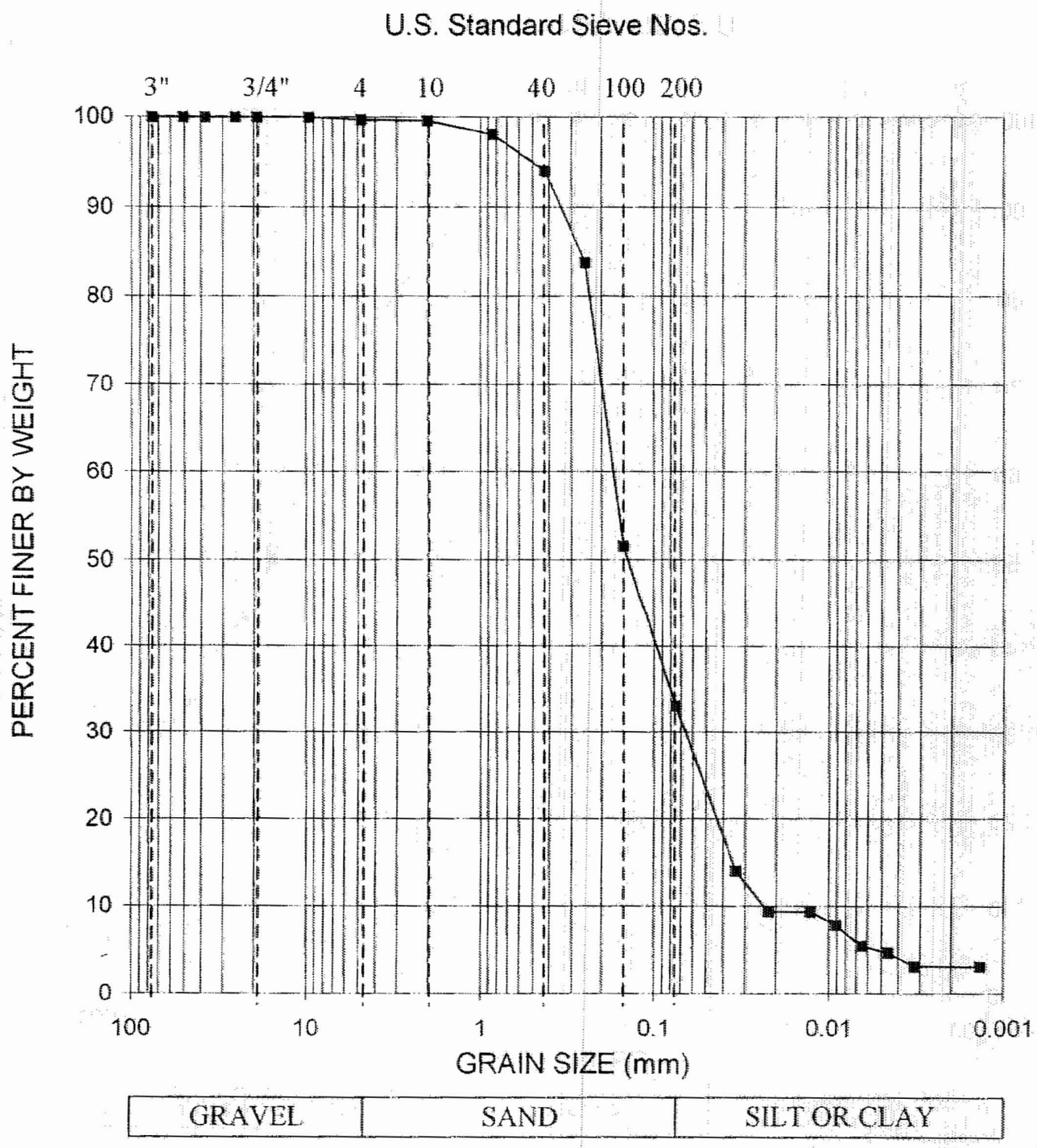
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland	Contract No.	06120048.00	Date:	9/20/2006

Boring No.	Depth (ft)	Sample Description	Class.	LL	PI
B-421	58.5	FAT CLAY, trace sand, dark gray	CH	78	46

Schnabel

Schnabel Engineering



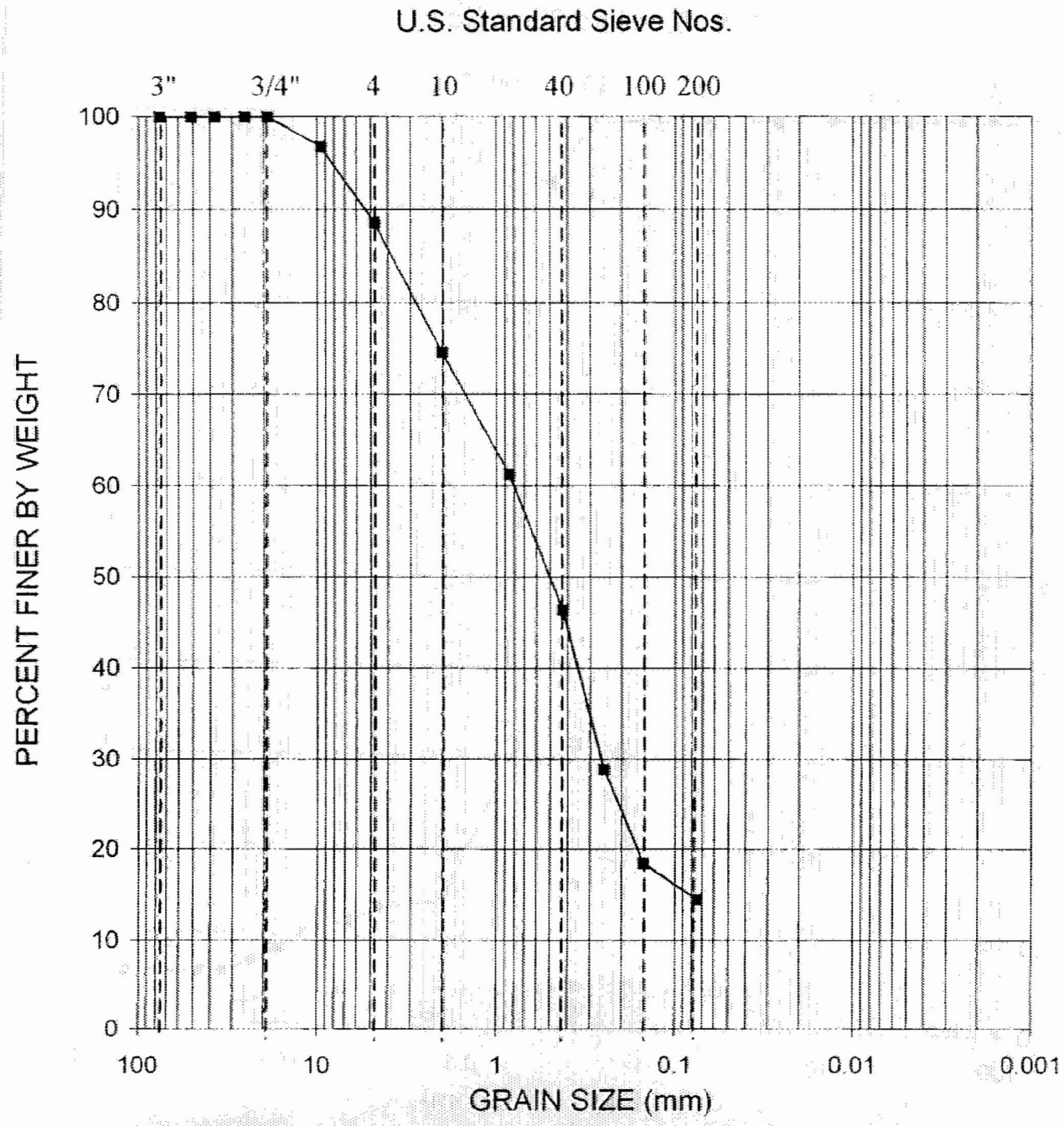
GRADATION CURVE

ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/25/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI	
B-421	68.5	Silty SAND, dark gray	SM			

Schnabel

Schnabel Engineering



GRADATION CURVE

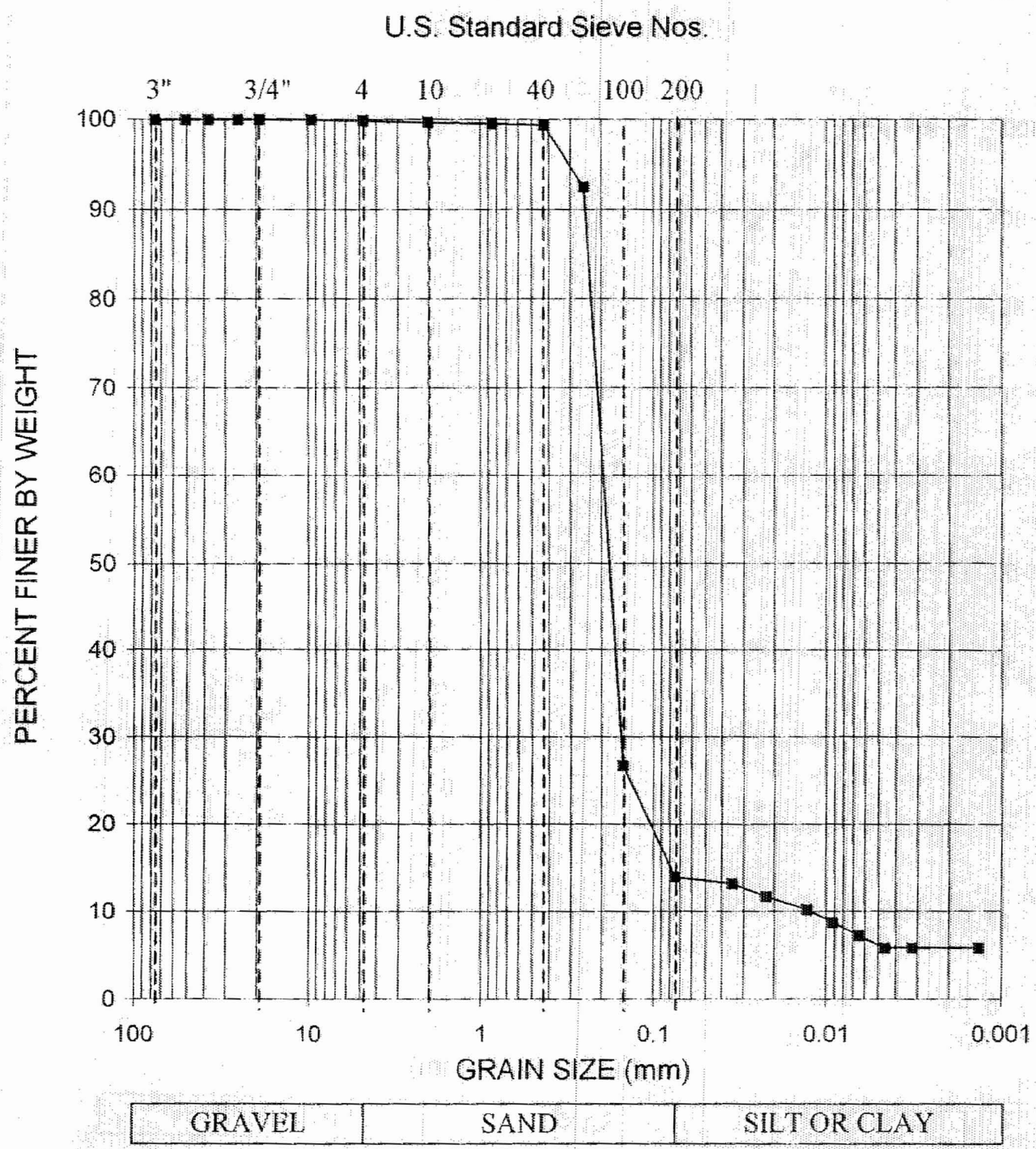
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland	Contract No.: 06120048.00	Date: 9/14/2006

Boring No.	Depth (ft)	Sample Description	Class.	LL	PI
B-421	88.5	Silty SAND, trace shells, dark gray	SM		

Schnabel

Schnabel Engineering



GRADATION CURVE

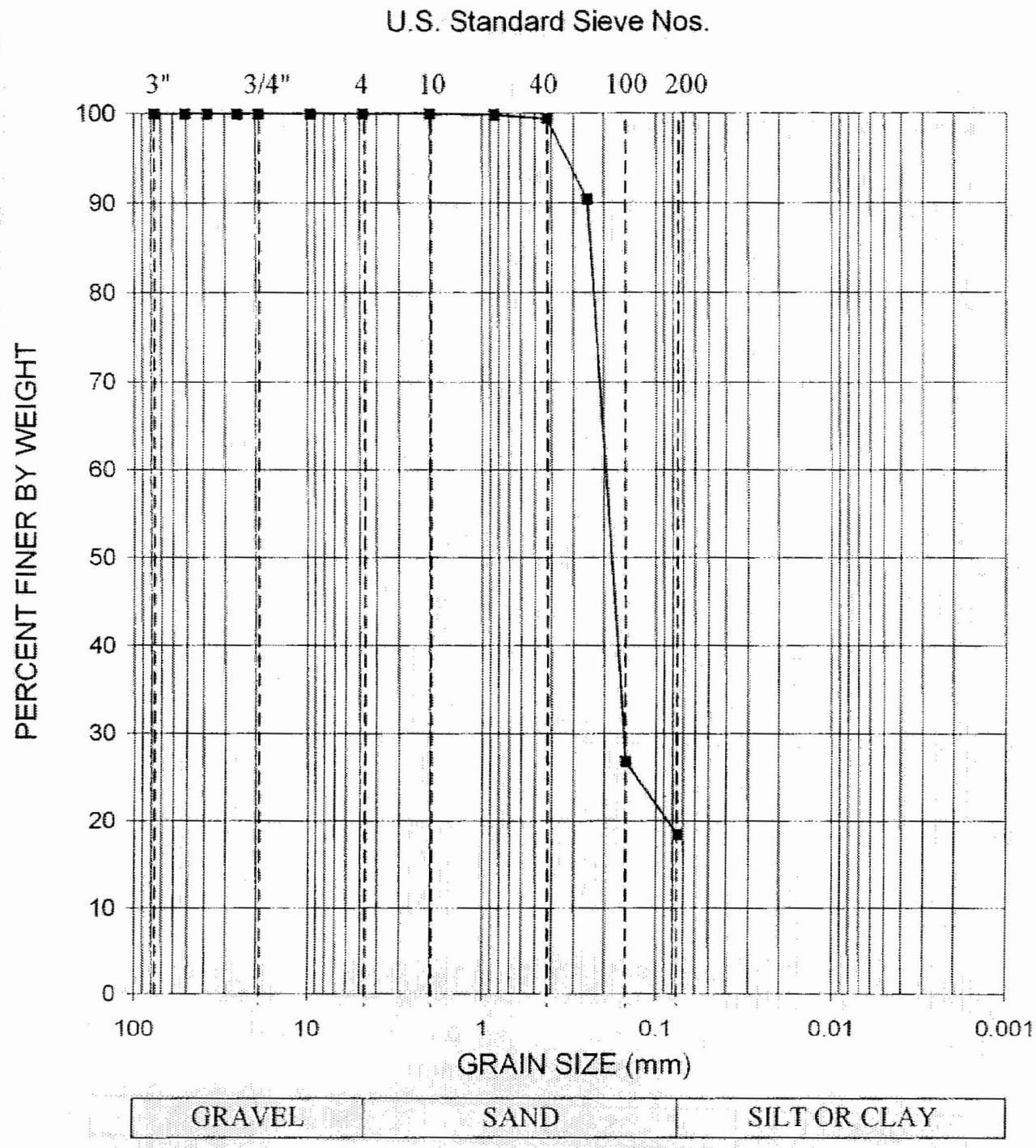
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland	Contract No.	06120048.00	Date:	9/20/2006

Boring No.	Depth (ft)	Sample Description	Class	LL	PI
B-421	108.5	Silty SAND, dark green	SM	NP	NP

Schnabel

Schnabel Engineering



GRADATION CURVE

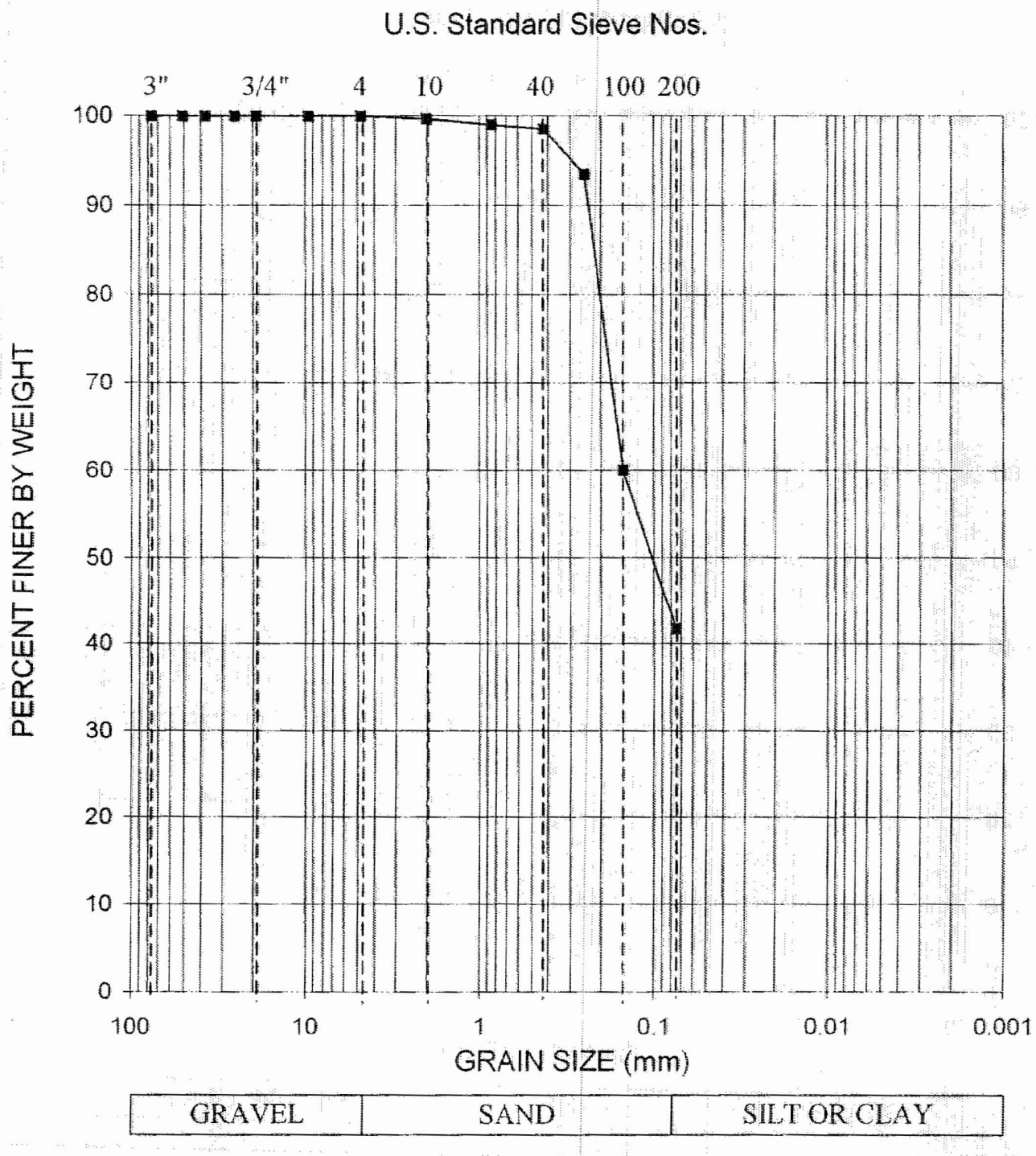
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland	Contract No.	06120048.00	Date:	9/14/2006

Boring No.	Depth (ft)	Sample Description	Class.	LL	PI
B-421	113.5	Silty SAND, green	SM		

Schnabel

Schnabel Engineering



GRADATION CURVE

ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland		Contract No.: 06120048.00		Date: 9/14/2006

Boring No.	Depth (ft)	Sample Description	Class.	LL	PI
B-421	133.5	Silty SAND, green	SM		

Schnabel

Schnabel Engineering