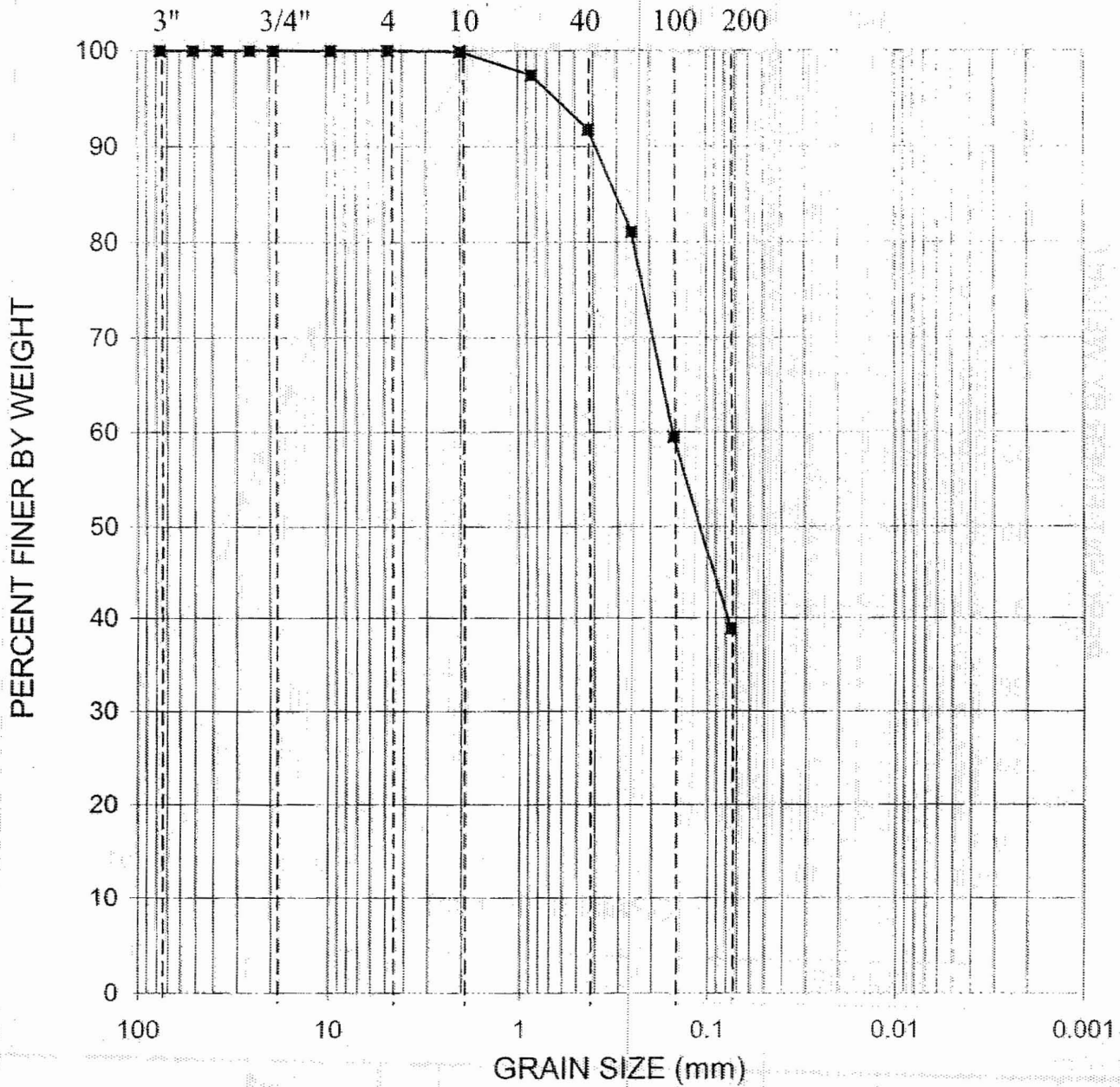


GRAVEL	SAND	SILT OR CLAY
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Key	Sample	Depth(ft.)	Sample Description	Class.	LL	PI	<b>Schnabel Engineering</b> <b>GRADATION CURVES</b>
■	B-333	28.5-30.5	FAT CLAY with sand - gray	CH	52	33	
▲							
●							Project: Calvert Cliffs Nuclear Power Plant  Contract No. 06120048 Date: 10/30/06 Method: ASTM D422



U.S. Standard Sieve Nos.



GRAVEL	SAND	SILT OR CLAY
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**GRADATION CURVE**  
ASTM D422

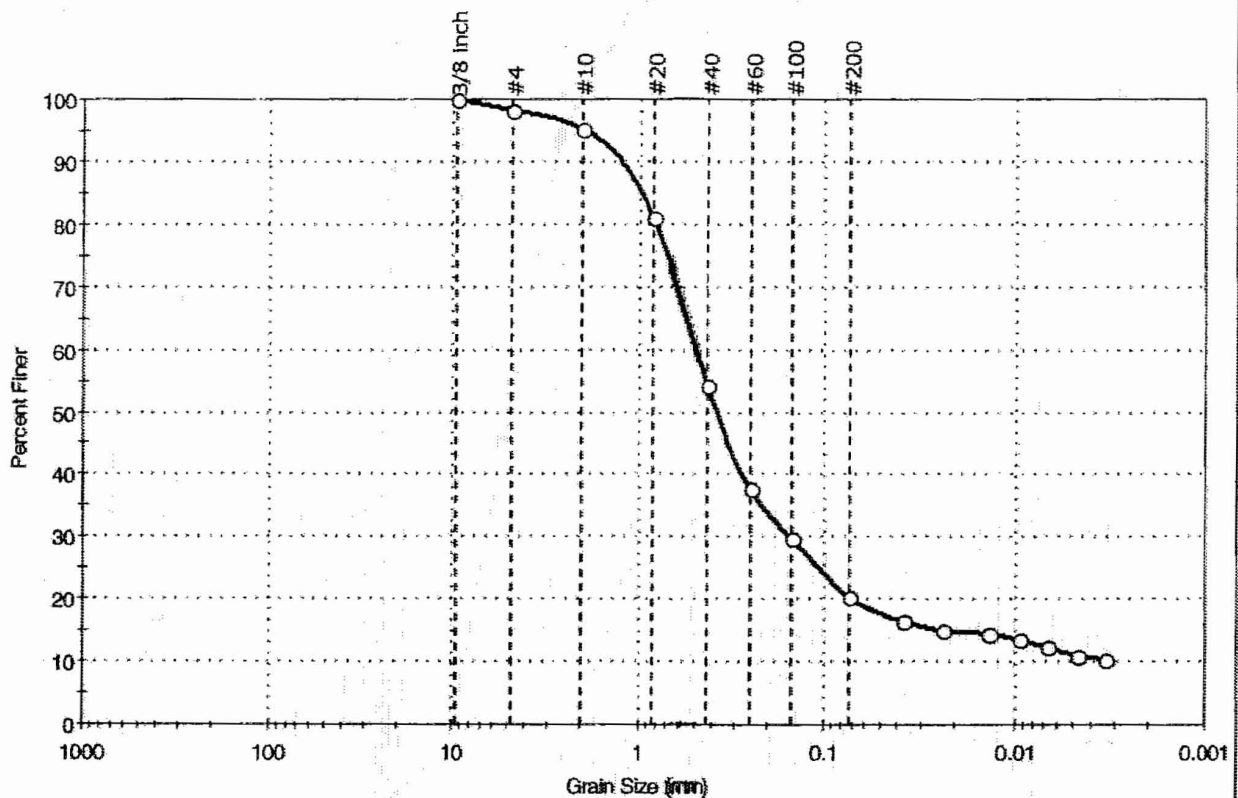
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland	Contract No.: 06120048.00	Date: 8/22/2006
Boring No.	Depth (ft)	Sample Description	Class. LL PI
B-333	43.5	SILTY SAND, dark gray	SM





Client: Schnabel Engineering, Inc.	Project: Subsurface Investigation Calvert Cliffs Nuclear PP	Project No: GTX-6880
Location: Calvert County, MD	Boring ID: B-333	Sample Type: tube
Sample ID: S-13	Test Date: 10/17/06	Tested By: sam
Depth: 48.5-48.8 ft	Test ID: 100186	Checked By: mcm
Test Comment: ---	Sample Description: Moist, mottled pretty brown, black, light gray, and dark greenish gray	
Sample Comment: ---		

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



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	1.7	78.0	20.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
3/8 inch	9.50	100		
#4	4.75	96		
#10	2.00	95		
#20	0.84	81		
#40	0.42	54		
#60	0.25	38		
#100	0.15	30		
#200	0.074	20		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0375	16		
---	0.0234	15		
---	0.0134	14		
---	0.0095	13		
---	0.0067	12		
---	0.0047	11		
---	0.0033	10		

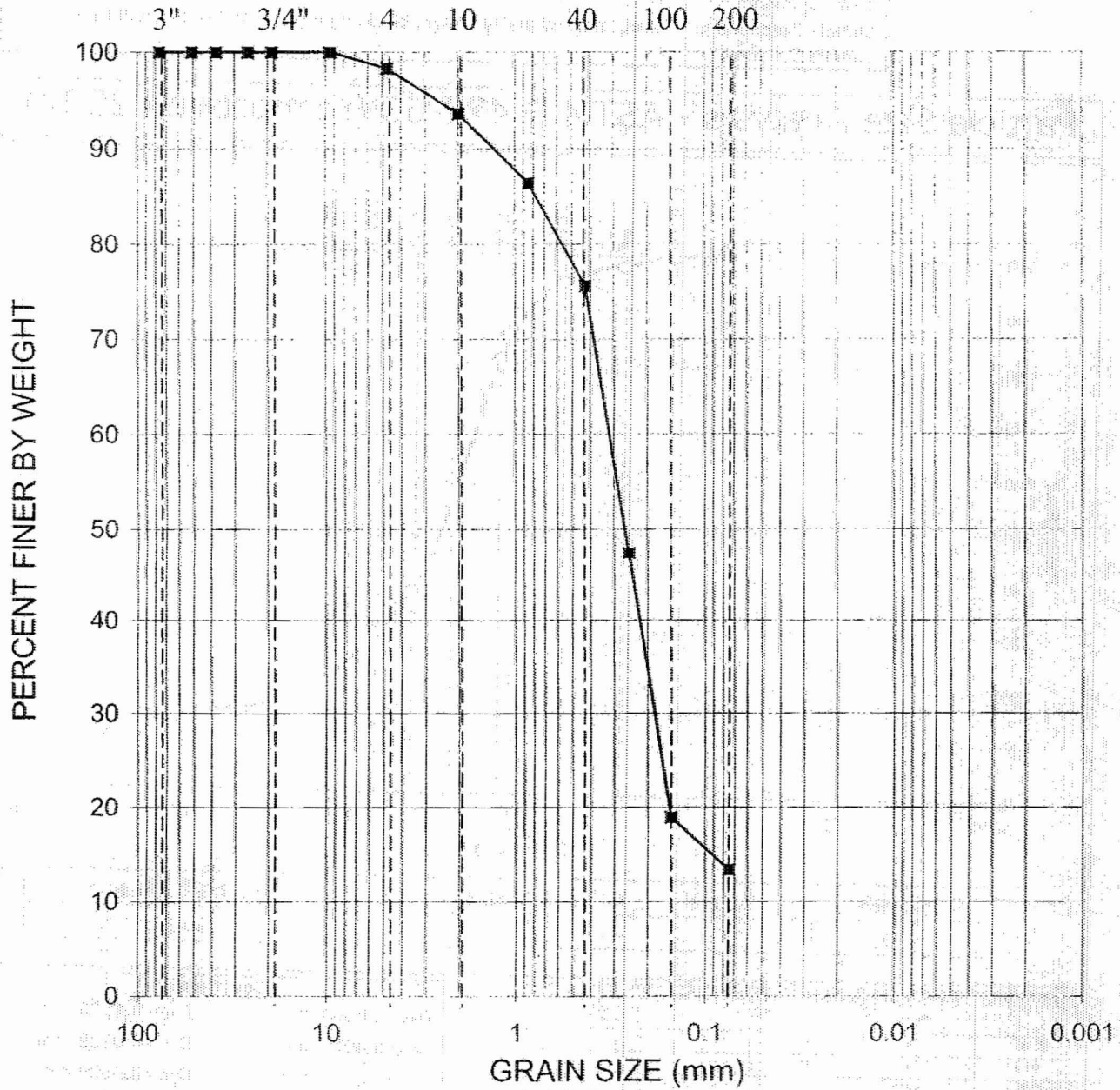
Coefficients	
D <sub>85</sub> = 1.0663 mm	D <sub>30</sub> = 0.1520 mm
D <sub>60</sub> = 0.4929 mm	D <sub>15</sub> = 0.0238 mm
D <sub>50</sub> = 0.3713 mm	D <sub>10</sub> = 0.0029 mm
C <sub>u</sub> = N/A	C <sub>c</sub> = N/A

Classification	
ASTM	Clayey sand (SC)
AASHTO	Clayey Gravel and Sand (A-2-6 (2))

Sample/Test Description	
Sand/Gravel Particle Shape : ANGULAR	
Sand/Gravel Hardness : HARD	



U.S. Standard Sieve Nos.



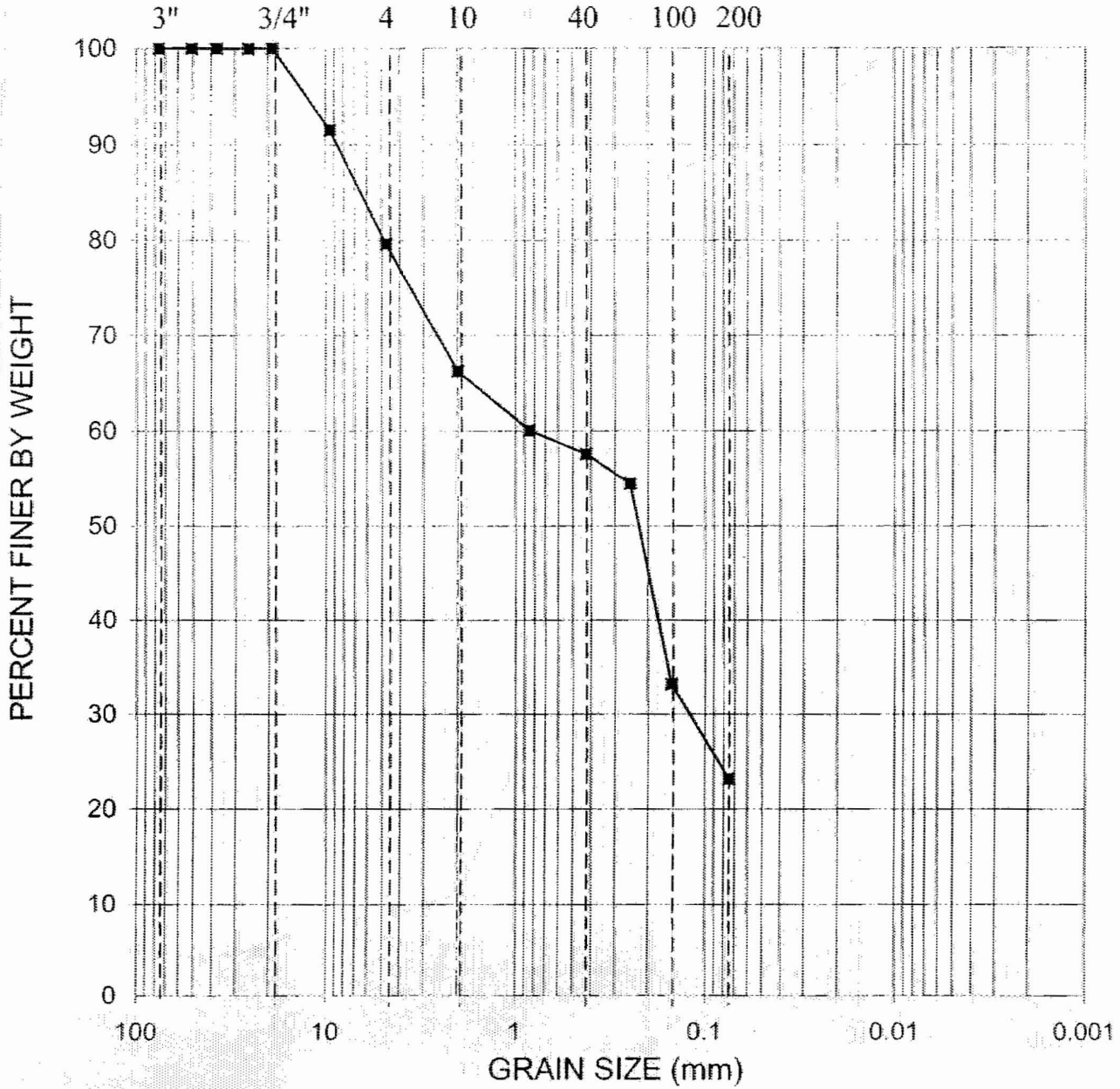
GRAVEL	SAND	SILT OR CLAY
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GRADATION CURVE  
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.: 06120048.00	Date: 8/22/2006	
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI
B-333	53.5	SILTY SAND, trace shells, dark gray	SM		




U.S. Standard Sieve Nos.

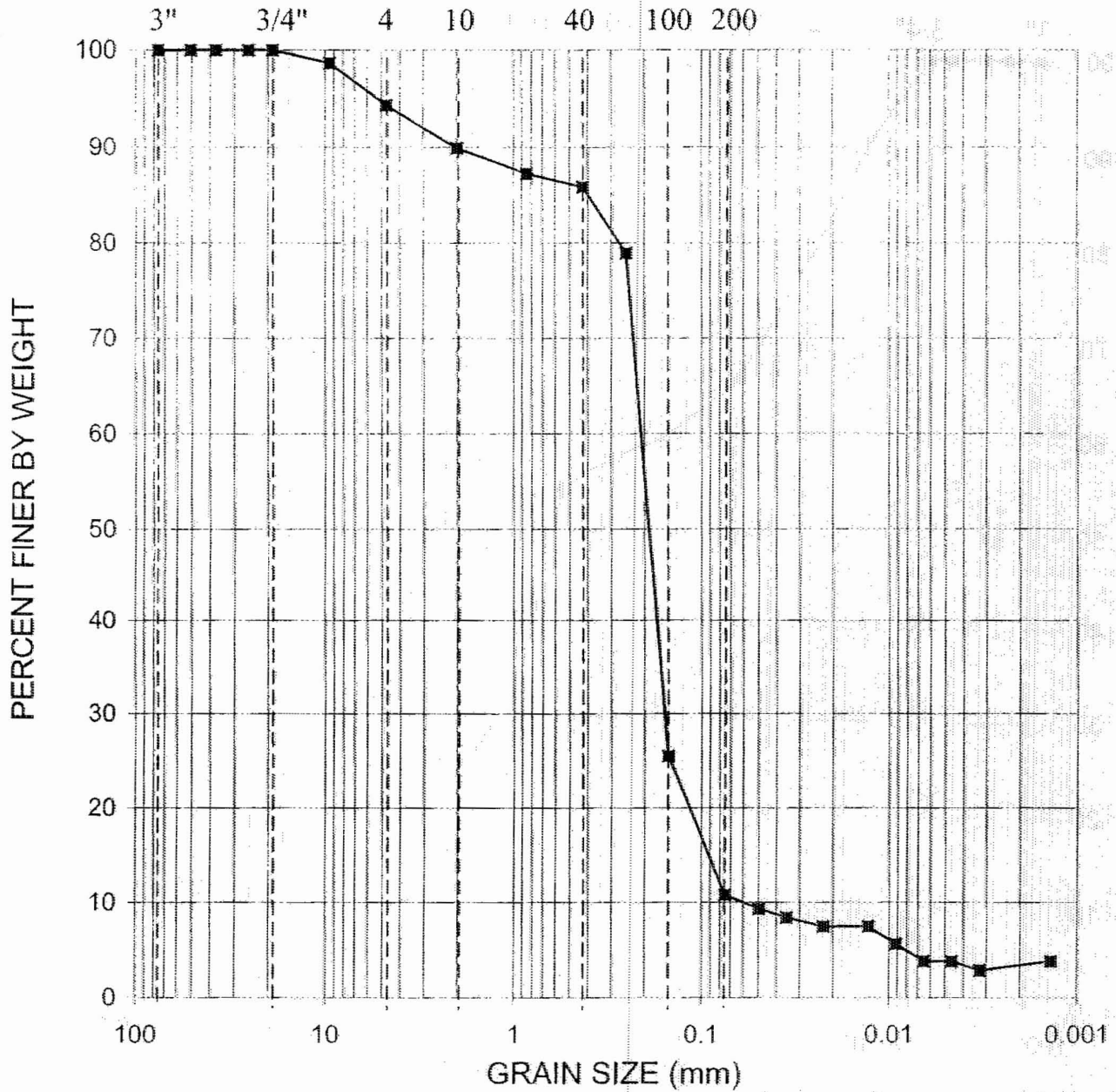


GRAVEL                      SAND                      SILT OR CLAY

**GRADATION CURVE**  
ASTM D422

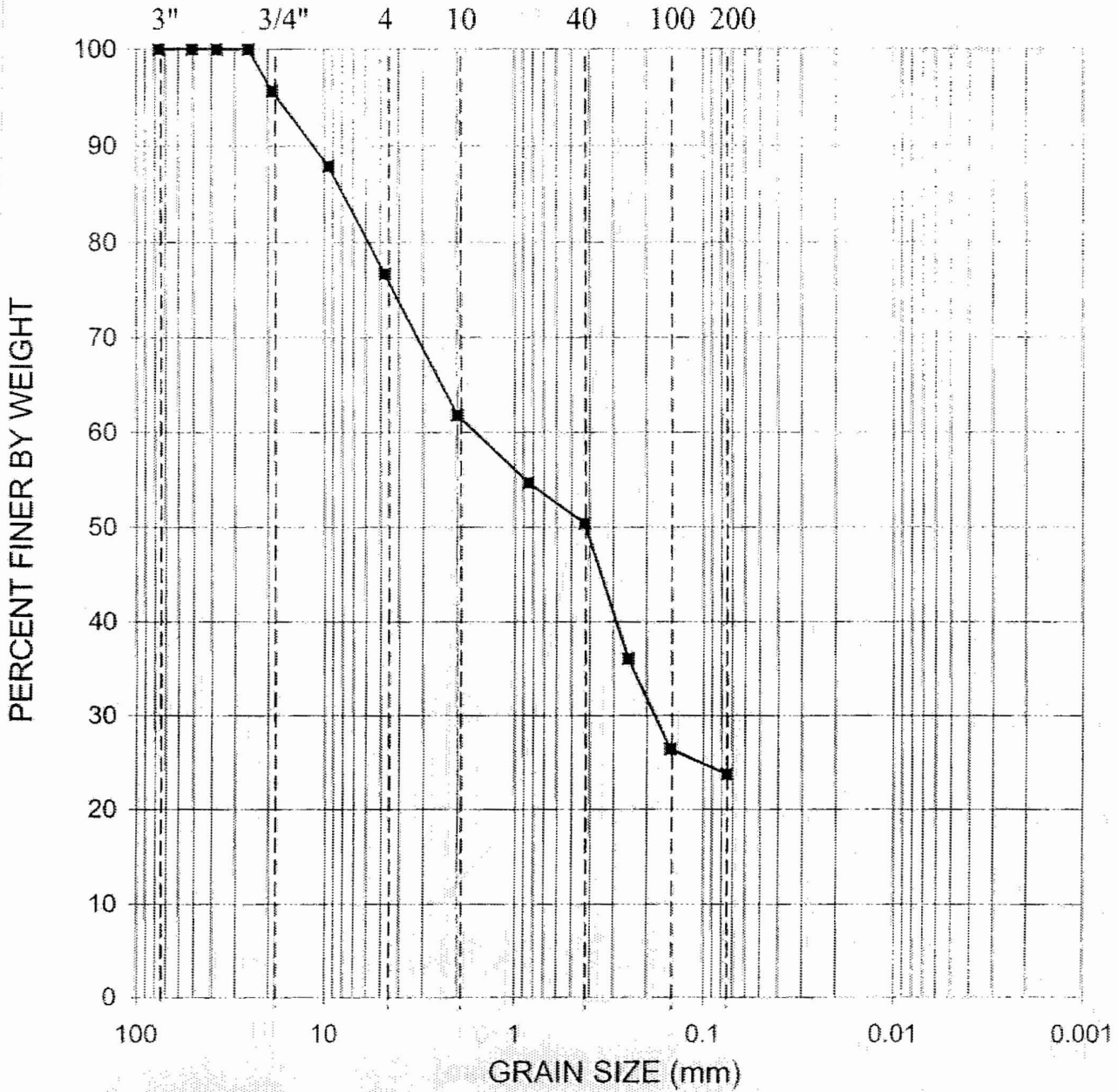
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland			Contract No.:	06120048.00	Date:	8/22/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI		
B-333	68.5	SILTY SAND, with gravel, trace shells and cemented sand, gray	SM				

U.S. Standard Sieve Nos.





U.S. Standard Sieve Nos.



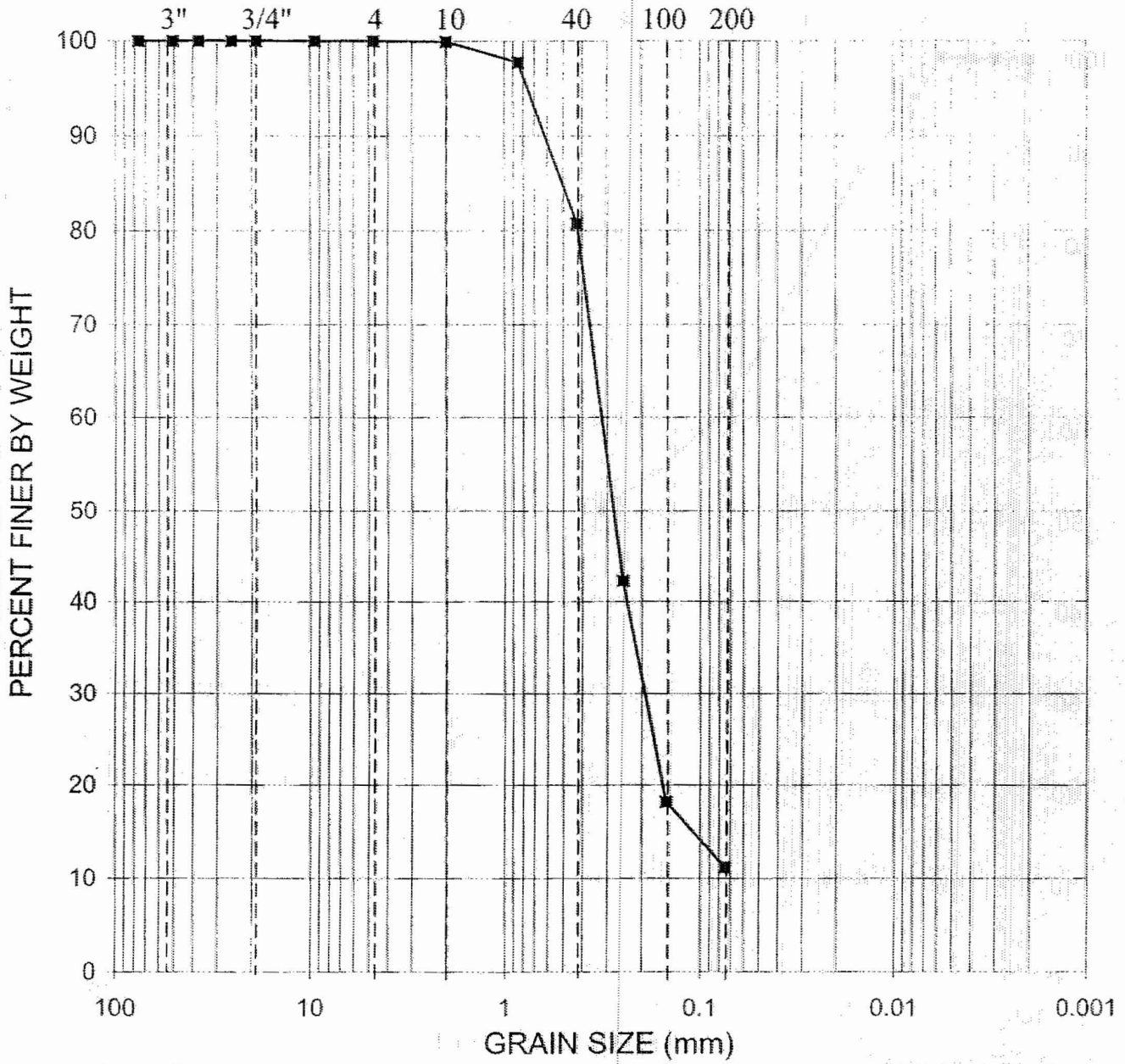
GRAVEL	SAND	SILT OR CLAY
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GRADATION CURVE  
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland			Contract No. 06120048.00	Date: 8/22/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI
B-333	93.5	Silty SAND, with shells, trace cemented sand, light green	SM		




U.S. Standard Sieve Nos.

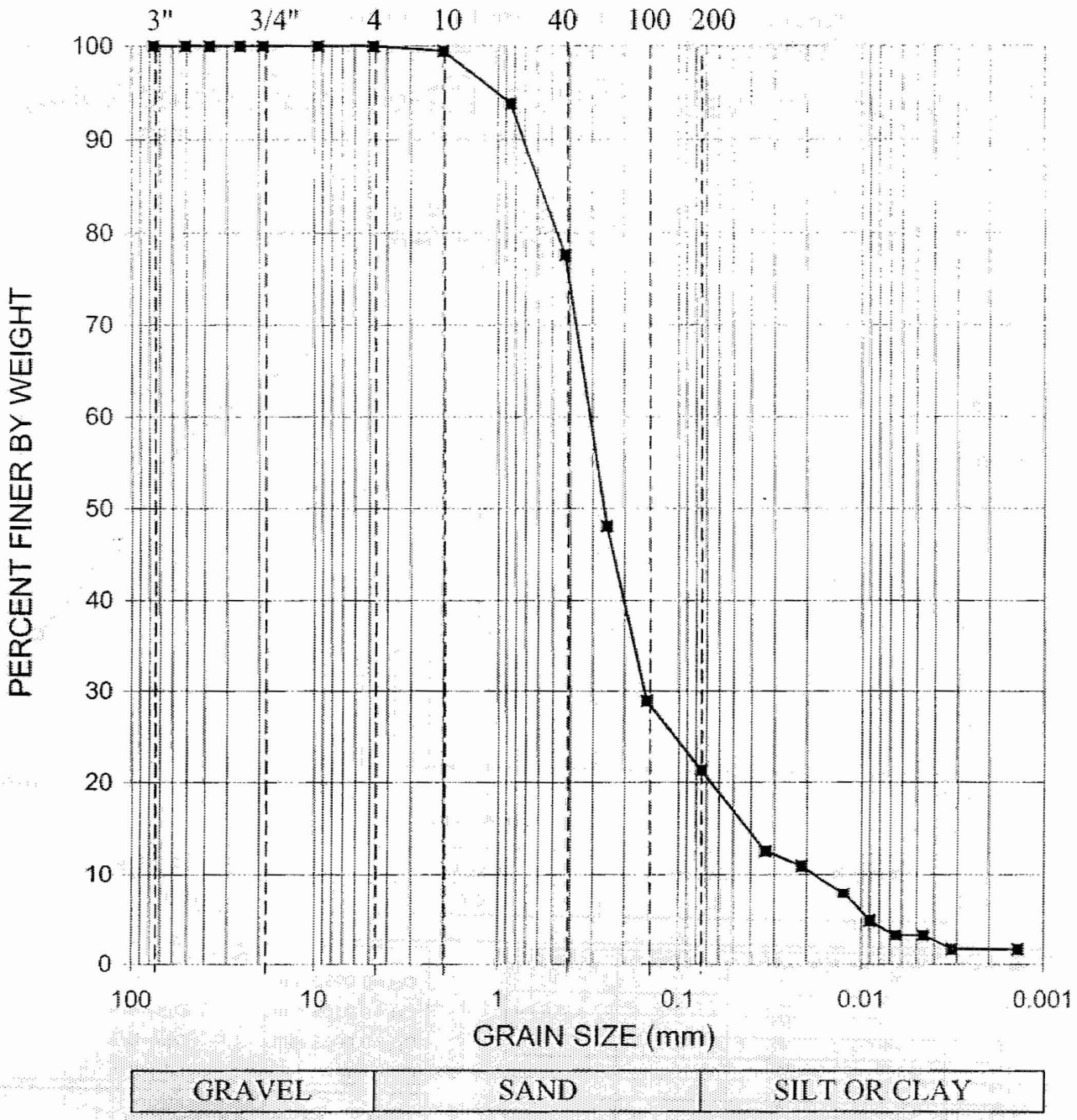


GRAVEL	SAND	SILT OR CLAY
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**GRADATION CURVE**  
ASTM D422

Project:		Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.: 06120048.00		Date: 8/22/2006	
Boring No.	Depth (ft)	Sample Description	Class	LL	PI		
B-334	0.0	Poorly Graded SAND, with silt dark brown	SP-SM				

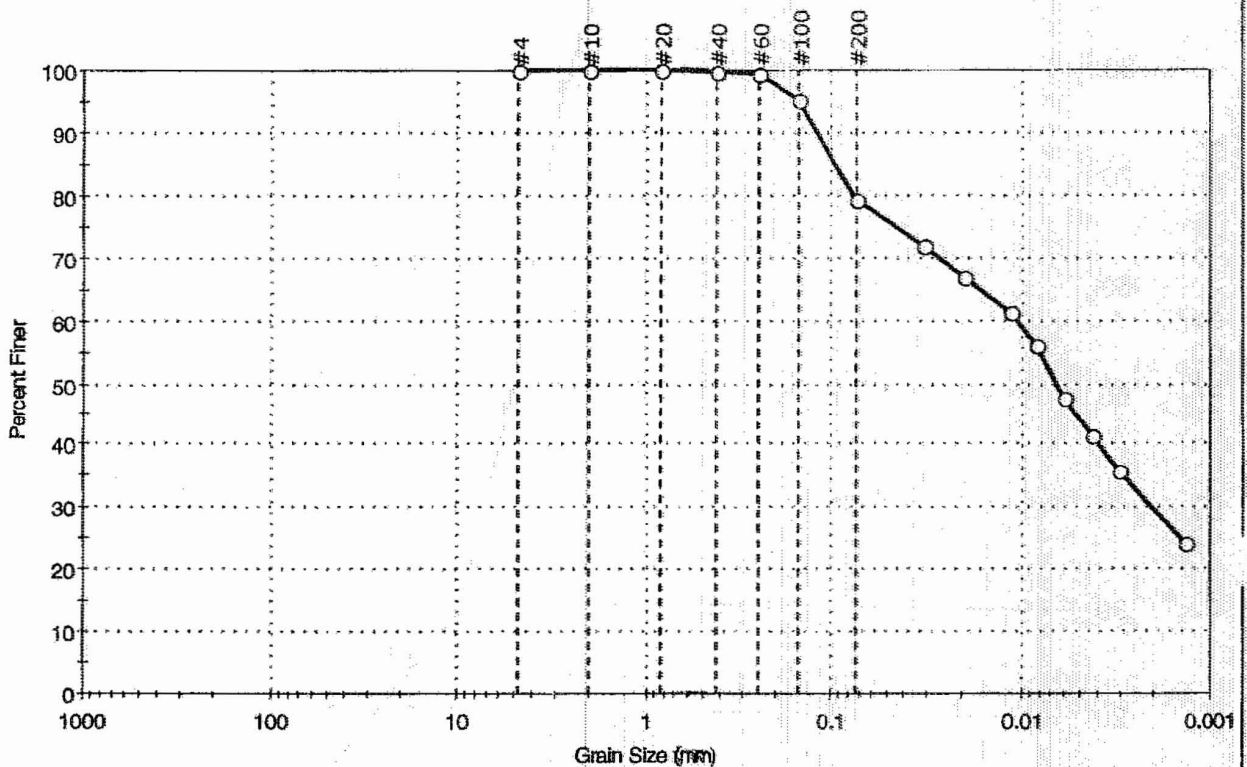
U.S. Standard Sieve Nos.





Client: Schnabel Engineering, Inc.	Project No: GTX-6880
Project: Subsurface Investigation Calvert Cliffs Nuclear PP	Tested By: sam
Location: Calvert County, MD	Checked By: mcm
Boring ID: B-334	Sample Type: tube
Sample ID: S-8	Test Date: 09/14/06
Depth: 23.0-25.0 ft	Test Id: 95799
Test Comment: ---	
Sample Description: Moist, dark greenish gray clay with sand	
Sample Comment: ---	

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



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	0.0	20.7	79.3

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	95		
#200	0.075	79		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0317	72		
---	0.0198	67		
---	0.0118	61		
---	0.0083	56		
---	0.0060	48		
---	0.0043	41		
---	0.0031	36		
---	0.0014	24		

**Coefficients**

D <sub>85</sub> = 0.0950 mm	D <sub>30</sub> = 0.0021 mm
D <sub>60</sub> = 0.0105 mm	D <sub>15</sub> = N/A
D <sub>50</sub> = 0.0065 mm	D <sub>10</sub> = N/A
C <sub>u</sub> = N/A	C <sub>c</sub> = N/A

**Classification**

ASTM fat clay with sand (CH)

AASHTO Clayey Soils (A-7-6 (31))

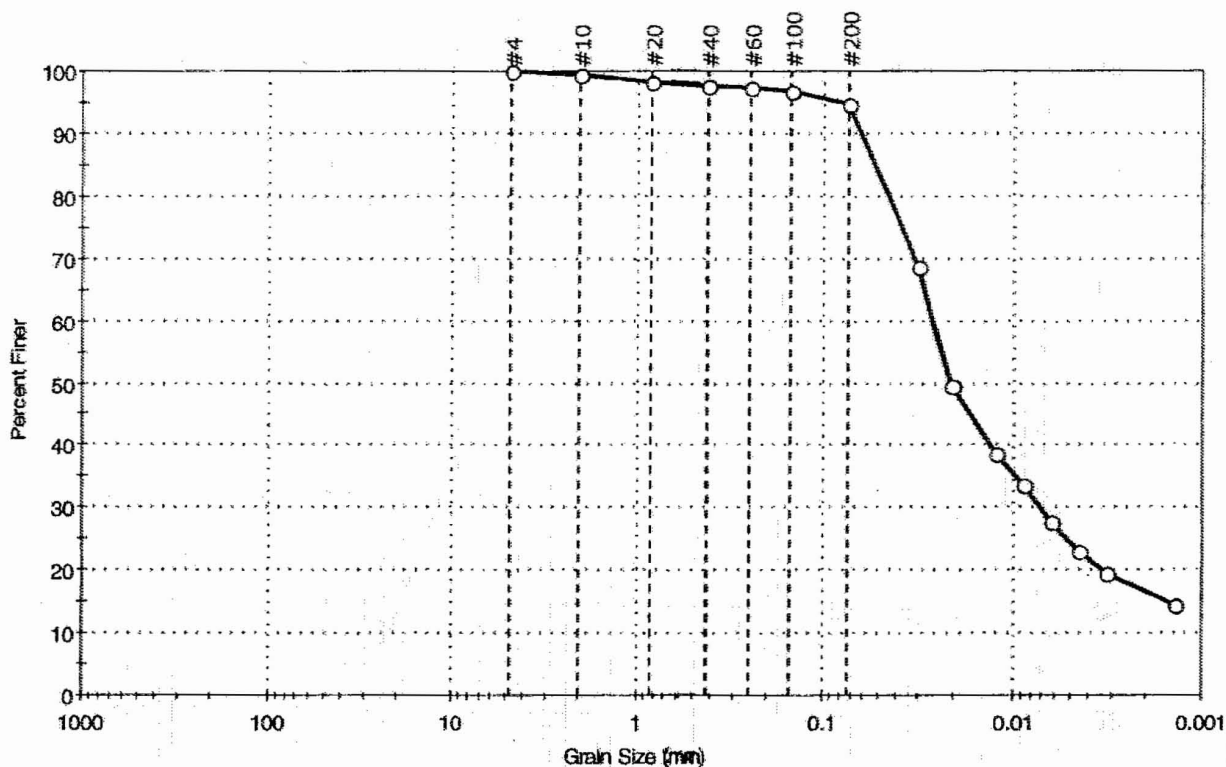
**Sample/Test Description**

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Client: Schnabel Engineering, Inc.	Project: Subsurface Investigation Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No: GTX-6880
Boring ID: B-334	Sample Type: tube	Tested By: sam	
Sample ID: S-10	Test Date: 09/14/06	Checked By: mcm	
Depth: 33.0-34.7 ft	Test Id: 95800		
Test Comment: ---			
Sample Description: Moist, dark greenish gray clay			
Sample Comment: ---			

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



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	5.3	94.7

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.84	96		
#40	0.42	96		
#60	0.25	97		
#100	0.15	97		
#200	0.075	95		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0300	69		
---	0.0206	50		
---	0.0122	39		
---	0.0068	34		
---	0.0043	28		
---	0.0045	23		
---	0.0032	19		
---	0.0014	15		

**Coefficients**

D <sub>85</sub> = 0.0529 mm	D <sub>30</sub> = 0.0072 mm
D <sub>60</sub> = 0.0253 mm	D <sub>15</sub> = 0.0015 mm
D <sub>50</sub> = 0.0208 mm	D <sub>10</sub> = 0.0007 mm
C <sub>u</sub> = N/A	C <sub>c</sub> = N/A

**Classification**

ASTM lean clay (CL)

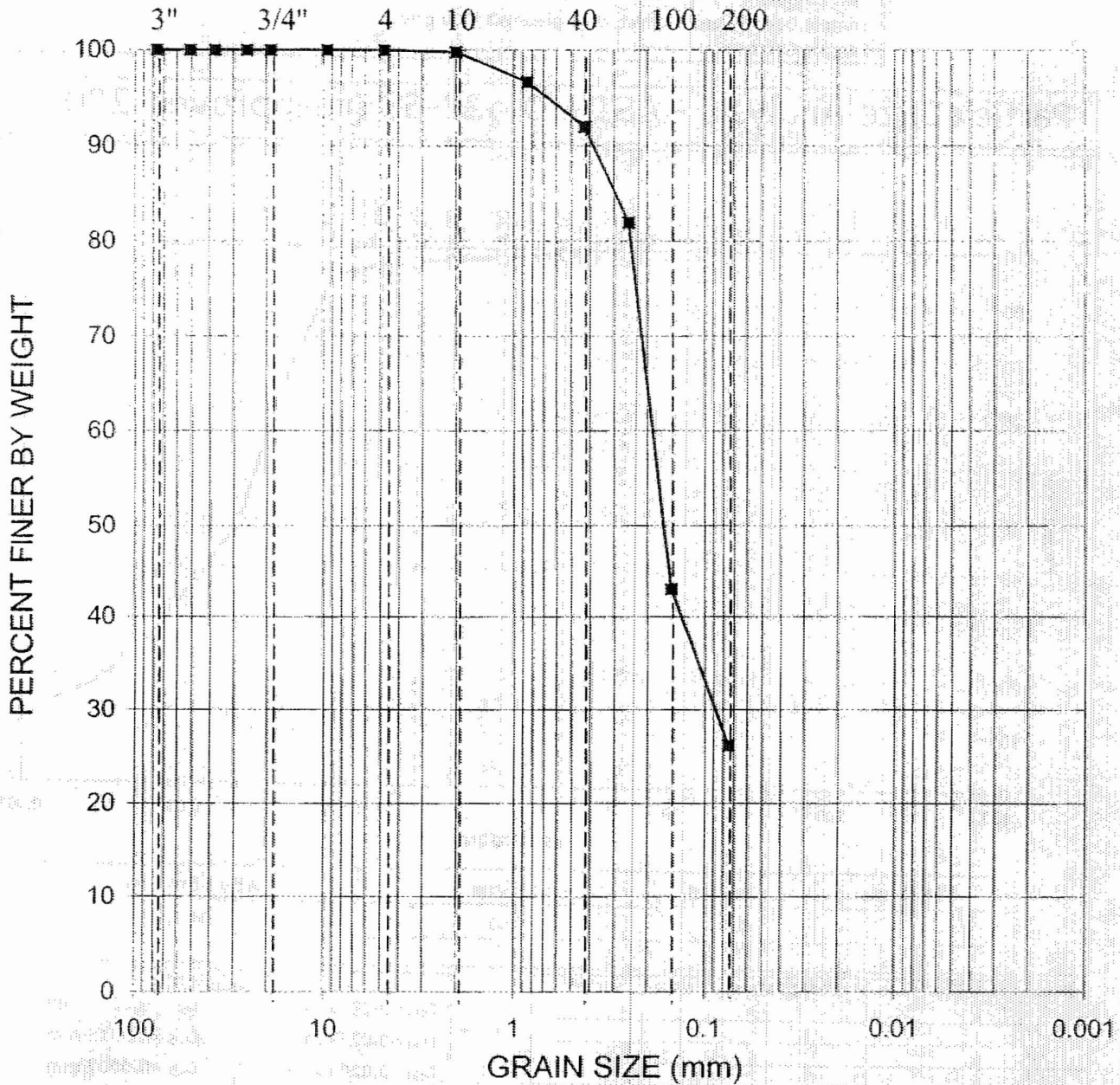
AASHTO Clayey Soils (A-7-6 (36))

**Sample/Test Description**

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

U.S. Standard Sieve Nos.



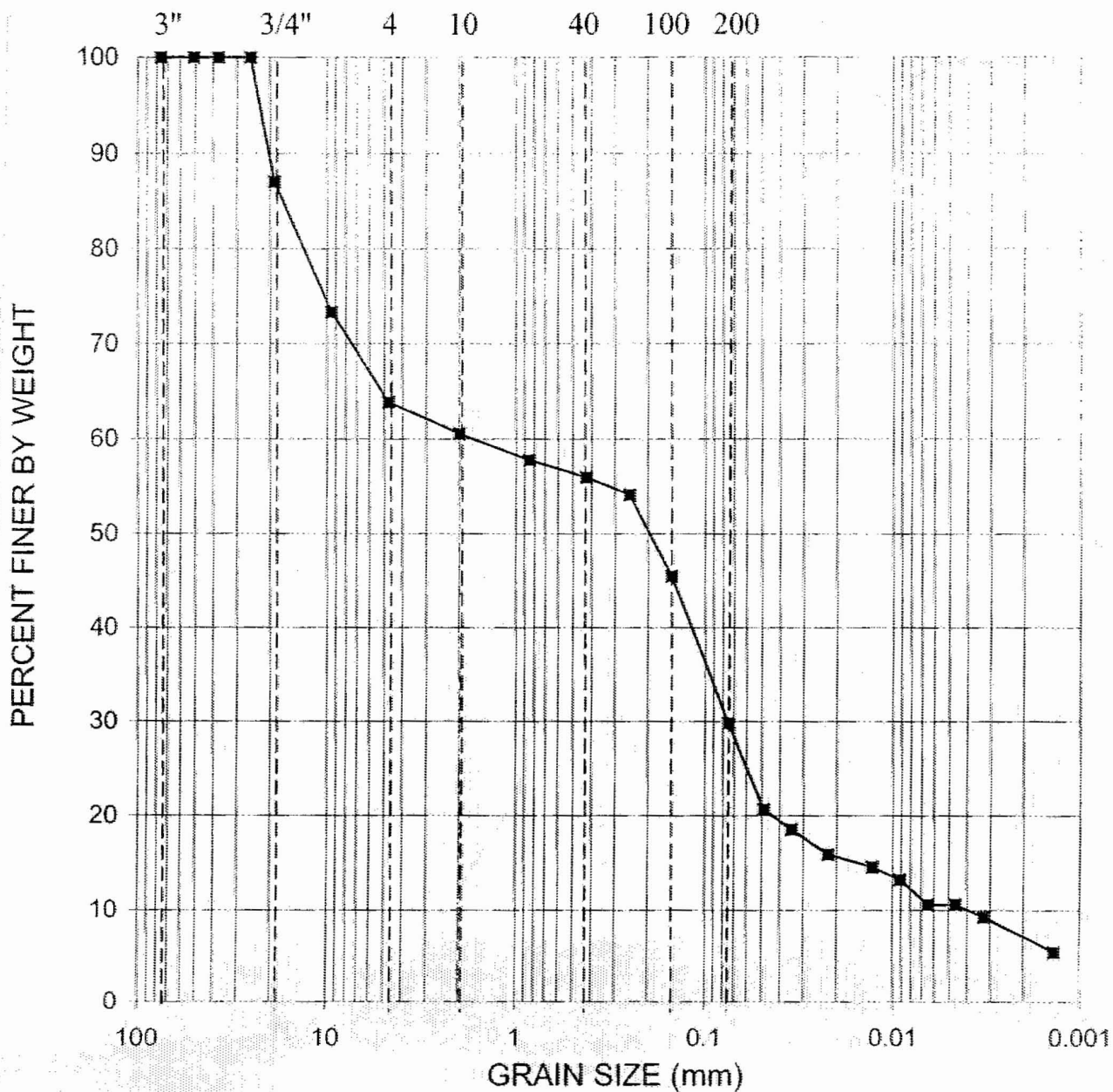
GRAVEL      SAND      SILT OR CLAY

GRADATION CURVE  
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	8/22/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI	
B-334	48.5	Silty SAND, dark gray	SM			



U.S. Standard Sieve Nos.



GRAVEL SAND SILT OR CLAY

GRADATION CURVE  
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/5/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI	
B-334	63.5	Silty GRAVEL, with sand, dark gray	GM	NP	NP	