

Client: Schnabel Engineering, Inc.

Project: Subsurface Investigation Calvert Cliffs Nuclear PP

Location: Calvert County, MD

Project No: GTX-6880

Boring ID: B-423

Sample Type: tube

Tested By: n/a

Sample ID: S-41

Test Date: 10/17/06

Checked By: mcm

Depth: 188.5-189.0 ft

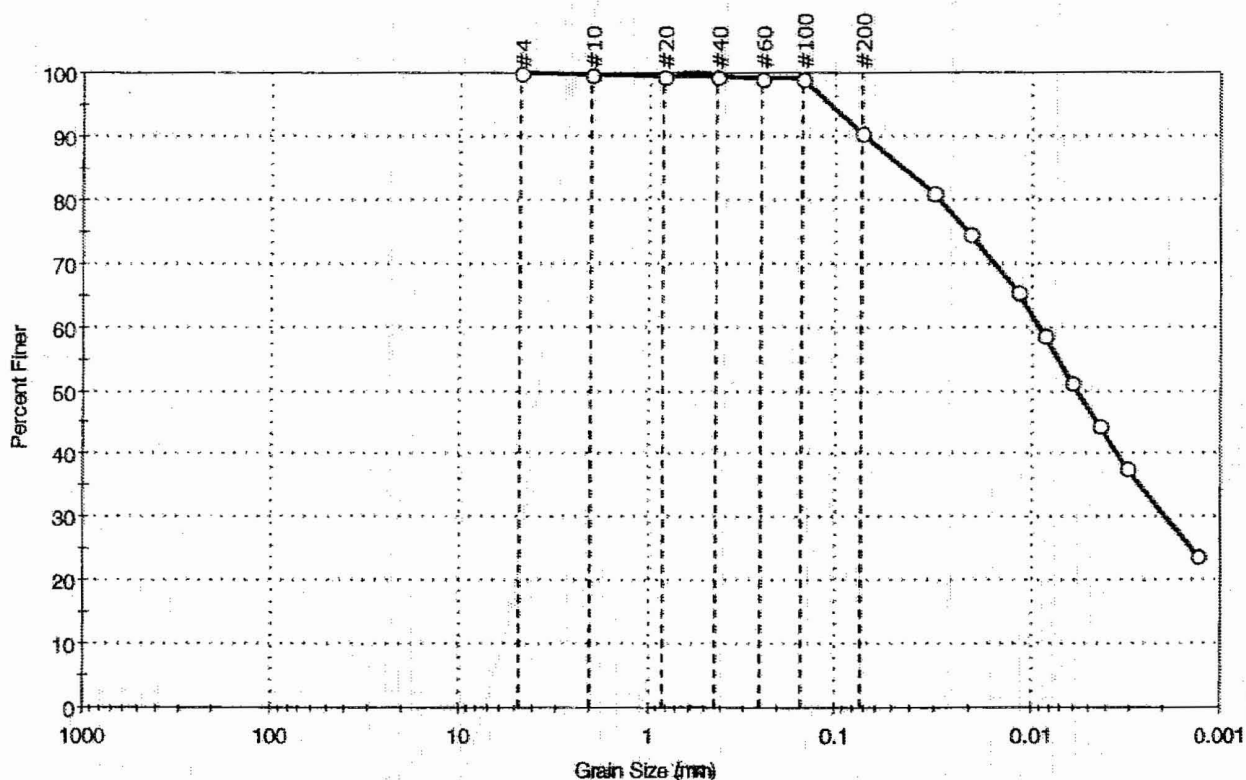
Test Id: 100192

Test Comment: ---

Sample Description: Moist olive gray sandy clay

Sample Comment: ---

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



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	0.0	9.4	90.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.84	99		
#40	0.42	99		
#60	0.25	99		
#100	0.15	99		
#200	0.074	91		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0314	81		
---	0.0201	75		
---	0.0118	65		
---	0.0085	59		
---	0.0061	51		
---	0.0043	45		
---	0.0031	38		
---	0.0013	24		

Coefficients

D ₈₅ = 0.0443 mm	D ₃₀ = 0.0019 mm
D ₆₀ = 0.0090 mm	D ₁₅ = N/A
D ₅₀ = 0.0057 mm	D ₁₀ = N/A
C _u = N/A	C _c = N/A

Classification

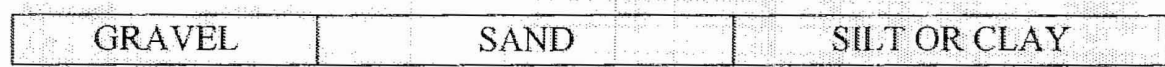
ASTM elastic silt (MH)

AASHTO Clayey Soils (A-7-5 (59))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD



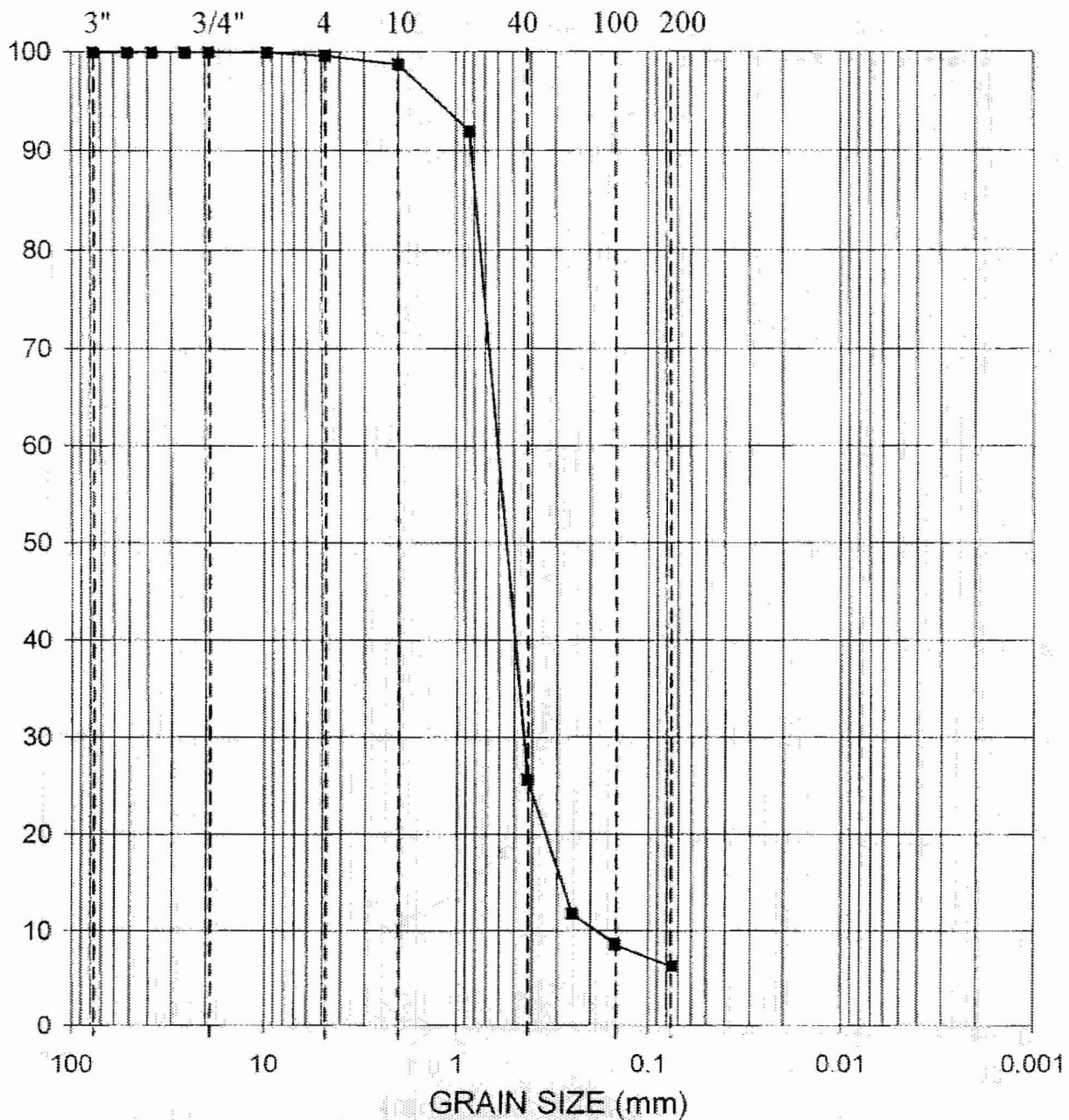
ASTM D422



Schnabel
Schnabel Engineering

U.S. Standard Sieve Nos.

PERCENT FINER BY WEIGHT



GRAVEL

SAND

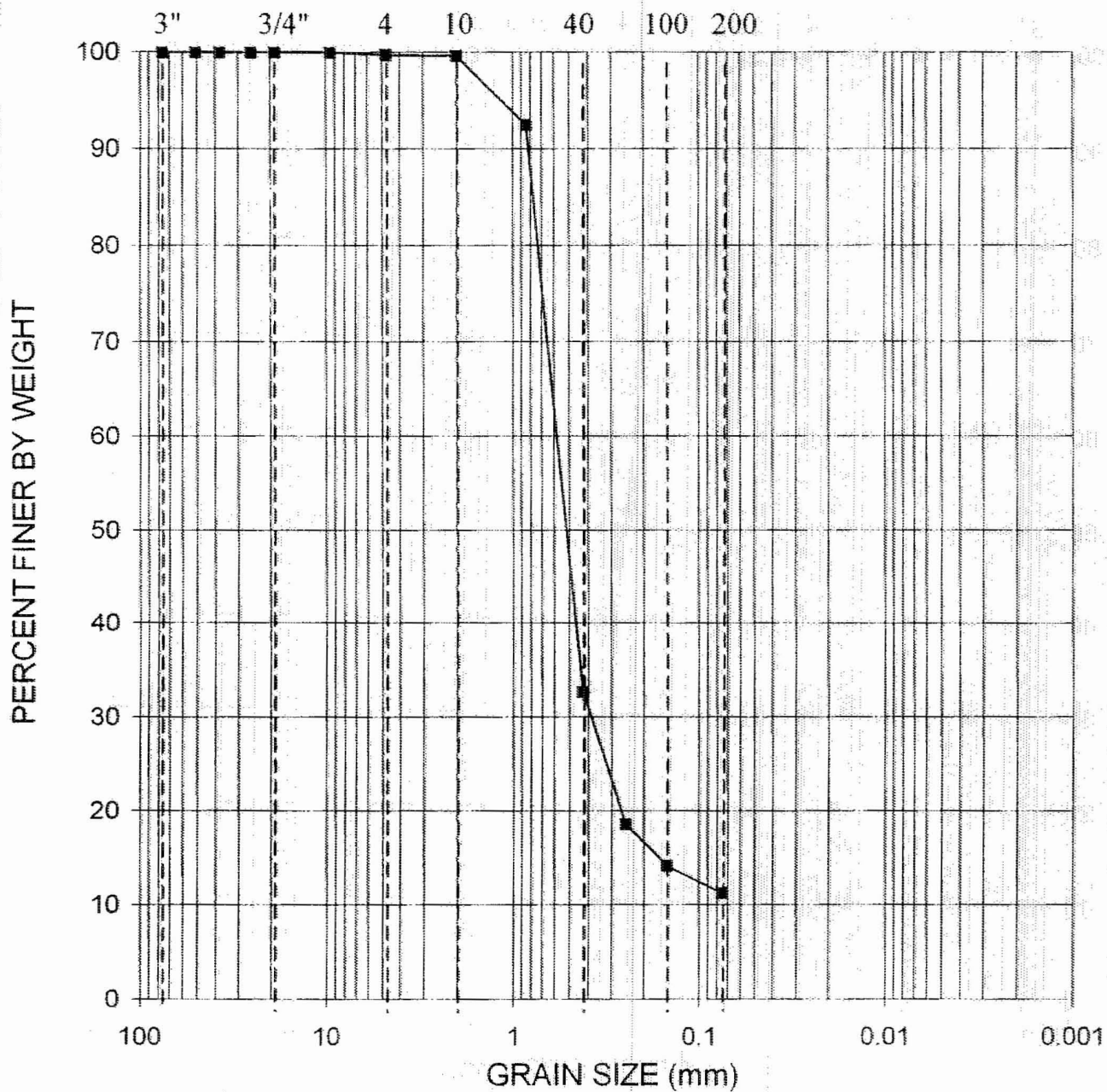
SILT OR CLAY

GRADATION CURVE

ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland			Contract No.	06120048.00	Date	9/18/2006
Boring No.	Depth (ft)	Sample Description	Class	LL	PI		
B-425	13.5	Poorly Graded SAND, with silt, brown	SP-SM				

U.S. Standard Sieve Nos.

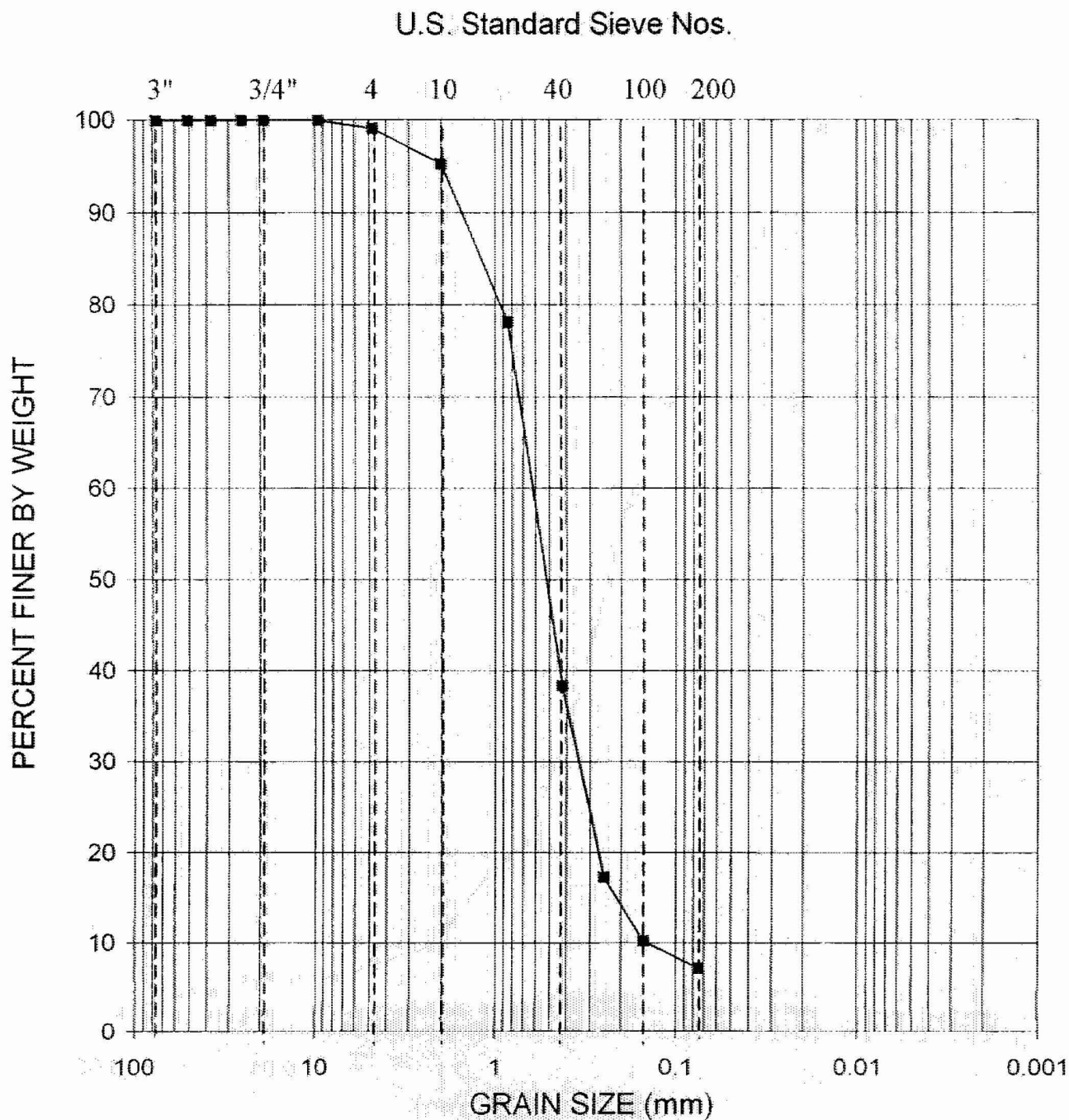


GRAVEL	SAND	SILT OR CLAY
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GRADATION CURVE

ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland			Contract No.	06120048.00	Date:	9/18/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI		
B-425	30.0	Poorly Graded SAND, with silt, brown	SP-SM				

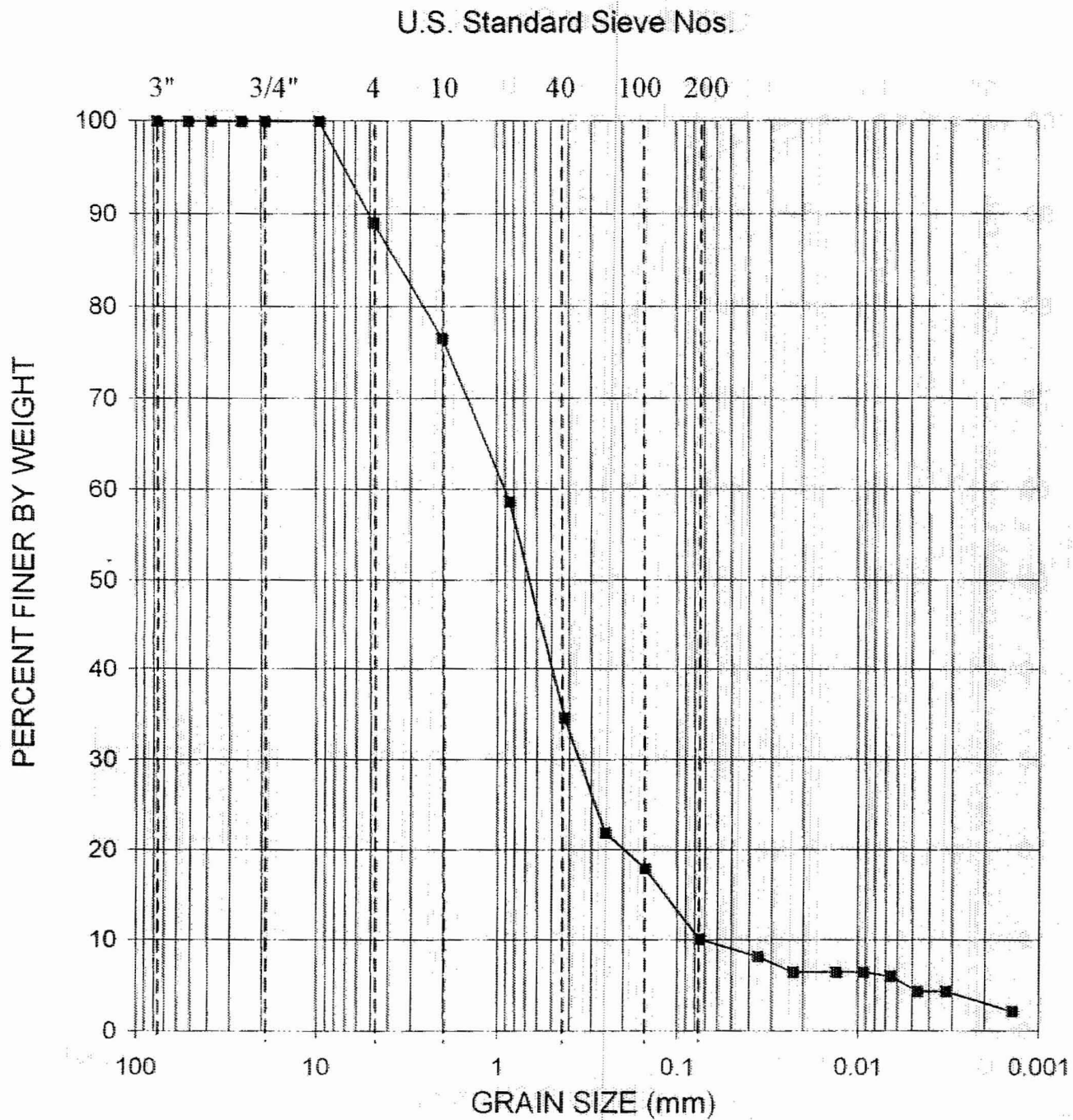


GRAVEL	SAND	SILT OR CLAY
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GRADATION CURVE

ASTM D422

Project	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland			Contract No.	06120048.00	Date	9/15/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI		
B-425	40.0	Poorly Graded SAND, with silt, brown	SP-SM				

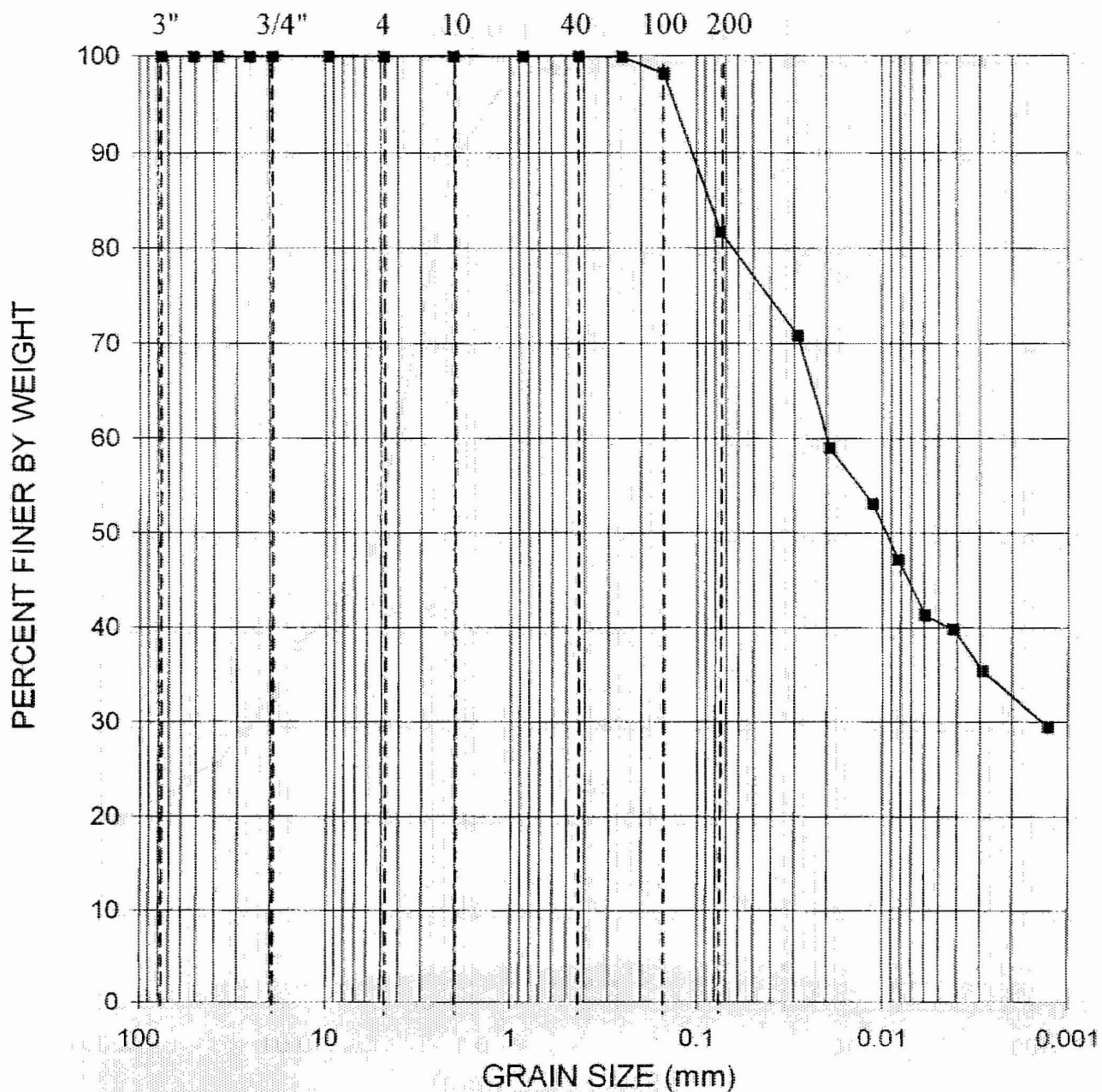


GRADATION CURVE

ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/22/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
B-425	50.0	Well Graded SAND, with silt, trace gravel, brown	SW-SM	28	11			

U.S. Standard Sieve Nos.



GRAVEL

SAND

SILT OR CLAY

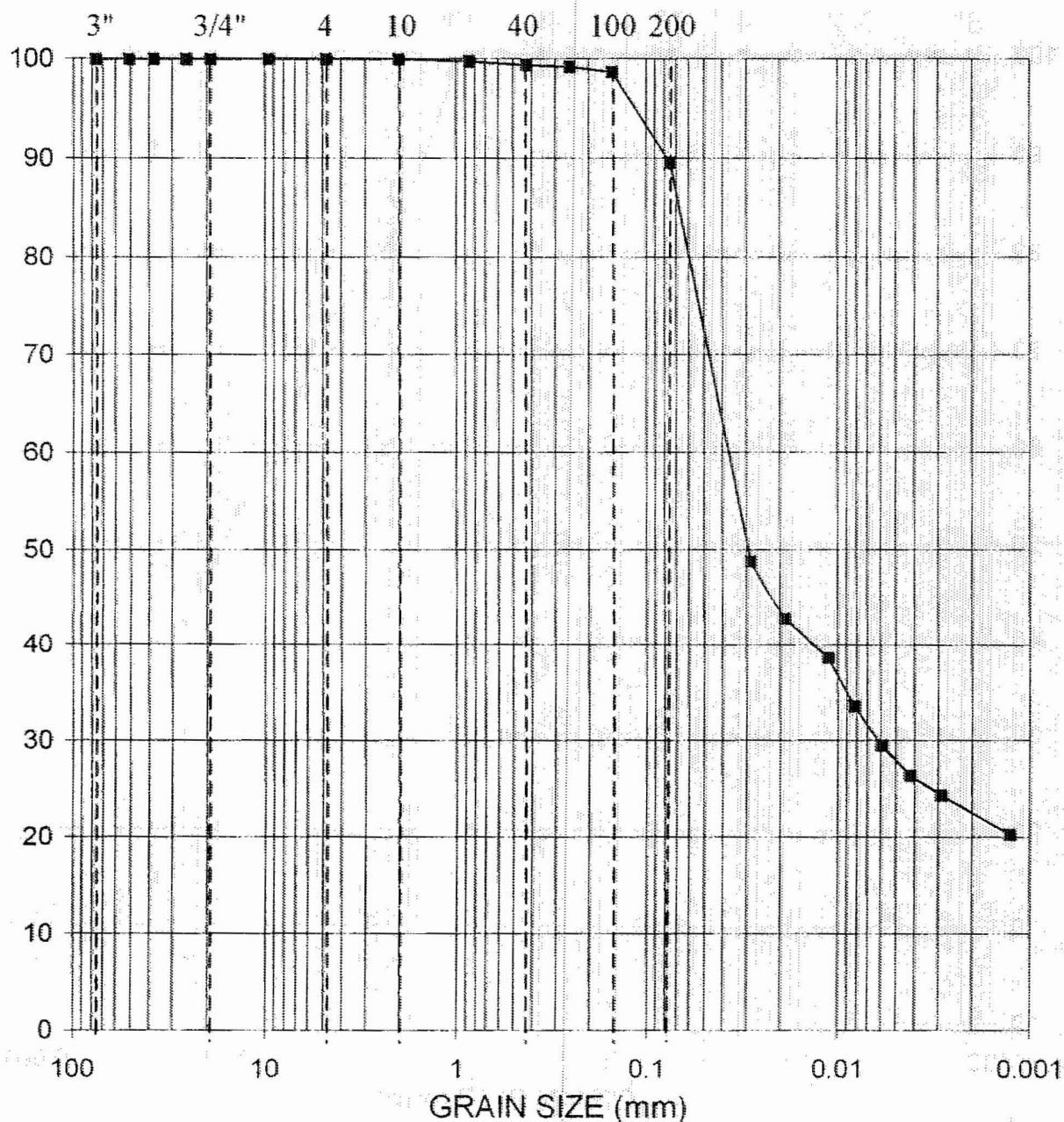
GRADATION CURVE

ASTM D422

Project:	Constellation Energy Group COLA Project Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland			Contract No.	06120048.00	Date:	9/20/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI		
B-425	57.0	FAT CLAY, with sand, gray	CH	55	30		

PERCENT FINER BY WEIGHT

U.S. Standard Sieve Nos.



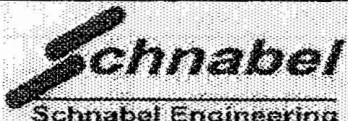
GRAVEL

SAND

SILT OR CLAY

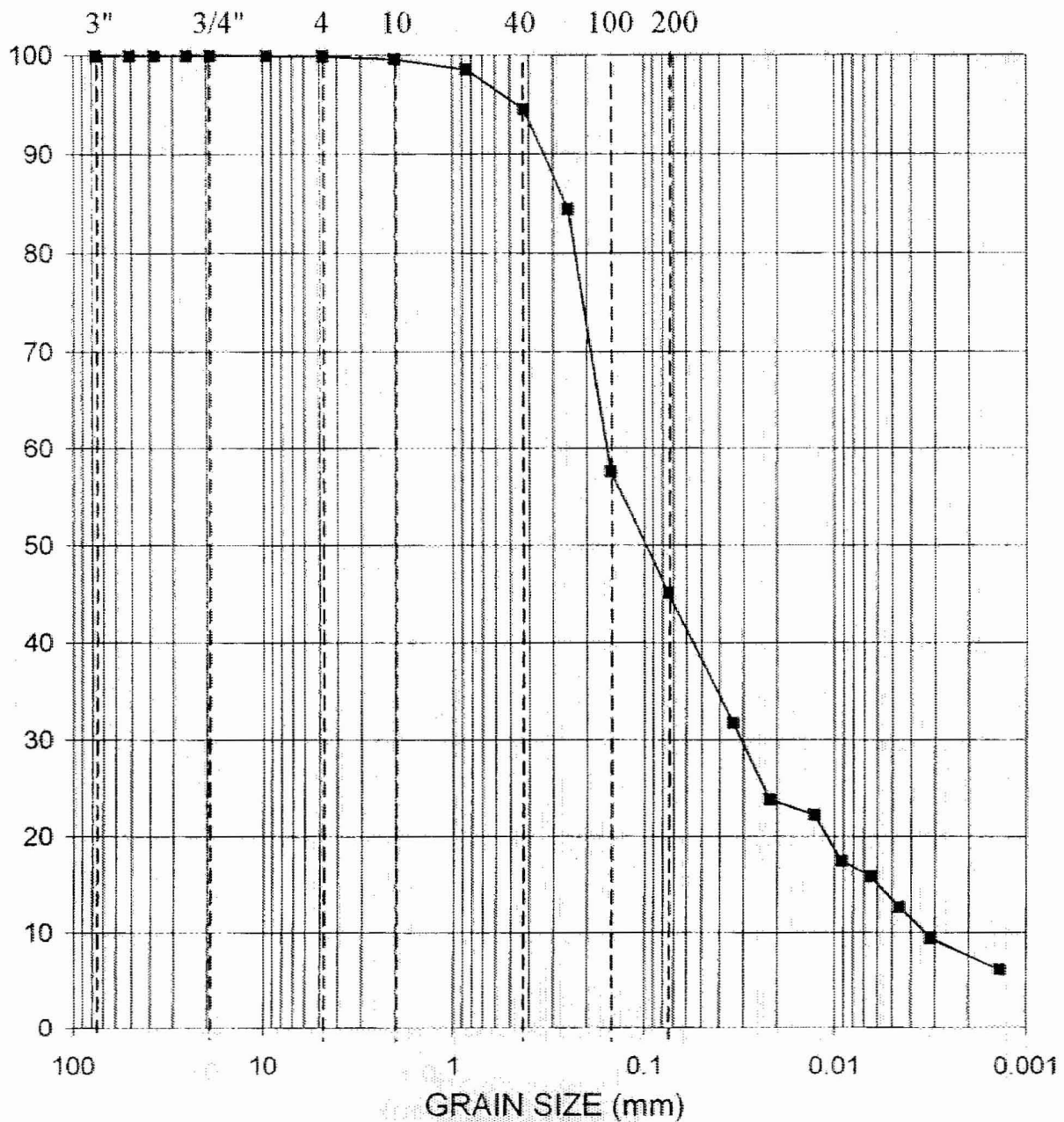
GRADATION CURVE

ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No:	06120048.00	Date:	9/20/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
B-425	65.0	FAT CLAY, trace sand, dark gray	CH	69	41			

U.S. Standard Sieve Nos.

PERCENT FINER BY WEIGHT



GRAVEL

SAND

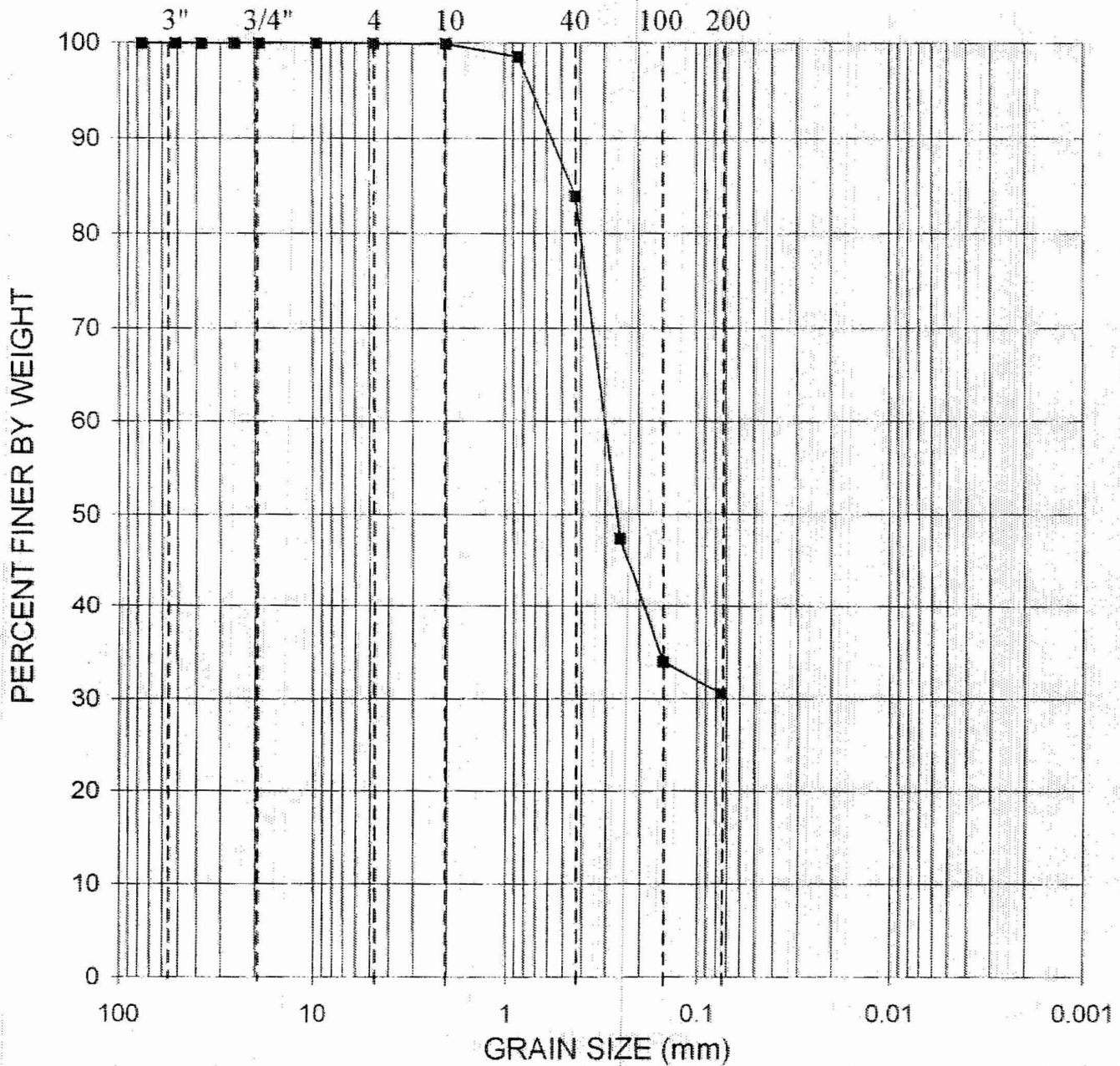
SILT OR CLAY

GRADATION CURVE

ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No. 06120048.00	Date: 9/19/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI	
B-425	75.0	Clayey SAND, dark gray	SC	41	21	

U.S. Standard Sieve Nos.



GRAVEL	SAND	SILT OR CLAY
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GRADATION CURVE

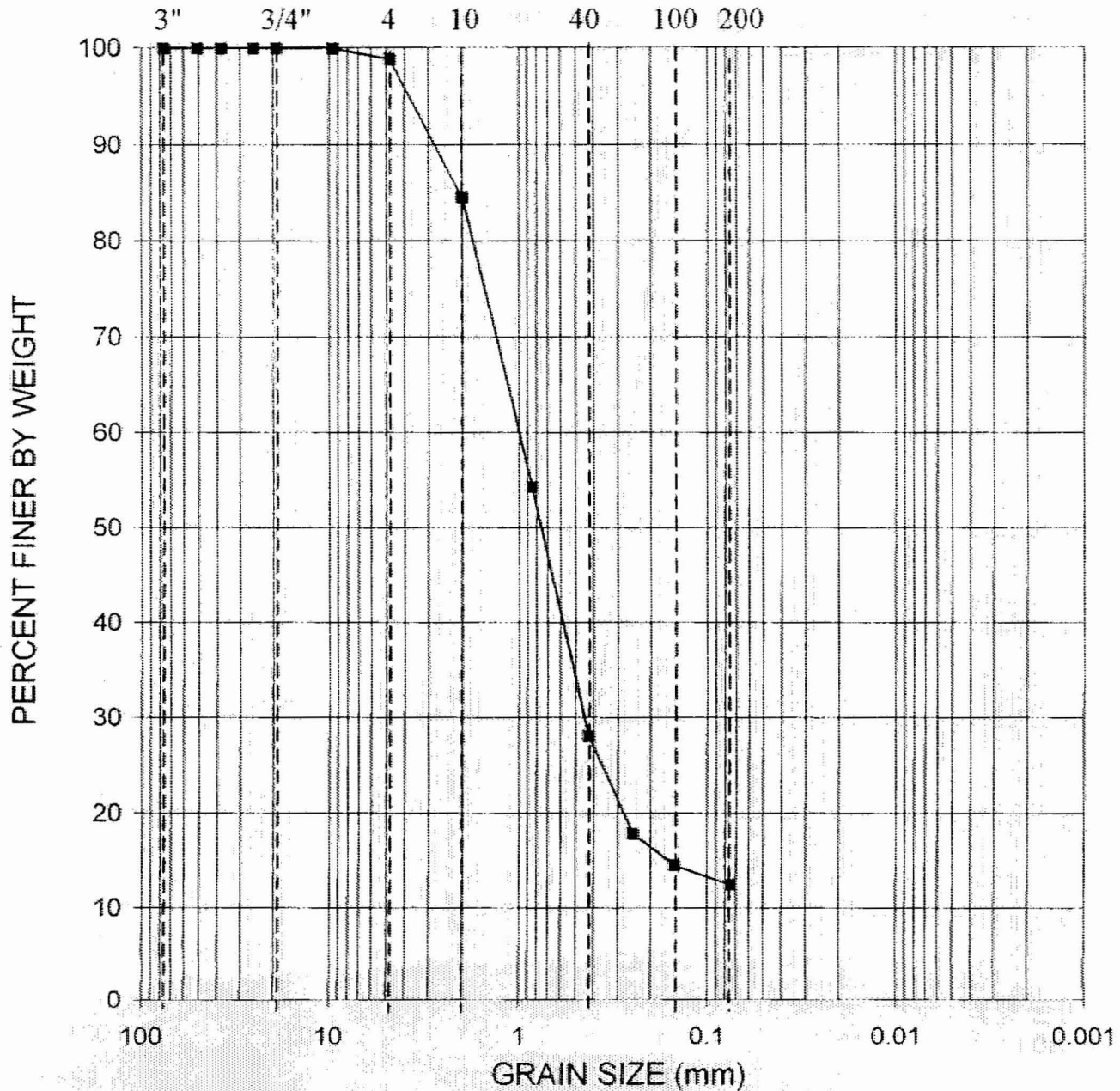
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland	Contract No.: 06120048.00	Date: 9/15/2006
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Boring No.	Depth (ft)	Sample Description	Class.	LL	PI
B-427	2.5	Silty SAND, dark brown	SM		



U.S. Standard Sieve Nos.

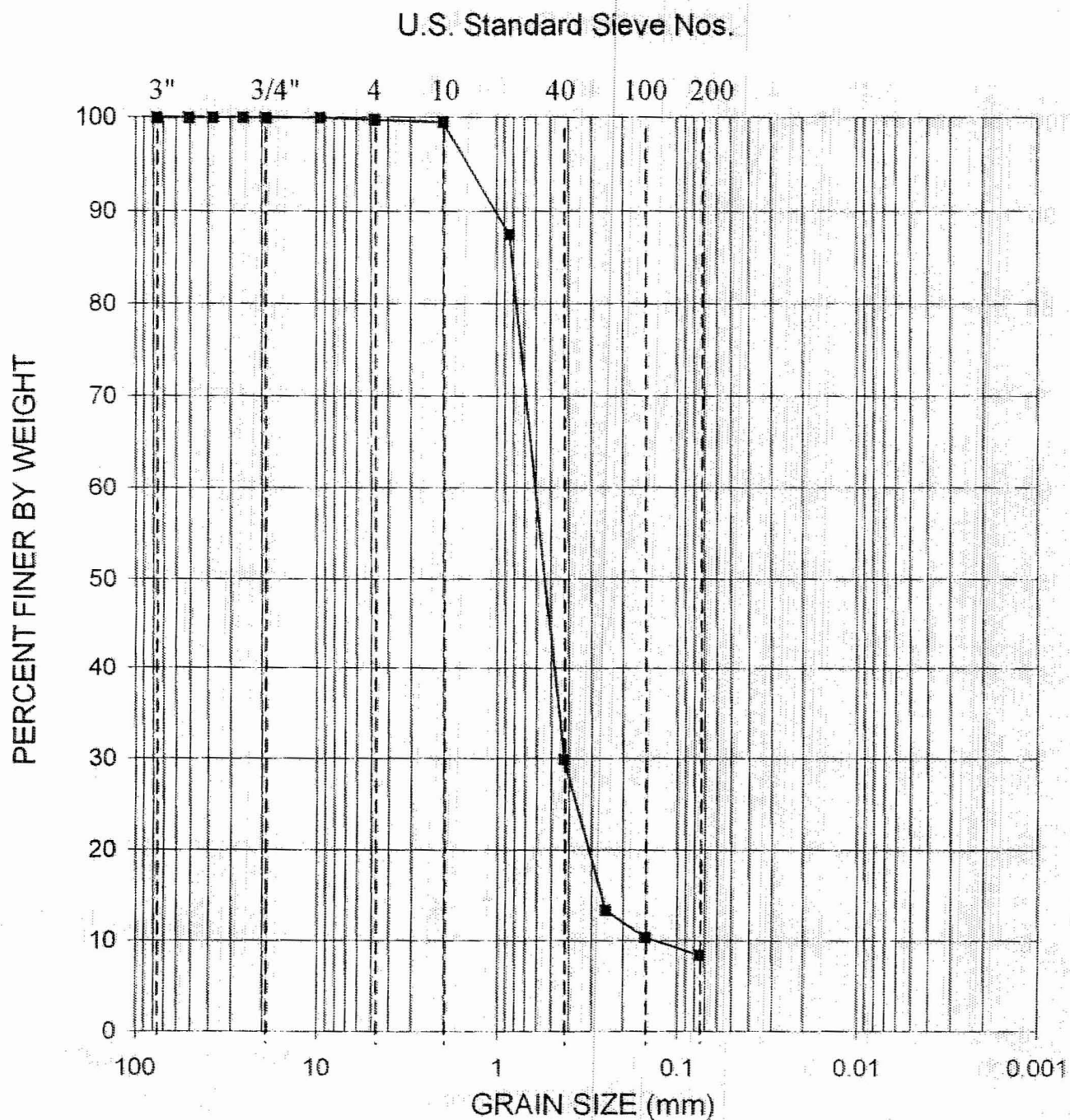


GRAVEL	SAND	SILT OR CLAY
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GRADATION CURVE

ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland			Contract No.	06120048.00	Date	9/18/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI		
B-427	18.5	Silty SAND, trace gravel, light brown	SM				

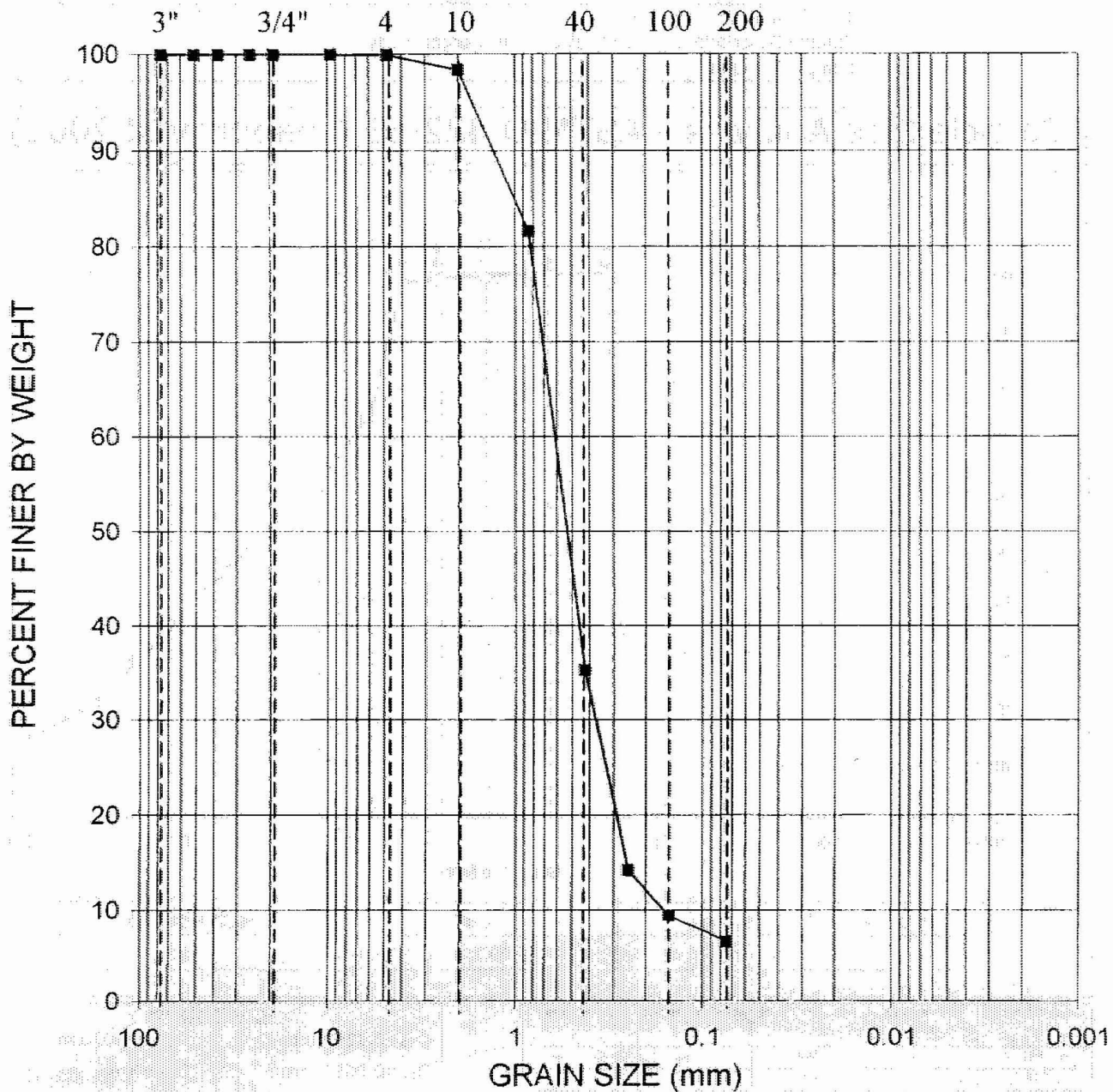


GRADATION CURVE

ASTM D422

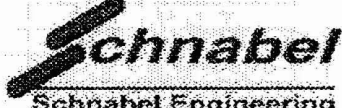
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.: 06120048.00	Date: 9/15/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI	
B-427	28.5	Poorly Graded SAND, with silt, light brown	SP-SM			

U.S. Standard Sieve Nos.



GRAVEL	SAND	SILT OR CLAY
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GRADATION CURVE
ASTM D422

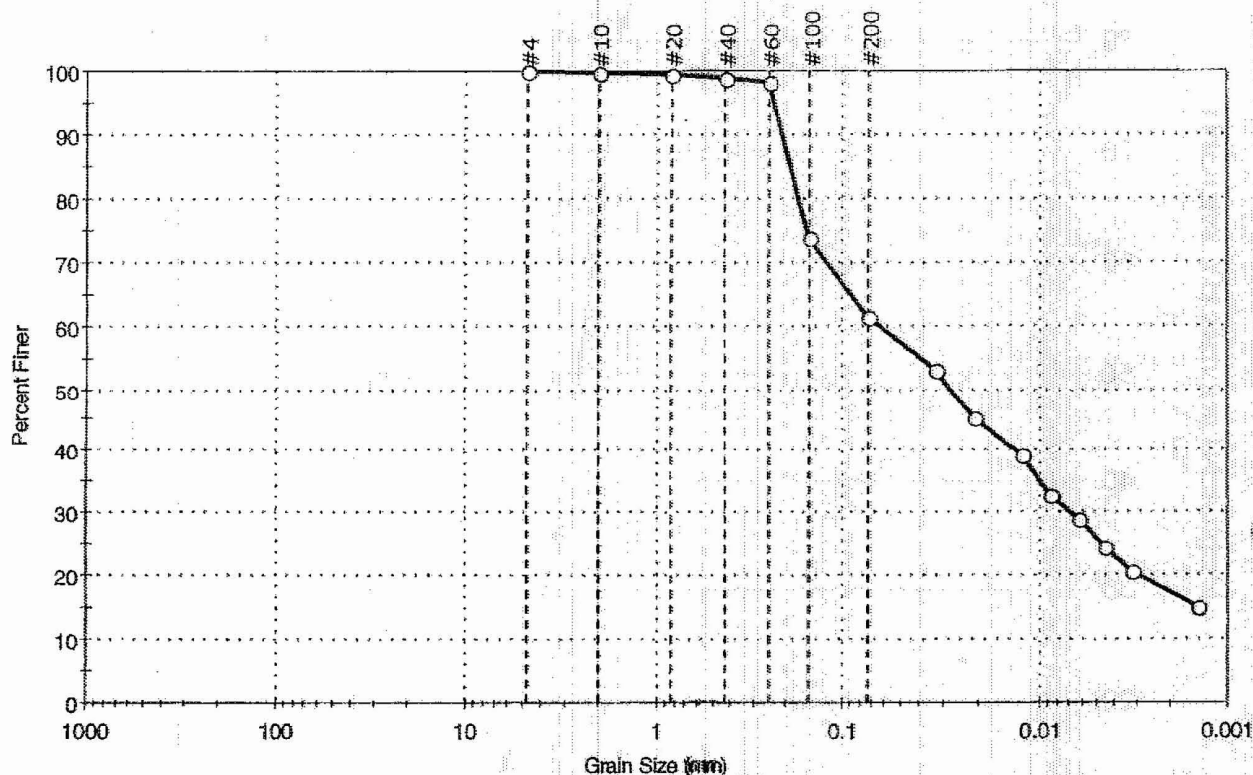
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland			Contract No.:	06120048.00	Date:	9/18/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI		
B-427	48.5	Poorly Graded SAND, with silt, brown	SP-SM				

GeoTesting express

a subsidiary of Geocomp Corporation

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-427	Sample Type:	tube
Sample ID:	S-16	Test Date:	10/11/06
Depth:	63.5-65.5 ft	Test ID:	98601
Test Comment:	---		
Sample Description:	Moist, black, sandy organic clay		
Sample Comment:	---		

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



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	38.7	61.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.84	99		
#40	0.42	99		
#60	0.25	98		
#100	0.15	74		
#200	0.074	61		
Particle Size (mm) Percent Finer Spec. Percent Complies				
---	0.0335	53		
---	0.0212	45		
---	0.0123	39		
---	0.0088	33		
---	0.0063	29		
---	0.0045	24		
---	0.0032	21		
---	0.0014	15		

Coefficients

D ₈₅ = 0.1896 mm	D ₃₀ = 0.0070 mm
D ₆₀ = 0.0654 mm	D ₁₅ = N/A
D ₅₀ = 0.0280 mm	D ₁₀ = N/A
C _u = N/A	C _c = N/A

Classification

ASTM Sandy organic clay (OH)

AASHTO Clayey Soils (A-7-6 (25))

Sample / Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---