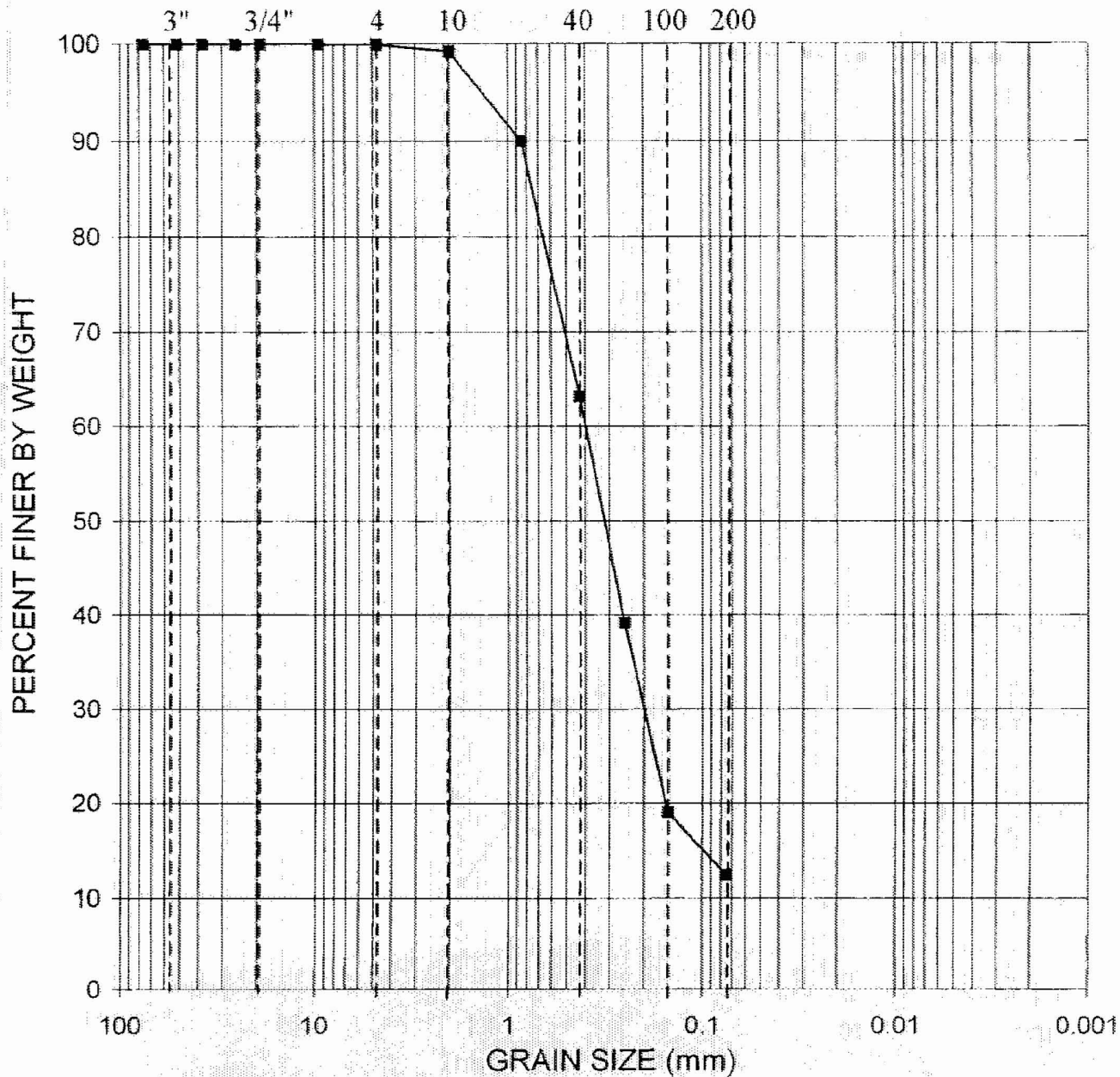



U.S. Standard Sieve Nos.

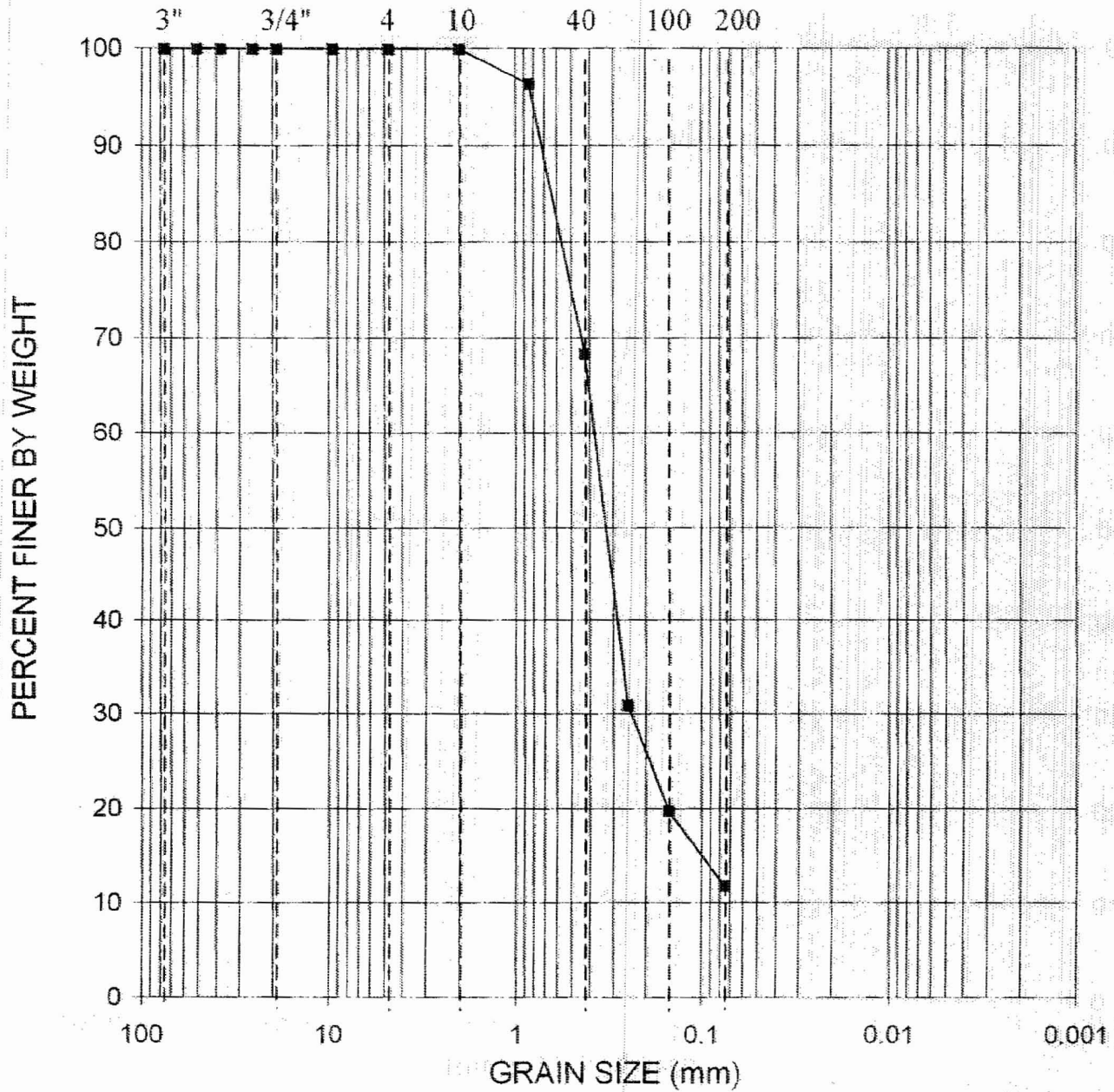


GRAVEL	SAND	SILT OR CLAY
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**GRADATION CURVE**  
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/14/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI	
B-423	2.5	Silty SAND, brown	SM			

U.S. Standard Sieve Nos.

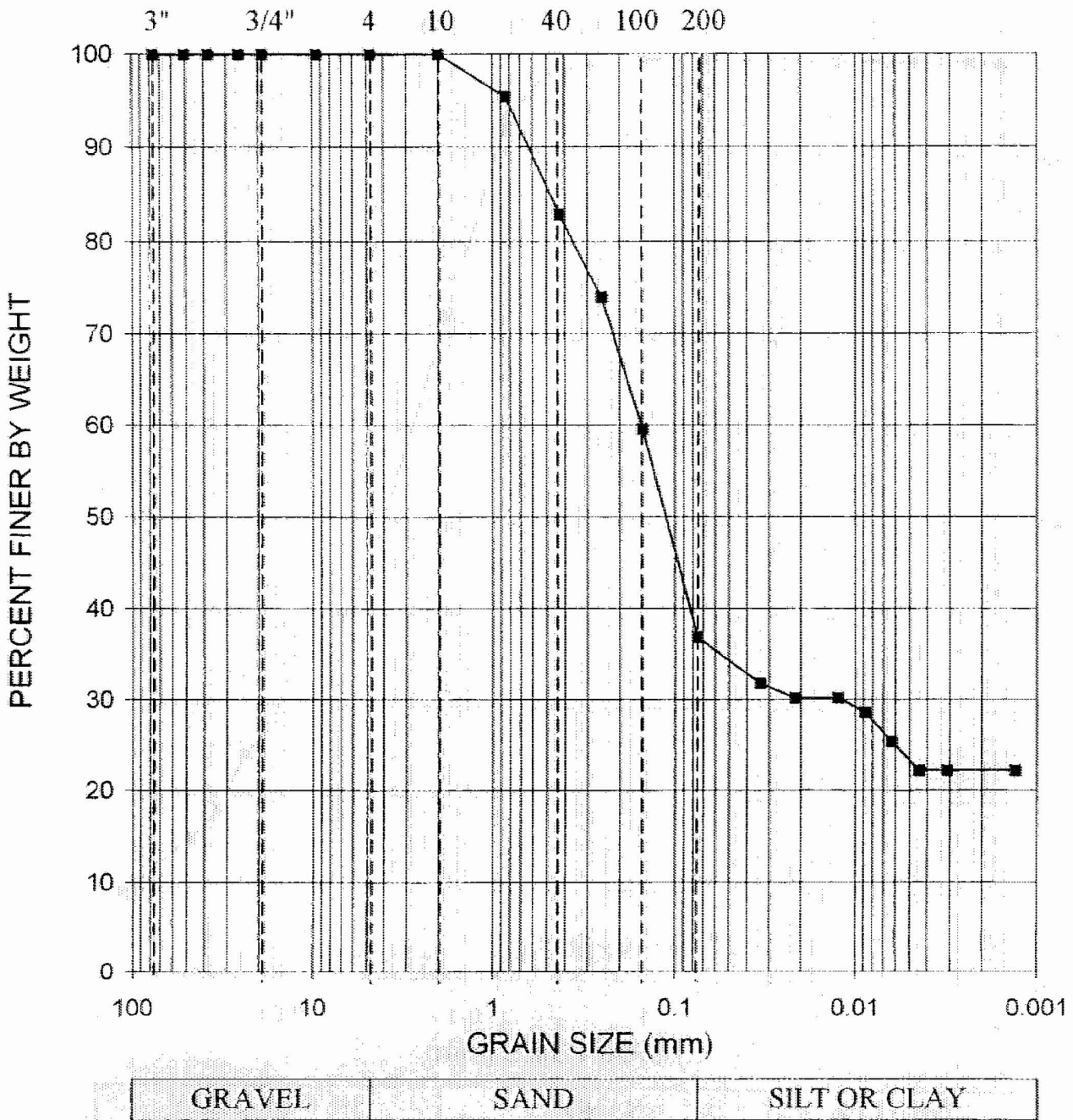


GRAVEL	SAND	SILT OR CLAY
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GRADATION CURVE  
ASTM D422

Project	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.	06120048.00	Date	9/14/2006
Boring No.	Depth (ft)	Sample Description	Class	LL	PI	
B-423	23.5	Poorly Graded SAND, with silt, brown	SP-SM			

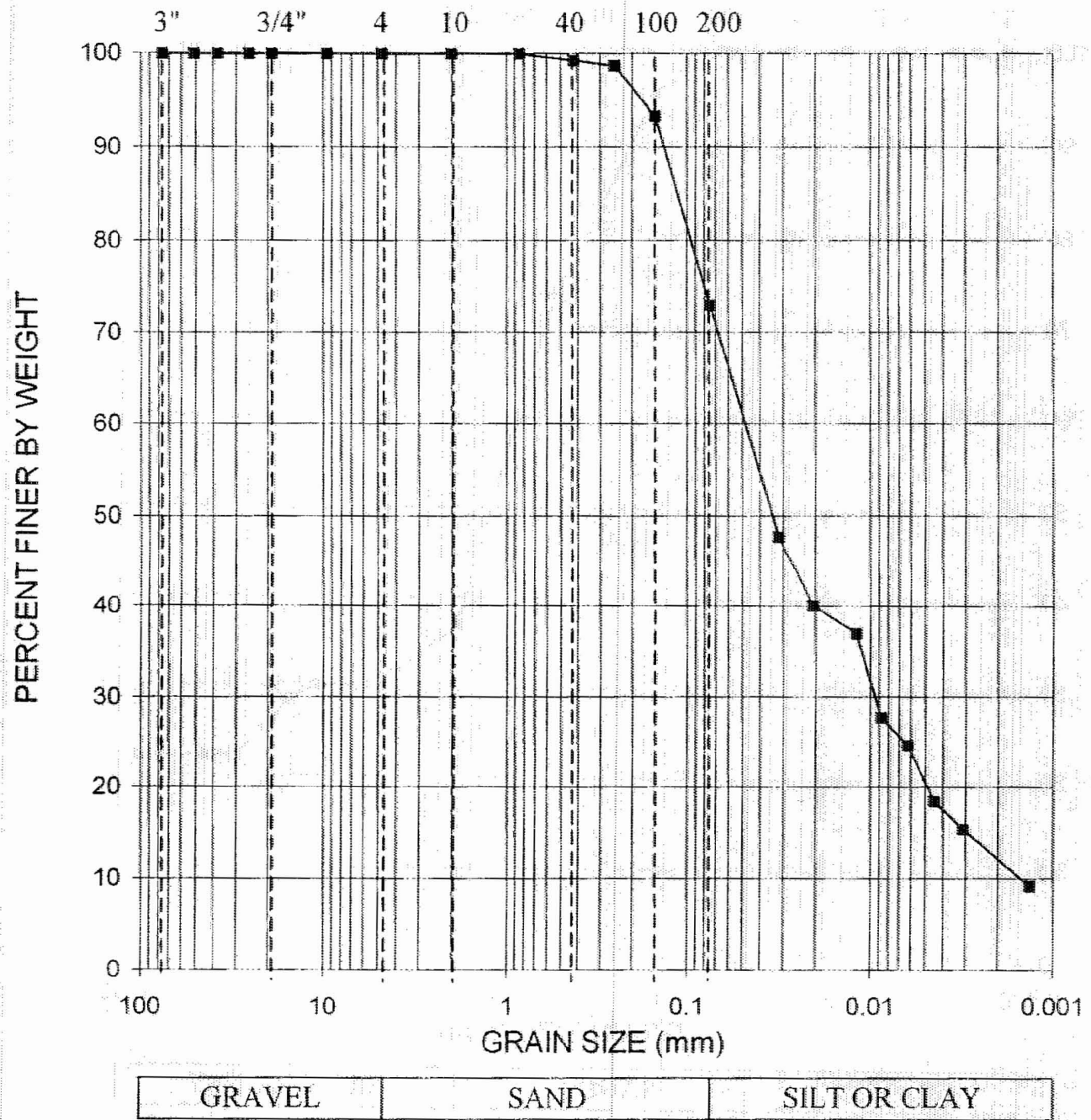
U.S. Standard Sieve Nos.



GRADATION CURVE  
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.	06120048.00	Date:	9/21/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI	
B-423	38.5	Clayey SAND, light gray-brown	SC	43	28	


U.S. Standard Sieve Nos.



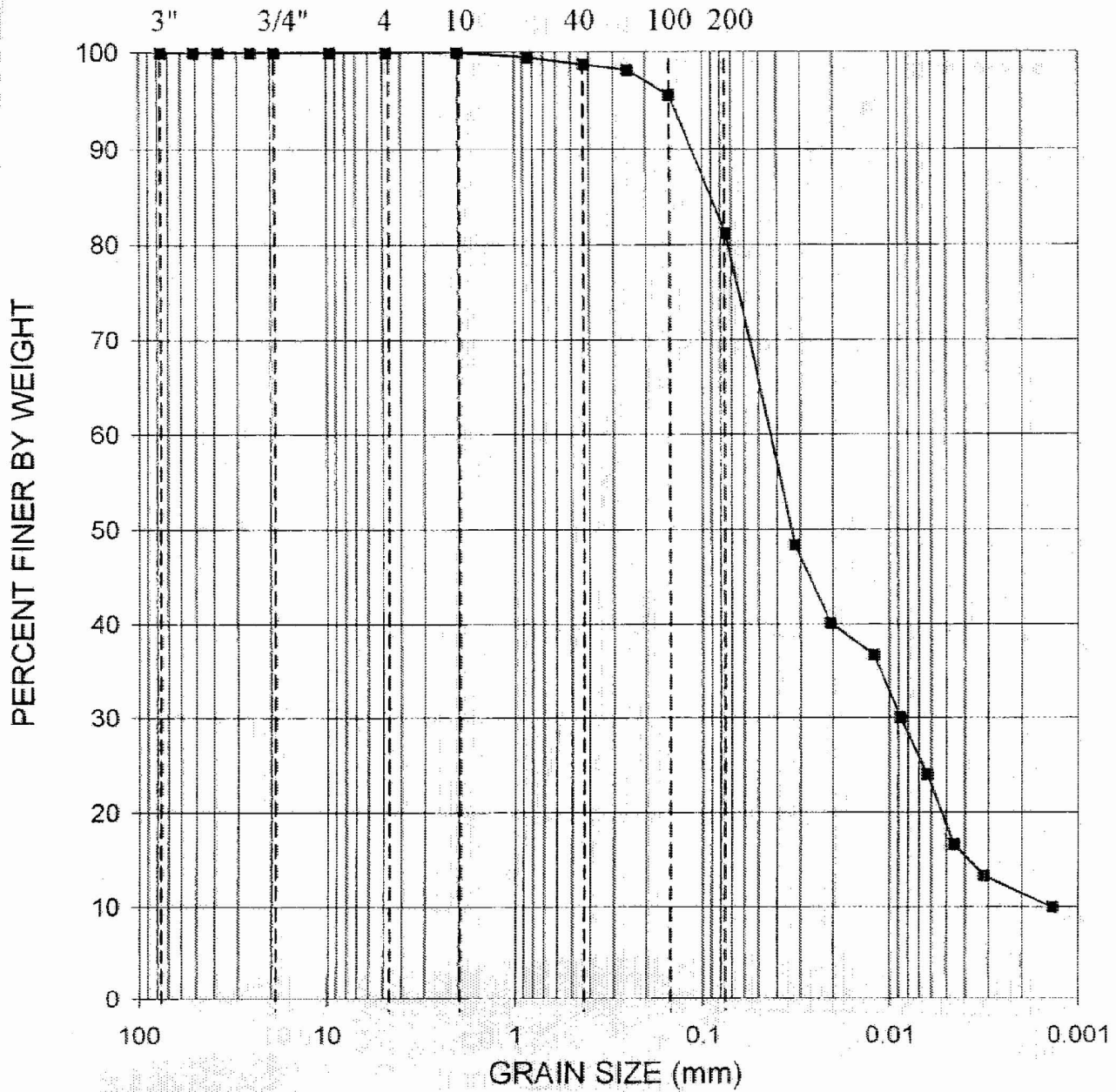
GRAVEL      SAND      SILT OR CLAY

GRADATION CURVE

ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland			Contract No.:	06120048.00	Date:	9/21/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI		
B-423	43.5	FAT CLAY, with sand, gray	CH	55	35		


U.S. Standard Sieve Nos.



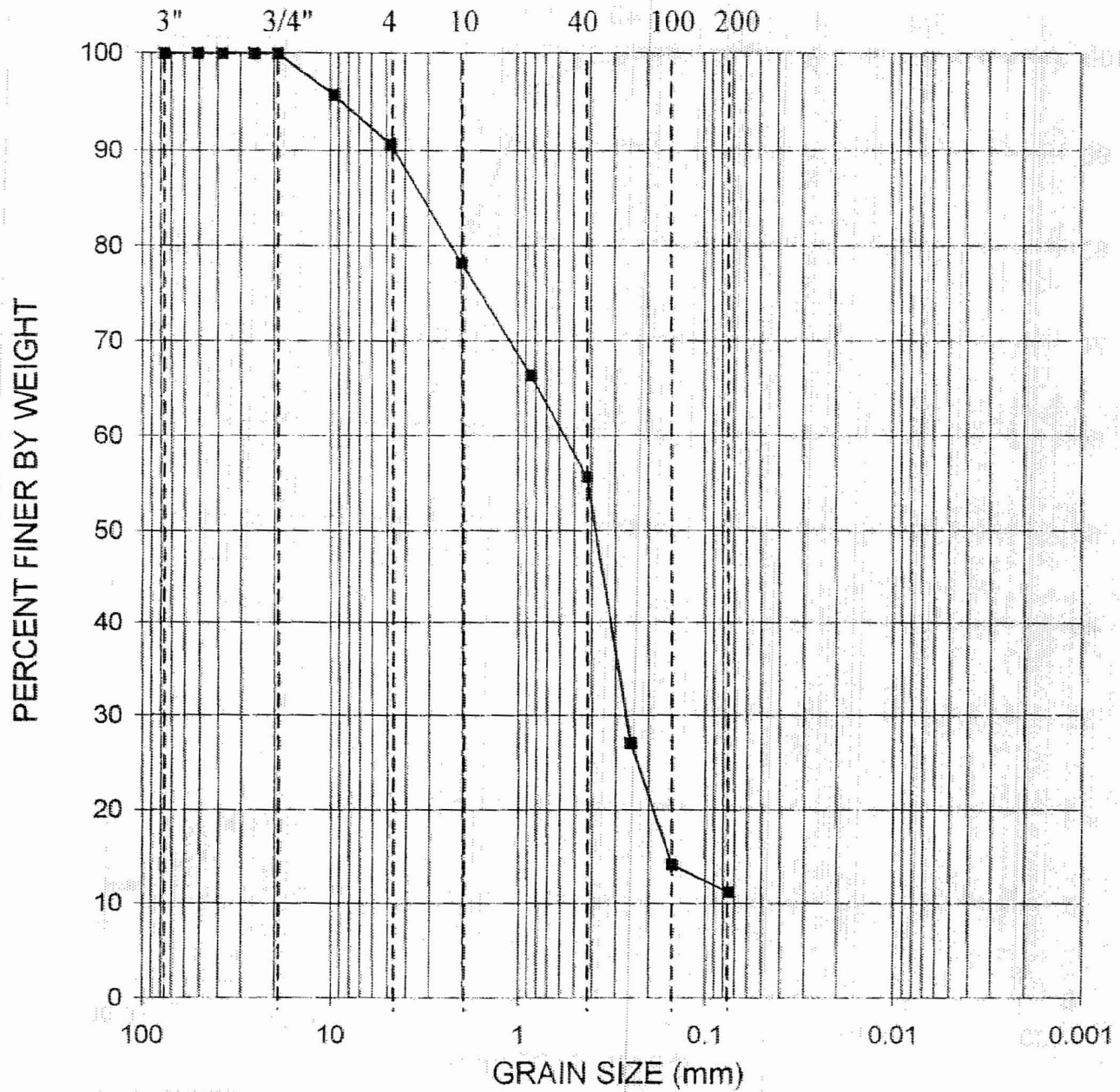
GRAVEL	SAND	SILT OR CLAY
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**GRADATION CURVE**

ASTM D422


Project:	Constellation Energy Group COLA Project Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland			Contract No.:	06120048.00	Date:	9/22/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI		
B-423	53.5	FAT CLAY, with sand, dark gray	CH	80	46		

U.S. Standard Sieve Nos.

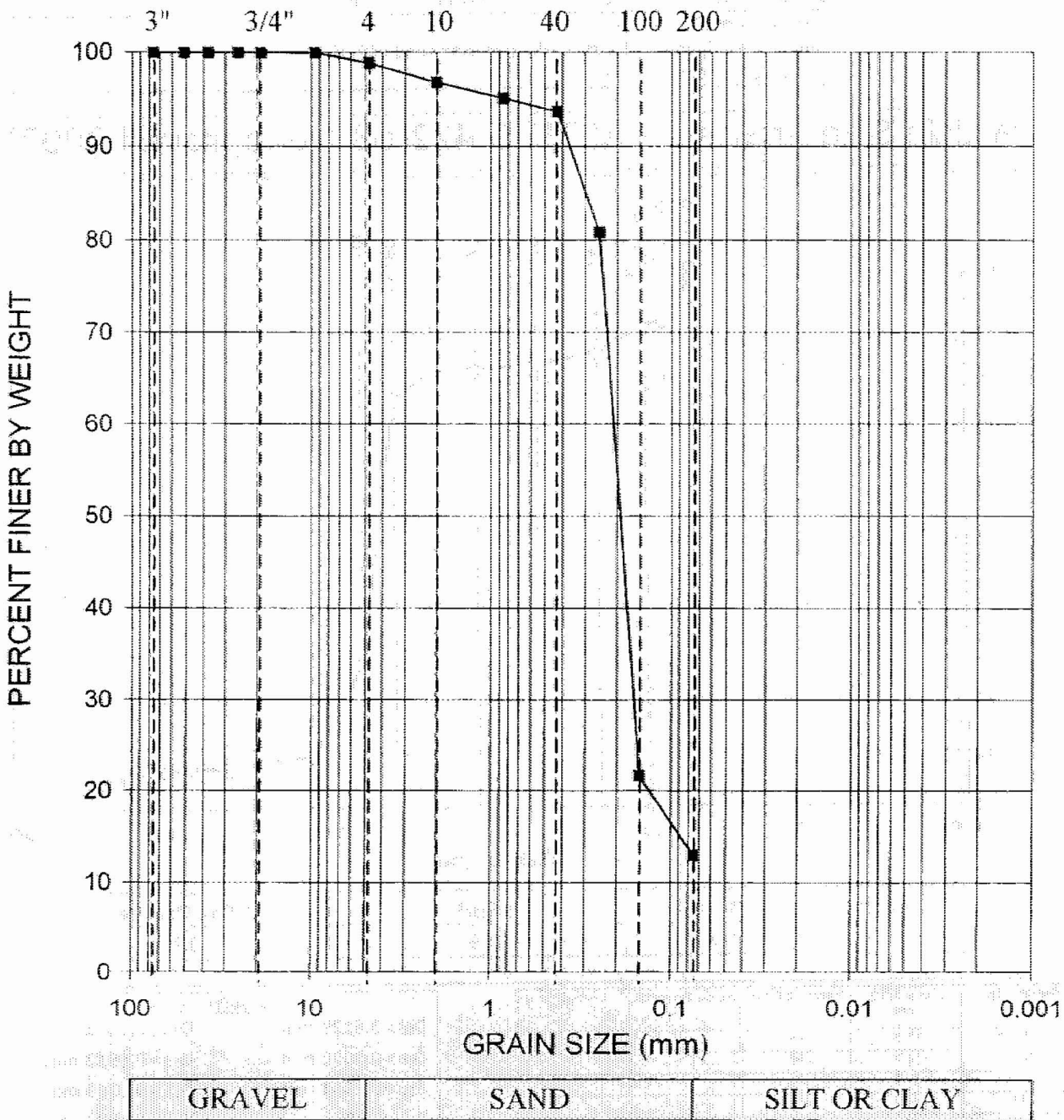


GRAVEL	SAND	SILT OR CLAY
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**GRADATION CURVE**  
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland			Contract No.:	06120048.00	Date:	9/14/2006
Boring No.	Depth (ft)	Sample Description	Class	LL	PI		
B-423	78.5	Sandy SILT, trace shells, green	ML				

U.S. Standard Sieve Nos.

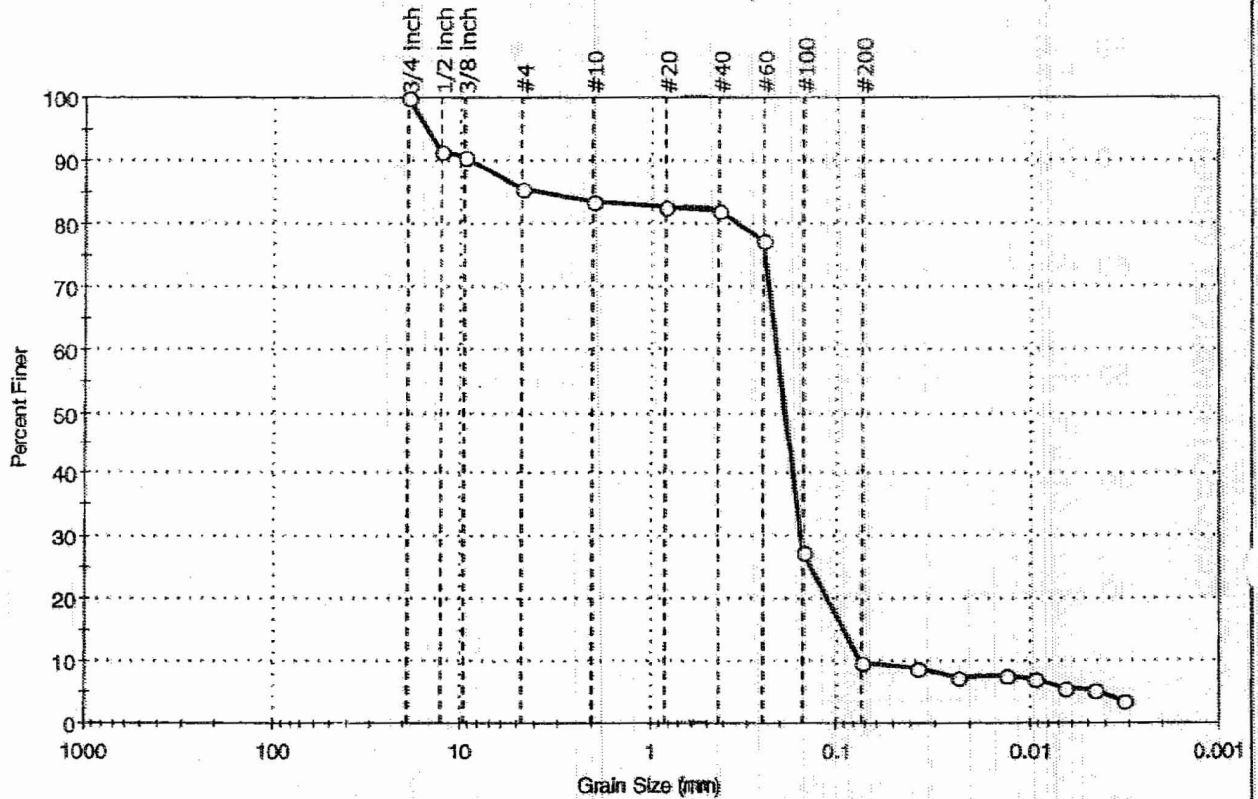


GRADATION CURVE  
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/14/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI	
B-423	93.5	Silty SAND, trace shells, gray	SM			

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: sam  
 Sample ID: S-24 Test Date: 10/25/06 Checked By: mcm  
 Depth: 103.5-105.3 ft Test ID: 98379  
 Test Comment: ---  
 Sample Description: Moist, dark olive gray sand with clay  
 Sample Comment: ---

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



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	14.4	75.9	9.7

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
3/4 inch	19.00	100		
1/2 inch	12.70	92		
3/8 inch	9.51	91		
#4	4.75	86		
#10	2.00	84		
#20	0.84	83		
#40	0.42	82		
#60	0.25	77		
#100	0.15	27		
#200	0.074	10		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0373	9		
---	0.0231	7		
---	0.0132	8		
---	0.0093	7		
---	0.0066	6		
---	0.0046	5		
---	0.0032	3		

**Coefficients**

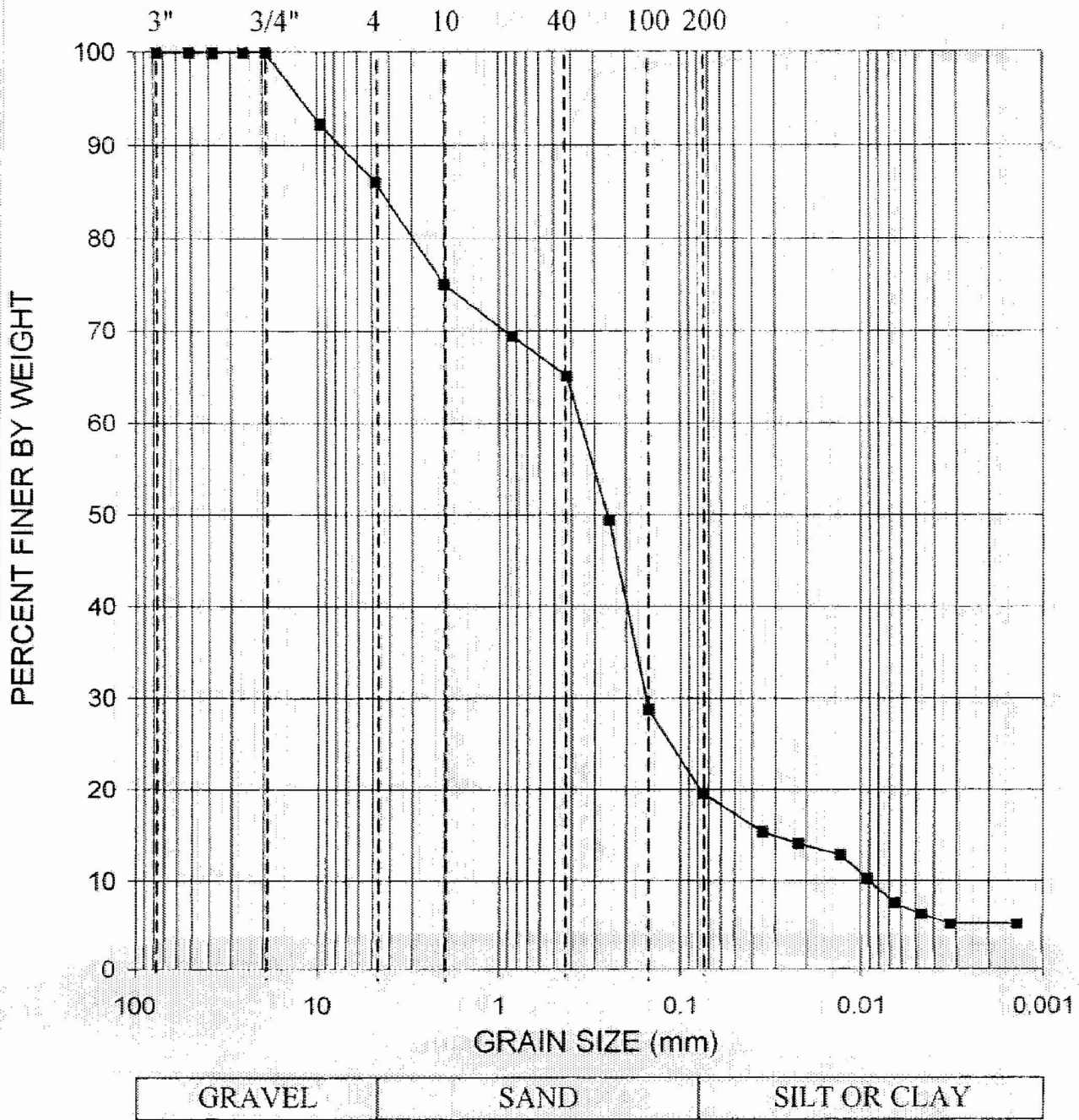
D <sub>85</sub> = 3.6129 mm	D <sub>30</sub> = 0.1531 mm
D <sub>60</sub> = 0.2090 mm	D <sub>15</sub> = 0.0913 mm
D <sub>50</sub> = 0.1884 mm	D <sub>10</sub> = 0.0749 mm
C <sub>u</sub> = 2.790	C <sub>c</sub> = 1.497

**Classification**  
 ASTM Poorly graded sand with silty clay (SP-SC)  
 AASHTO Silty Gravel and Sand (A-2-4 (0))

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



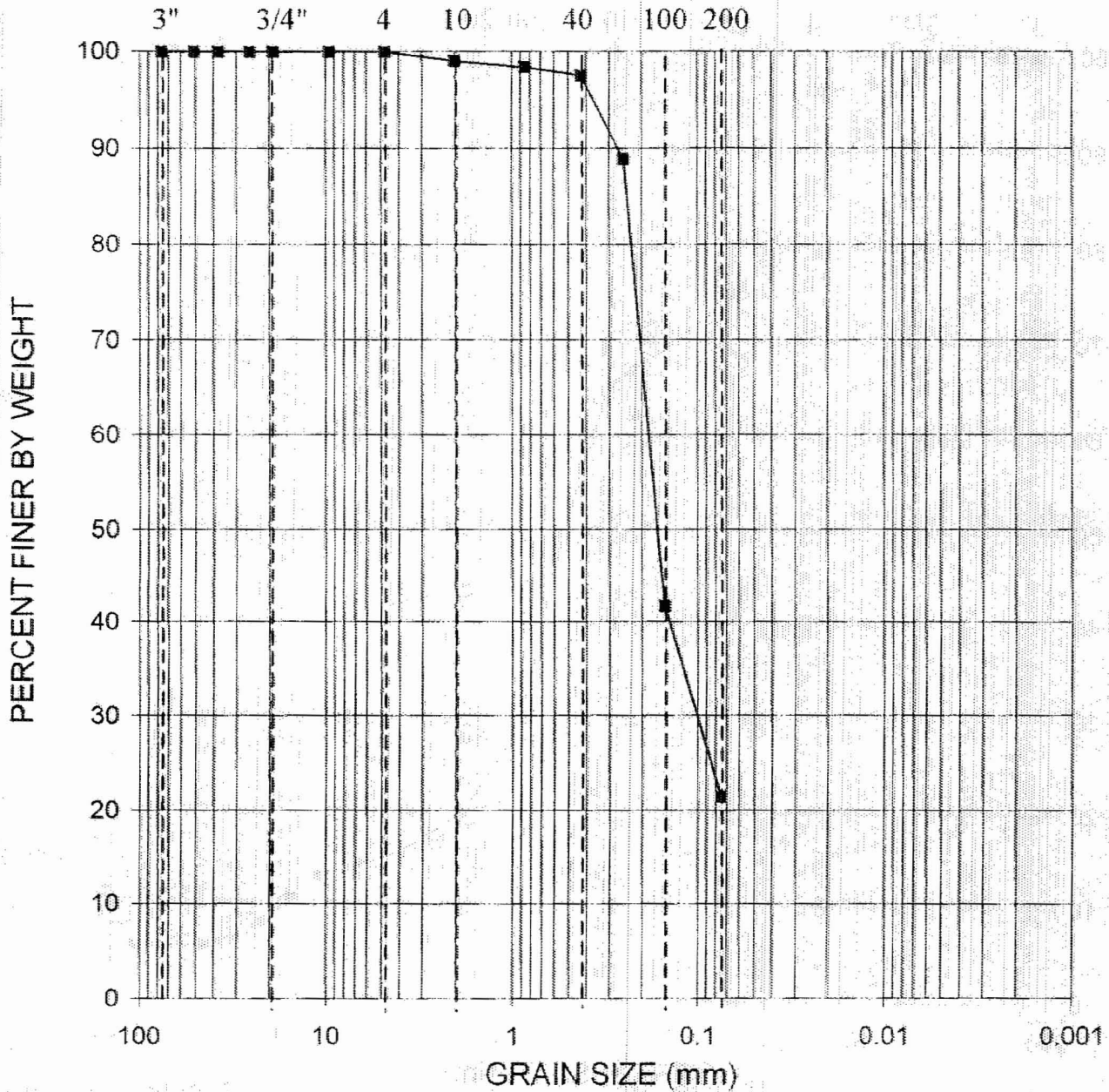
U.S. Standard Sieve Nos.



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-423	118.5	Silty SAND, trace shells, green	SM	NP	NP		

U.S. Standard Sieve Nos.



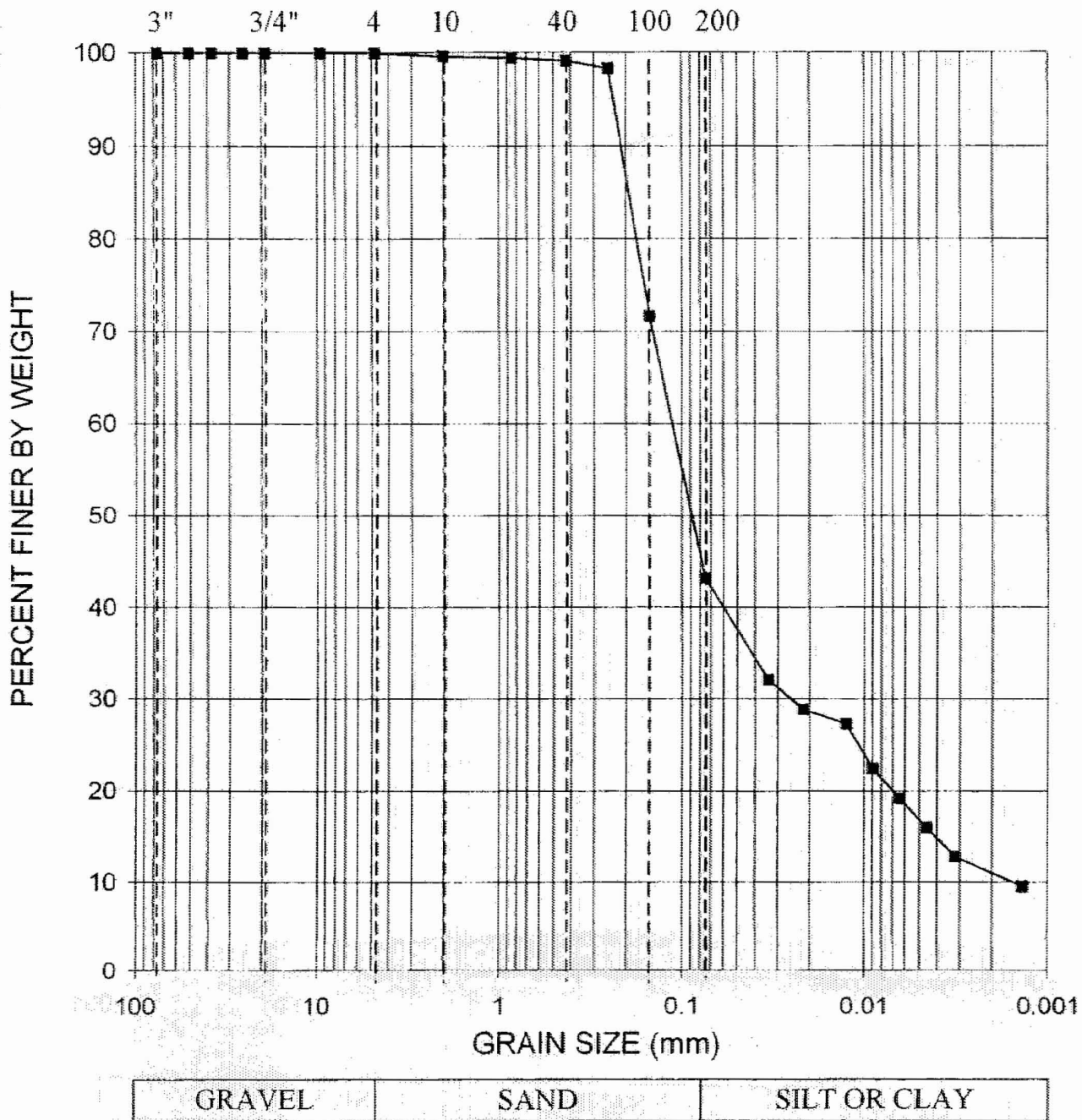
GRAVEL	SAND	SILT OR CLAY
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**GRADATION CURVE**  
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland	Contract No.:	06120048.00	Date:	9/14/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI
B-423	128.5	Silty SAND, contains shells, green	SM		




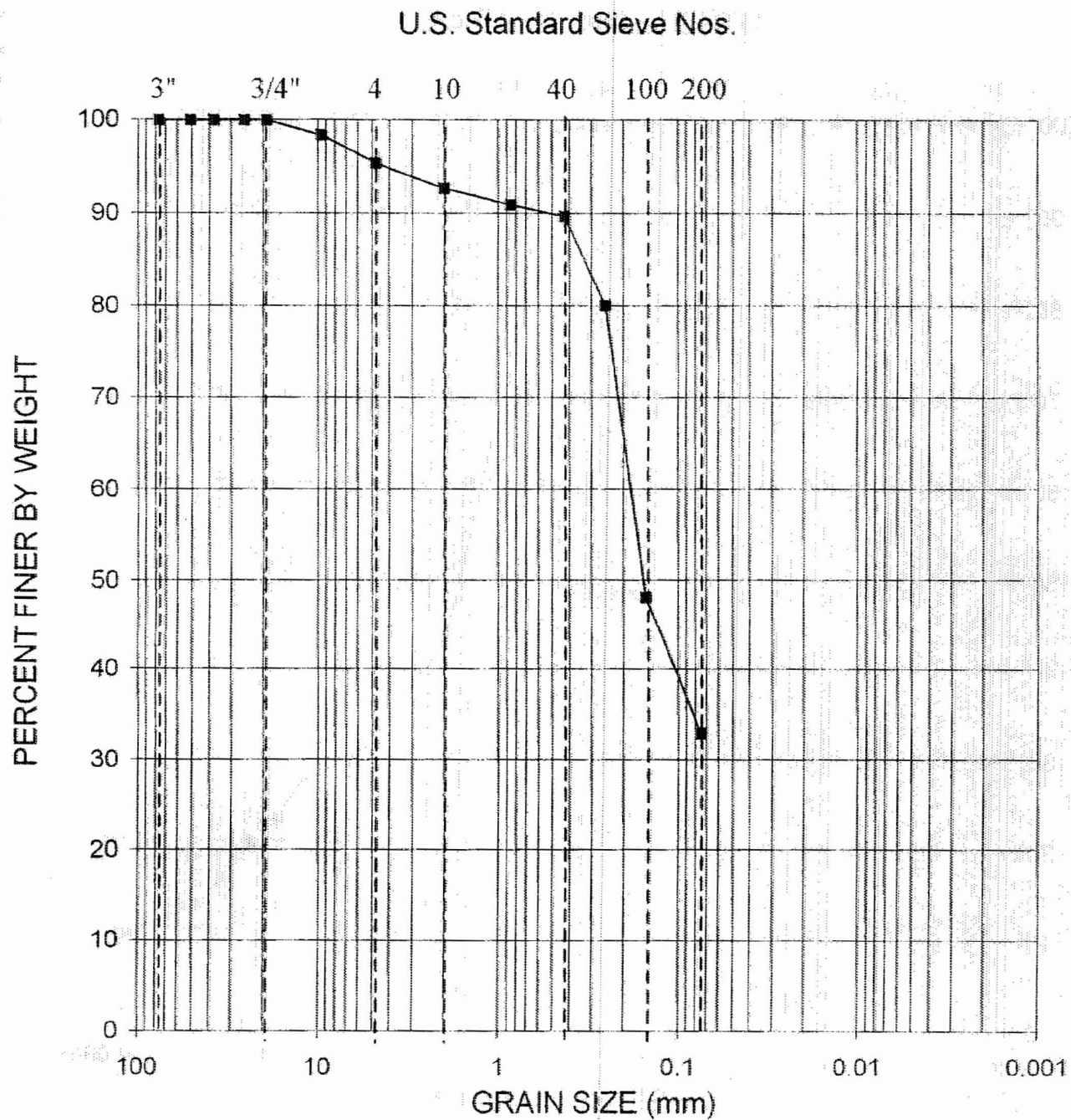
U.S. Standard Sieve Nos.



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-423	138.5	Silty SAND, contains shells, green	SM				



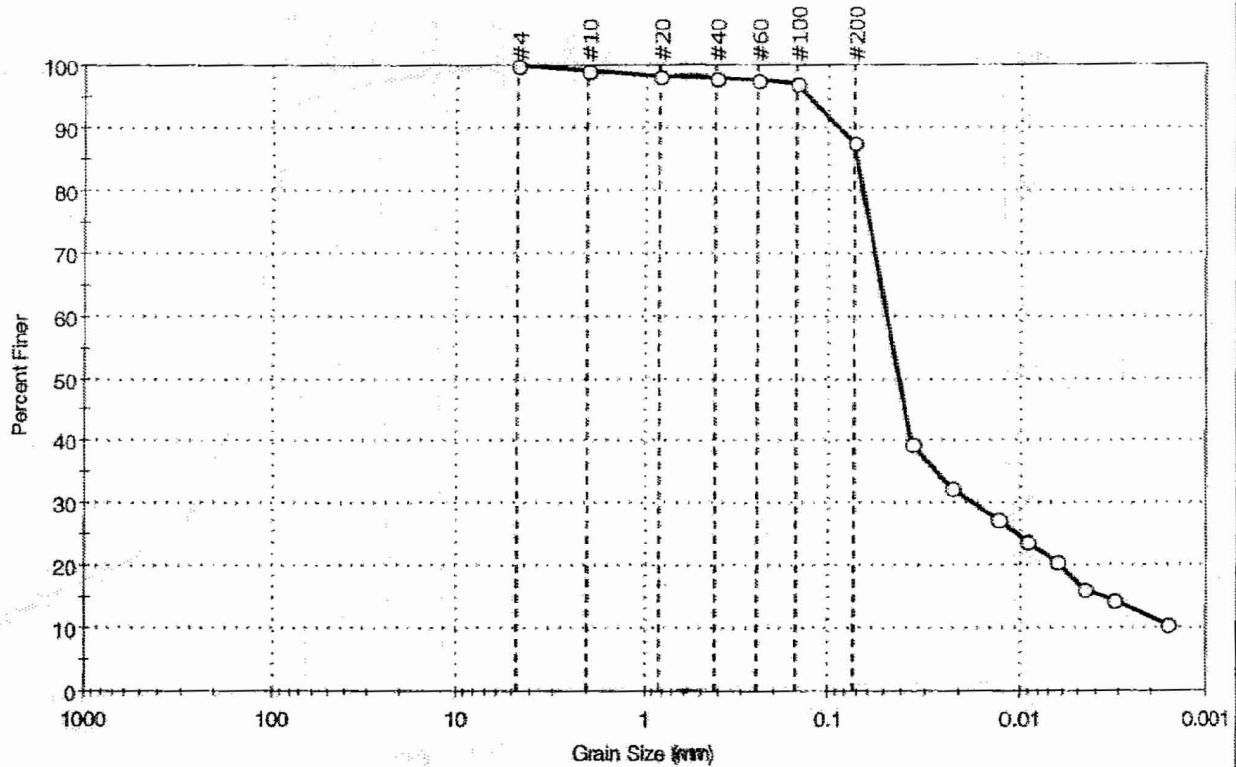
GRAVEL	SAND	SILT OR CLAY
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**GRADATION CURVE**  
ASTM D422

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland			Contract No.:	06120048.00	Date:	9/14/2006
Boring No.:	Depth (ft):	Sample Description	Class:	LL	PI		
B-423	148.5	Silty SAND, trace shells, green	SM				

Client: Schnabel Engineering, Inc.	Project: Subsurface Investigation Calvert Cliffs Nuclear PP	Project No: GTX-6880
Location: Calvert County, MD	Boring ID: B-423	Sample Type: tube
Tested By: sam	Sample ID: S-35	Test Date: 09/12/06
Checked By: mcm	Depth: 158.5-160.1 ft	Test ID: 95815
Test Comment: ---	Sample Description: Moist, olive gray organic clay	Sample Comment: ---

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



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	12.4	87.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	99		
#20	0.85	98		
#40	0.425	98		
#60	0.25	98		
#100	0.15	97		
#200	0.075	88		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0354	39		
---	0.0223	32		
---	0.0125	26		
---	0.0092	24		
---	0.0065	21		
---	0.0046	16		
---	0.0032	14		
---	0.0017	11		

**Coefficients**

D<sub>85</sub> = 0.0711 mm      D<sub>30</sub> = 0.0171 mm  
D<sub>60</sub> = 0.0485 mm      D<sub>15</sub> = 0.0037 mm  
D<sub>50</sub> = 0.0416 mm      D<sub>10</sub> = 0.0015 mm  
C<sub>u</sub> = N/A                      C<sub>c</sub> = N/A

**Classification**

ASTM    organic clay (OH)

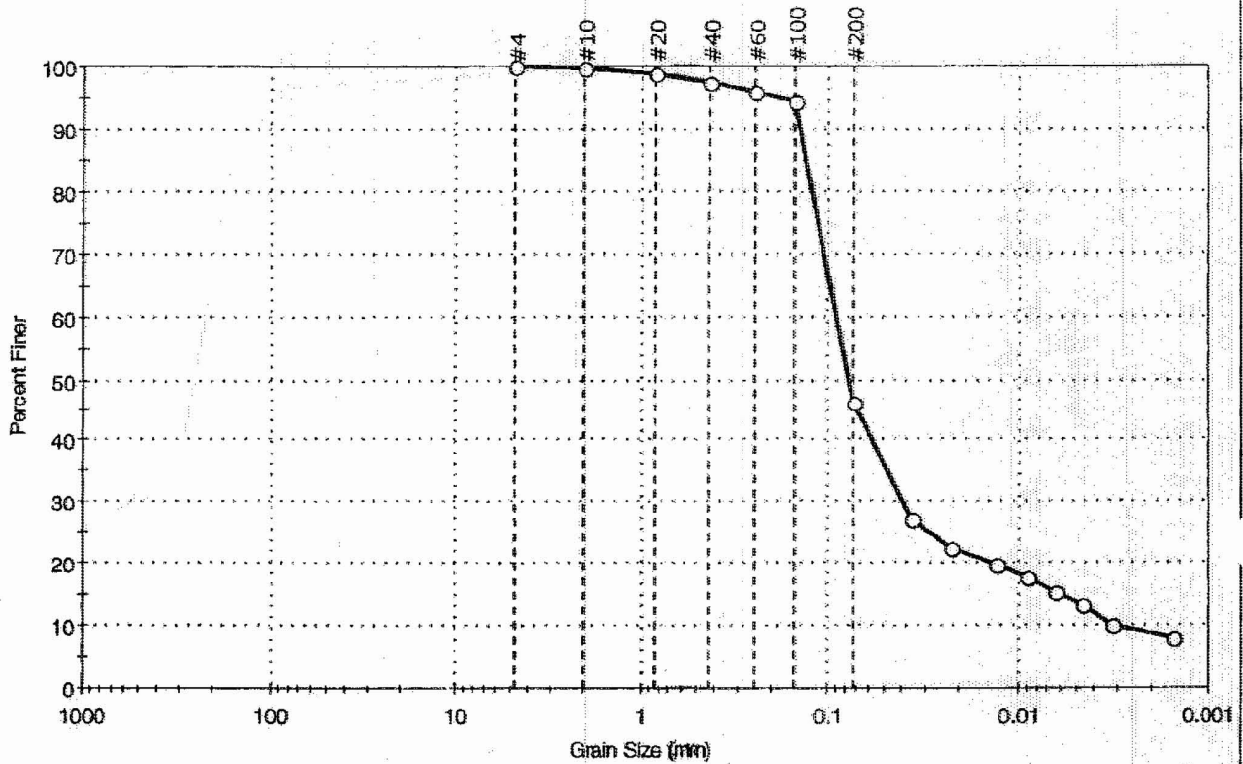
AASHTO    Clayey Soils (A-7-6 (59))

**Sample/Test Description**

Sand/Gravel Particle Shape : ANGULAR  
Sand/Gravel Hardness : HARD

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: sam  
 Sample ID: S-39 Test Date: 09/28/06 Checked By: mcm  
 Depth: 178.5-179.8 ft Test Id: 95825  
 Test Comment: ---  
 Sample Description: Dry, olive clayey sand  
 Sample Comment: ---

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



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.0	53.6	46.4

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	97		
#60	0.25	96		
#100	0.15	96		
#200	0.074	46		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0356	27		
---	0.0223	22		
---	0.0128	20		
---	0.0091	18		
---	0.0065	15		
---	0.0046	13		
---	0.0033	10		
---	0.0015	8		

**Coefficients**

D <sub>85</sub> = 0.1308 mm	D <sub>30</sub> = 0.0398 mm
D <sub>60</sub> = 0.0905 mm	D <sub>15</sub> = 0.0060 mm
D <sub>50</sub> = 0.0781 mm	D <sub>10</sub> = 0.0031 mm
C <sub>u</sub> = N/A	C <sub>c</sub> = N/A

**Classification**

ASTM Silty sand (SM)

AASHTO Clayey Soils (A-7-5 (13))

**Sample/Test Description**

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---