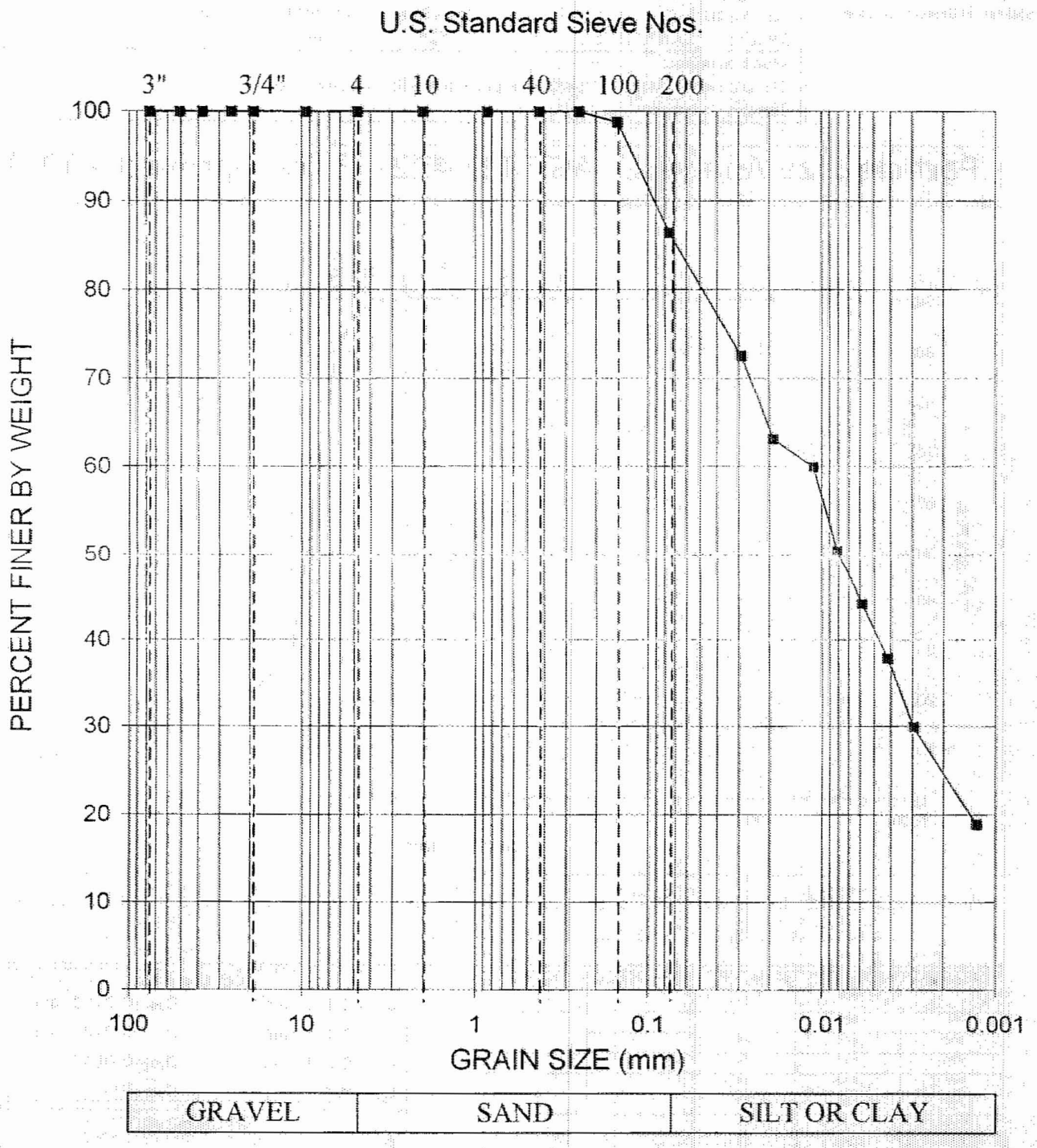
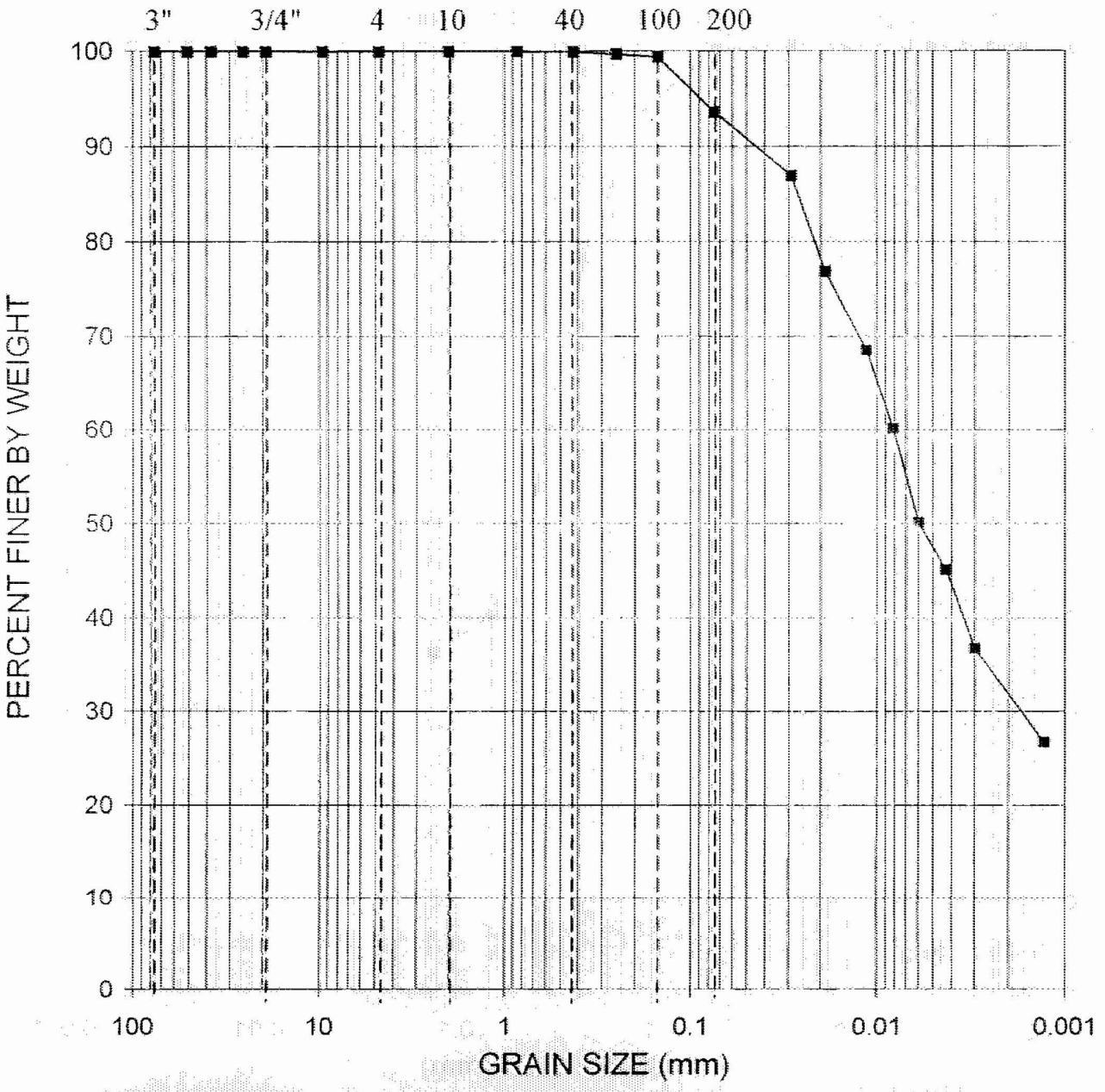



**GRADATION CURVE**
**ASTM D422**

Project: Constellation Energy Group (CEG) Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland

| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI |
|---|---|---|---|---|---|
| B-746 | 23.5 | FAT CLAY, trace sand, dark gray | CH | 52 | 35 |

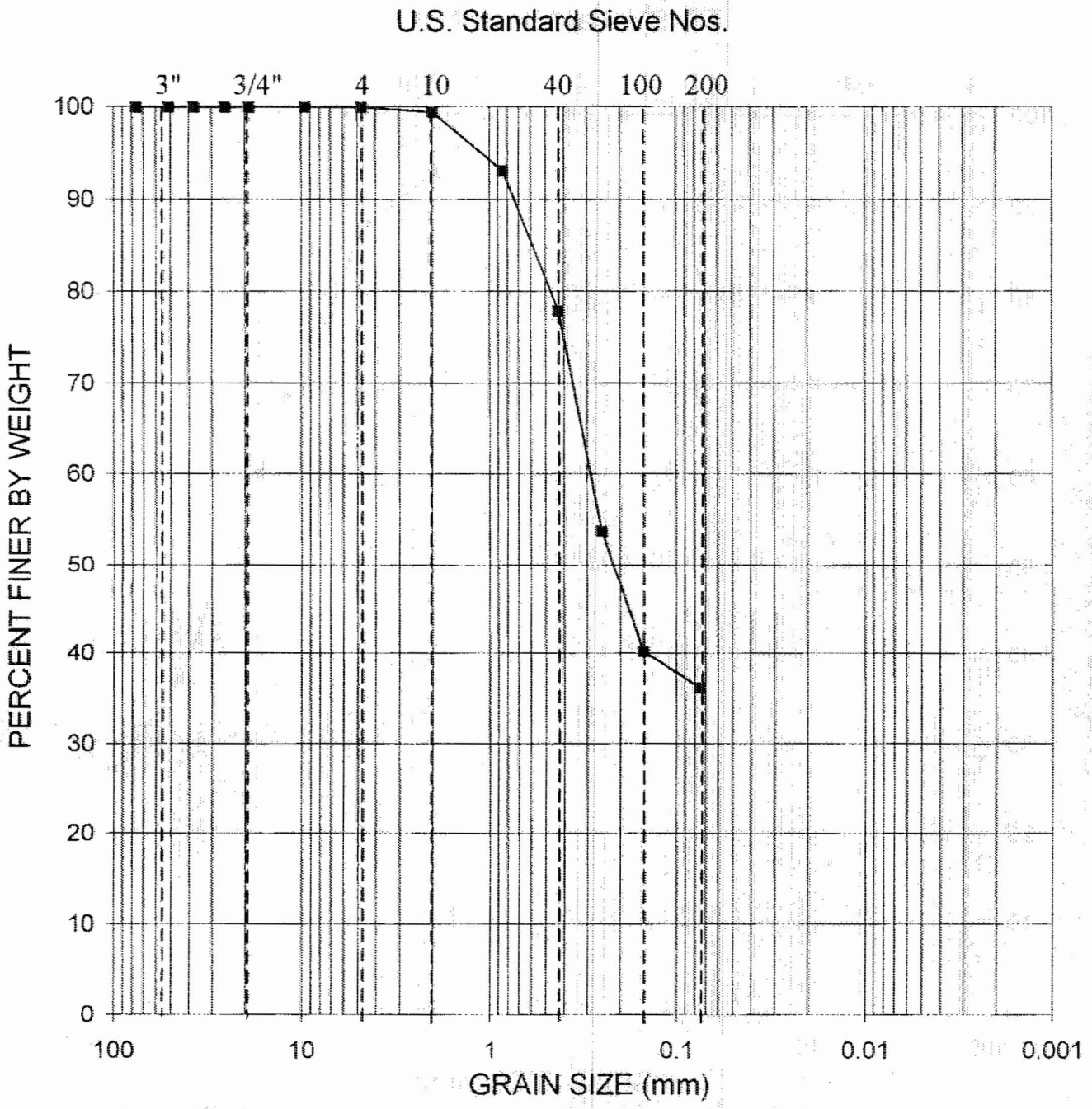
Schnabel Engineering




## GRADATION CURVE
## ASTM D422

| | | | Contract No. 0612004[illegible] | | | Date: 10/18/2006 |
|---|---|---|---|---|---|---|
| | [illegible] Calvert Cliffs Nuclear Power Plant (CCNPP) Calvert County, Maryland | | | | | |
| Boring No. | Depth (ft.) | Sample Description | Class. | LL | PI | |
| B-746 | 33.5 | FAT CLAY, trace sand, dark gray | CH | 64 | 40 | |

Schnabel Engineering

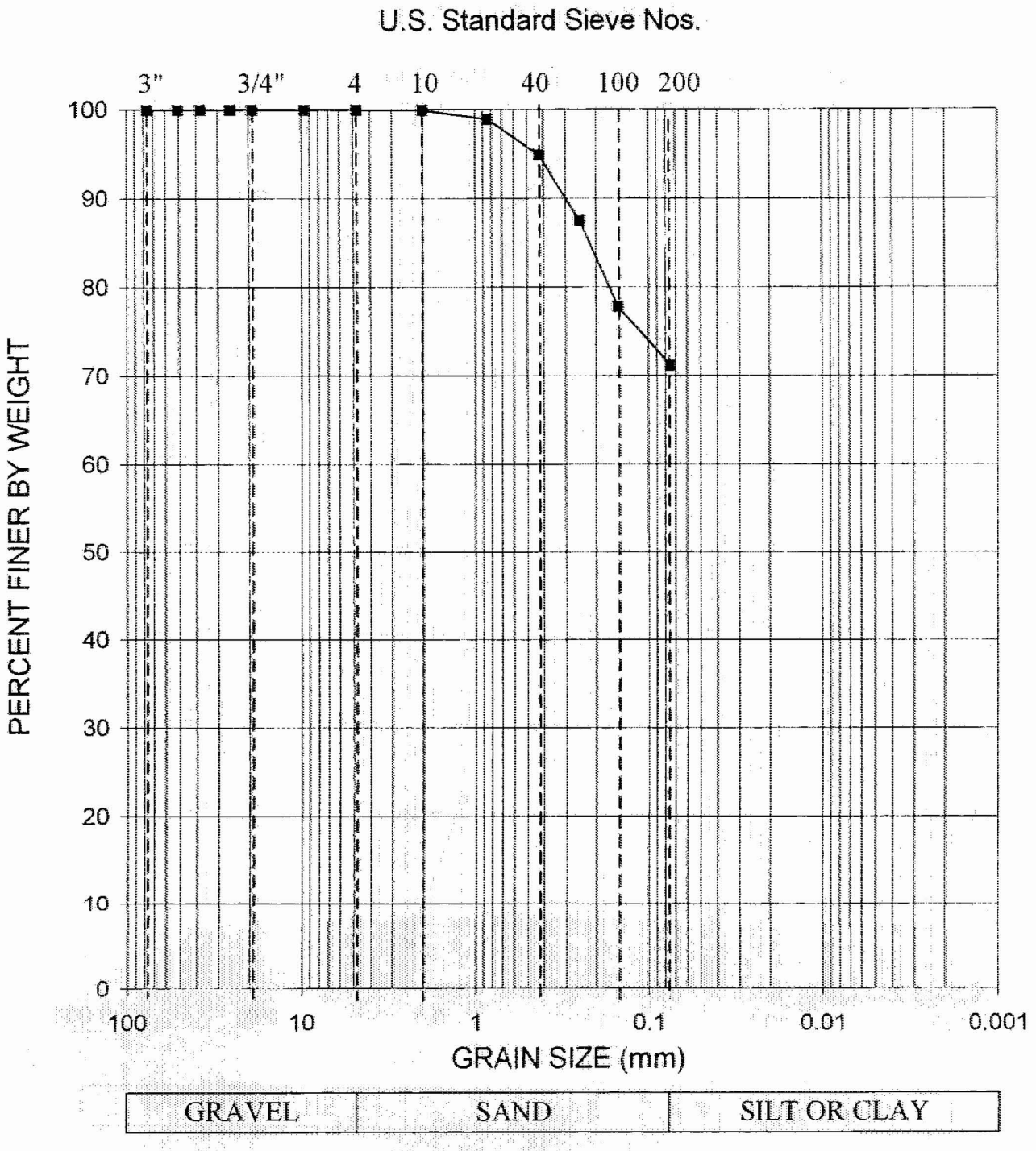



**GRADATION CURVE**

ASTM D422

| Project: | Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland | | Contract No.: 06120048.00 | | | Date: 9/22/2006 |
|---|---|---|---|---|---|---|
| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI | |
| B-747 | 2.5 | Silty SAND, brown | SM | | | |

Schnabel Engineering



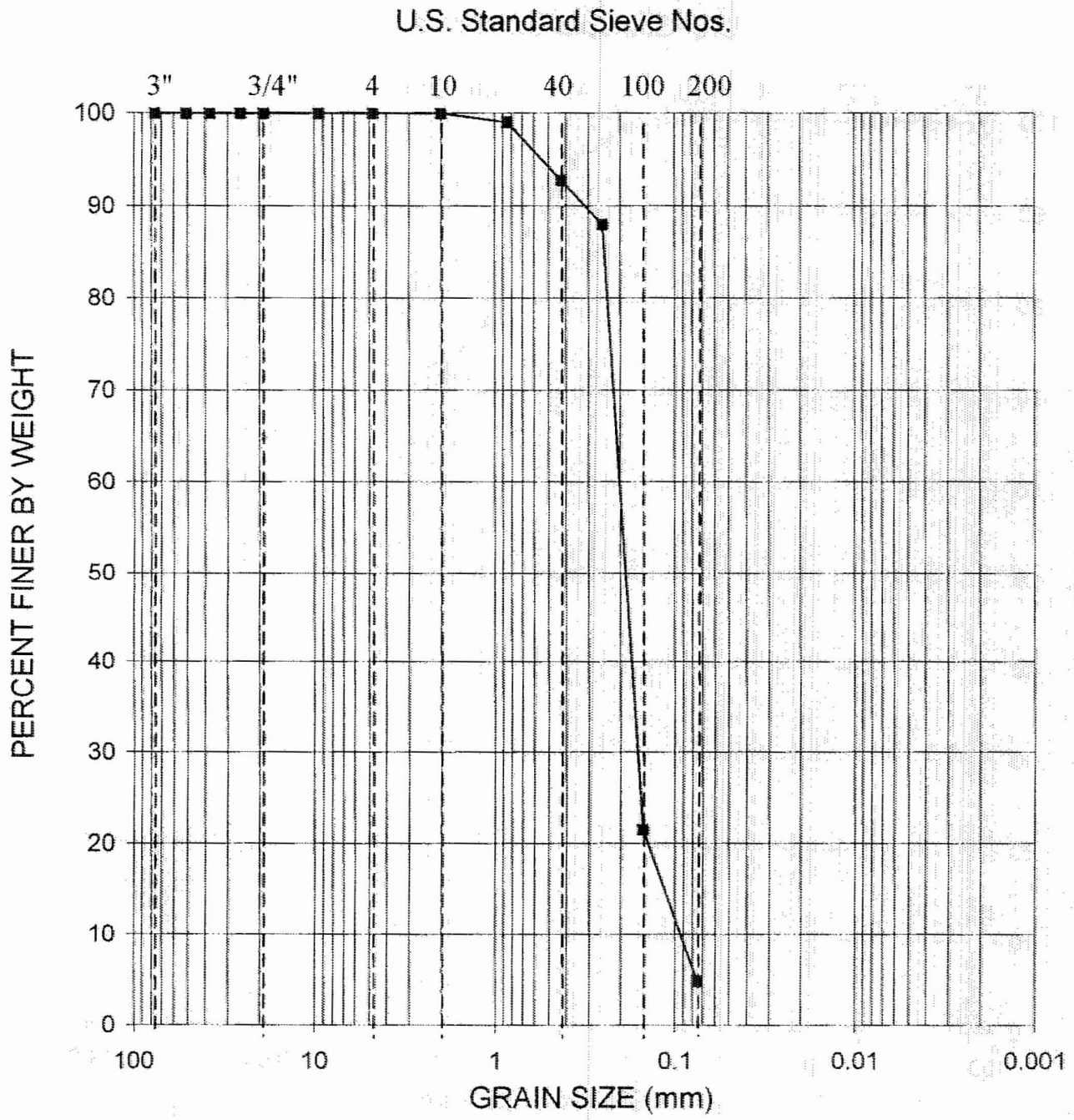

**GRADATION CURVE**

**ASTM D422**

| Project: | Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland | | Contract No.: 06120048.00 | | Date: 9/22/2006 |
|---|---|---|---|---|---|

| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI |
|---|---|---|---|---|---|
| B-747 | 5.0 | SILT, with sand, brown | ML | | |

Schnabel Engineering



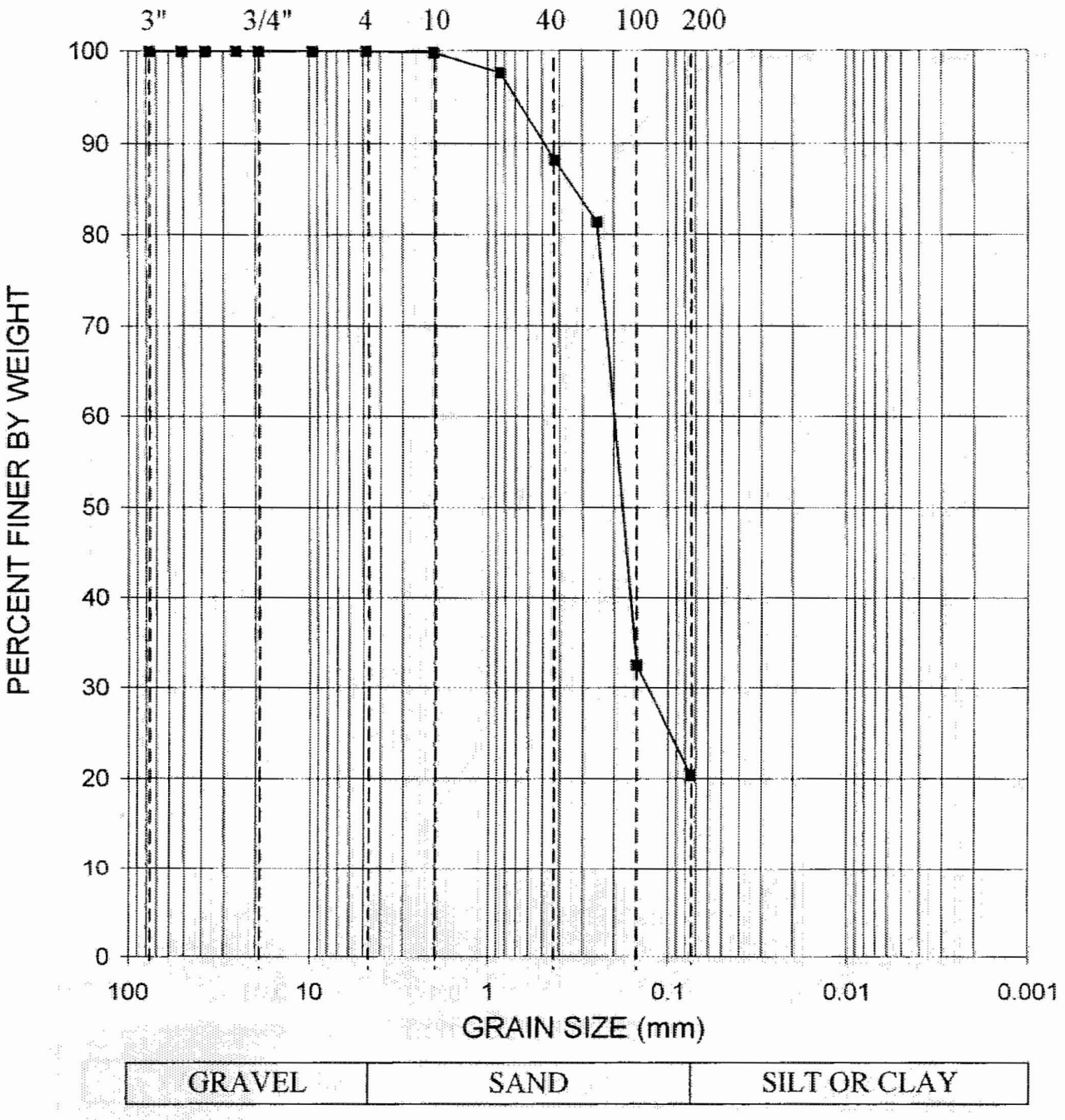

**GRADATION CURVE**

ASTM D422

| Project: | Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland | | Contract No.: | 06120048.00 | Date: | 9/22/2006 |
|---|---|---|---|---|---|---|

| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI |
|---|---|---|---|---|---|
| B-747 | 10.5 | Poorly Graded SAND, with silt, light brown | SP-SM | | |

Schnabel Engineering



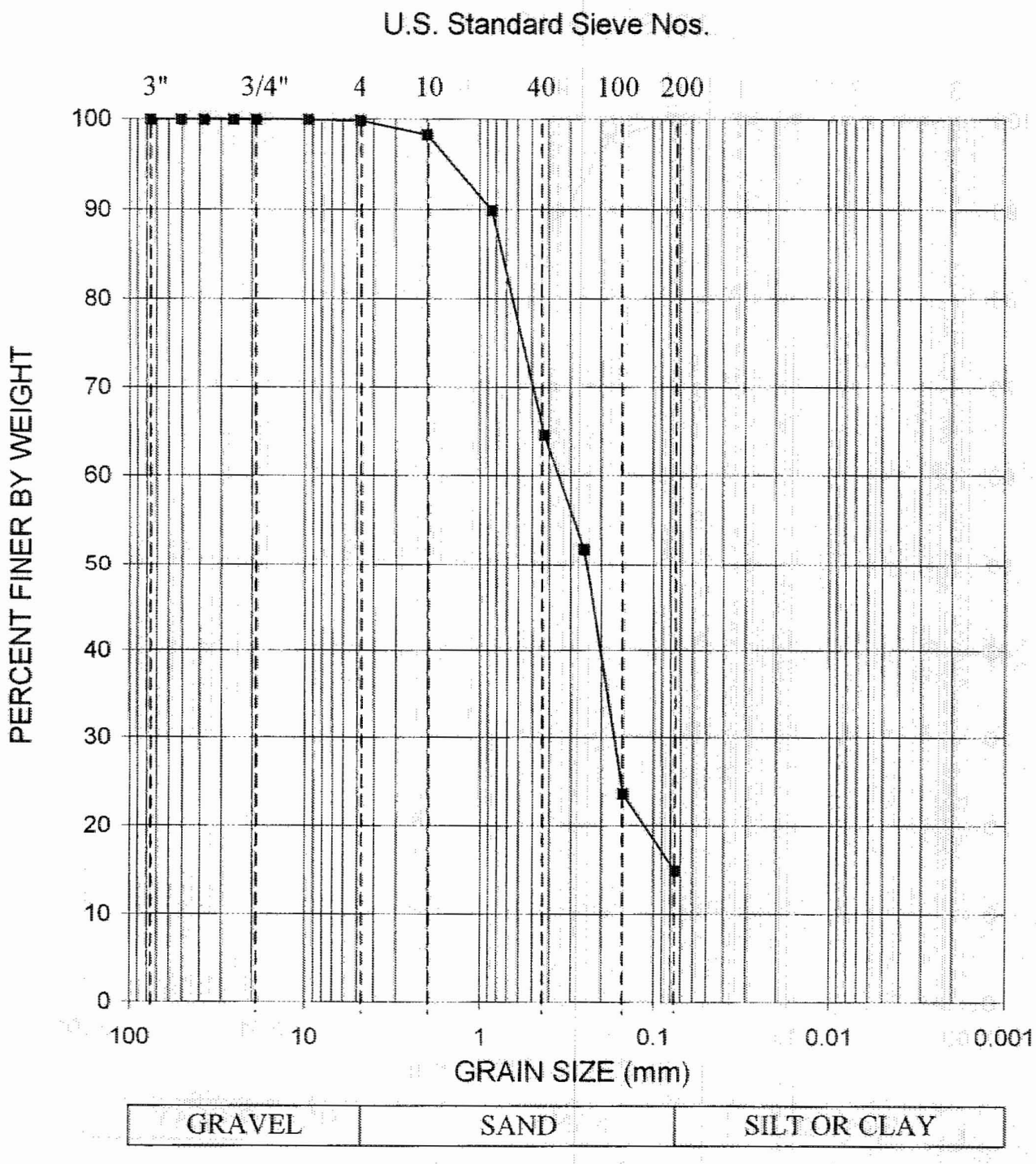

**GRADATION CURVE**

ASTM D422

| Project: | Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland | | Contract No.: 06120048.00 | | Date: 9/27/2006 |
|---|---|---|---|---|---|

| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI |
|---|---|---|---|---|---|
| B-747 | 13.5 | Silty SAND, orange-brown | SM | | |

Schnabel Engineering



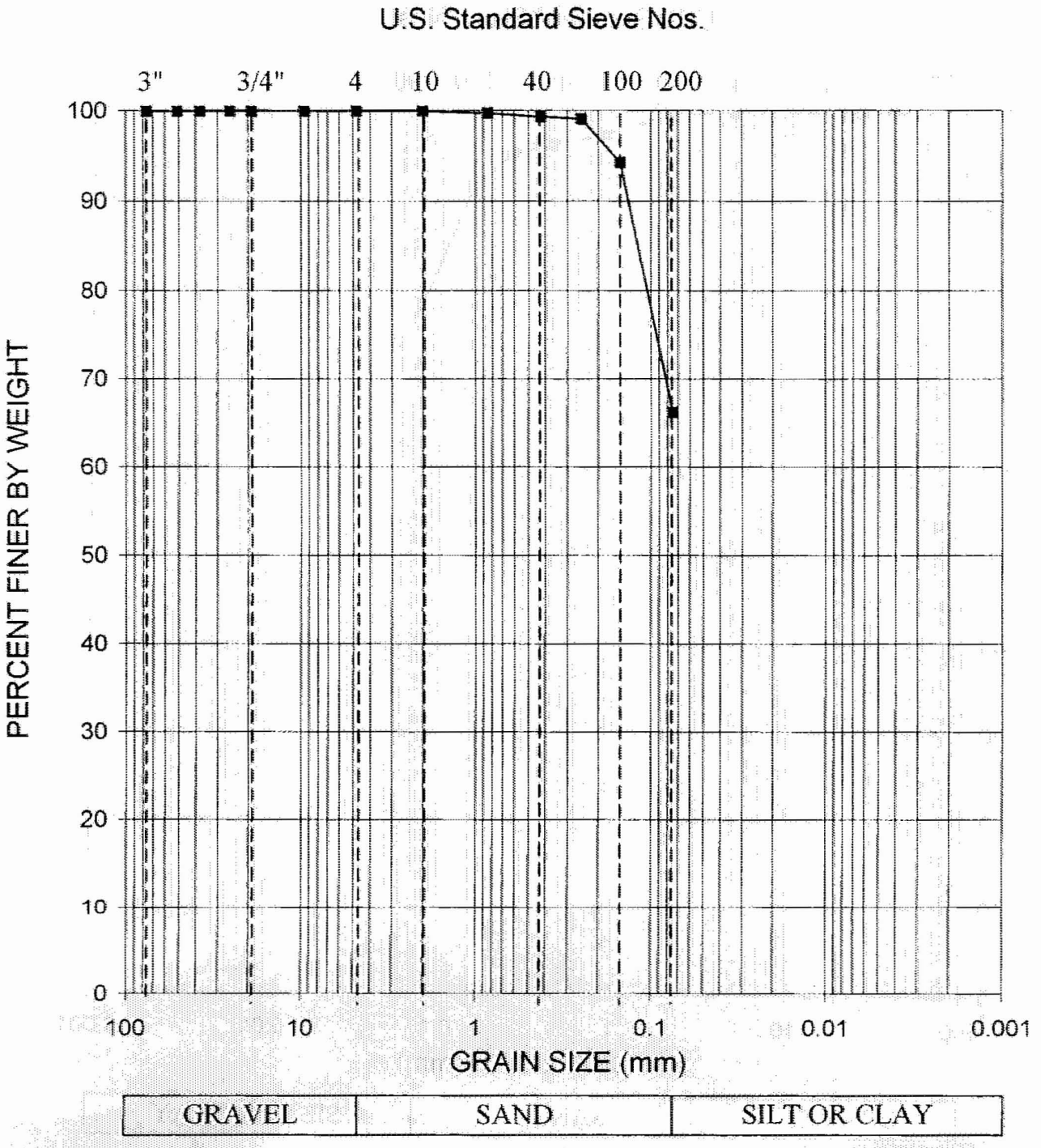

**GRADATION CURVE**

ASTM D422

| Project: | Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland | | Contract No.: 06120048.00 | | Date: 9/27/2006 |
|---|---|---|---|---|---|

| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI |
|---|---|---|---|---|---|
| B-747 | 18.5 | Silty SAND, brown-gray | SM | | |

Schnabel Engineering



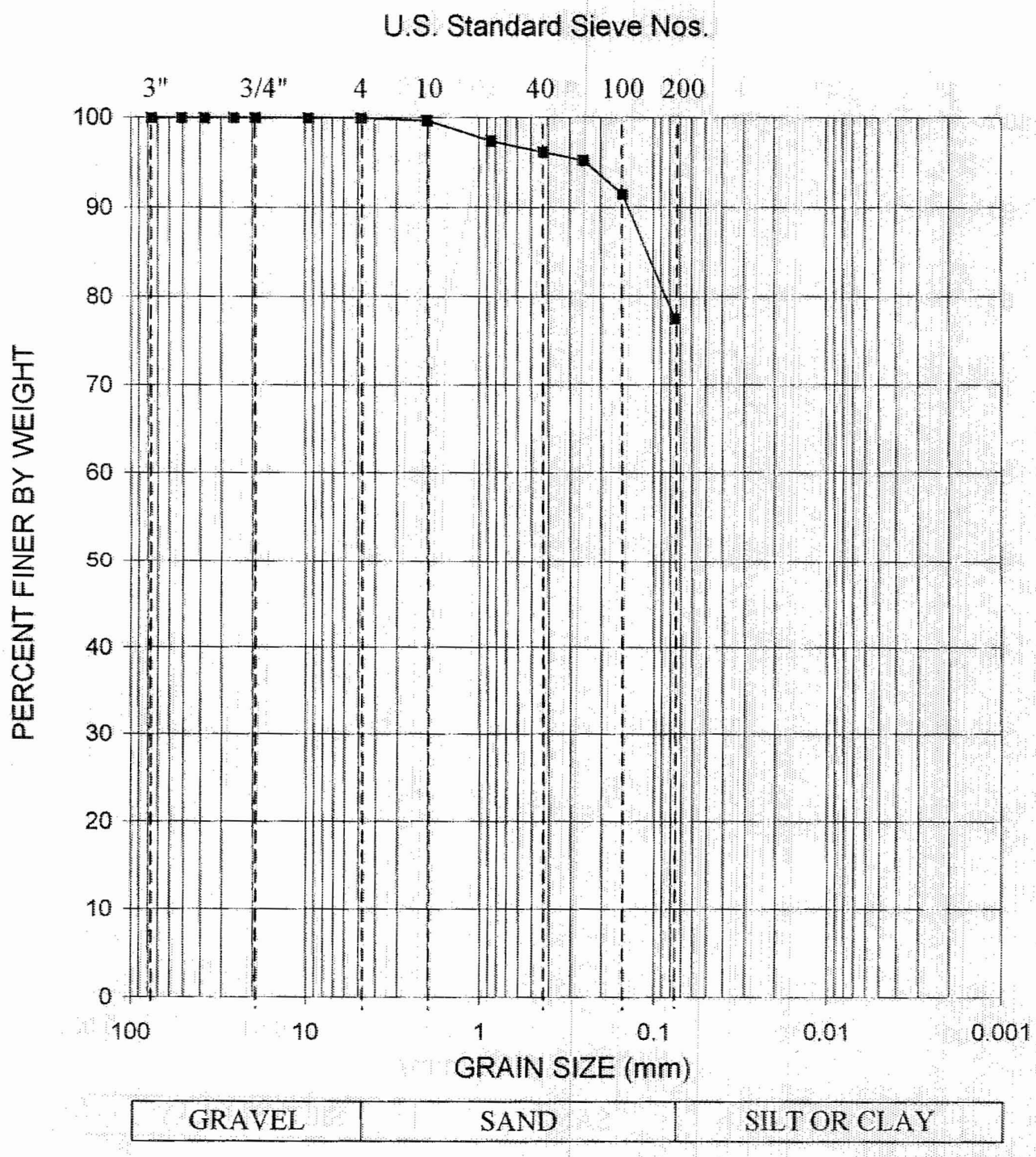

**GRADATION CURVE**

**ASTM D422**

| Project: | Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland | Contract No. | 06120048.00 | Date: | 9/28/2006 |
|---|---|---|---|---|---|

| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI |
|---|---|---|---|---|---|
| B-747 | 23.5 | Sandy SILT, gray | ML | | |

Schnabel Engineering



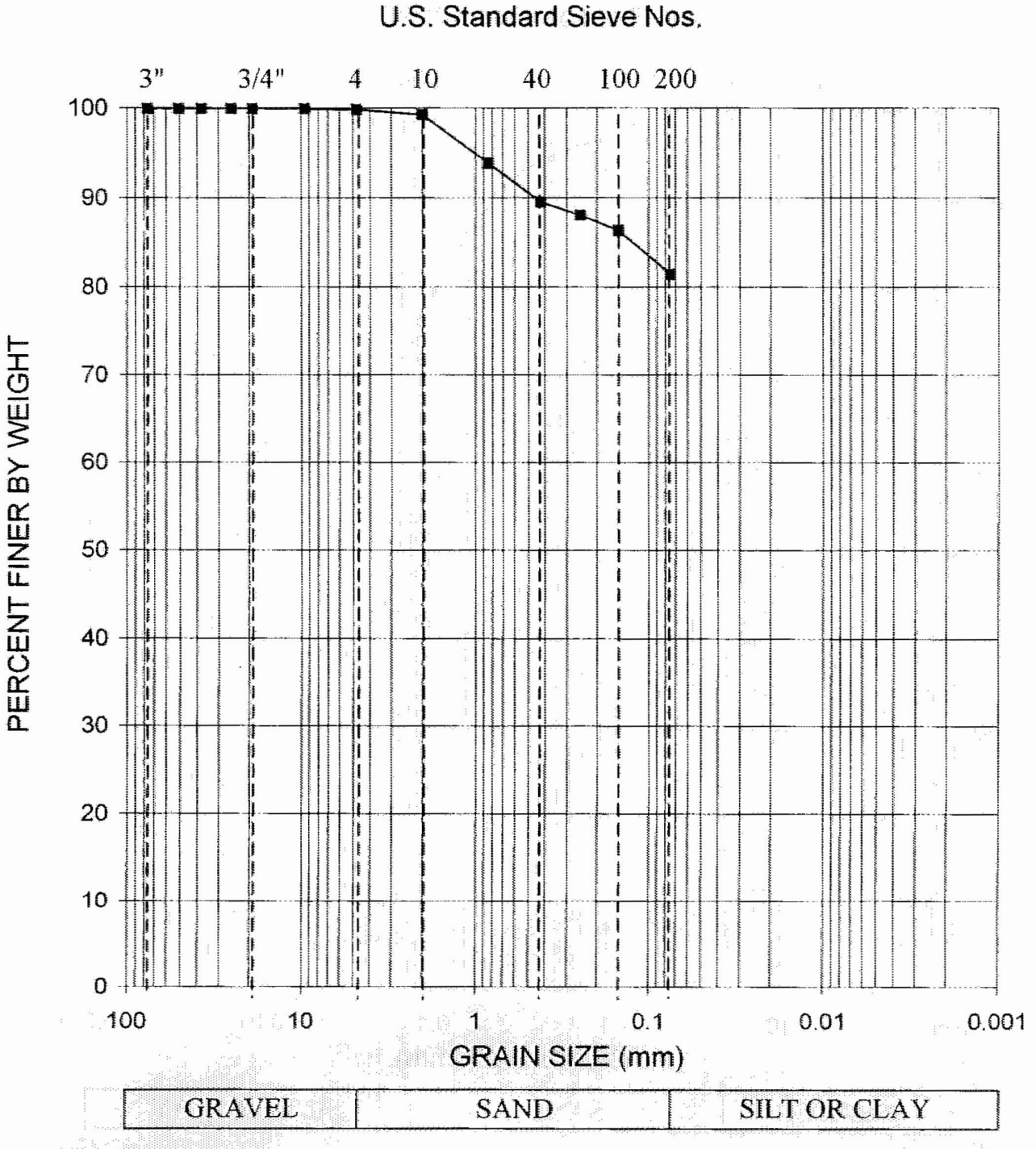

**GRADATION CURVE**

ASTM D422

| Project: | Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland | | Contract No.: | 06120048.00 | Date: | 9/28/2006 |
|---|---|---|---|---|---|---|

| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI |
|---|---|---|---|---|---|
| B-747 | 33.5 | FAT CLAY, with sand, dark gray | CH | | |

Schnabel Engineering



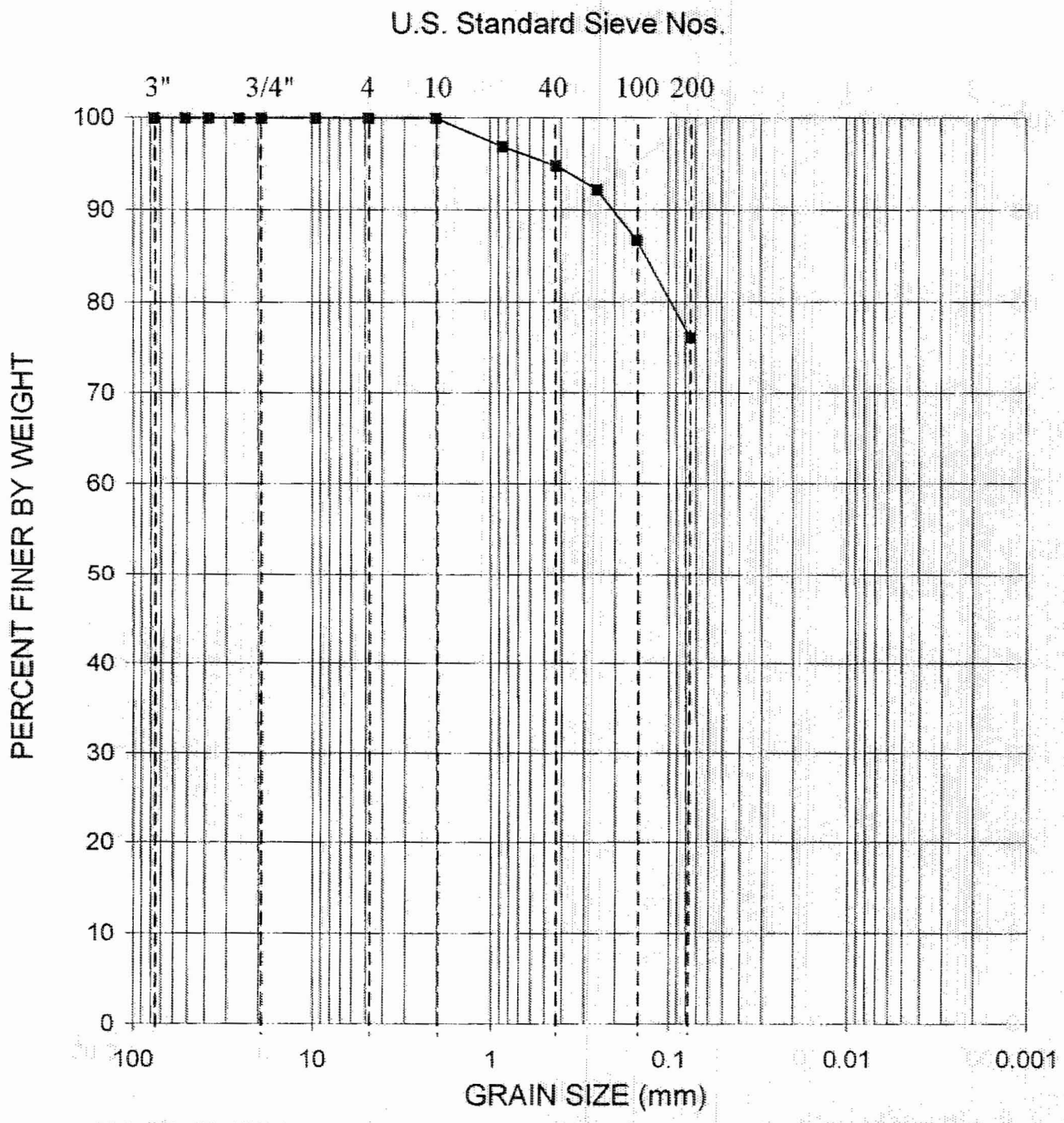

**GRADATION CURVE**

ASTM D422

| Project: | Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland | | Contract No.: 06120048.00 | | Date: 9/28/2006 |
|---|---|---|---|---|---|

| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI |
|---|---|---|---|---|---|
| B-747 | 38.5 | FAT CLAY, with sand, dark gray | CH | | |

Schnabel Engineering




**GRADATION CURVE**

ASTM D422

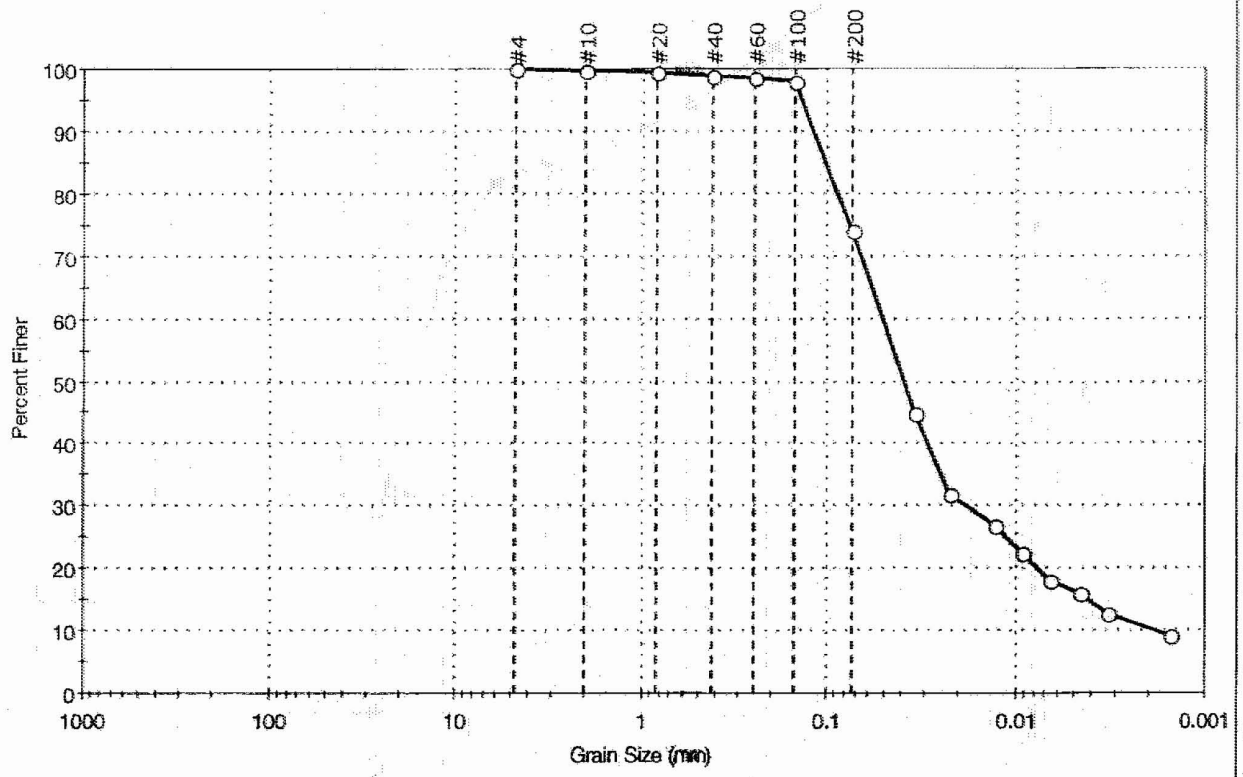
| Project: | Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland | | Contract No.: 06120048.00 | | Date: 9/28/2006 |
|---|---|---|---|---|---|
| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI |
| B-747 | 53.5 | ELASTIC SILT, with sand, dark green-gray | MH | 78 | 31 |

Schnabel Engineering

**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-747 | Sample Type: | tube | Tested By: | sam |
| Sample ID: | S-15 | Test Date: | 09/29/06 | Checked By: | mcm |
| Depth : | 58.5-60 ft | Test Id: | 99170 | | |
| Test Comment: | --- | | | | |
| Sample Description: | Moist, dark olive gray clay with sand | | | | |
| Sample Comment: | --- | | | | |

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




| % Cobble | % Gravel | % Sand | % Silt & Clay Size |
|---|---|---|---|
| -- | 0.0 | 25.8 | 74.2 |

| 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 | 98 | | |
| #200 | 0.074 | 74 | | |
| --- | Particle Size (mm) | Percent Finer | Spec. Percent | Complies |
| --- | 0.0345 | 45 | | |
| --- | 0.0221 | 32 | | |
| --- | 0.0128 | 27 | | |
| --- | 0.0091 | 22 | | |
| --- | 0.0065 | 18 | | |
| --- | 0.0046 | 16 | | |
| --- | 0.0033 | 13 | | |
| --- | 0.0016 | 9 | | |
| | | | | |

**Coefficients**

| | |
|---|---|
| $D_{85}$ = 0.1017 mm | $D_{30}$ = 0.0178 mm |
| $D_{60}$ = 0.0512 mm | $D_{15}$ = 0.0042 mm |
| $D_{50}$ = 0.0395 mm | $D_{10}$ = 0.0018 mm |
| $C_u$ = N/A | $C_c$ = 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 : ---

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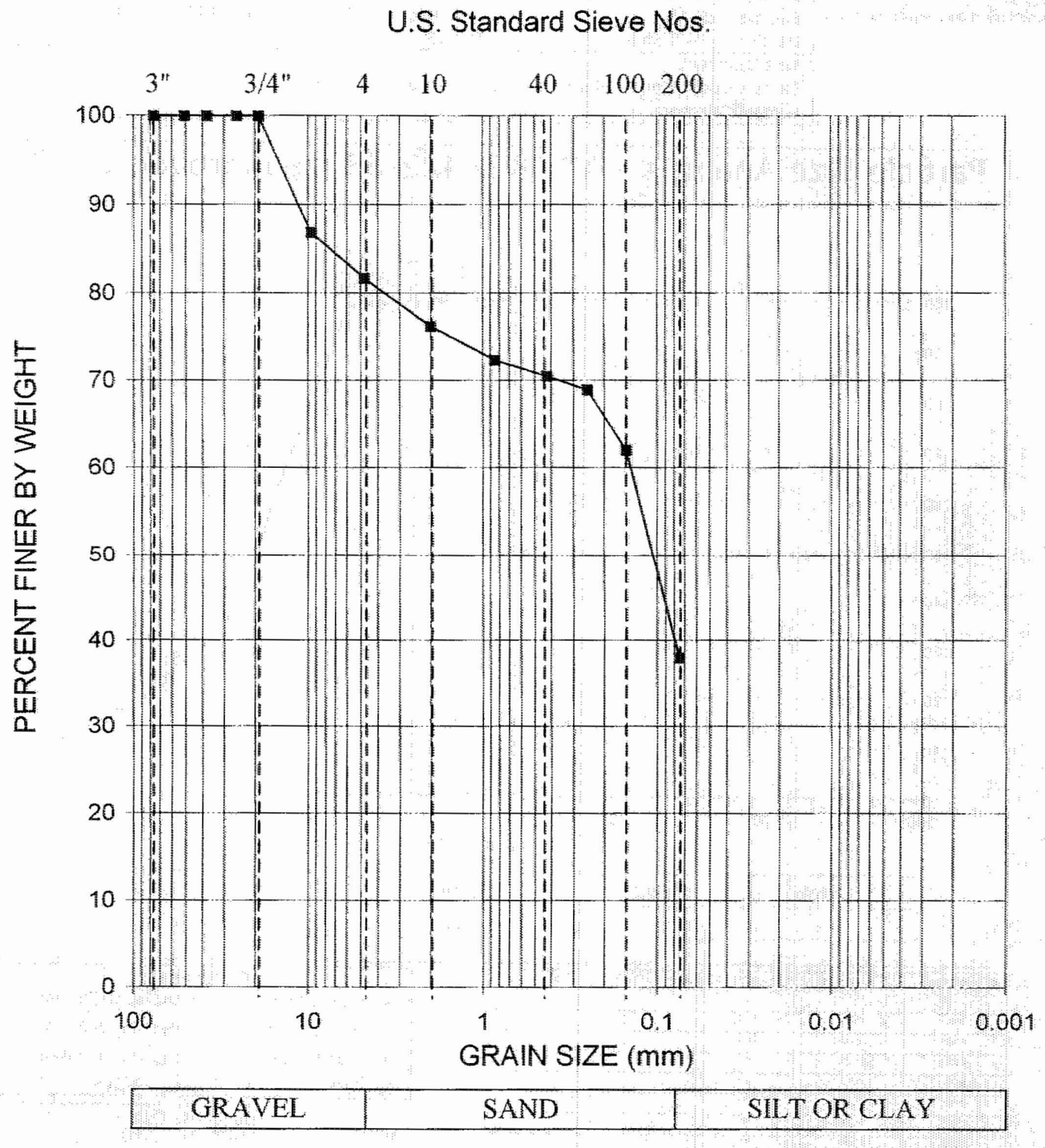


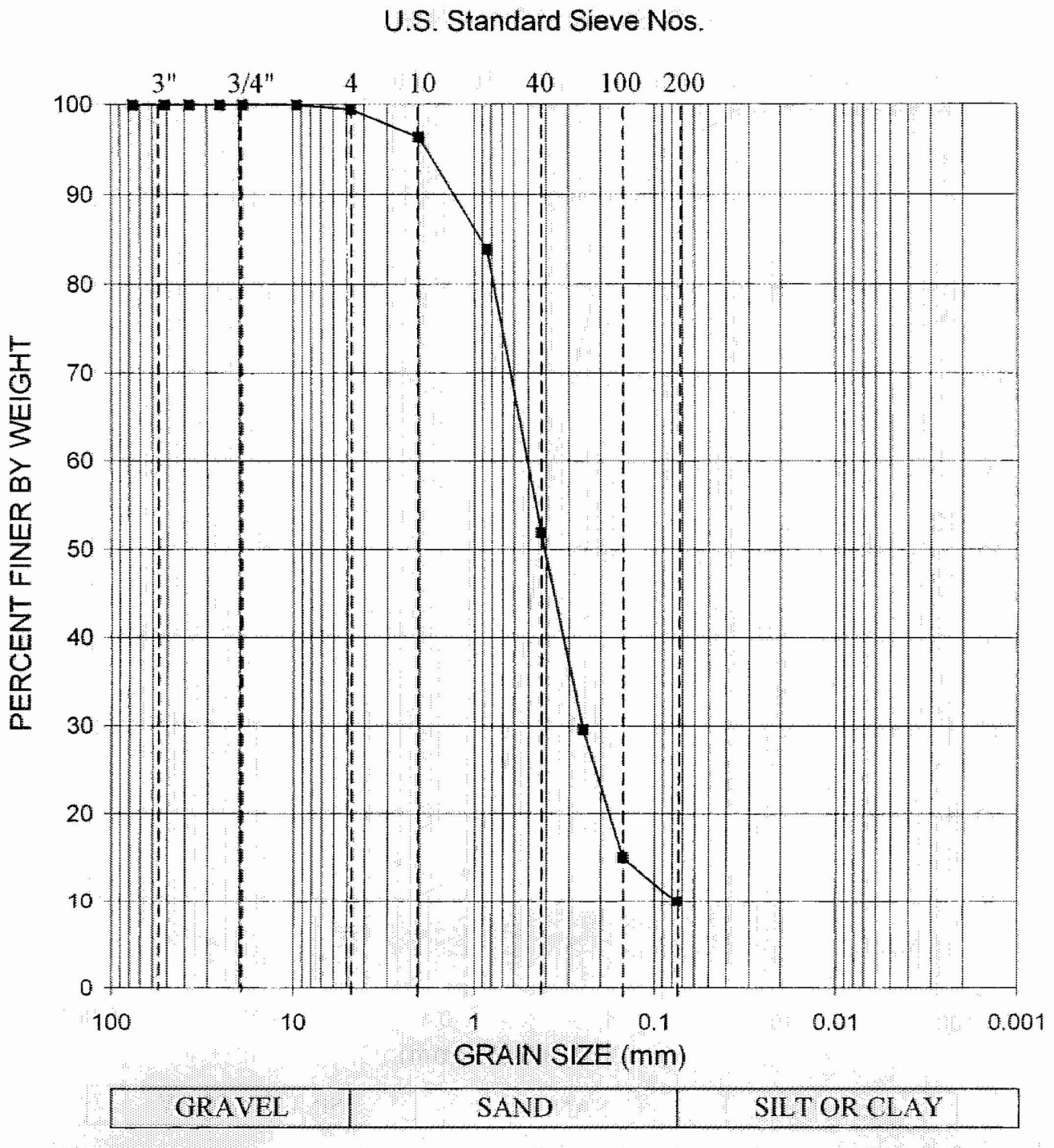

**GRADATION CURVE**

ASTM D422

| Project: | Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland | Contract No.: | 06120048.00 | Date: | 9/28/2006 |
|---|---|---|---|---|---|

| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI |
|---|---|---|---|---|---|
| B-747 | 63.5 | Clayey SAND, with shells, dark green | SC | 43 | 23 |

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: 9/27/2006 | |
|---|---|---|---|---|---|---|
| Boring No. | Depth (ft) | Sample Description | Class. | LL | PI | |
| B-752 | 2.5 | Poorly Graded SAND, with silt, orange | SP-SM | | | Schnabel Engineering |